# Exhibit 6

# Test Report
# Part 1
# FCC Part 27

# EXHIBIT 6, PART 1
# TABLE OF CONTENTS

# Test Equipment List

| Test Equipment | Description |
|---|---|
| DUT | NextNet Wireless Base Transceiver Station<br>Model No. BTS-2500-C<br>RF Board P/N 123-0150-0100<br>Logic Board P/N 123-0150-0200<br>Logic Board S/N 0150-0200-4500-145 |
| Spectrum Analyzer | Agilent E4440A<br>S/N: MY44022791<br>Calibrated: 05/30/2004<br>Calibration due: 05/30/2006 |
| Attenuator/Coaxial Cable (all applicable tests except harmonic frequencies) | Calibrated by user<br>MCE/Weinshel Attenuator 30dB, 10W<br>Model: 37-30-34, S/N. BN 9845 |
| Notch Filter/Attenuator/ Coaxial Cable (harmonic frequency test only) | Filter and assembly calibrated by user<br>MCE/Weinshel Attenuator 20dB, 10W<br>Model: 23-20-34, S.N. BP4391 |
| Computer | Dell Inspiron 5000<br>Model: PPM<br>S/N: 000832RM-12961-04R-0441 |
| Ethernet Switch | D-Link<br>Model: DSS-5+<br>5 port 10/100Mbps<br>S/N: B205335003173 |
| Power Supply 48V (All Tests Except Frequency Stability) | Lambda<br>Model JWS600-48<br>S/N VVG-158C02-0082W050 |
| Power Supply (Frequency Stability Test Only) | Agilent 6544A 0-60VDC<br>S/N: US36390304<br>Calibrated with voltmeter listed below. |
| Digital Voltmeter | HP 34401A<br>S/N: MY45001201<br>Calibrated: 4-9-2005<br>Calibration due: 4-9-2007 |
| Temperature Chamber | Test Equity<br>1000 Series |
| Temperature Sensor | Fluke 89 IV True RMS Multimeter<br>K-Type Thermocouple |
| Radiation Hazard Meter | General Microwave Corporation<br>RAHAM Model 3<br>Calibrated: 10-14-2003<br>Calibration due: 10-14-2005 |

# RF Power Output

Rule Part Number: 2.1046, 27.50(h)(1)

(i) The maximum EIRP of a main, booster or base station shall not exceed 33 dBW +10log(X/Y) dBW, where X is the actual channel width in MHz and Y is either 6 MHz if prior to transition or the station is in the MBS following transition or 5.5 MHz if the station is in the LBS and UBS following transition, except as provided in paragraph (h)(1)(ii) of this section.

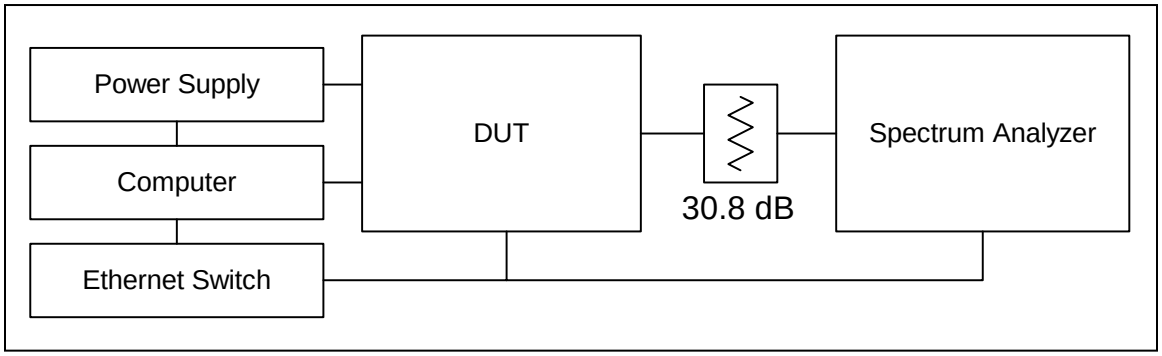
(ii) If a main or booster station sectorizes or otherwise uses one or more transmitting antennas with a non-omnidirectional horizontal plane radiation pattern, the maximum EIRP in dBW in a given direction shall be determined by the following formula: EIRP = 33 dBW + 10 log(X/Y) dBW + 10 log(360/beamwidth) dBW, where X is the actual channel width in MHz, Y is either (i) 6 MHz if prior to transition or the station is in the MBS following transition or (ii) 5.5 MHz if the station is in the LBS and UBS following transition, and beamwidth is the total horizontal plane beamwidth of the individual transmitting antenna for the station or any sector measured at the half-power points.

Standard: TIA-603-B
TIA Standard, Land Mobile FM or PM Communications Equipment, Measurement and Performance Standards

Test Procedure: The radiated power of the base station is calculated from the maximum antenna gain and the conducted power available at the antenna port. The conducted RF output power was measured with a spectrum analyzer utilizing the power measurement function. The RF output is applied to an attenuator that is connected to the spectrum analyzer RF input port. An RMS detector is used to measure the average power during the transmission. The transmitter is enabled in test mode by the attached computer. The RF loss of the attenuators and coax has been measured and is included in the spectrum analyzer offset level and is noted on the block diagram. Measurements are performed at several frequencies across the band for each of the modulation formats available (4-, 16-, and 64-QAM) and channel bandwidths (5.5 MHz and 6.0 MHz). RF power is calibrated at the antenna port, the channel filter that is required for emissions compliance is not used for this test since the 5 watts is the power applied to the channel filter.

Test Conditions: 2-Watt Frequencies
5.5 MHz channels: 2504.75, 2565.25, 2626.75, 2687.25 MHz
6.0 MHz channels: 2499, 2575, and 2621 MHz

5-Watt Frequencies
5.5 and 6.0 MHz channels: 2503, 2593, and 2683 MHz
Temperature = 25° C
Supply Voltage = 48.0 VDC Nominal to DUT




**2W and 5W Conducted RF Power Test Setup**

# Conducted RF Output Test Results Summary (2W)

| 2W Minimum Conducted Power | | | | | | |
|---|---|---|---|---|---|---|
| | QPSK | | 16 QAM | | 64 QAM | |
| Freq (MHz) | dBm | Watts | dBm | Watts | dBm | Watts |
| 2504.75 | 0.16 | 0.00104 | 0.12 | 0.00103 | 0.12 | 0.00103 |
| 2565.25 | -0.40 | 0.00091 | -0.39 | 0.00091 | -0.38 | 0.00092 |
| 2626.75 | 0.24 | 0.00106 | 0.23 | 0.00105 | 0.23 | 0.00105 |
| 2687.25 | 0.18 | 0.00104 | 0.19 | 0.00104 | 0.20 | 0.00105 |
| 2499.00 | 0.12 | 0.00103 | 0.11 | 0.00103 | 0.11 | 0.00103 |
| 2575.00 | -0.41 | 0.00091 | -0.40 | 0.00091 | -0.39 | 0.00091 |
| 2621.00 | 0.12 | 0.00103 | 0.12 | 0.00103 | 0.11 | 0.00103 |

| 2W Maximum Conducted Power | | | | | | |
|---|---|---|---|---|---|---|
| | QPSK | | 16 QAM | | 64 QAM | |
| Freq (MHz) | (dBm) | (Watts) | (dBm) | (Watts) | (dBm) | (Watts) |
| 2504.75 | 32.01 | 1.59 | 32.01 | 1.59 | 32.03 | 1.60 |
| 2565.25 | 32.26 | 1.68 | 32.26 | 1.68 | 32.26 | 1.68 |
| 2626.75 | 31.93 | 1.56 | 31.94 | 1.56 | 31.93 | 1.56 |
| 2687.25 | 32.92 | 1.96 | 32.91 | 1.95 | 32.91 | 1.95 |
| 2499.00 | 32.04 | 1.60 | 32.04 | 1.60 | 32.04 | 1.60 |
| 2575.00 | 32.81 | 1.91 | 32.81 | 1.91 | 32.82 | 1.91 |
| 2621.00 | 31.96 | 1.57 | 31.97 | 1.57 | 31.97 | 1.57 |

# Conducted RF Output Test Results Summary (5W)

| 5W Minimum Conducted Power | | | | | | |
|---|---|---|---|---|---|---|
| Freq/BW (MHz) | 4 QAM | | 16 QAM | | 64 QAM | |
| | dBm | Watts | dBm | Watts | dBm | Watts |
| 2503/5.5 | -0.41 | 0.00091 | -0.42 | 0.00091 | -0.43 | 0.00091 |
| 2593/5.5 | 0.70 | 0.00117 | 0.69 | 0.00117 | 0.68 | 0.00117 |
| 2683/5.5 | -0.05 | 0.00099 | -0.06 | 0.00099 | -0.07 | 0.00098 |
| 2503/6.0 | -0.44 | 0.00090 | -0.45 | 0.00090 | -0.44 | 0.00090 |
| 2593/6.0 | 0.68 | 0.00117 | 0.28 | 0.00107 | 0.68 | 0.00117 |
| 2683/6.0 | -0.12 | 0.00097 | -0.13 | 0.00097 | -0.13 | 0.00097 |

| 5W Maximum Conducted Power | | | | | | |
|---|---|---|---|---|---|---|
| | 4 QAM | | 16 QAM | | 64 QAM | |
| Freq/BW (MHz) | (dBm) | (Watts) | (dBm) | (Watts) | (dBm) | (Watts) |
| 2503/5.5 | 36.12 | 4.09 | 36.12 | 4.09 | 36.14 | 4.11 |
| 2593/5.5 | 36.75 | 4.73 | 36.79 | 4.78 | 36.78 | 4.76 |
| 2683/5.5 | 36.74 | 4.72 | 36.76 | 4.74 | 36.75 | 4.73 |
| 2503/6.0 | 36.75 | 4.73 | 36.75 | 4.73 | 36.78 | 4.76 |
| 2593/6.0 | 36.74 | 4.72 | 36.73 | 4.71 | 36.76 | 4.74 |
| 2683/6.0 | 36.12 | 4.09 | 36.14 | 4.11 | 36.14 | 4.11 |

# RF Power Output (Cont'd)

Test Conclusions:

Vertically Polarized Antenna

RF Power Output = 33 dBm

Vertical Antenna Gain = 19 dBi

Transmitted Power = RF Power + Isotropic Antenna Gain

Transmitted Power = 33 + 19 = 52 dBim

Transmitted Power = 10*log(2W)+19dBi = 22 dBiW < 33 dBiW

Horizontally Polarized Antenna

RF Power Output = 33 dBm

Horizontal Antenna Gain = 19 dBi

Transmitted Power = RF Power + Isotropic Antenna Gain

Transmitted Power = 33 + 19 = 52 dBim

Transmitted Power = 10*log(2W)+19dBi = 22 dBiW < 33 dBiW

Pass: Transmitted Power Output Requirement at 2 watt setting

# RF Power Output (Cont'd)

Test Conclusions:

Vertically Polarized Antenna

RF Power Output = 37 dBm

Vertical Antenna Gain = 19 dBi

Transmitted Power = RF Power + Isotropic Antenna Gain

Transmitted Power = 37 + 19 = 56 dBim

Transmitted Power = 10*log(5W)+19dBi = 26 dBiW < 33 dBiW

Horizontally Polarized Antenna

RF Power Output = 37 dBm

Horizontal Antenna Gain = 19 dBi

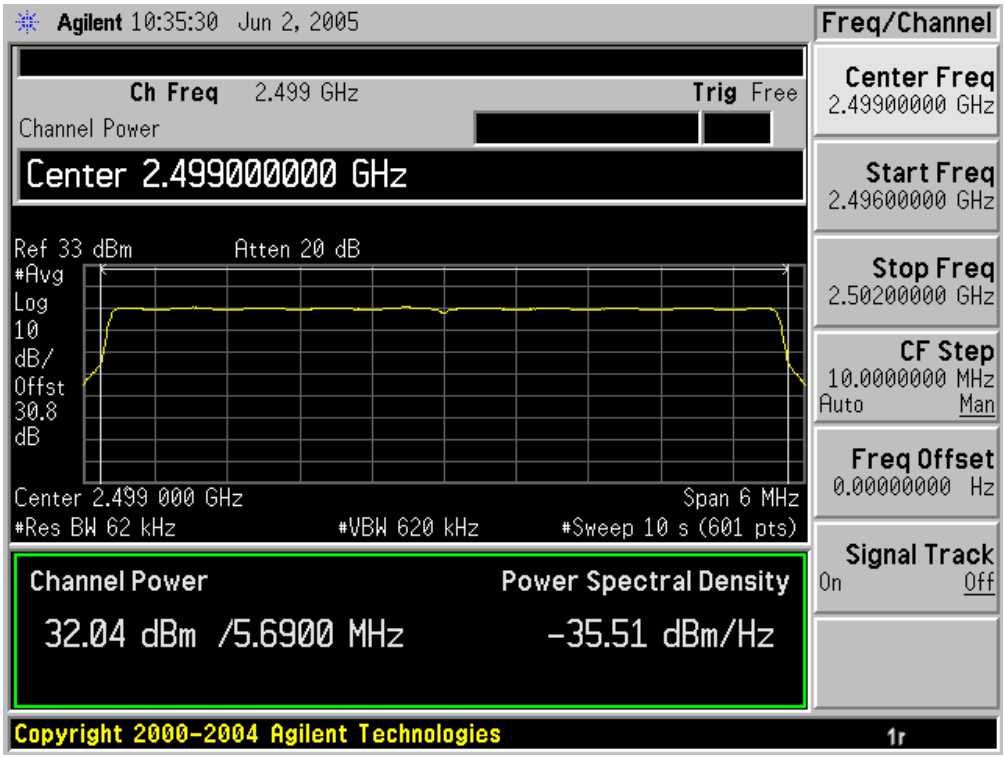
Transmitted Power = RF Power + Isotropic Antenna Gain

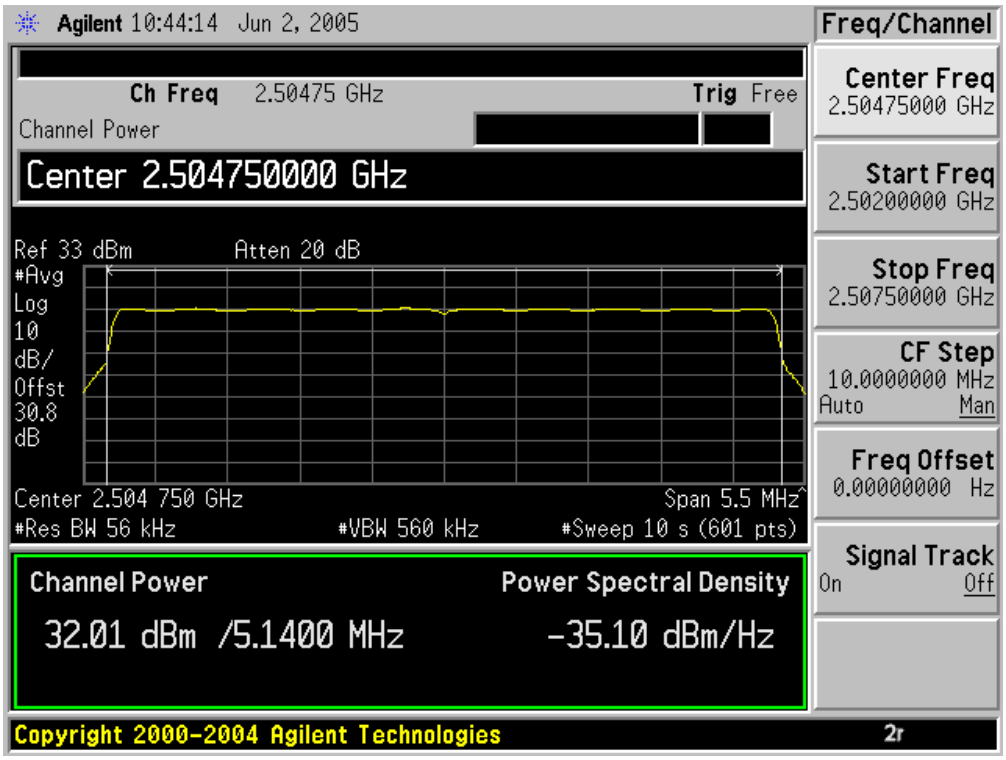
Transmitted Power = 37 + 19 = 56 dBim

Transmitted Power = 10*log(5W)+19dBi = 26 dBiW < 33 dBiW

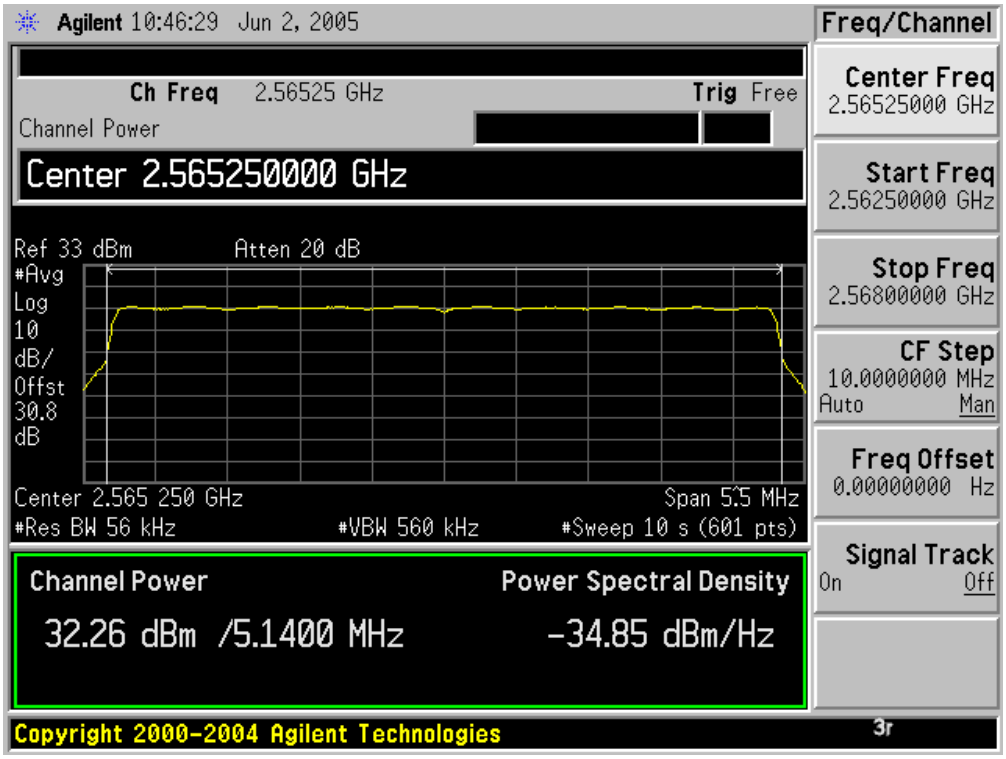
Pass: Transmitted Power Output Requirement at 5 watt setting

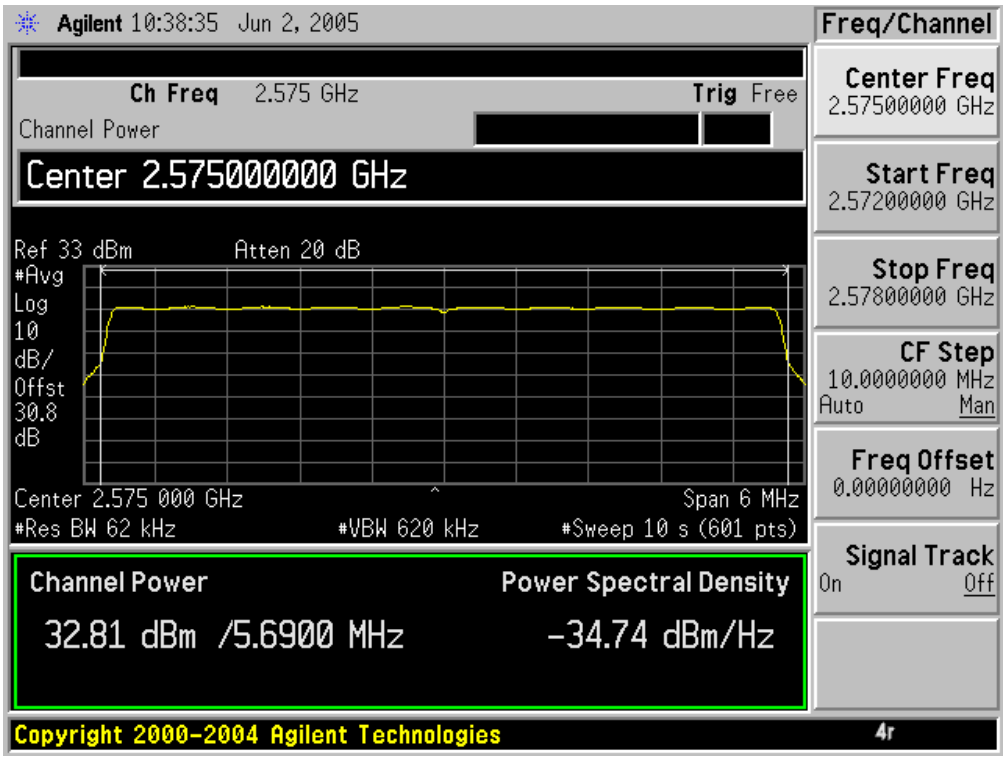
# 2W Conducted RF Power Output Spectrum Analyzer Plots
# 4-QAM (Maximum)



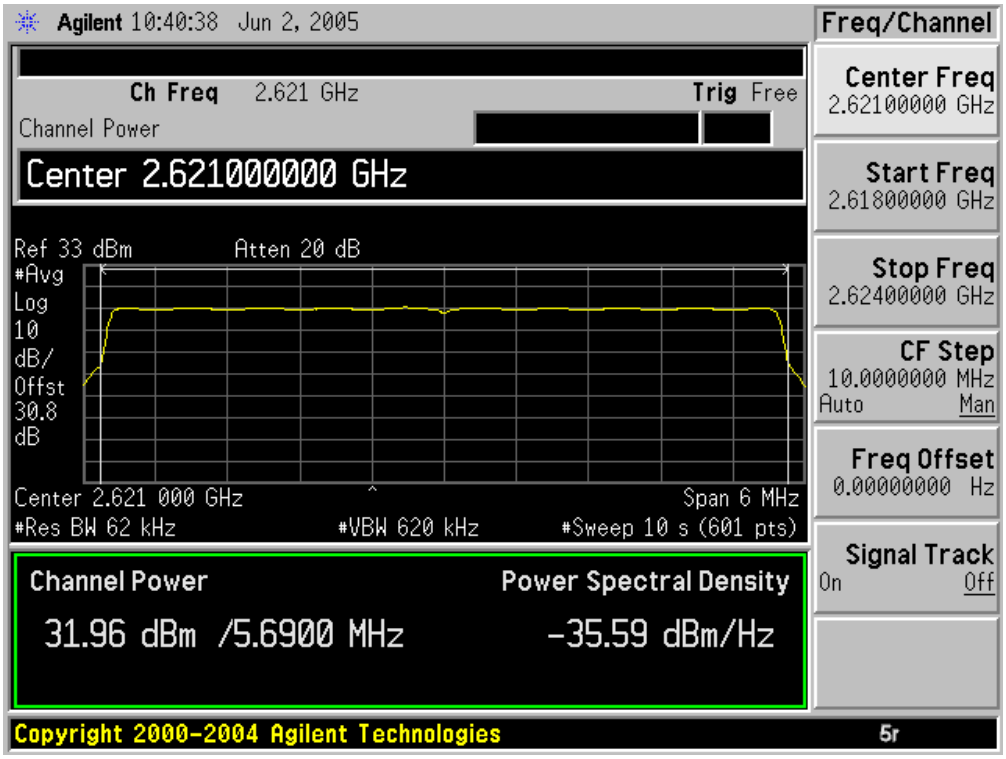



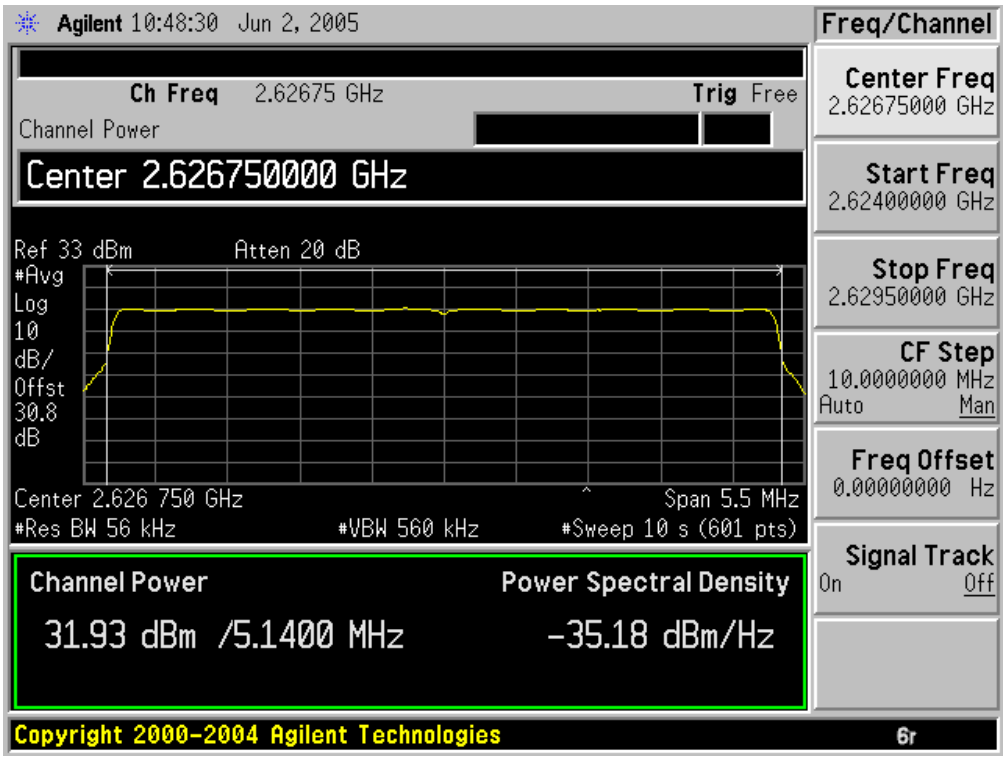
# 2W RF Power Output – Conducted (Maximum)
# 4-QAM (Cont'd)



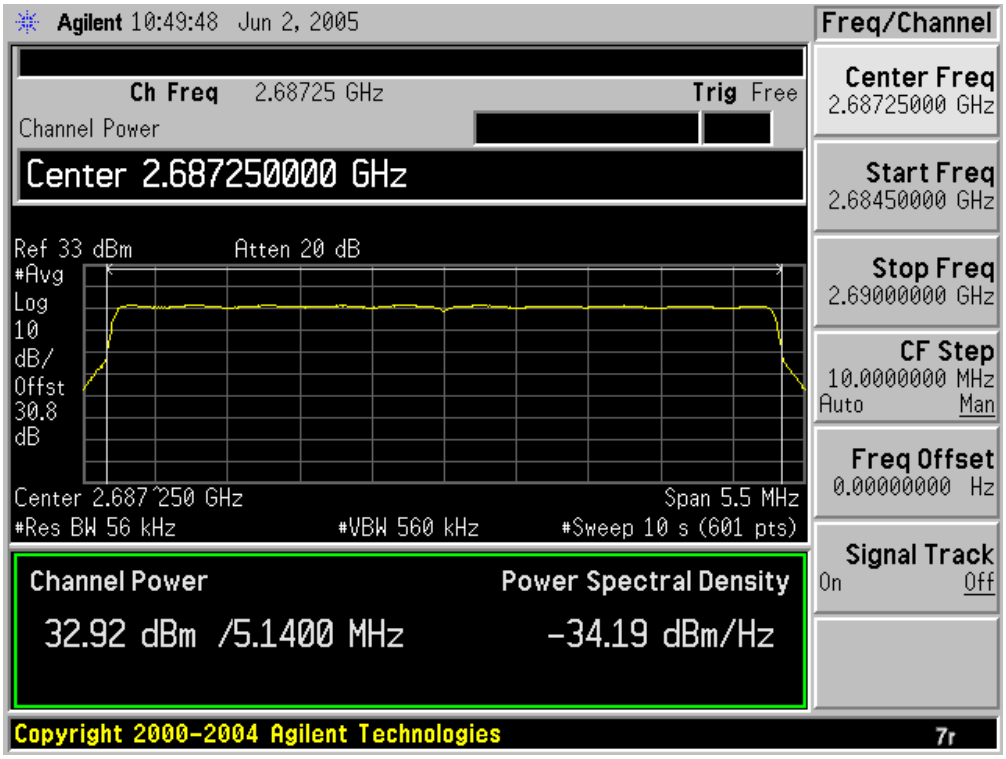



# 2W RF Power Output – Conducted (Maximum)
# 4-QAM (Cont'd)

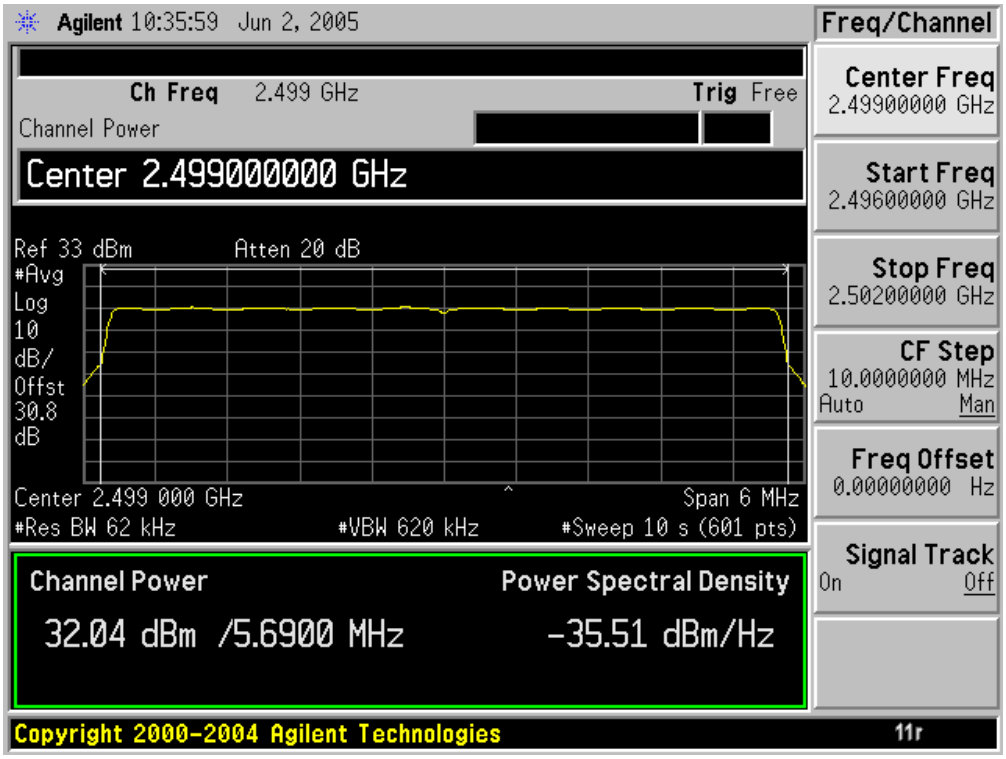


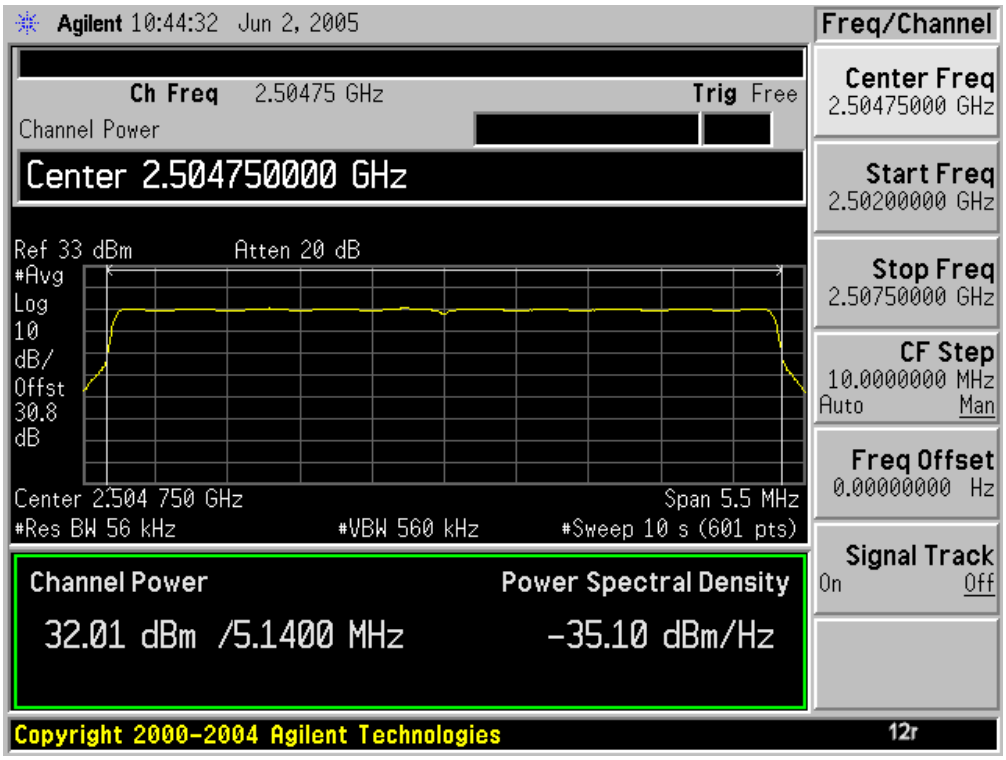



# 2W RF Power Output – Conducted (Maximum)
# 4-QAM (Cont'd)

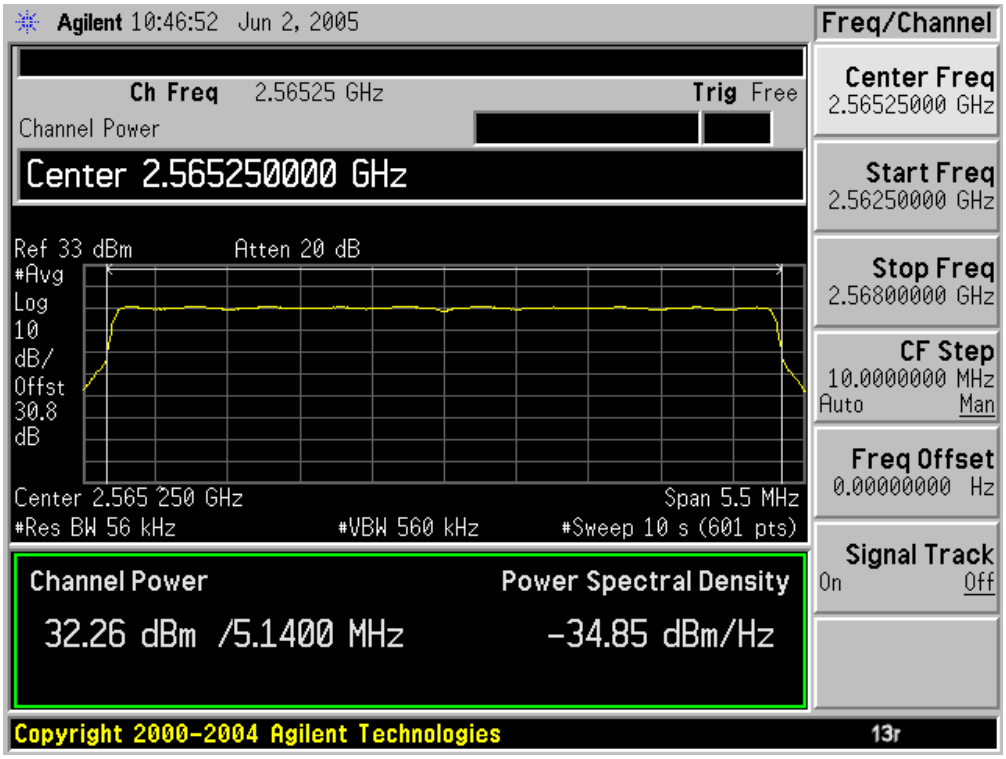


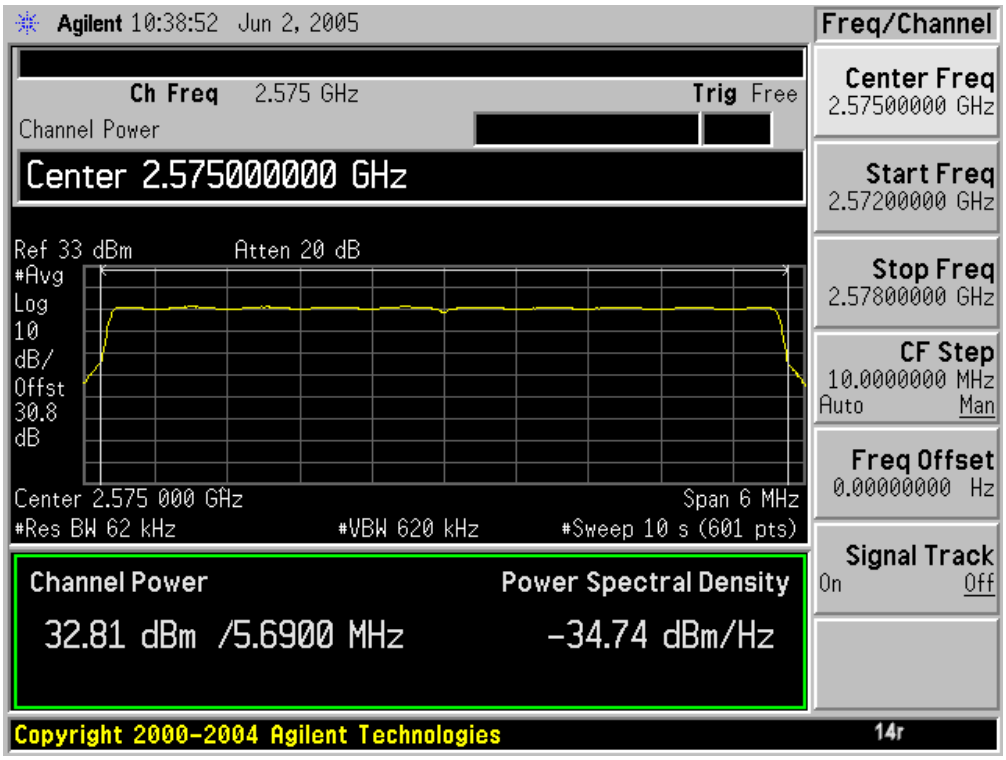
# 2W RF Power Output – Conducted (Maximum)
# 16-QAM



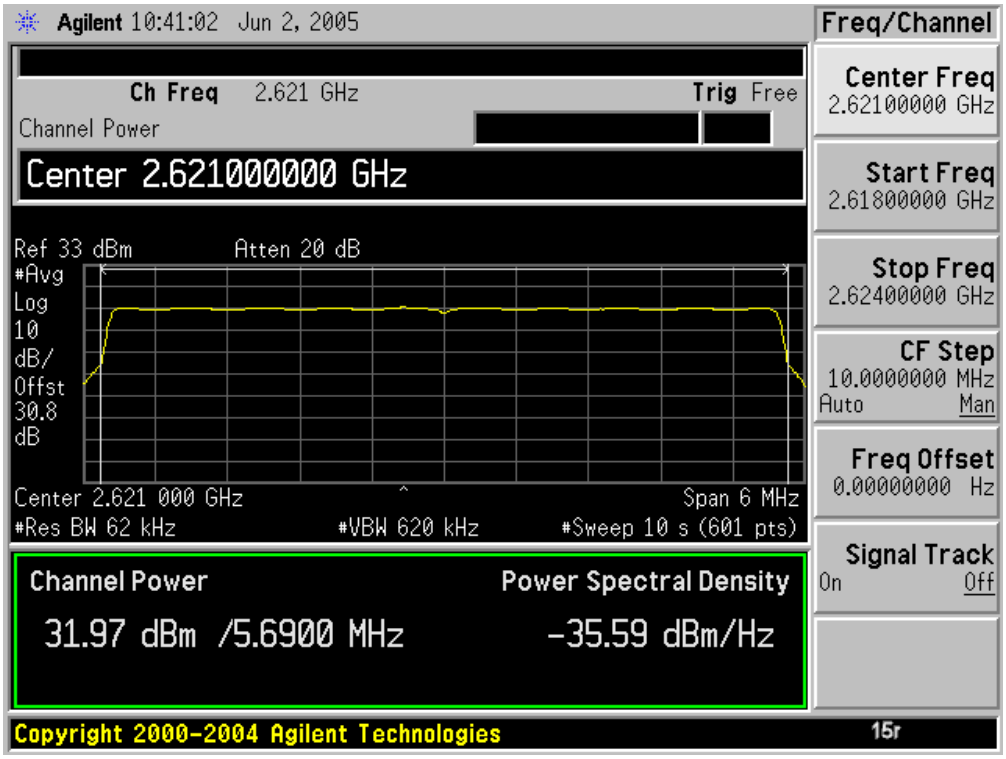



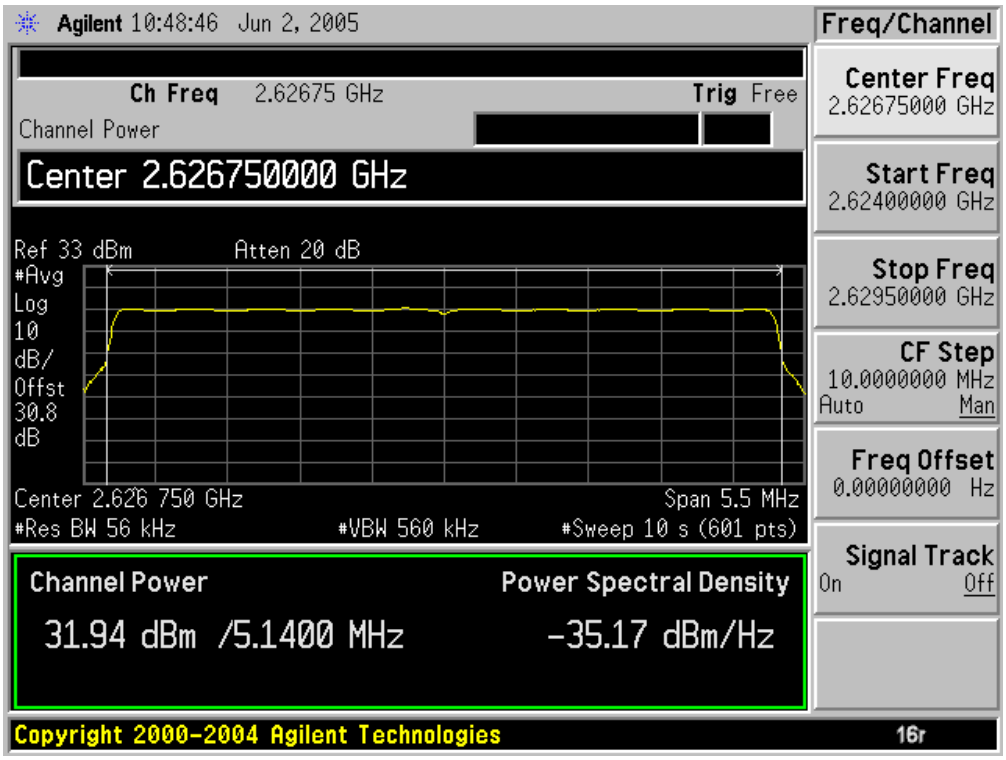
# 2W RF Power Output – Conducted (Maximum)
# 16-QAM (Cont'd)



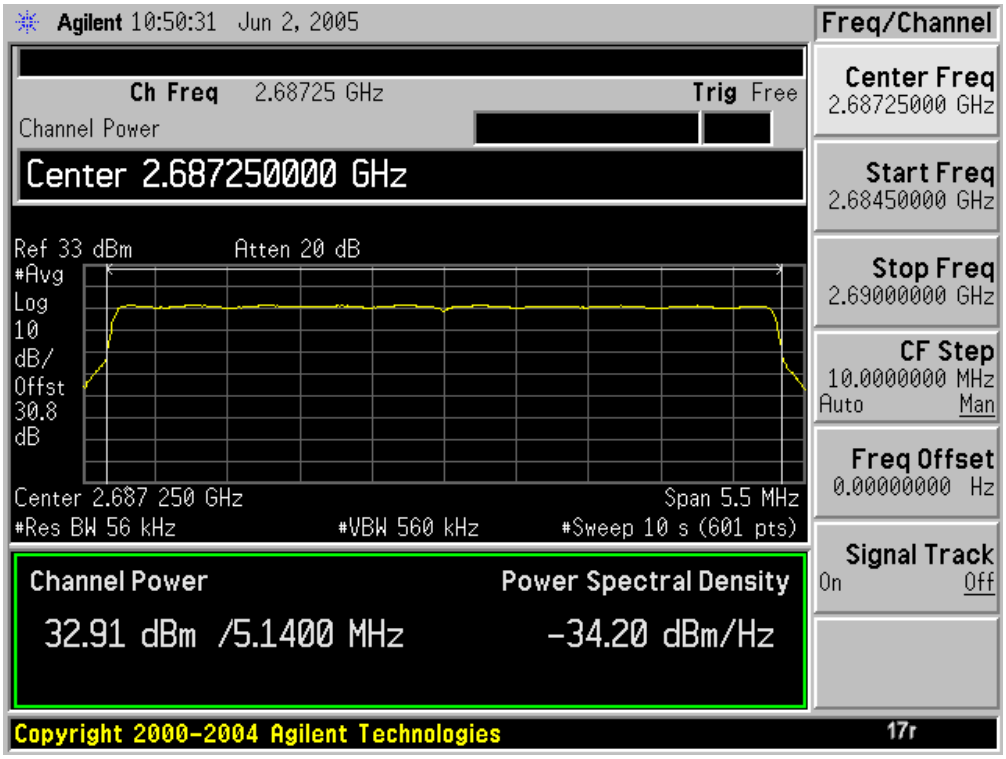



# 2W RF Power Output – Conducted (Maximum)
# 16-QAM (Cont'd)

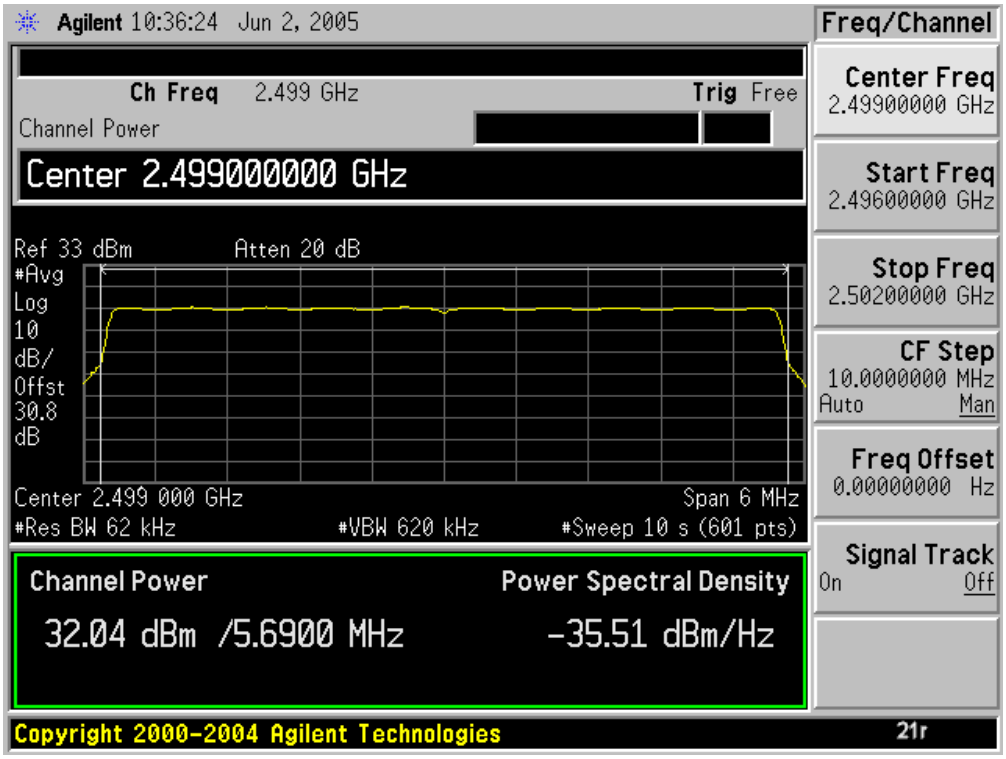


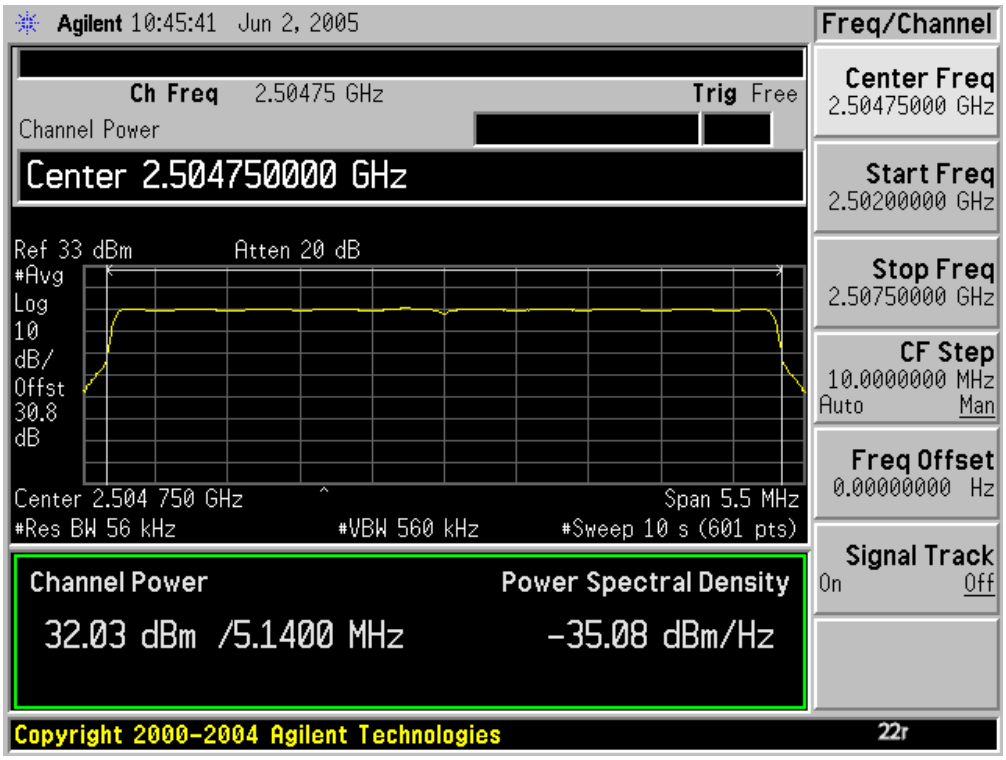



# 2W RF Power Output – Conducted (Maximum)
# 16-QAM (Cont'd)

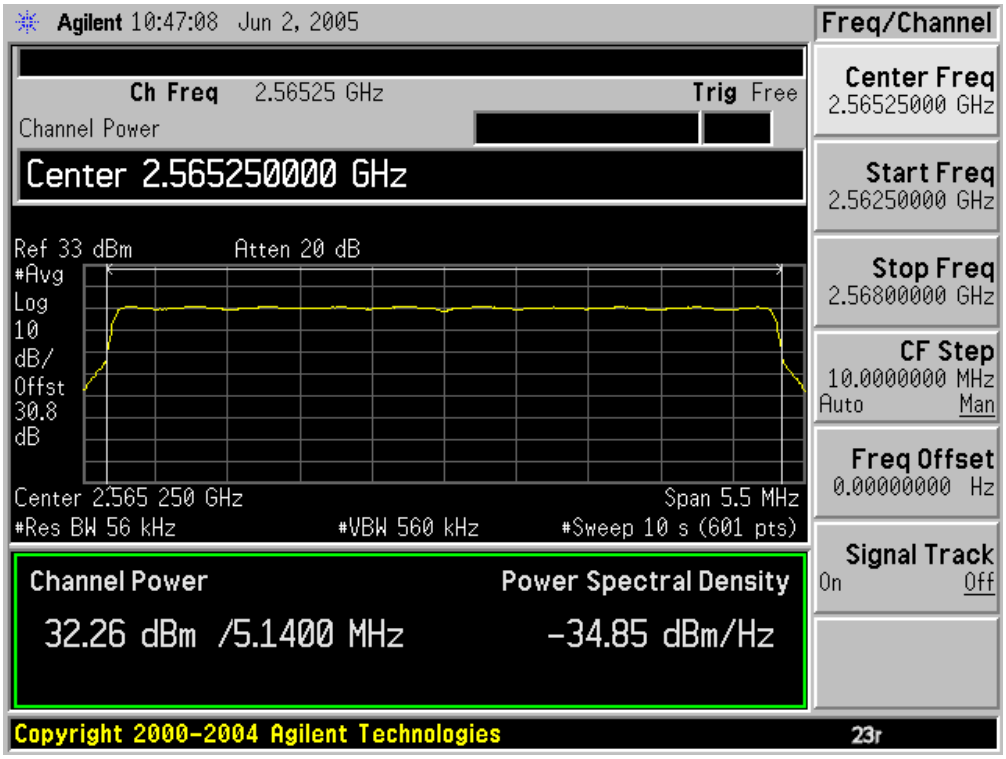


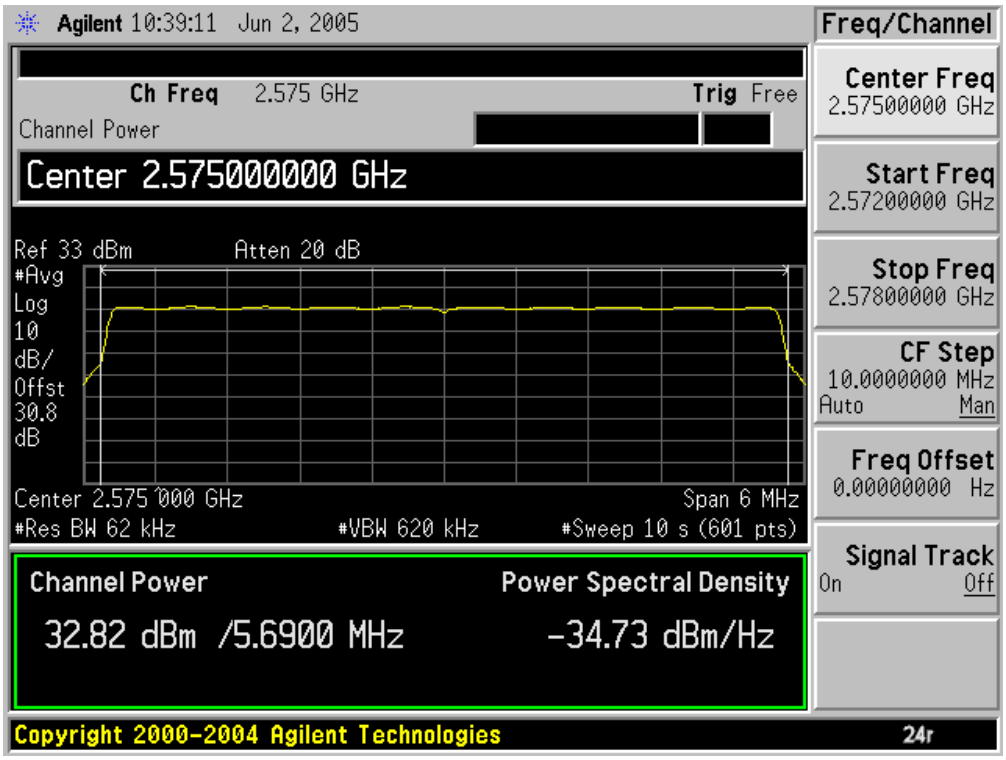
# 2W RF Power Output – Conducted (Maximum)
# 64-QAM



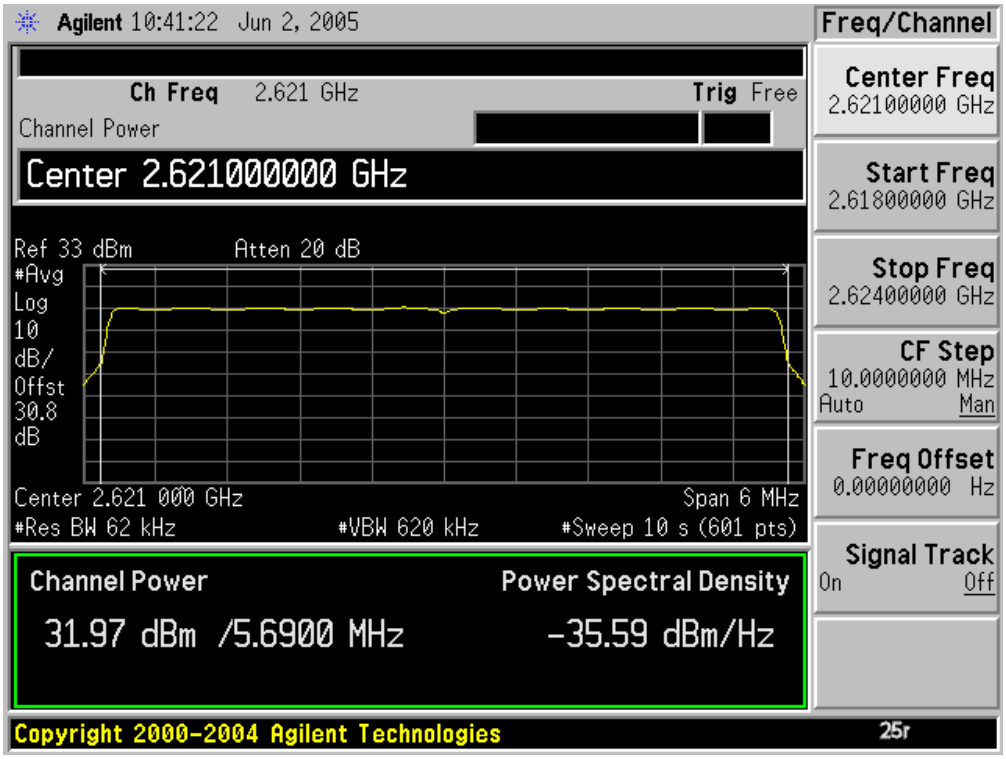



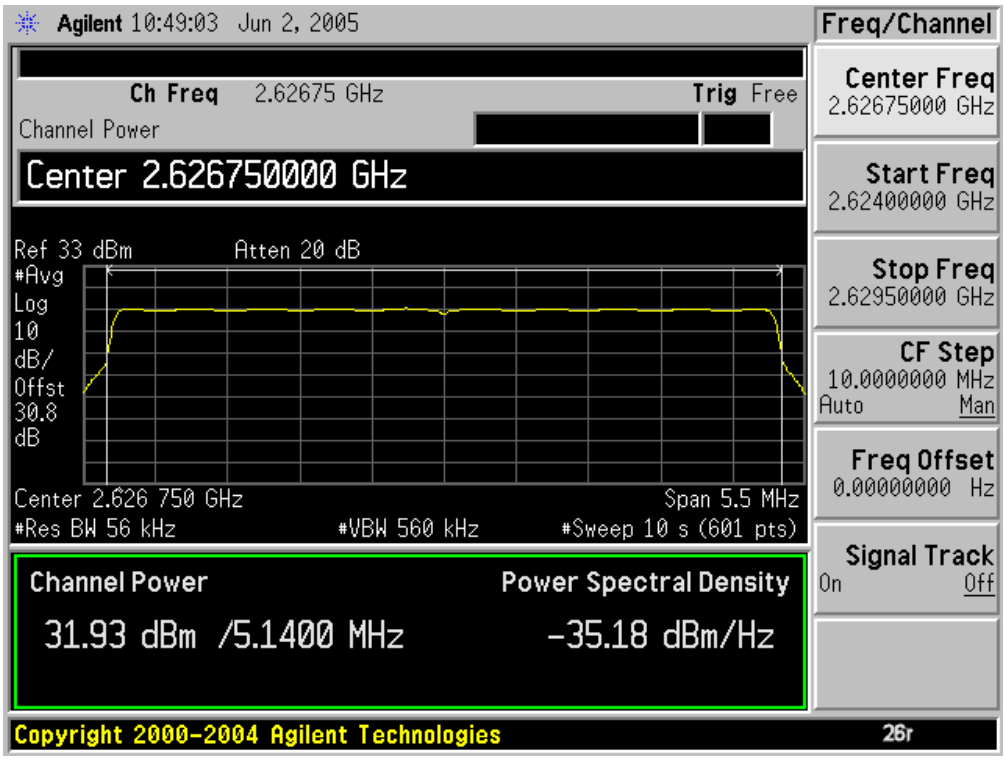
# 2W RF Power Output – Conducted (Maximum)
# 64-QAM (Cont'd)



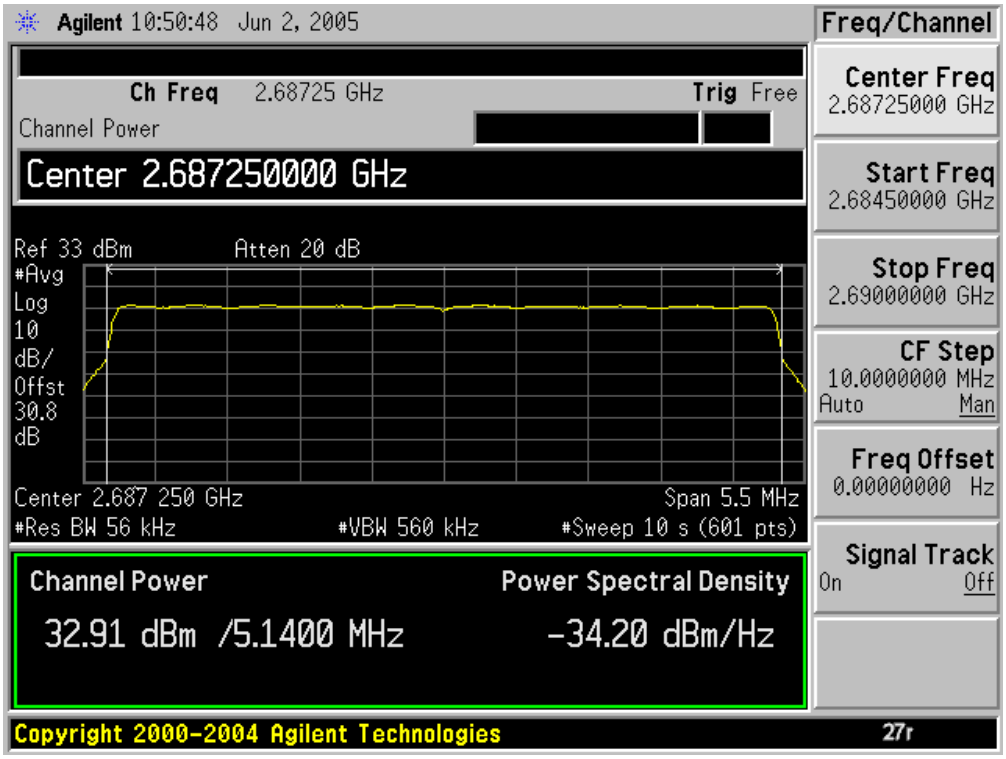



# 2W RF Power Output – Conducted (Maximum)
# 64-QAM (Cont'd)

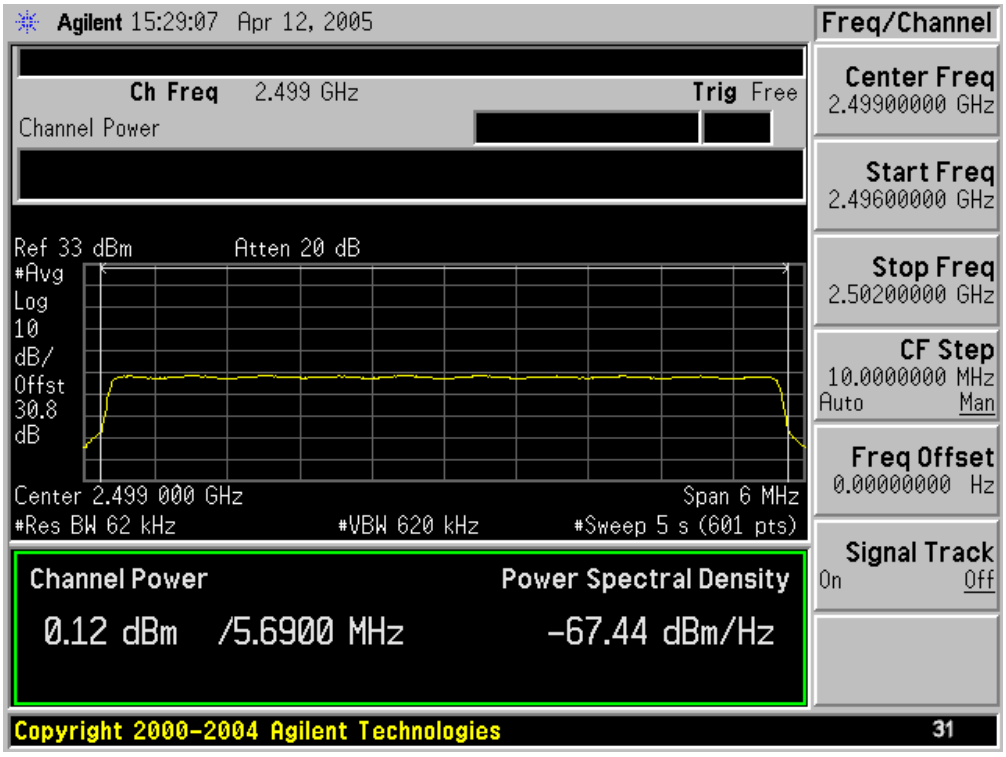


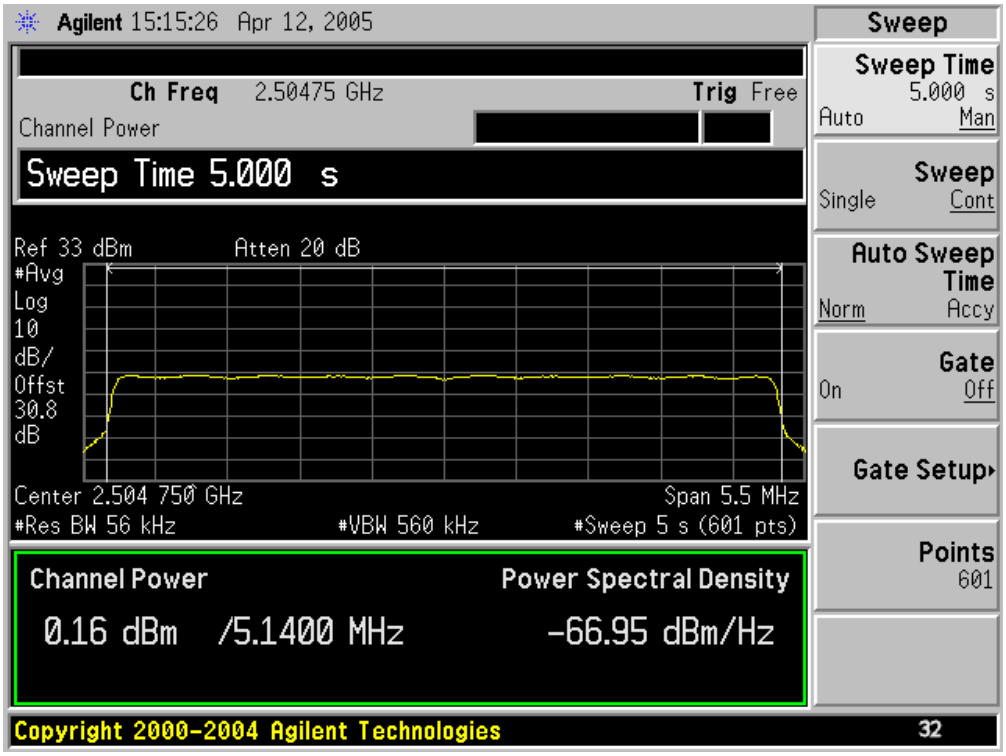



# 2W RF Power Output – Conducted (Maximum)
# 64-QAM (Cont'd)

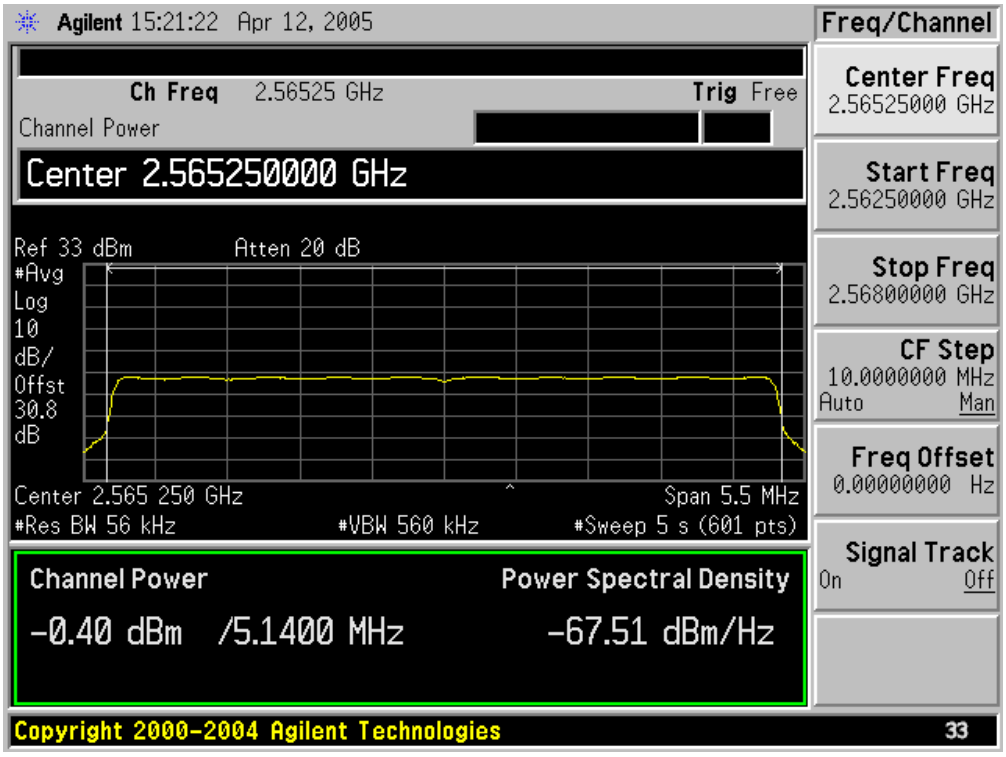


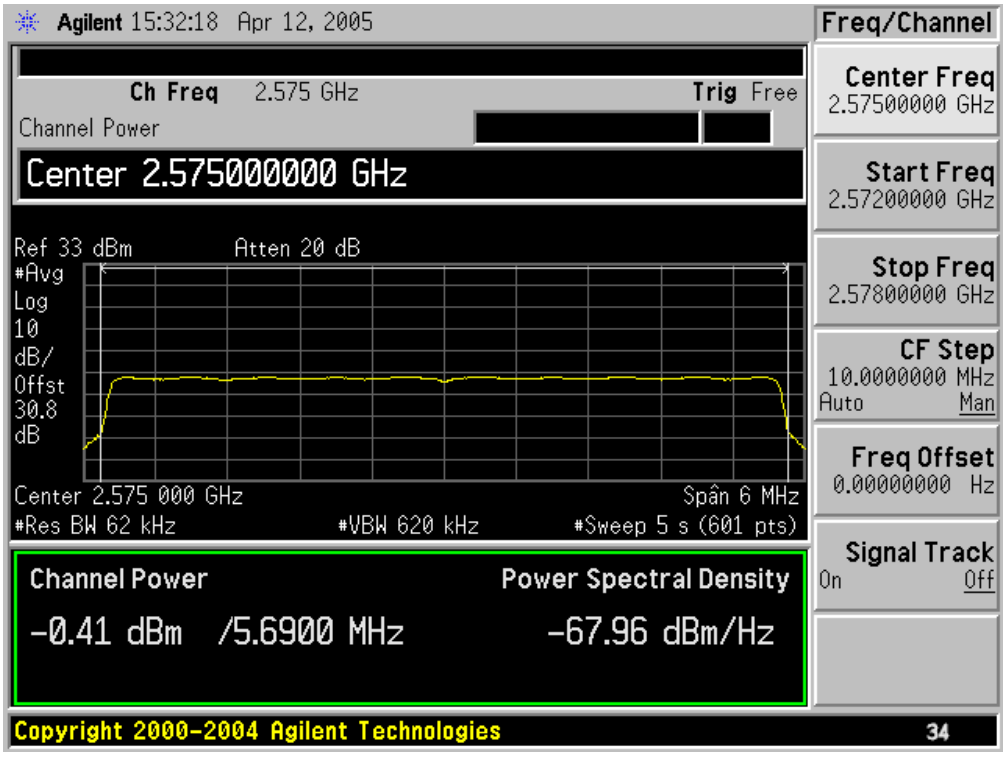
# 2W RF Power Output – Conducted (Minimum)
# 4-QAM



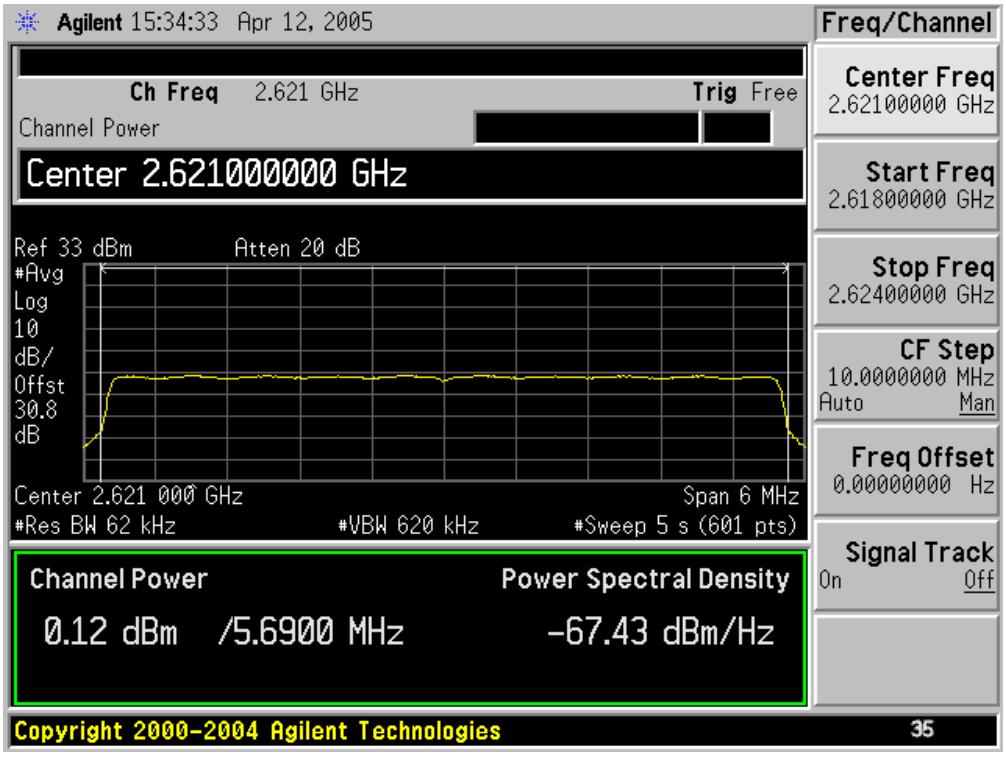



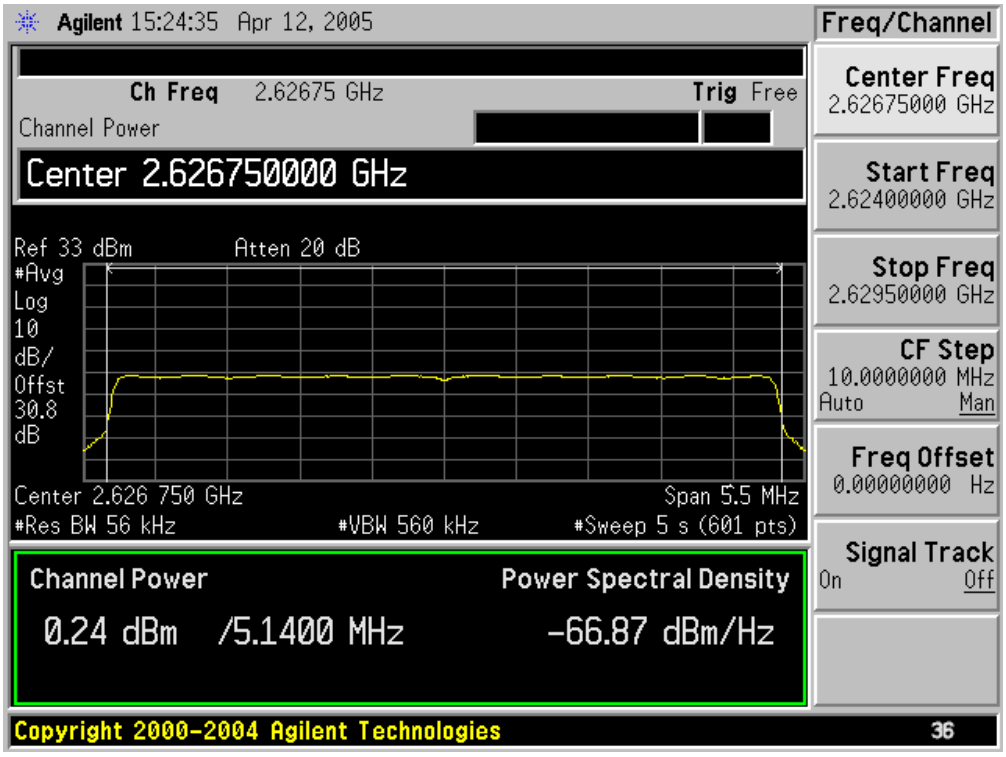
# 2W RF Power Output – Conducted (Minimum)
# 4-QAM (Cont'd)



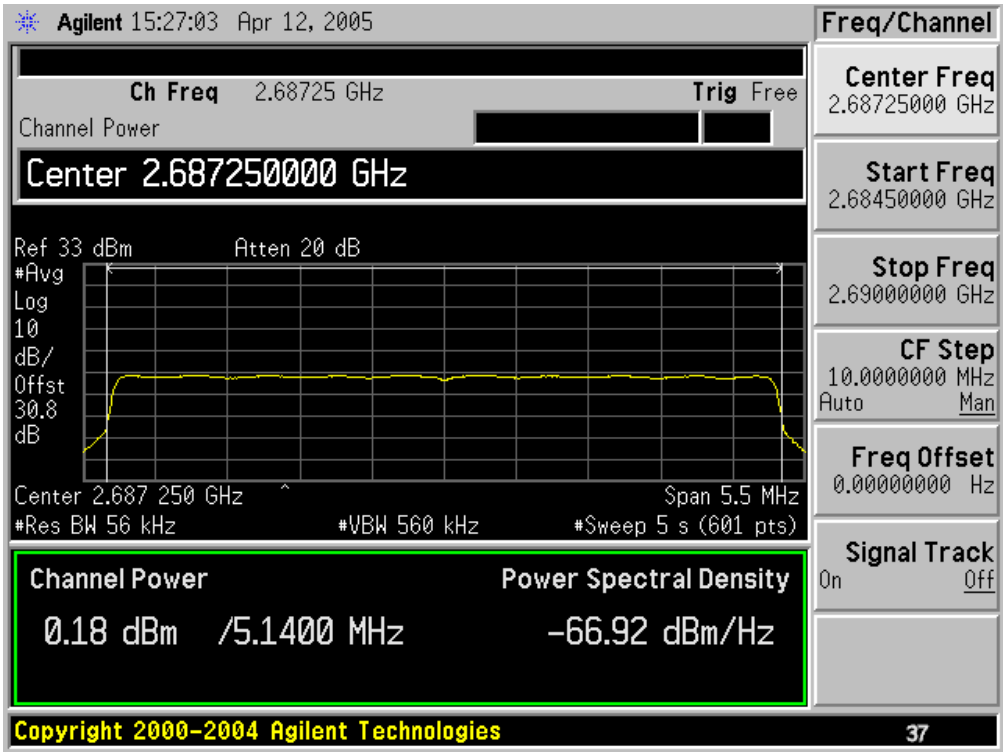



# 2W RF Power Output – Conducted (Minimum)
# 4-QAM (Cont'd)

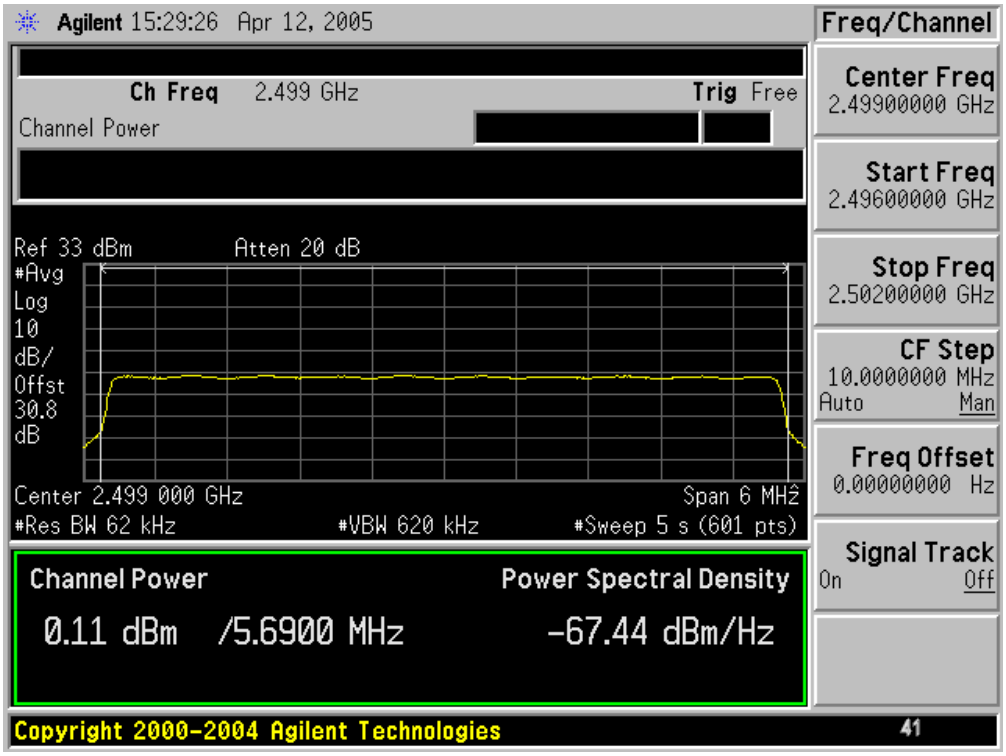


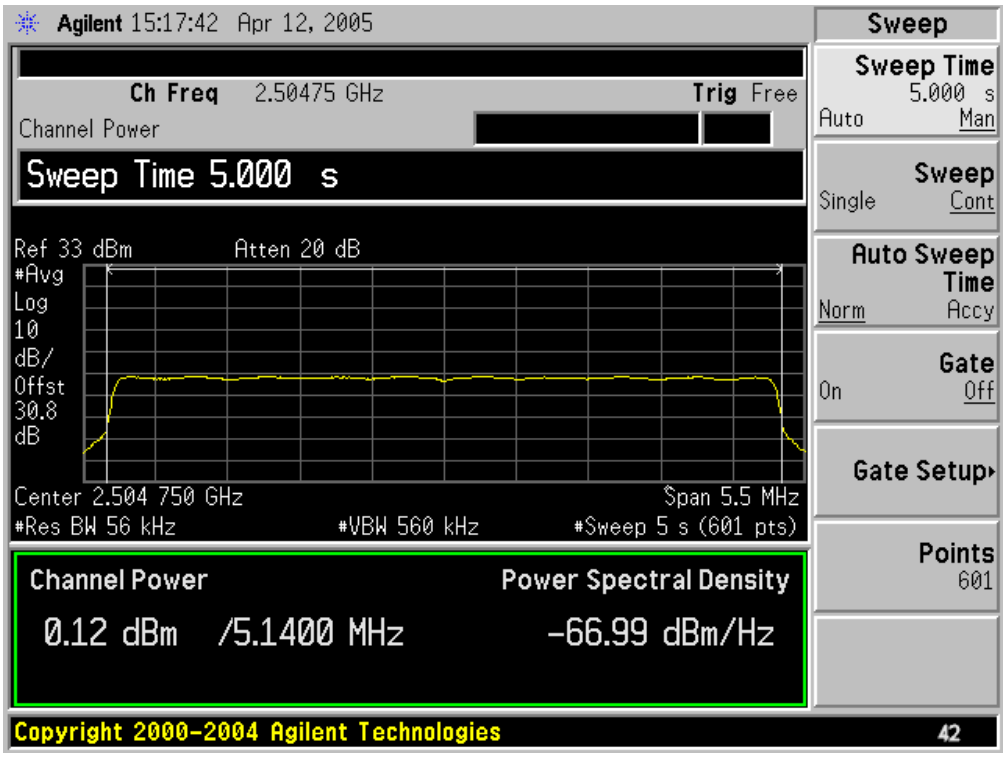



# 2W RF Power Output – Conducted (Minimum)
# 4-QAM (Cont'd)

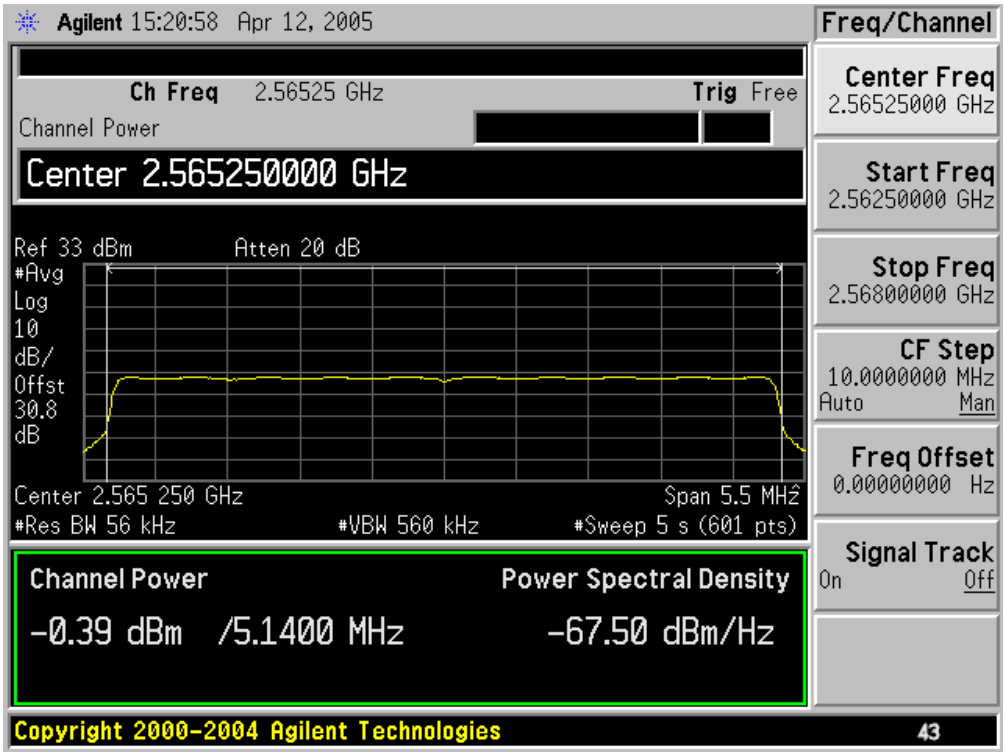


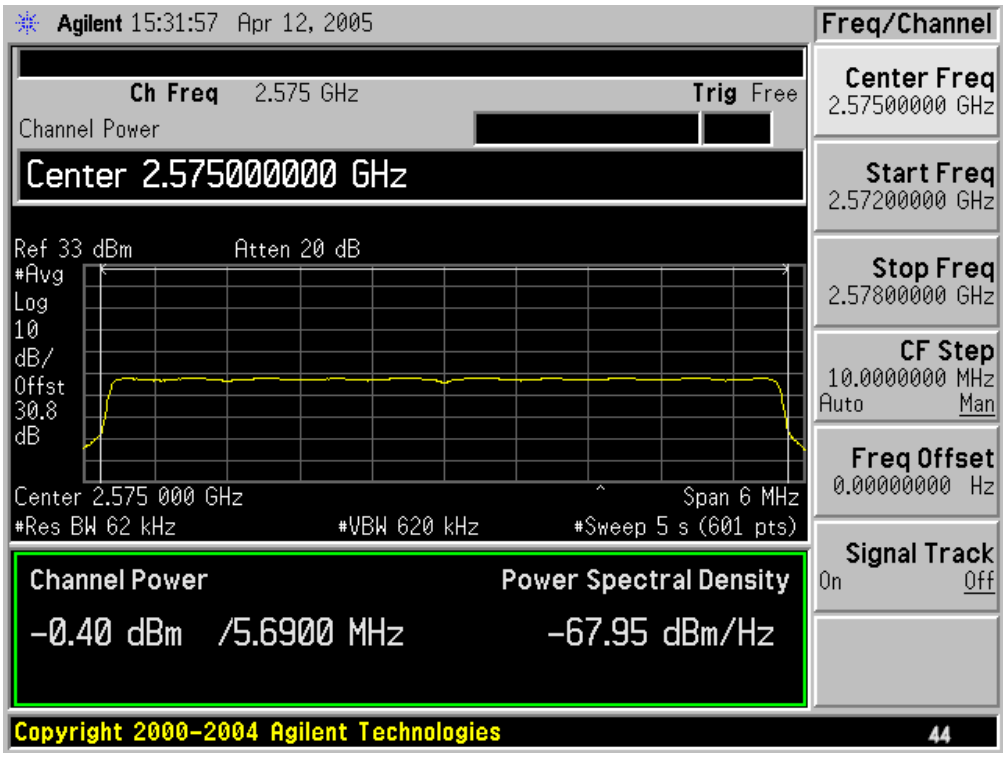
# 2W RF Power Output – Conducted (Minimum)
# 16-QAM



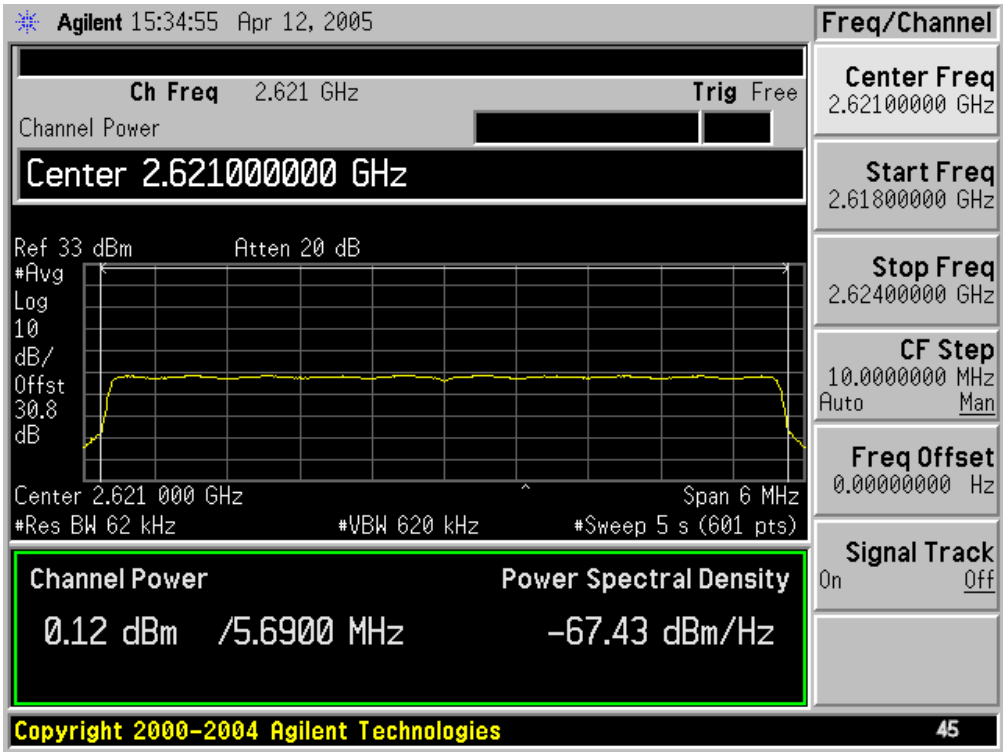



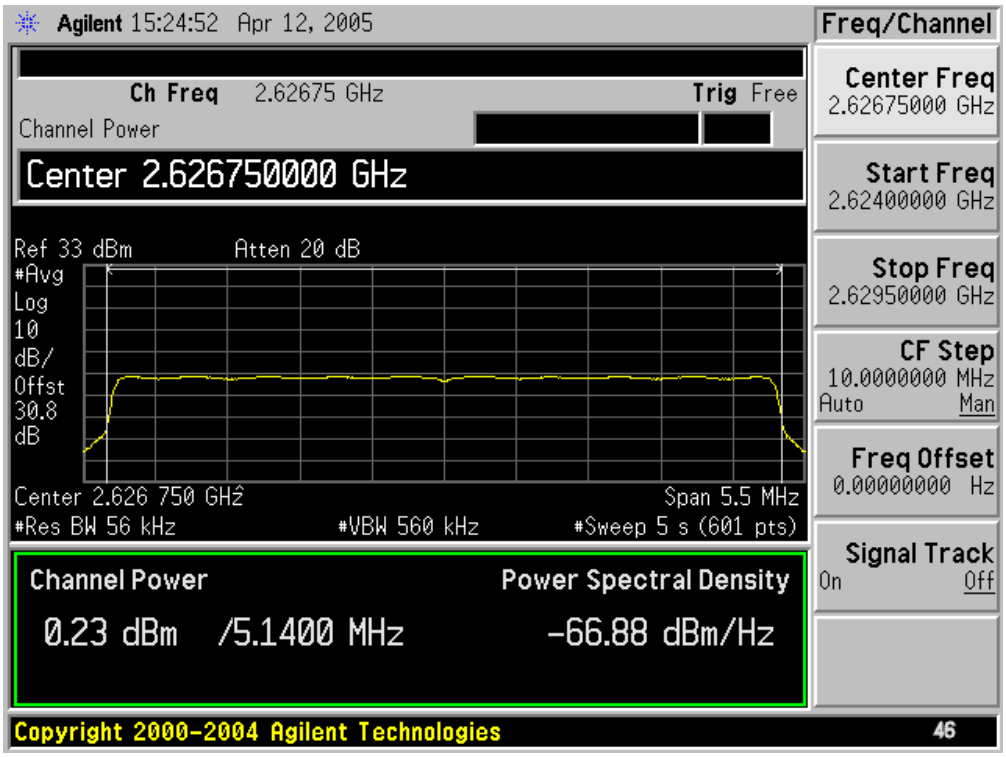
# 2W RF Power Output – Conducted (Minimum)
# 16-QAM (Cont'd)



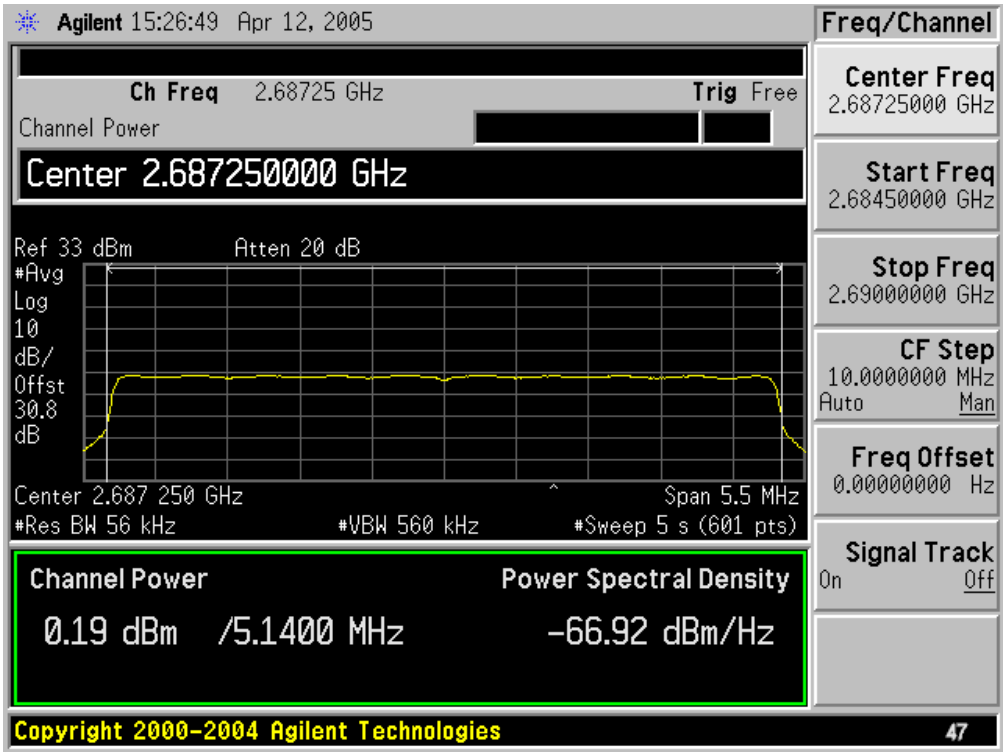



# 2W RF Power Output – Conducted (Minimum)
# 4-QAM (Cont'd)

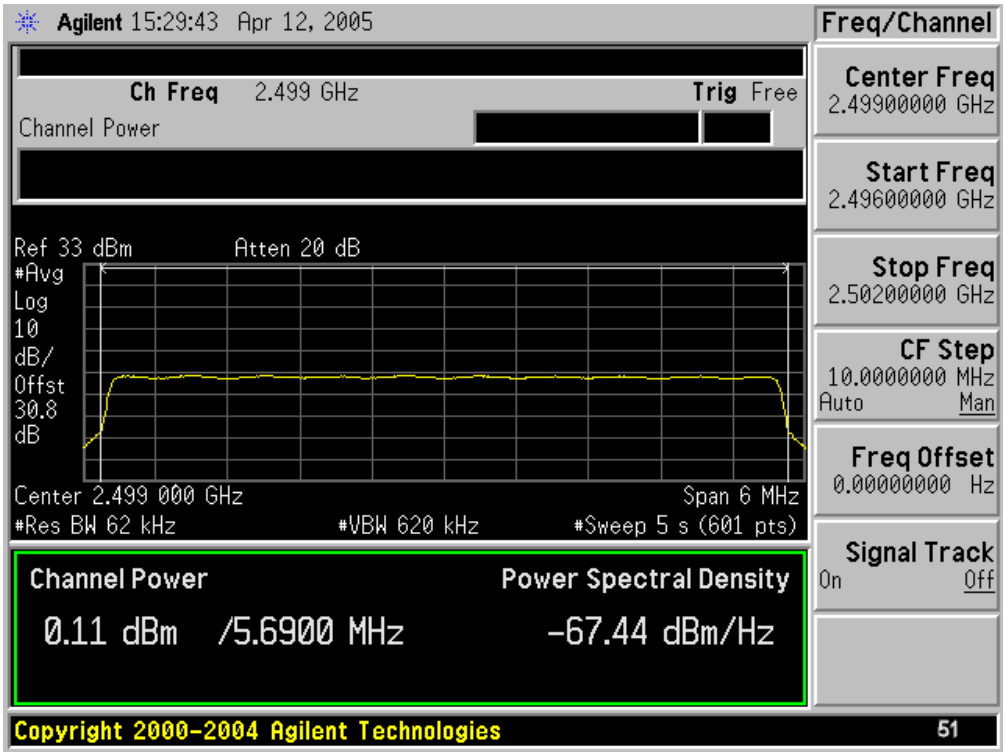


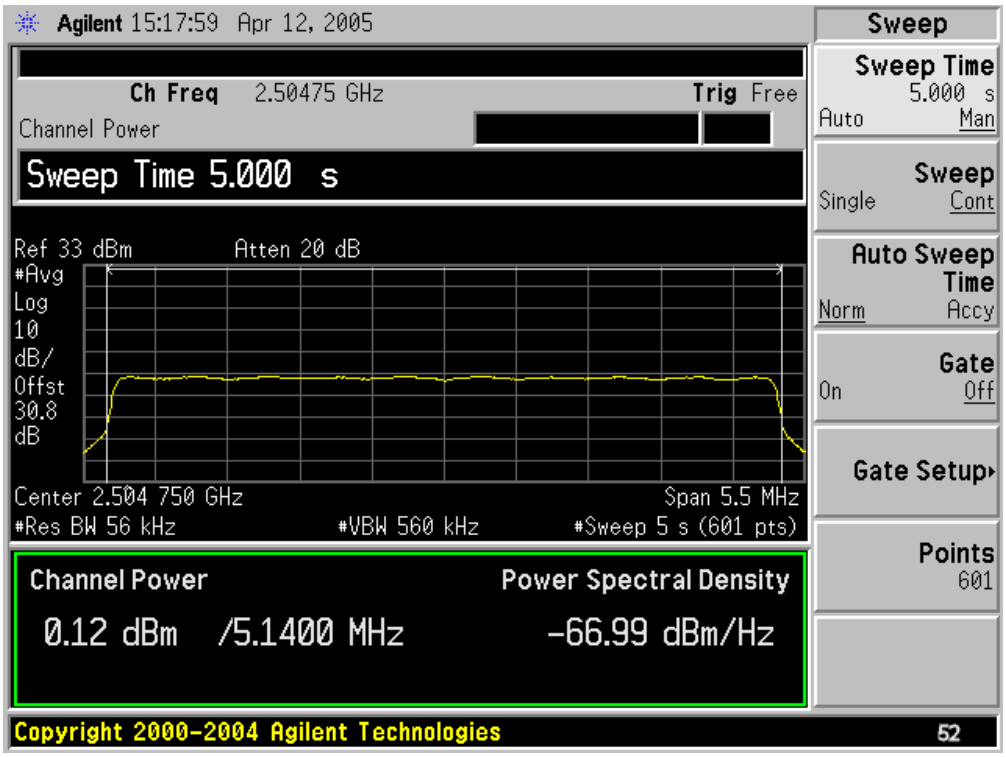



# 2W RF Power Output – Conducted (Minimum)
# 16-QAM (Cont'd)

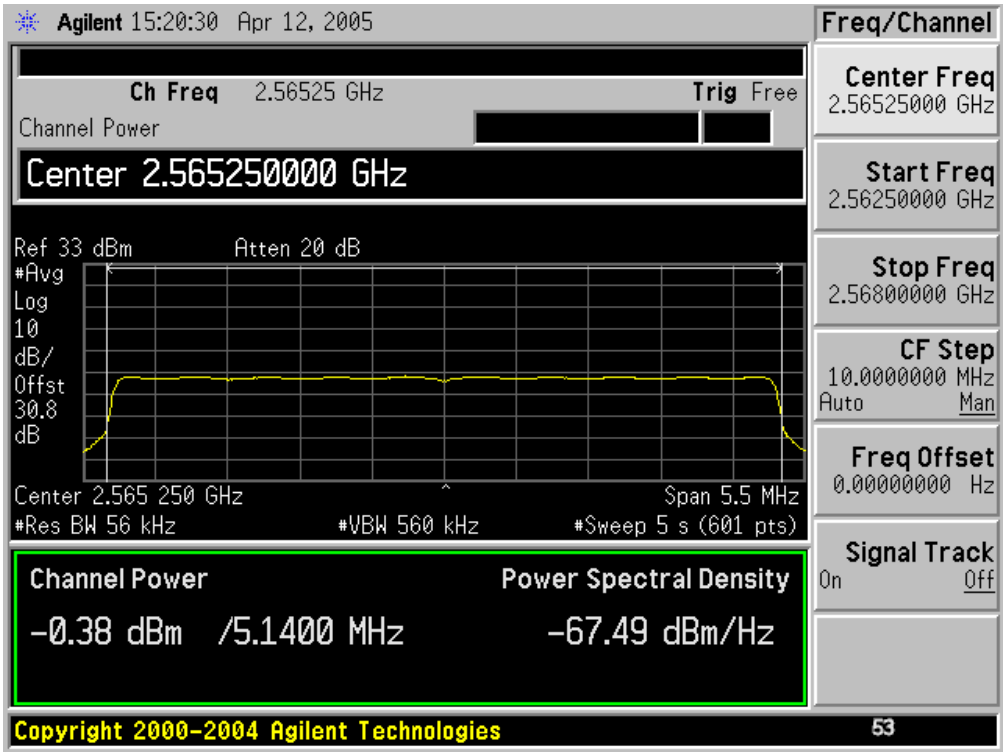


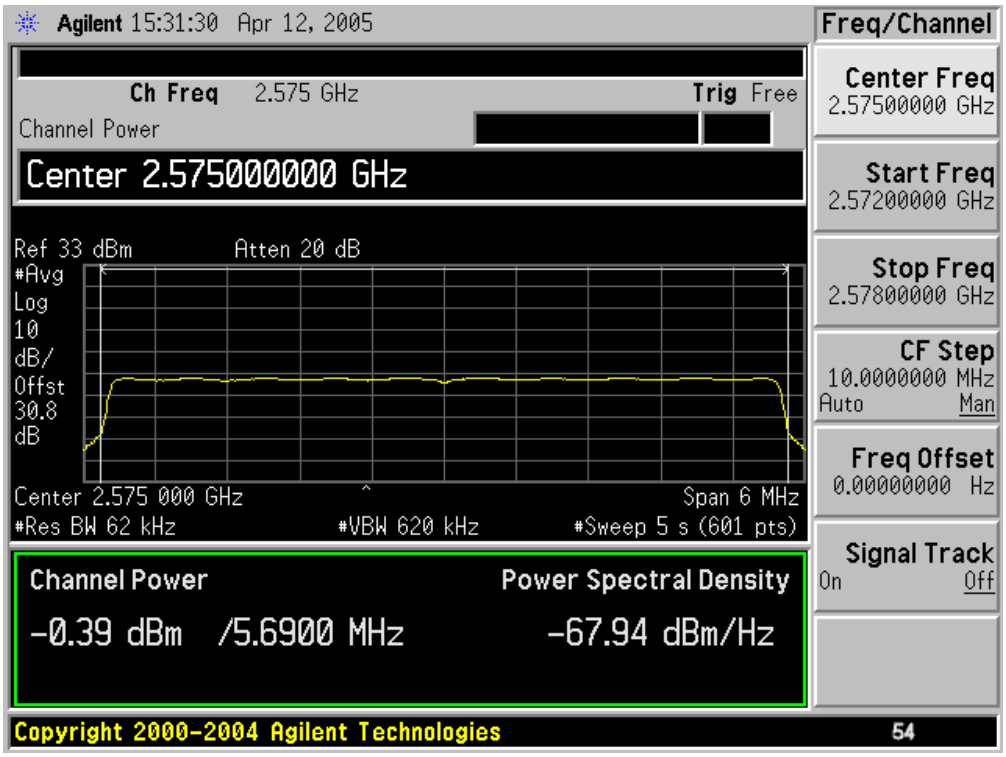
# 2W RF Power Output – Conducted (Minimum)
# 64-QAM



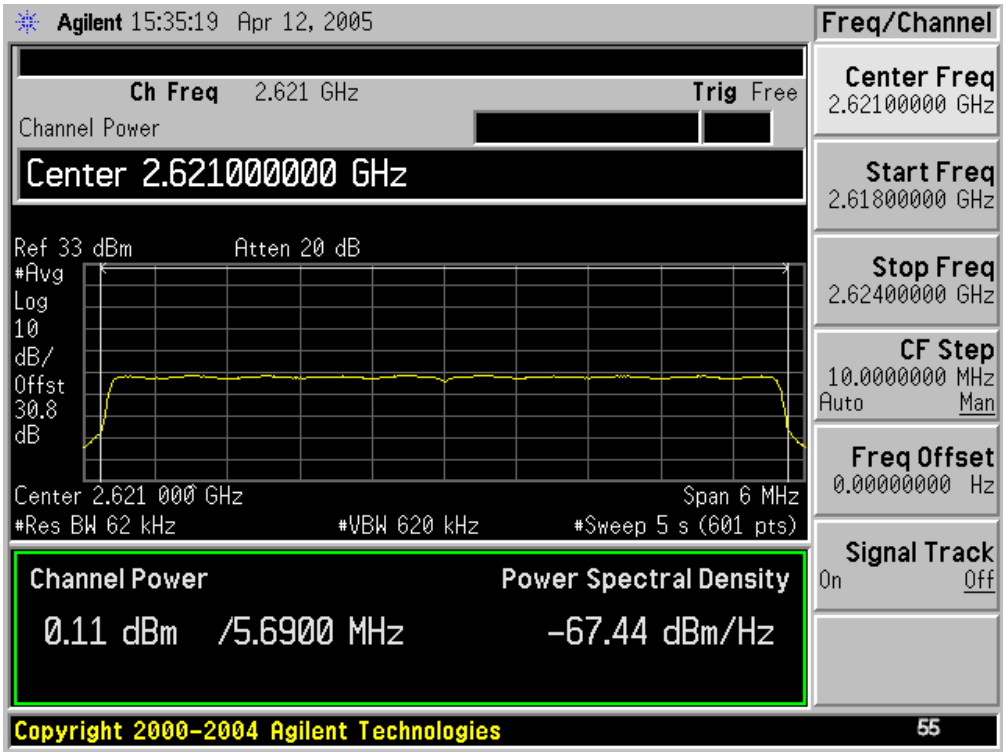



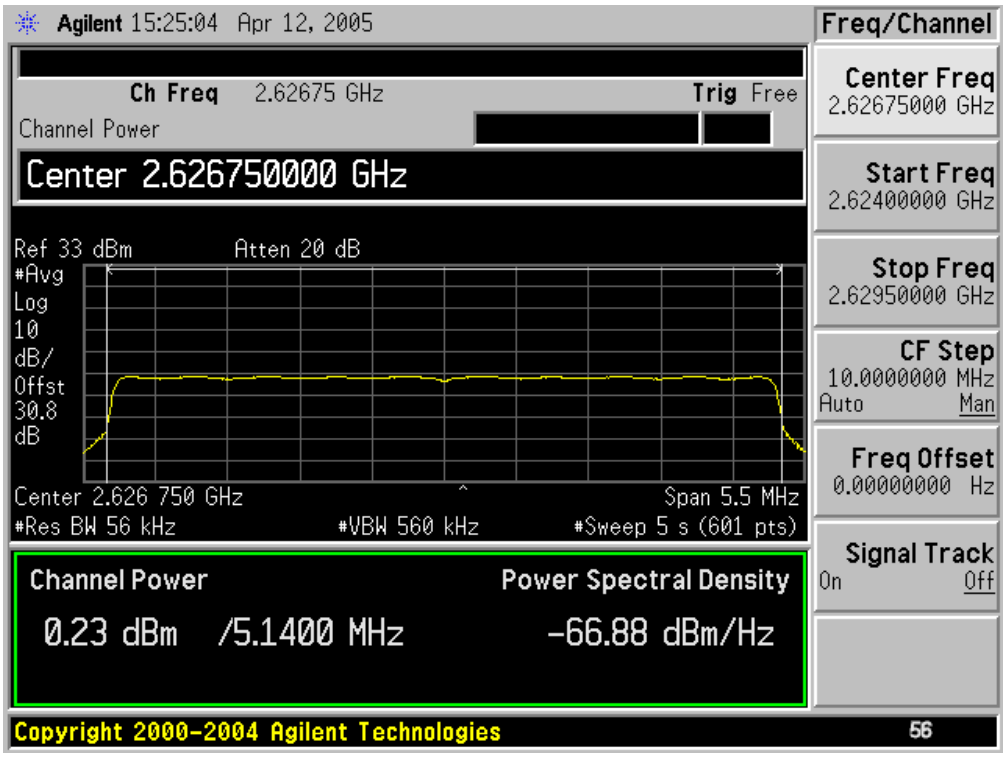
# 2W RF Power Output – Conducted (Minimum)
# 64-QAM (Cont'd)



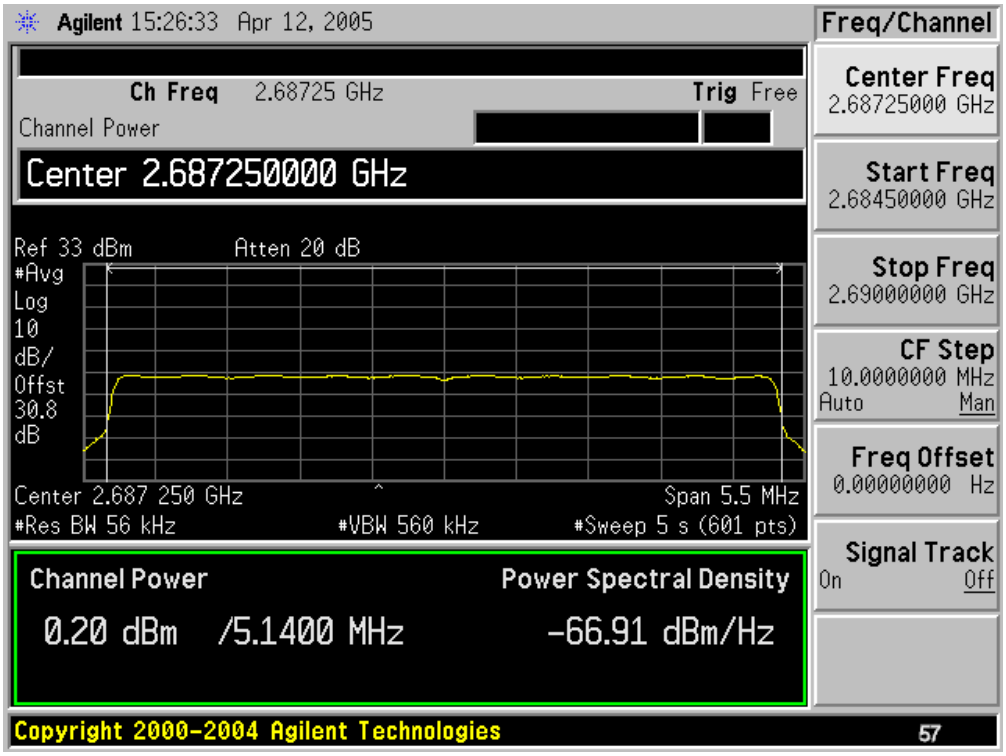



# 2W RF Power Output – Conducted (Minimum)
# 64-QAM (Cont'd)

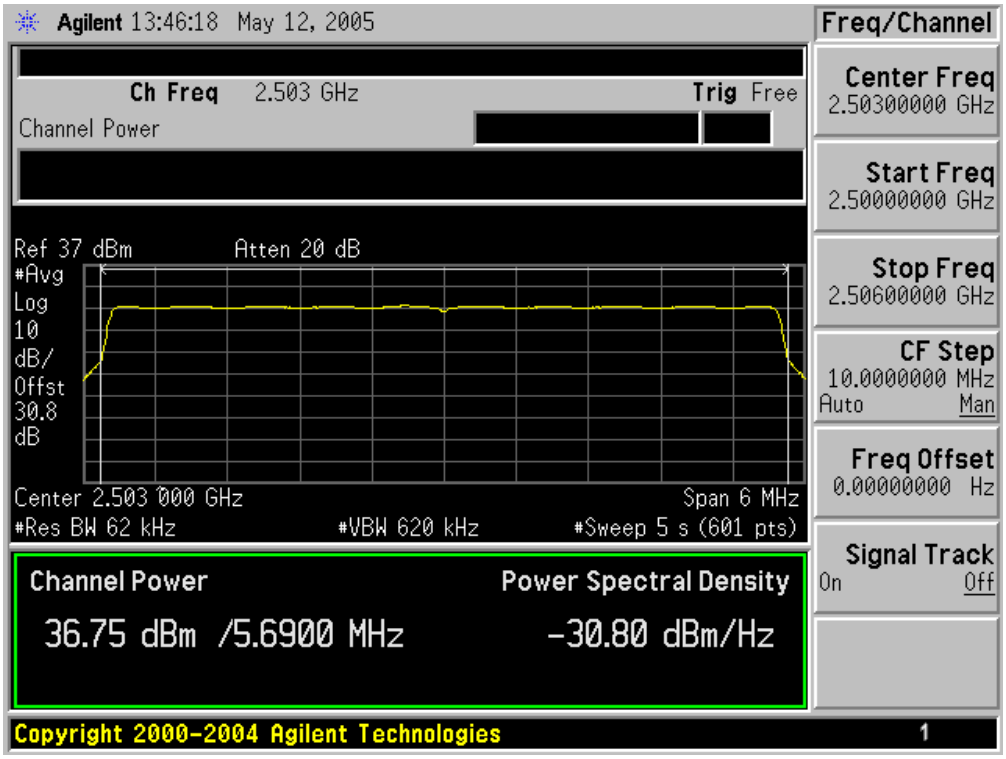


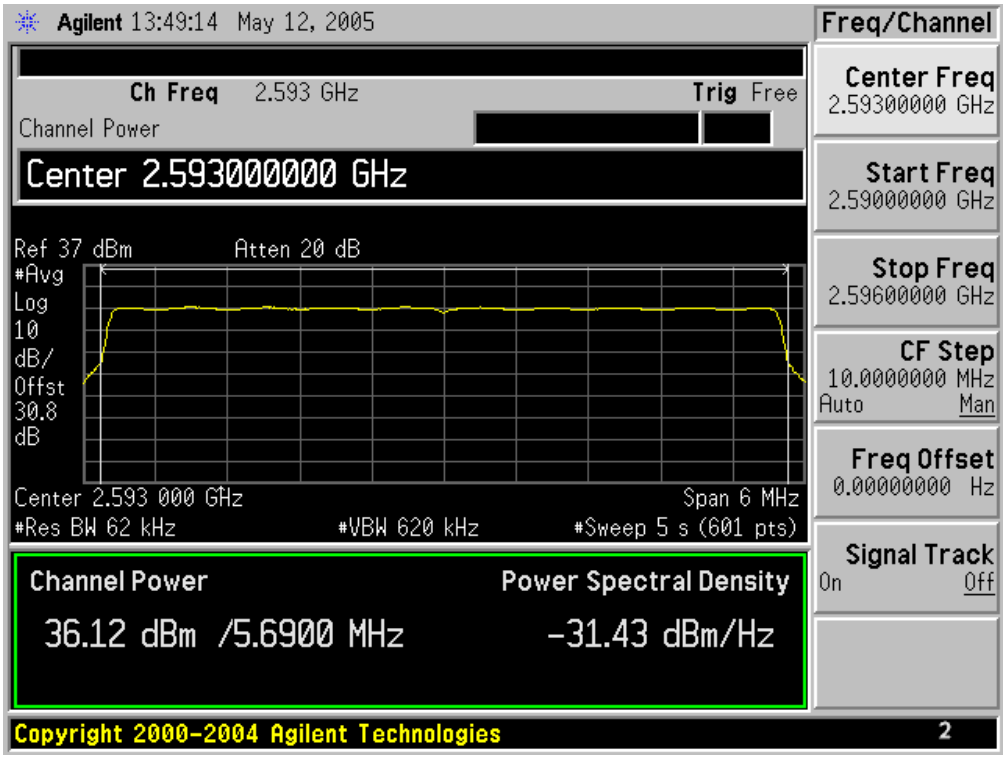



# 2W RF Power Output – Conducted (Minimum)
# 64-QAM (Cont'd)

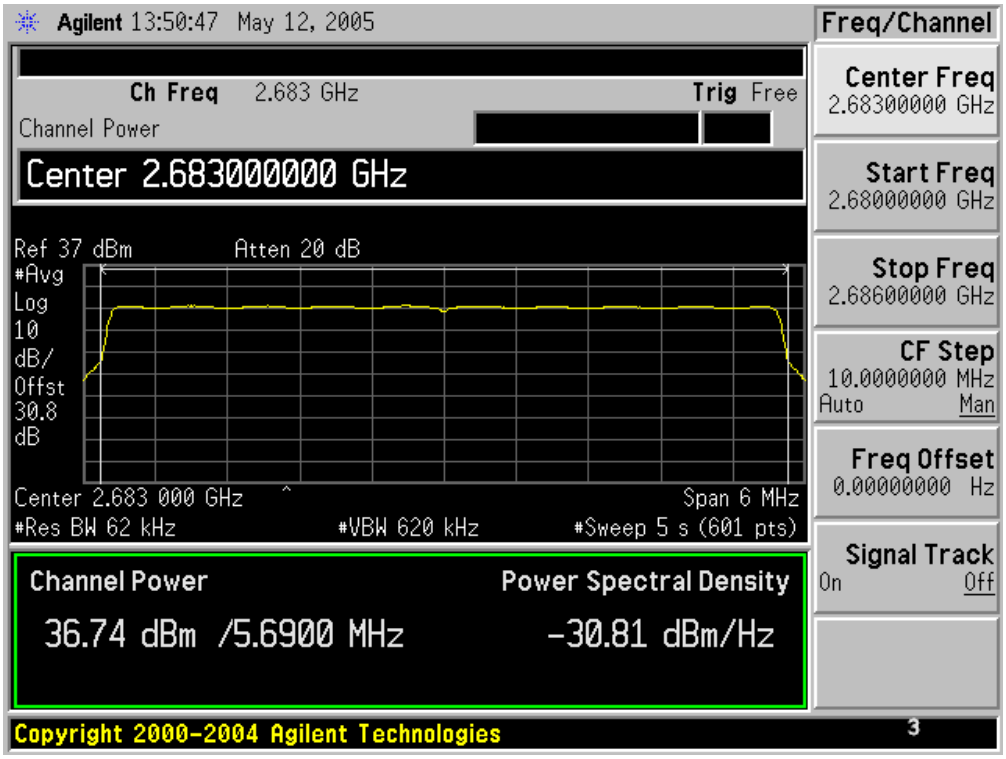


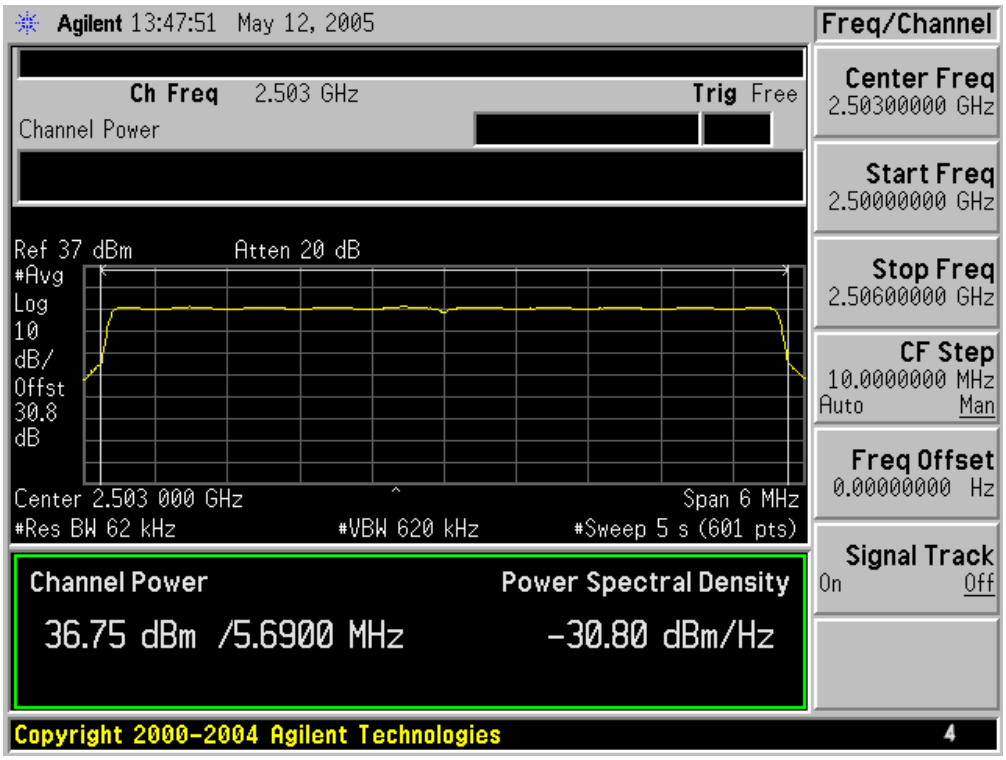
# 5W Conducted RF Power Output Spectrum Analyzer Plots
# 4-QAM (Maximum)



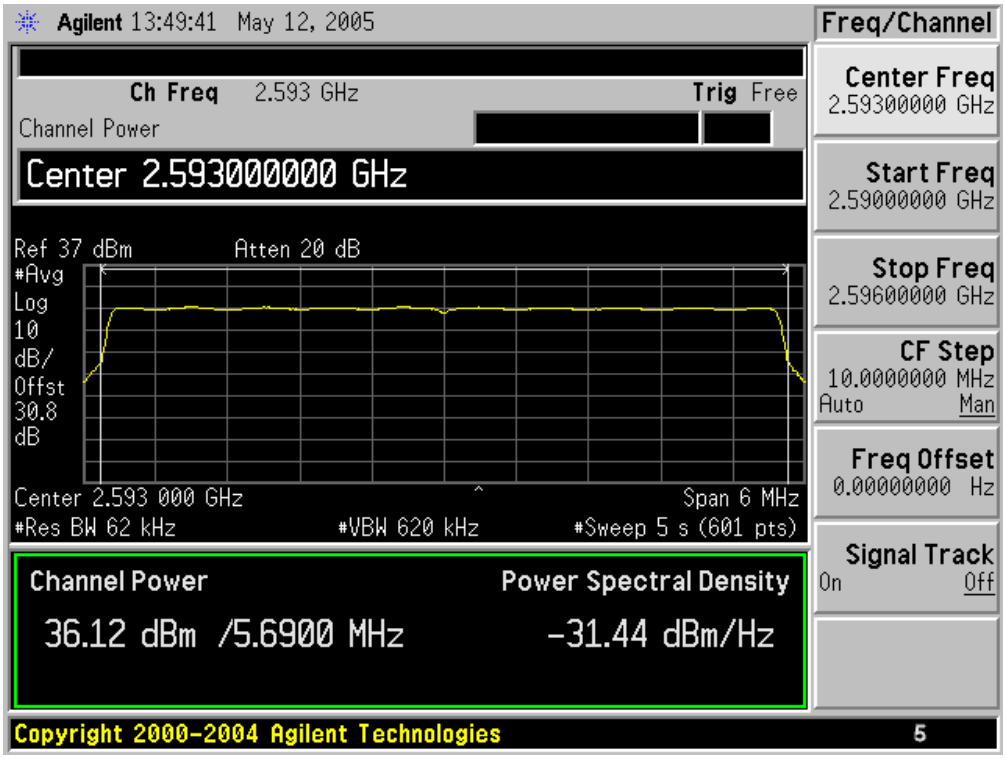



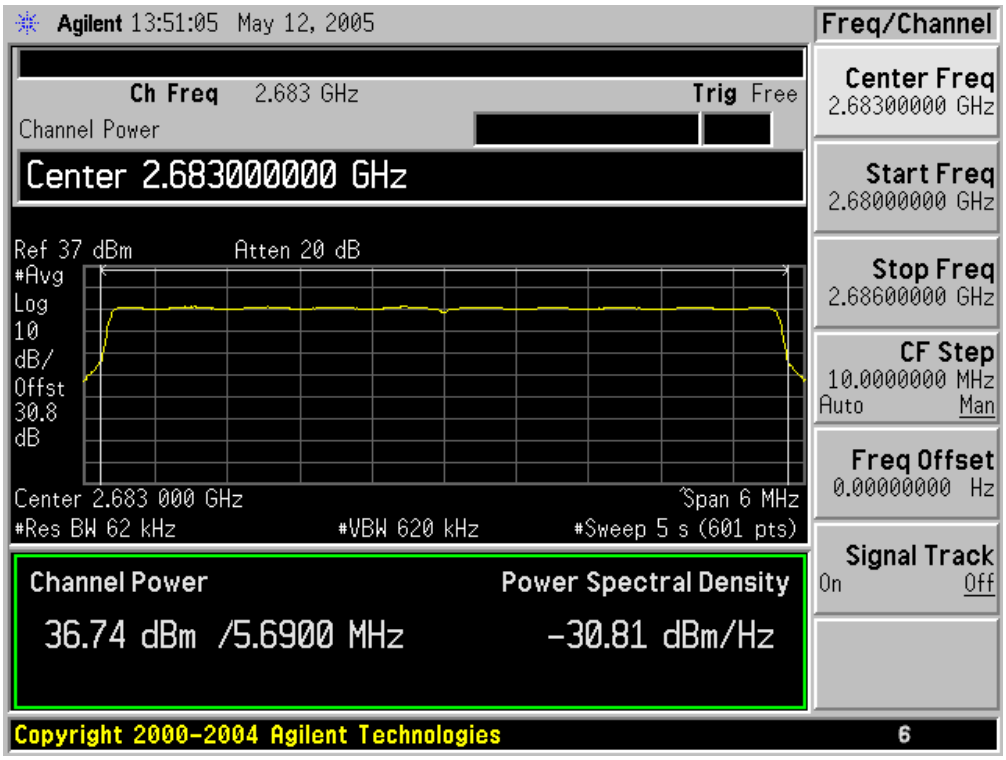
# 5W RF Power Output – Conducted (Maximum)
# 4-QAM (Cont'd)



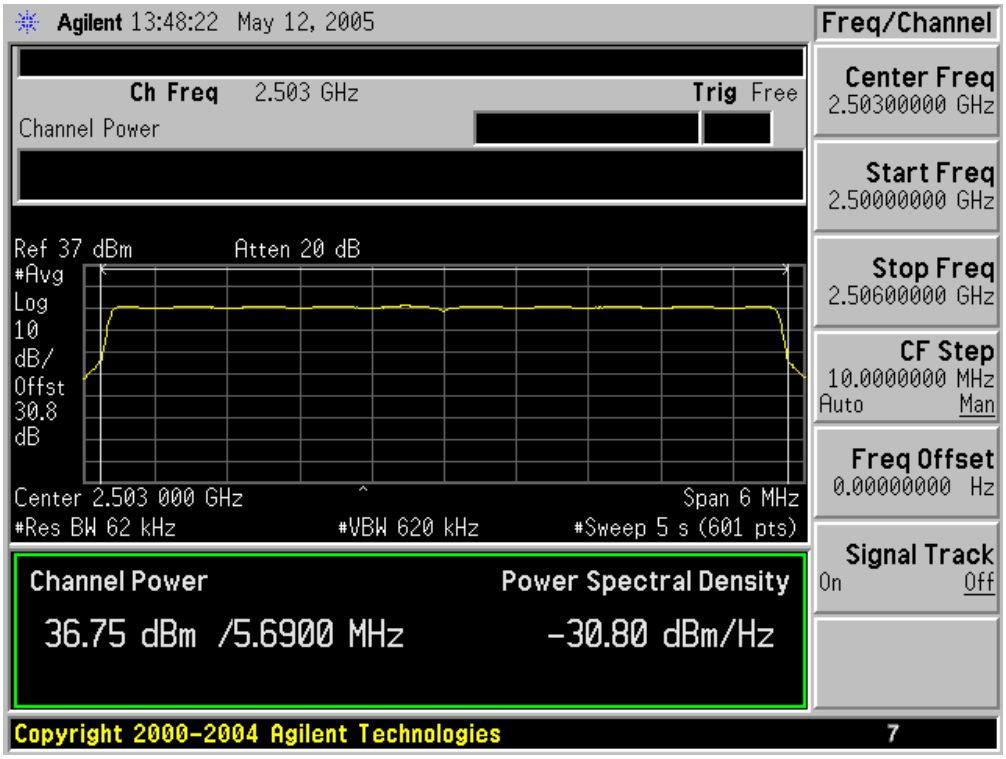



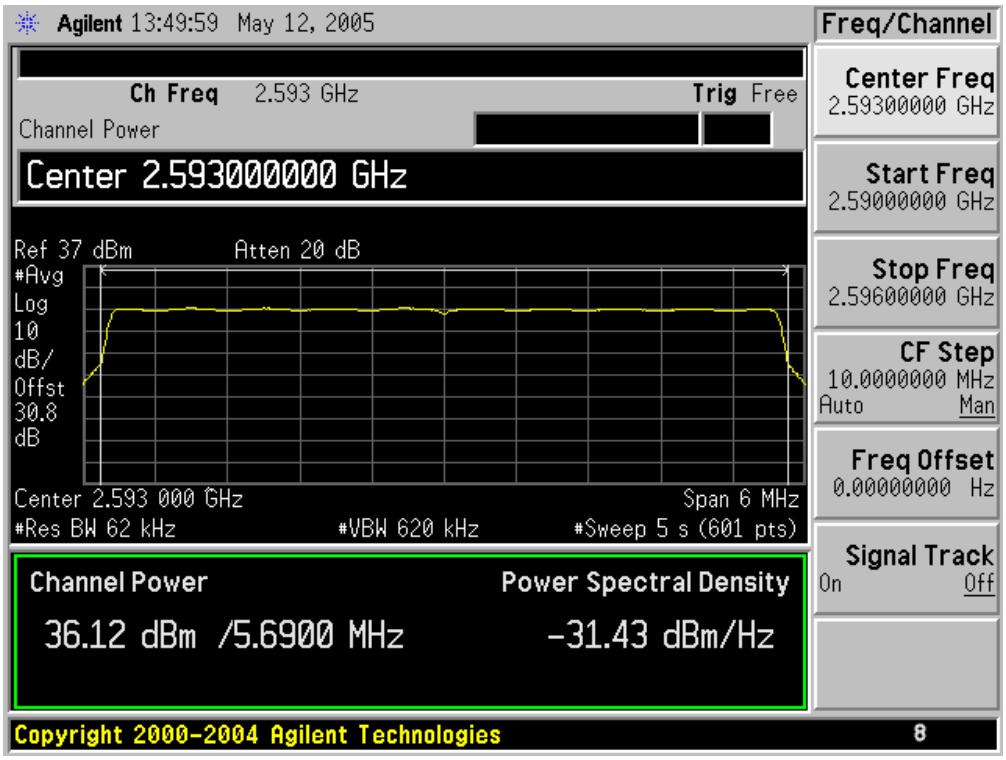
# 5W RF Power Output – Conducted (Maximum)
# 4-QAM (Cont'd)



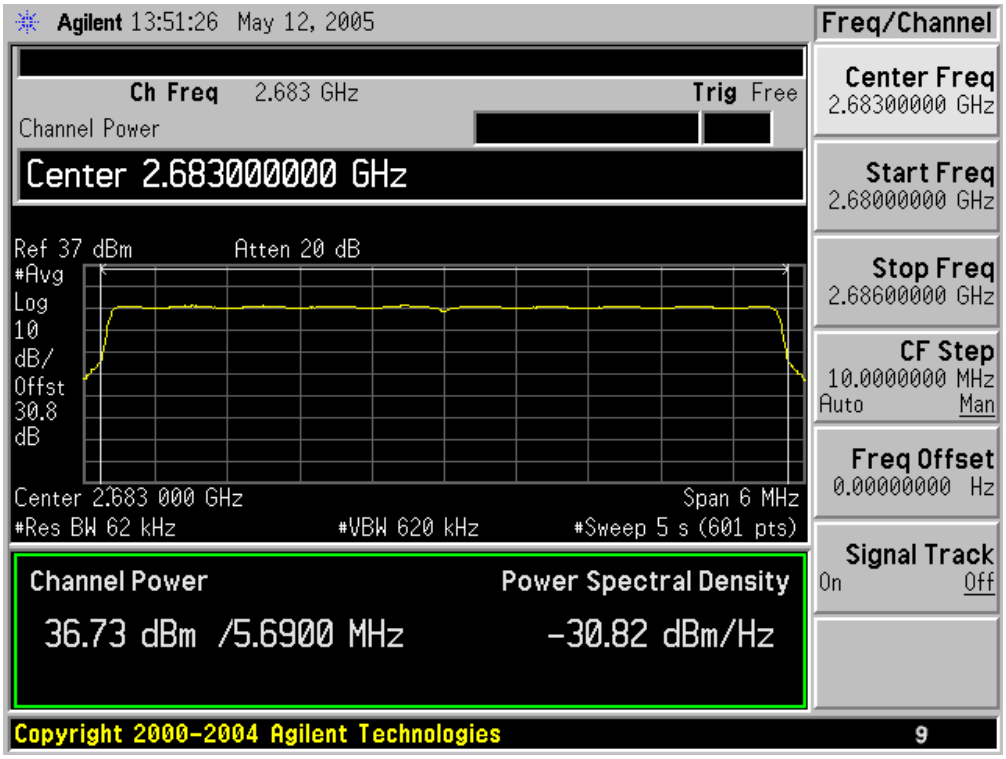



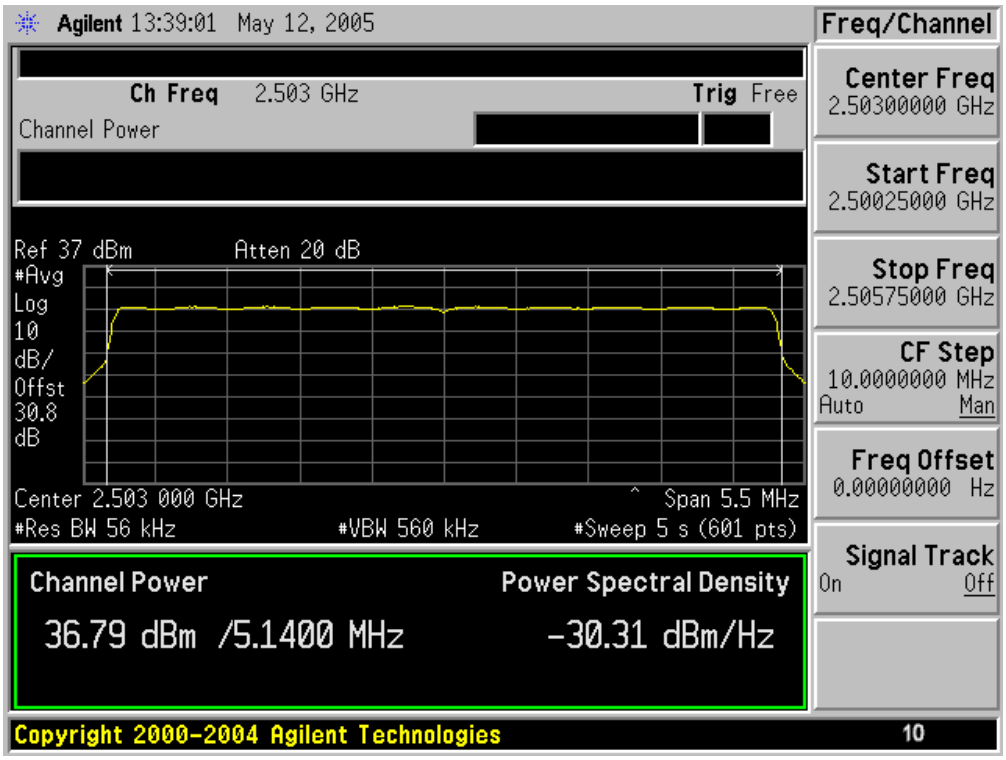
# 5W RF Power Output – Conducted (Maximum)
# 16-QAM



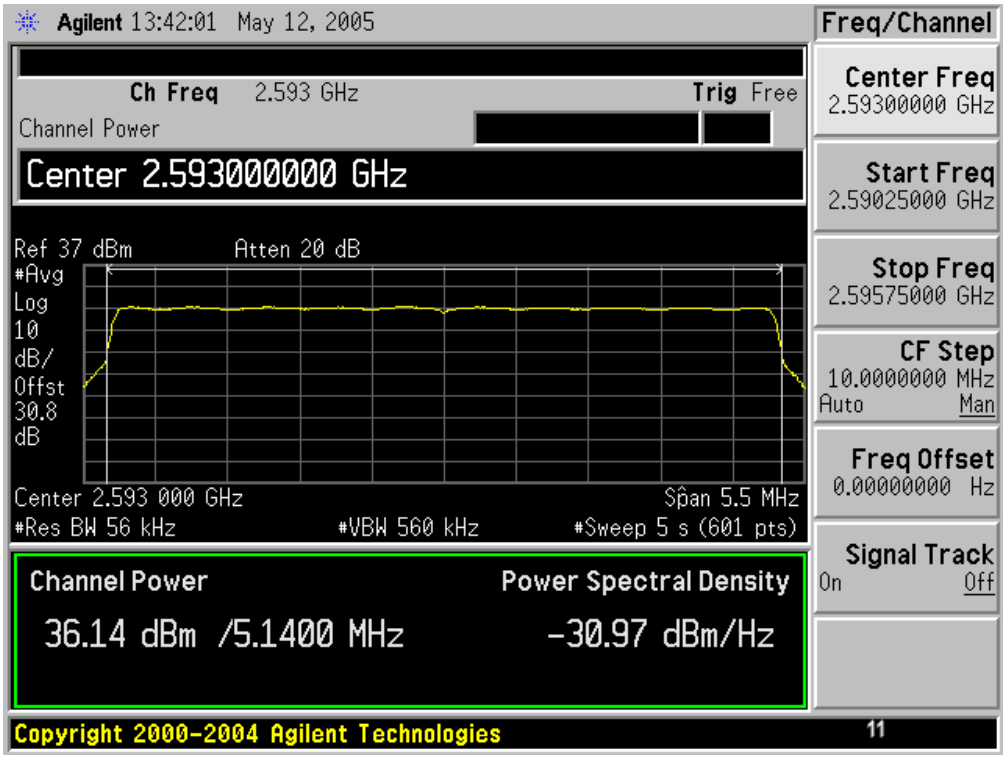



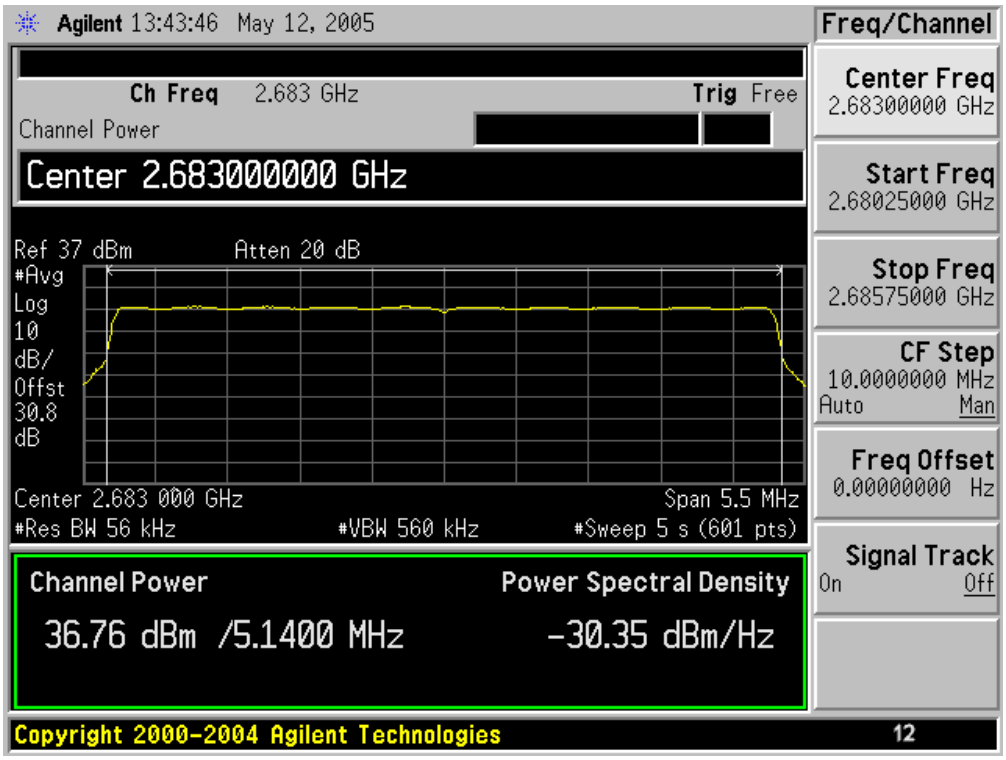
# 5W RF Power Output – Conducted (Maximum)
# 16-QAM (Cont'd)



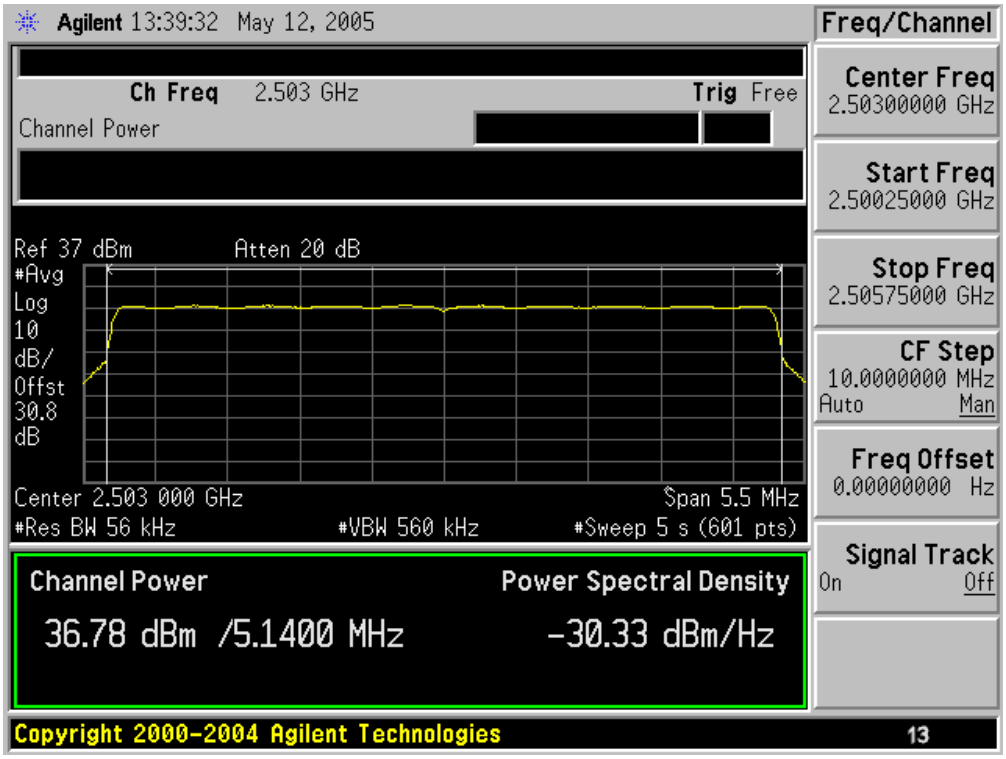



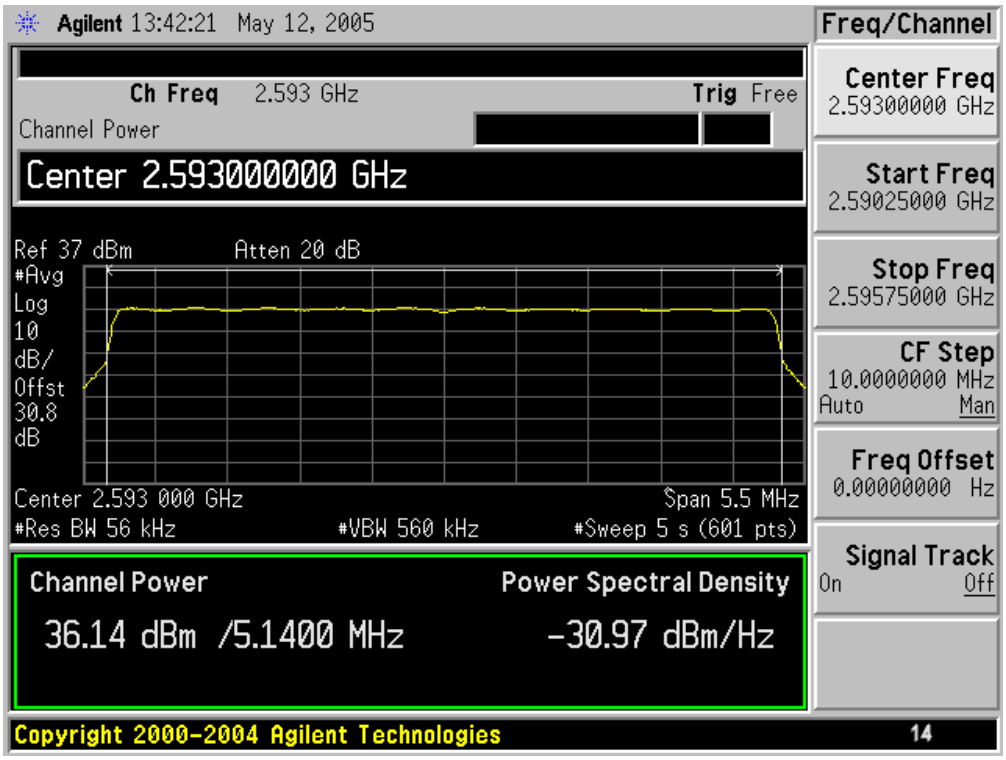
# 5W RF Power Output – Conducted (Maximum)
# 16-QAM (Cont'd)



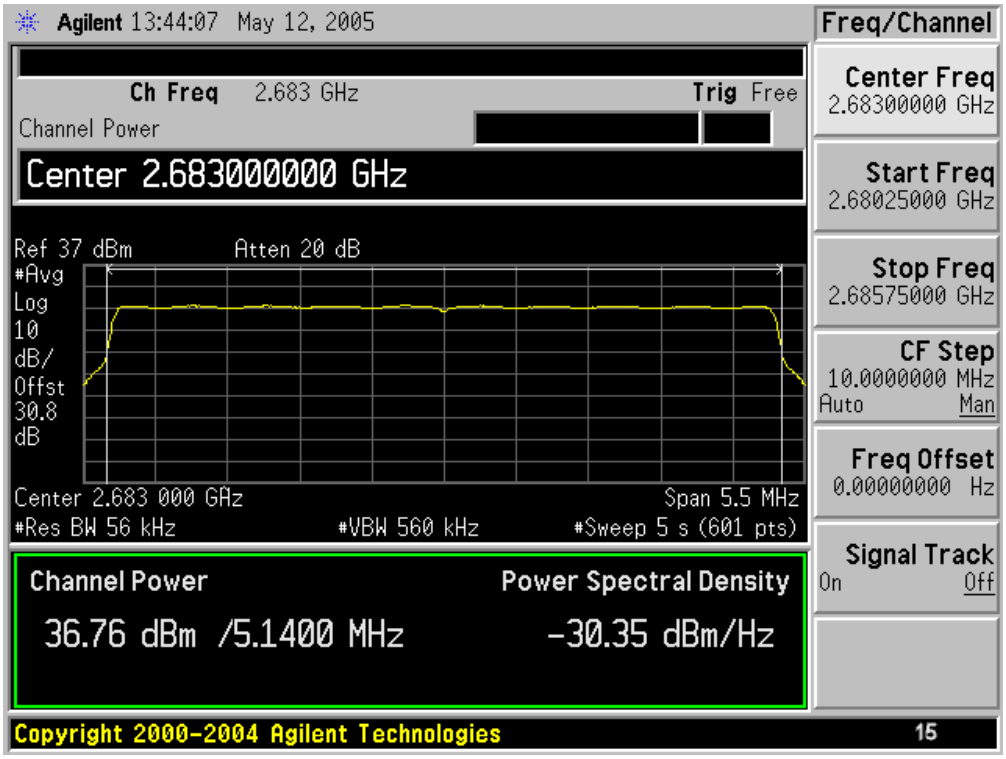



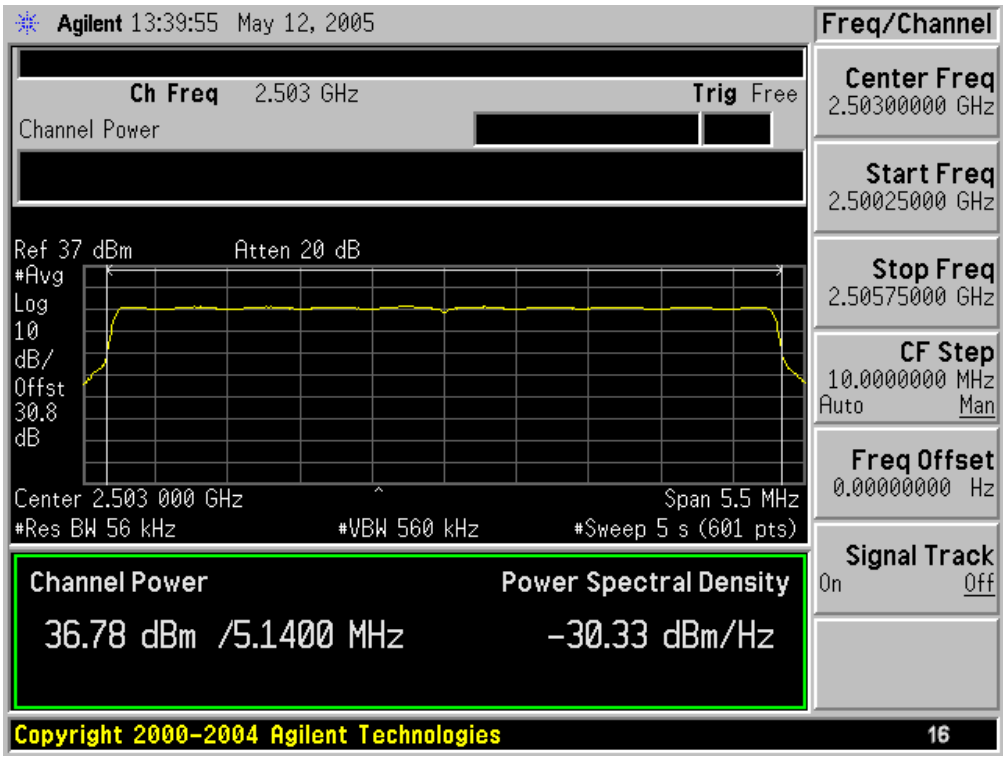
# 5W RF Power Output – Conducted (Maximum)
# 64-QAM



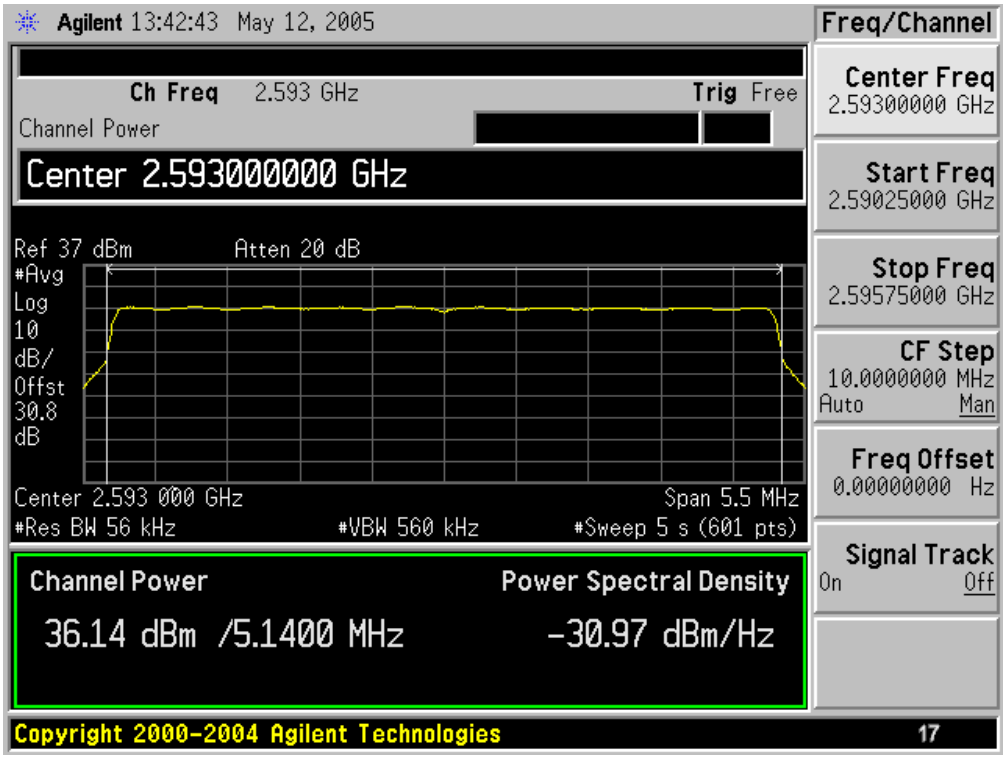



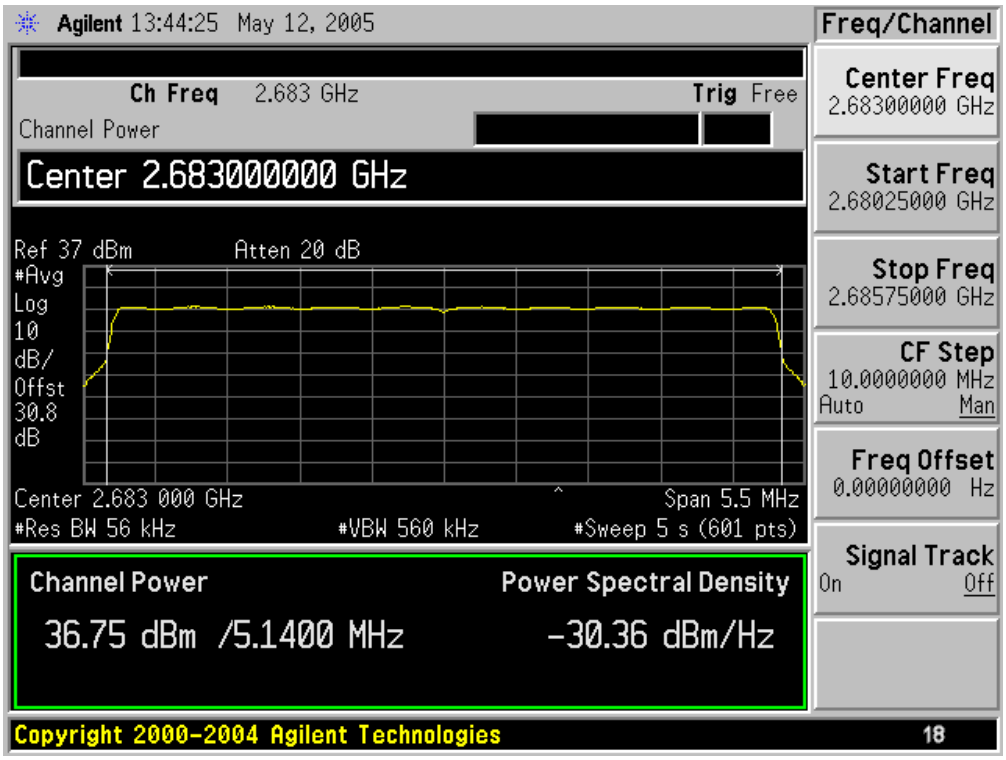
# 5W RF Power Output – Conducted (Maximum)
# 64-QAM (Cont'd)



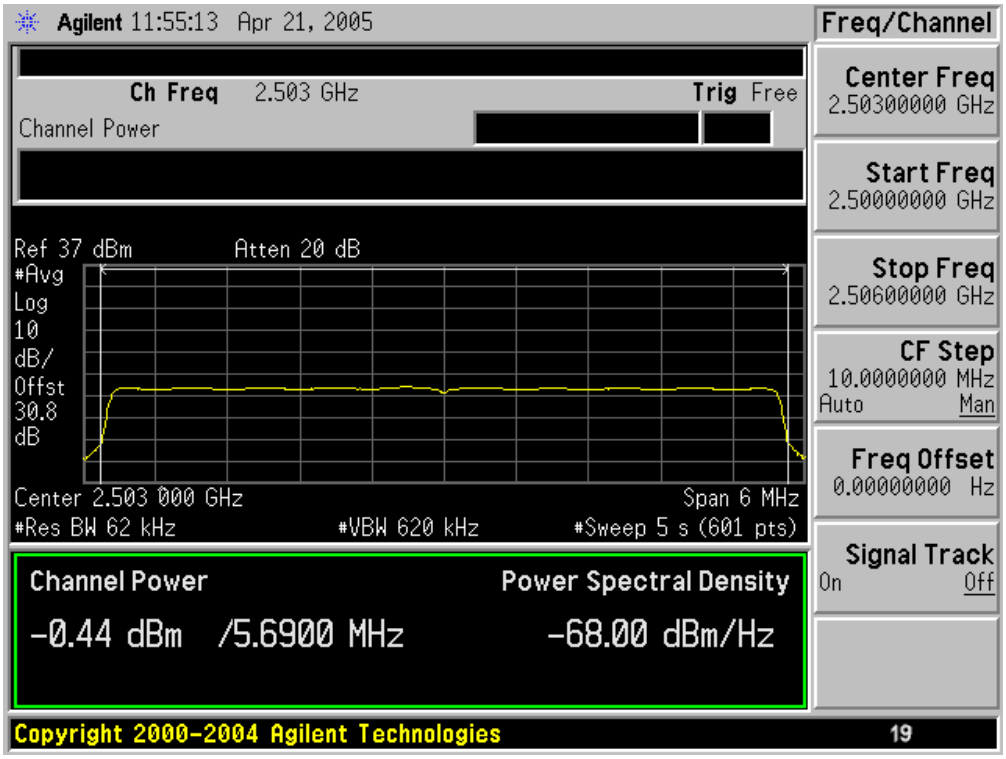



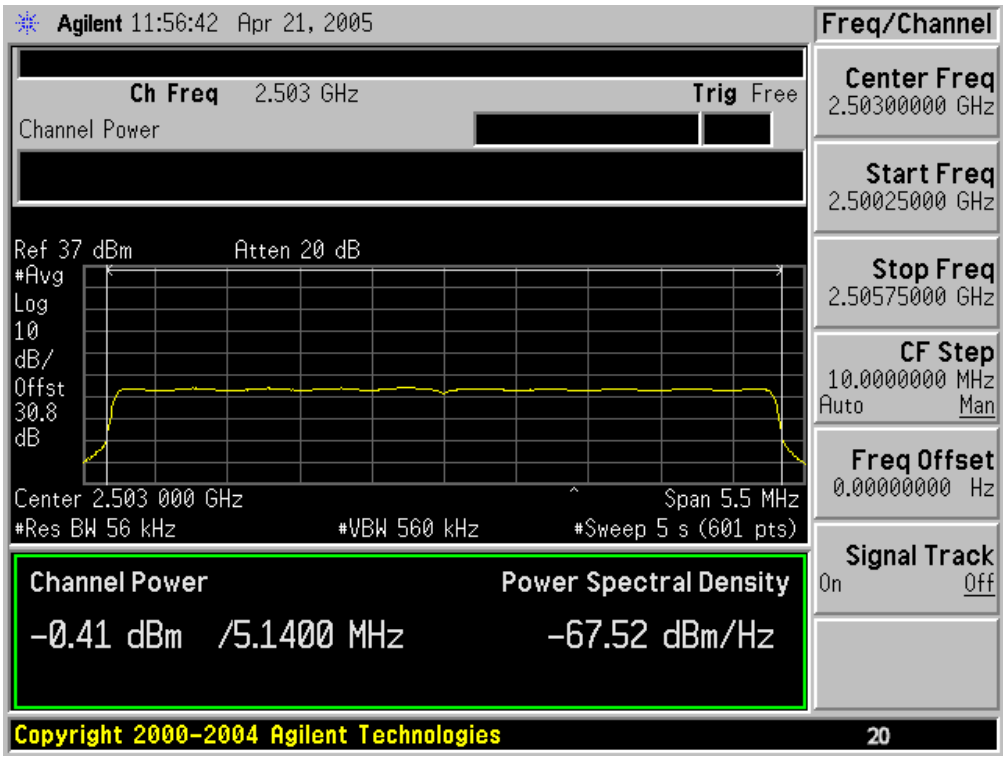
# 5W RF Power Output – Conducted (Maximum)
# 64-QAM (Cont'd)



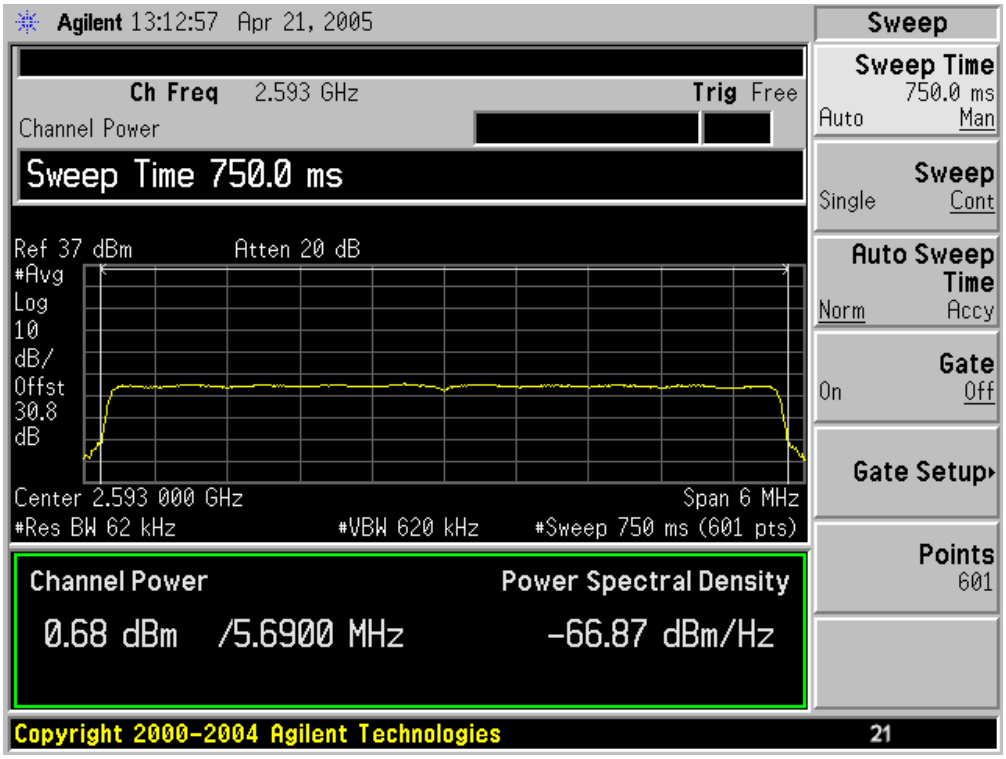



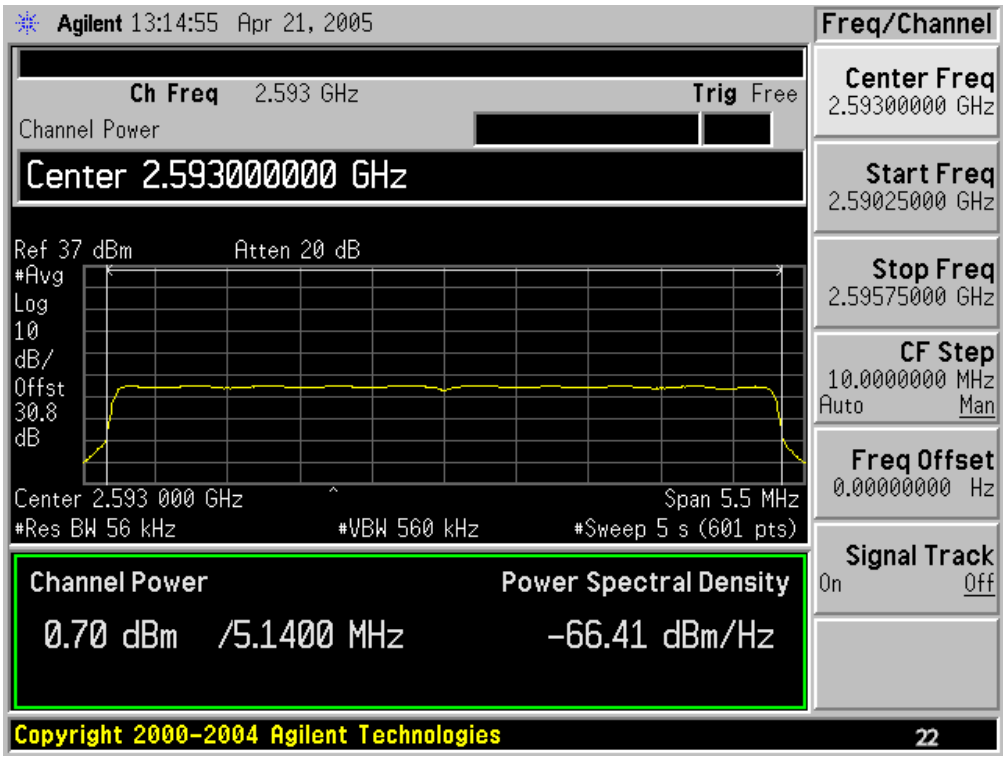
# 5W RF Power Output – Conducted (Minimum)
# 4-QAM



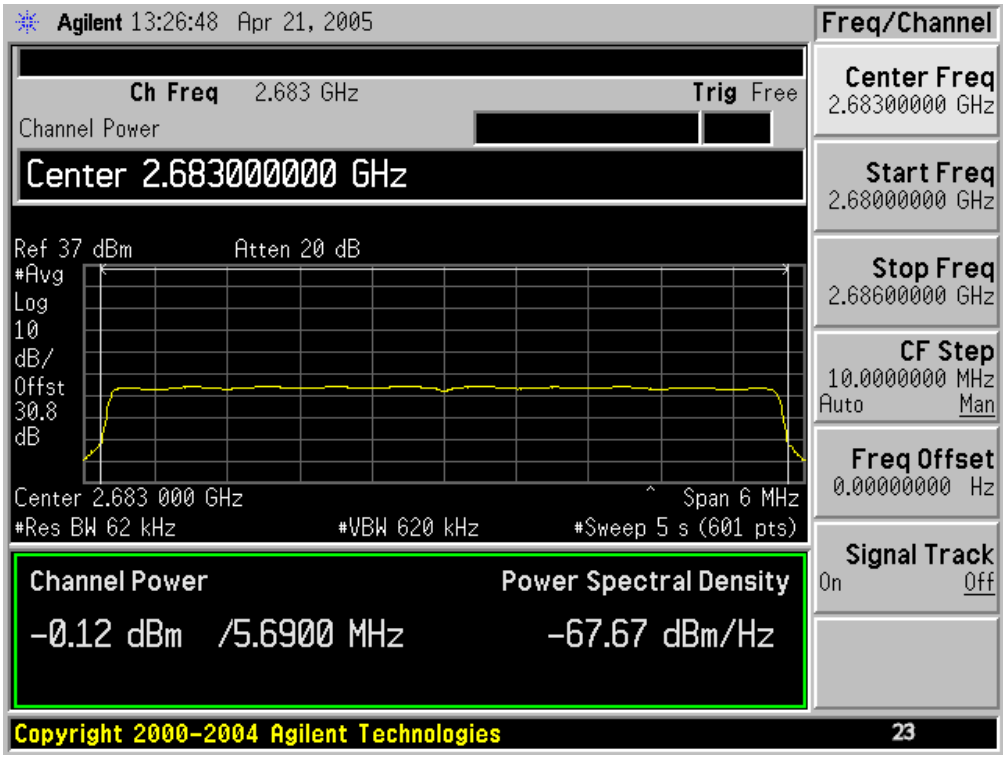



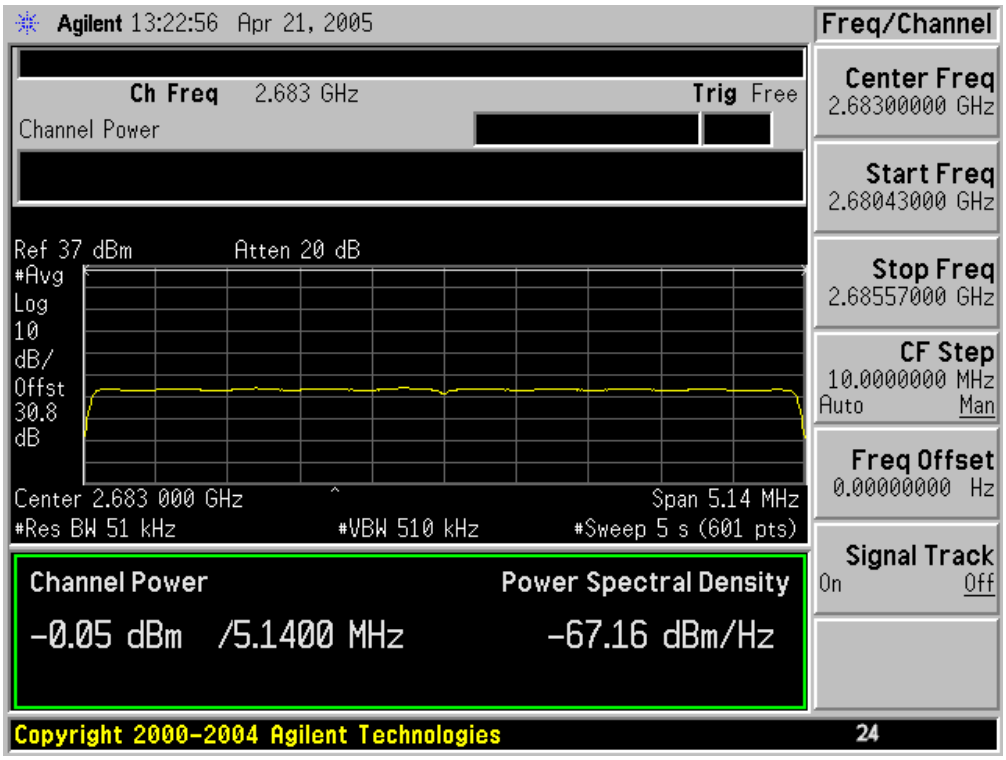
# 5W RF Power Output – Conducted (Minimum)
# 4-QAM (Cont'd)



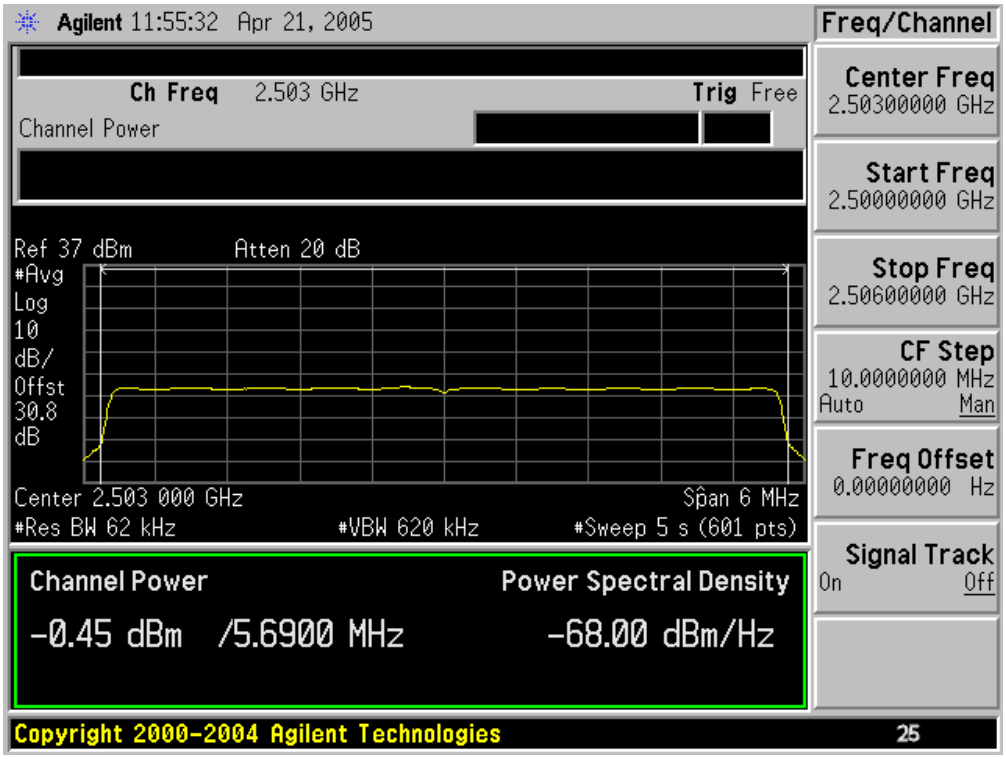



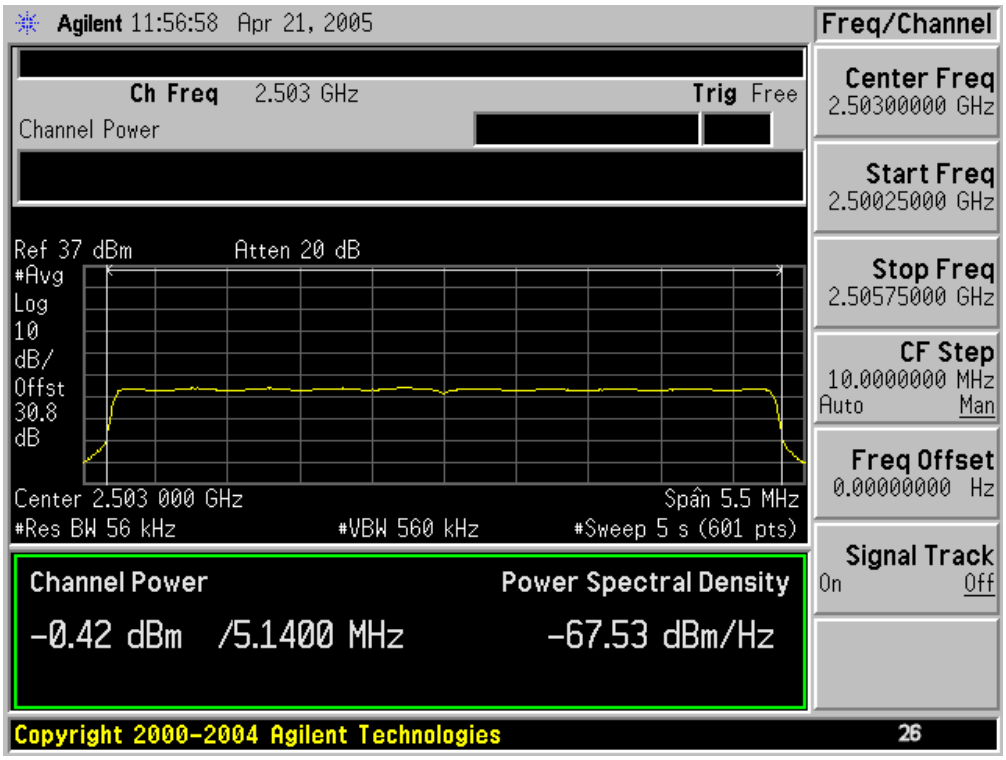
# 5W RF Power Output – Conducted (Minimum)
# 4-QAM (Cont'd)



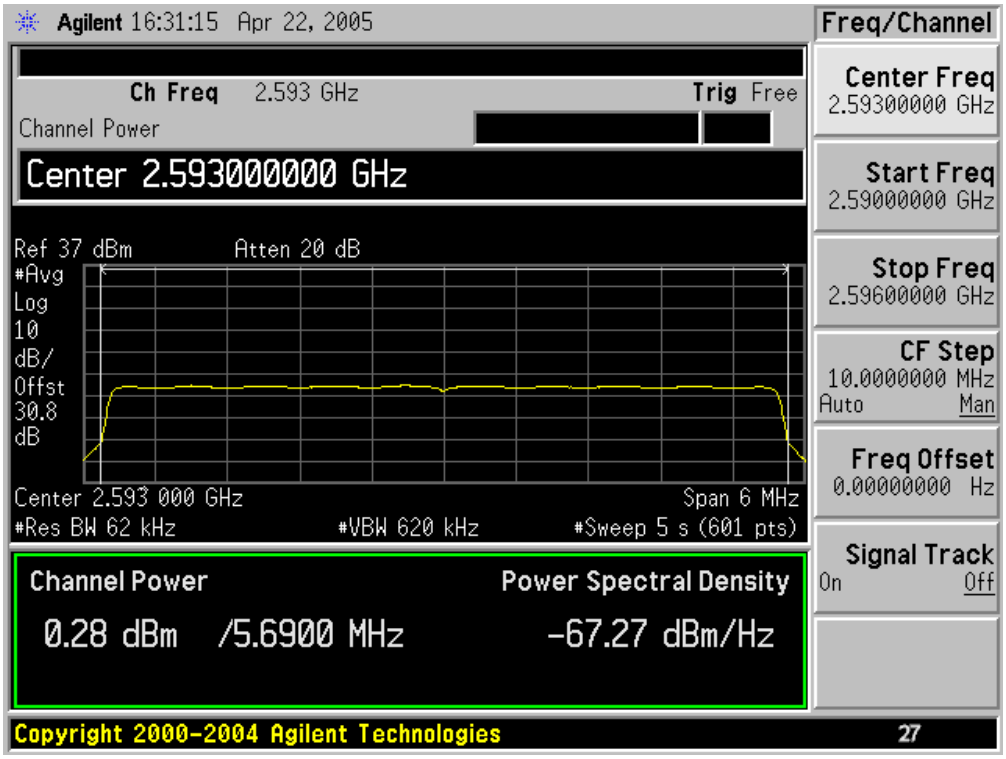



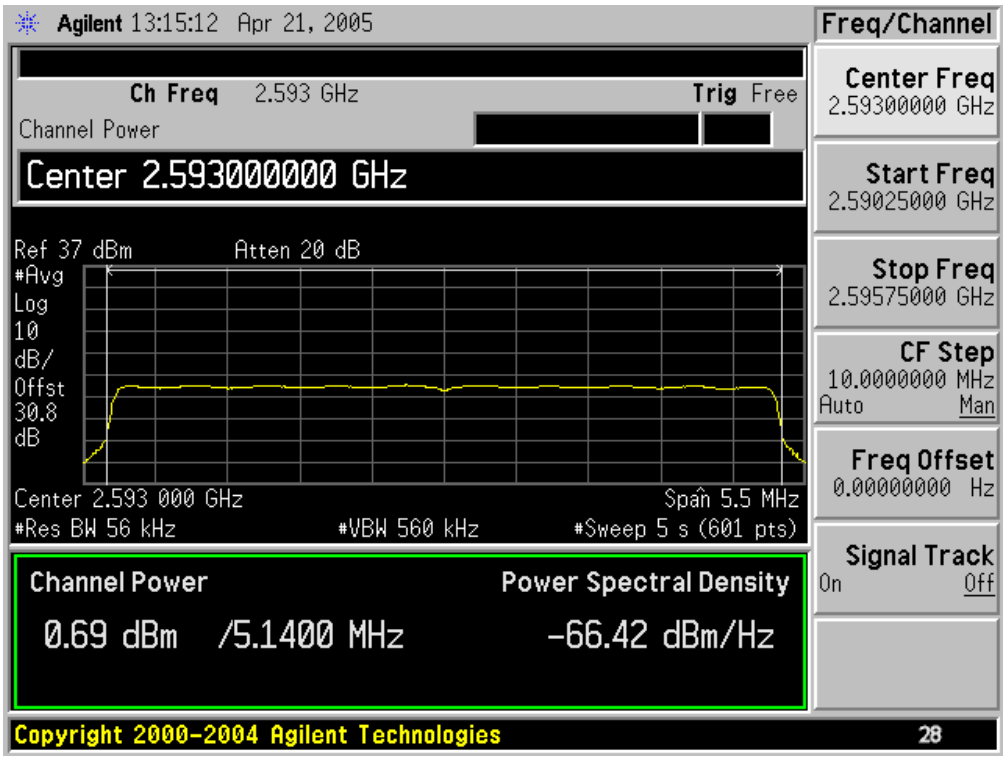
# 5W RF Power Output – Conducted (Minimum)
# 16-QAM



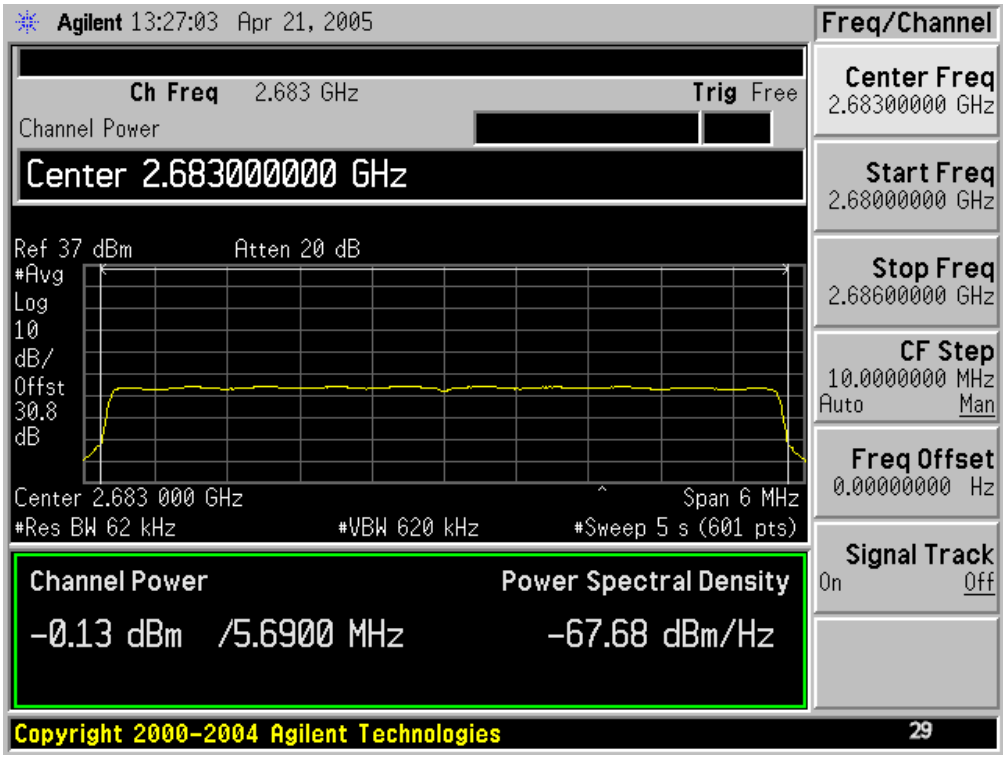



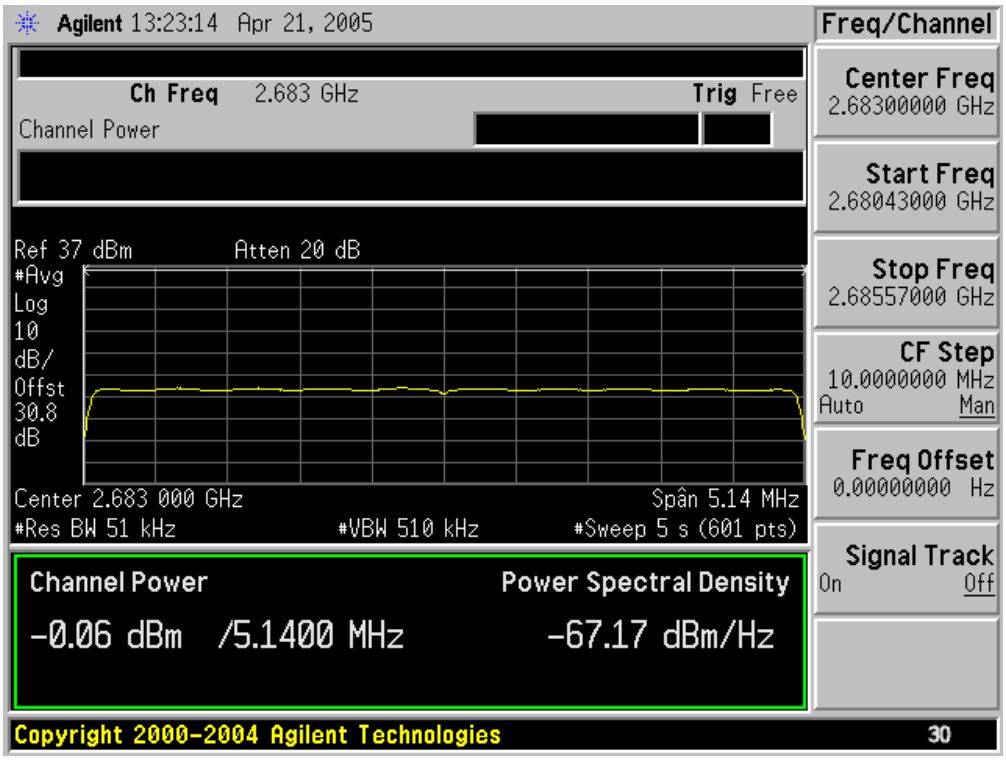
# 5W RF Power Output – Conducted (Minimum)
# 16-QAM (Cont'd)



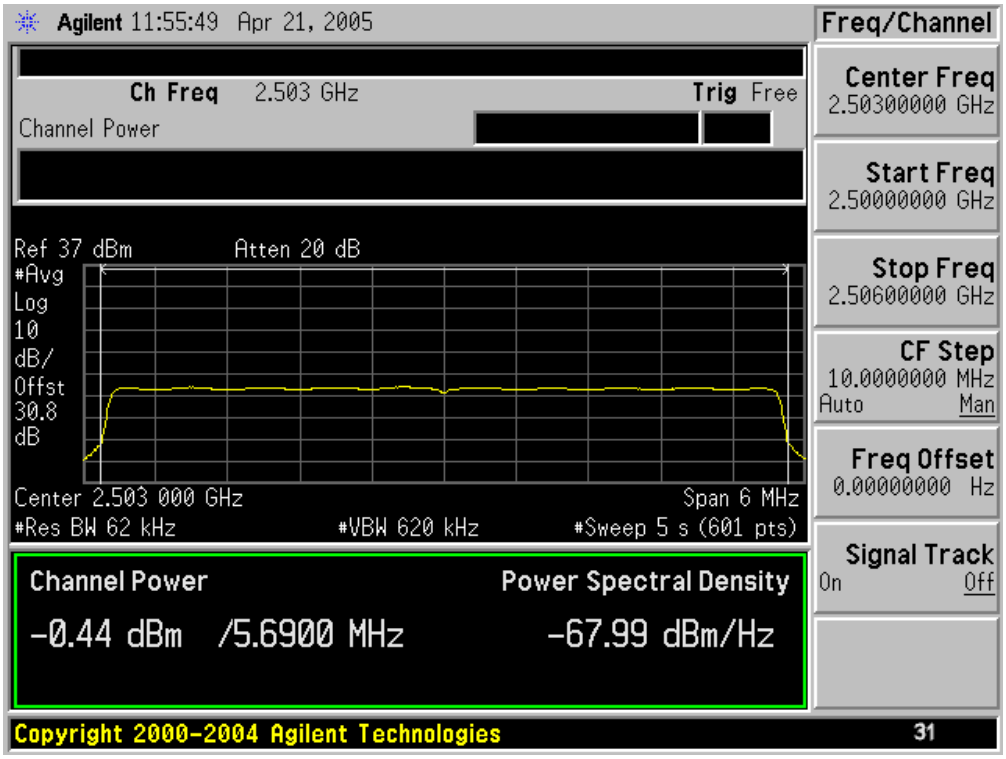



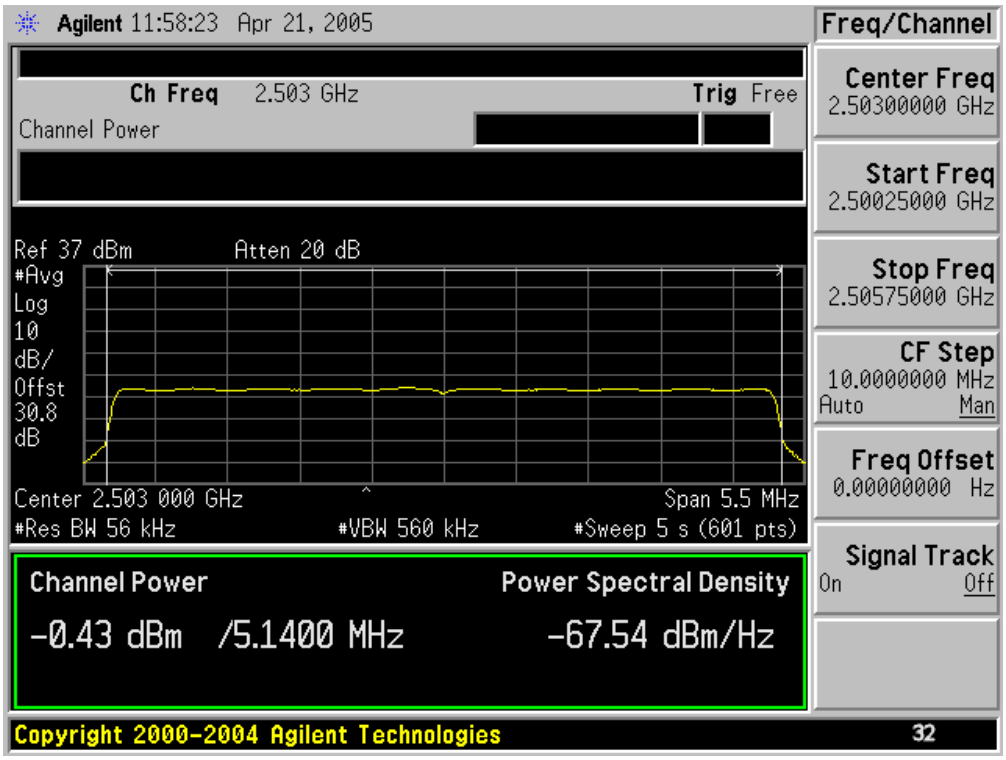
# 5W RF Power Output – Conducted (Minimum)
# 16-QAM (Cont'd)



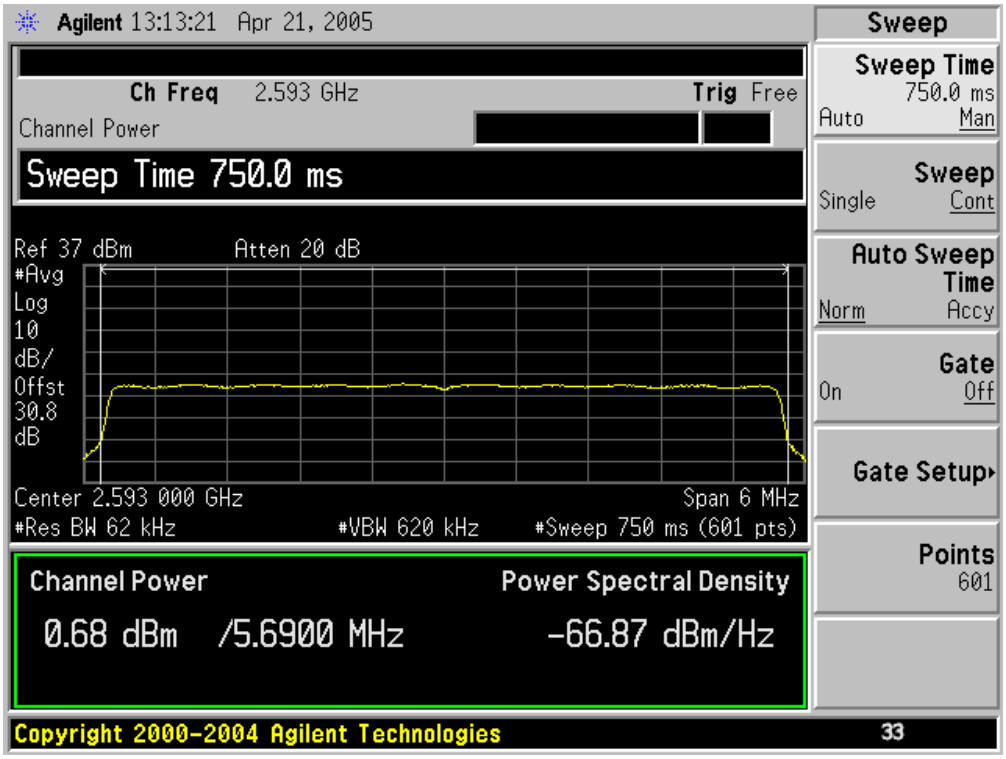



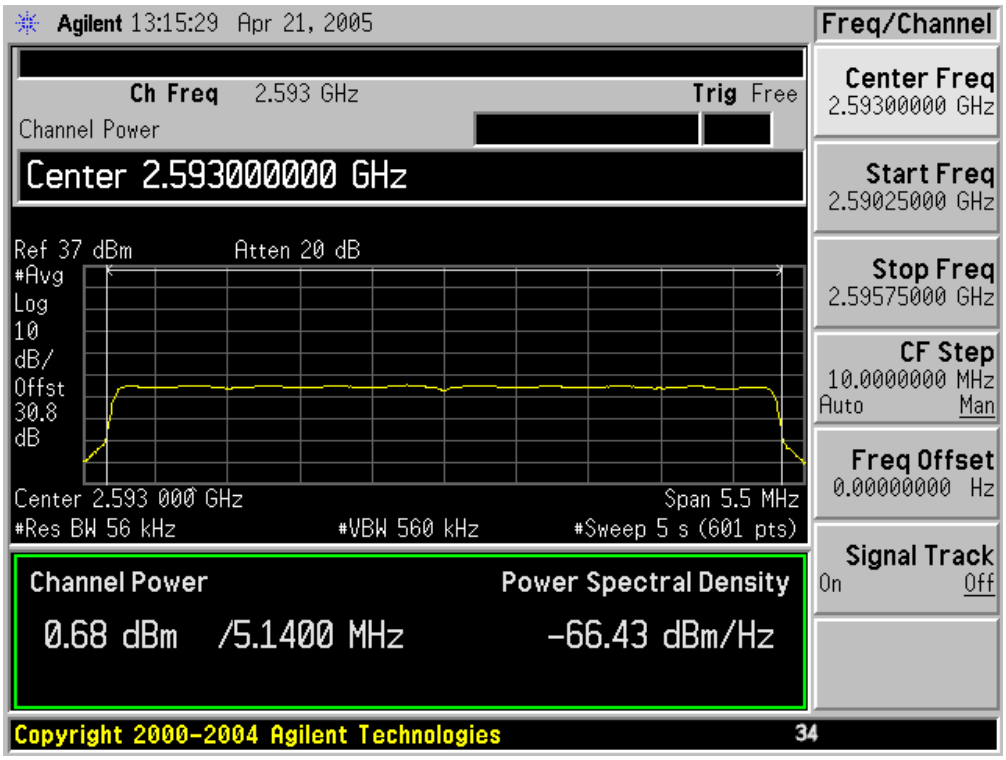
# 5W RF Power Output – Conducted (Minimum)
# 64-QAM



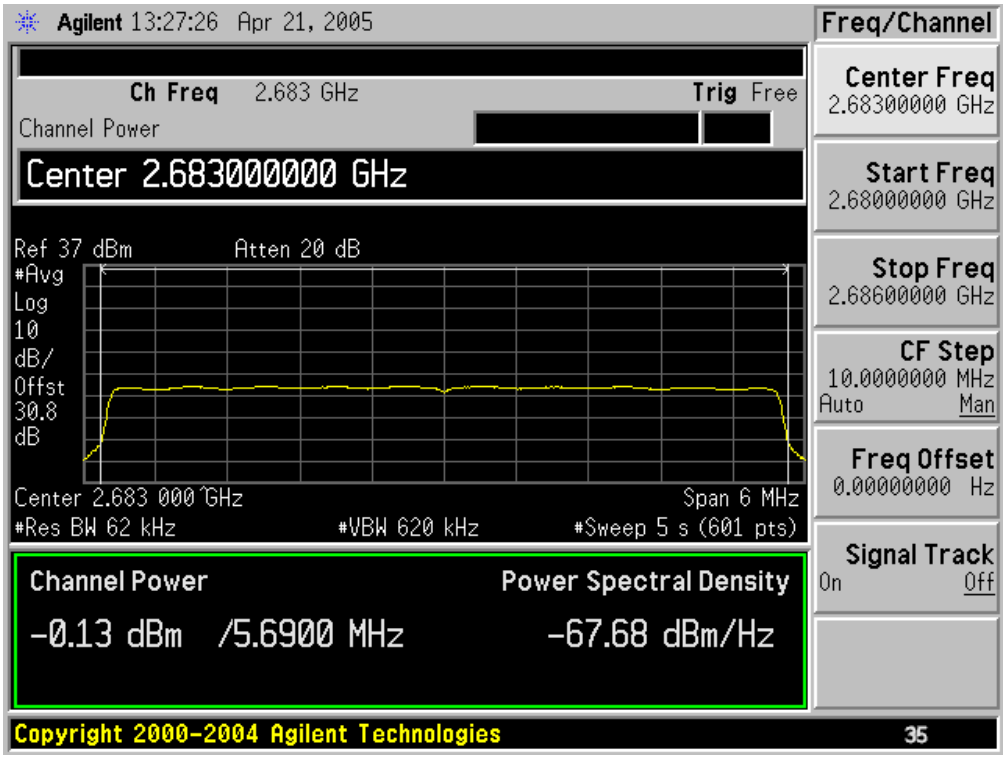



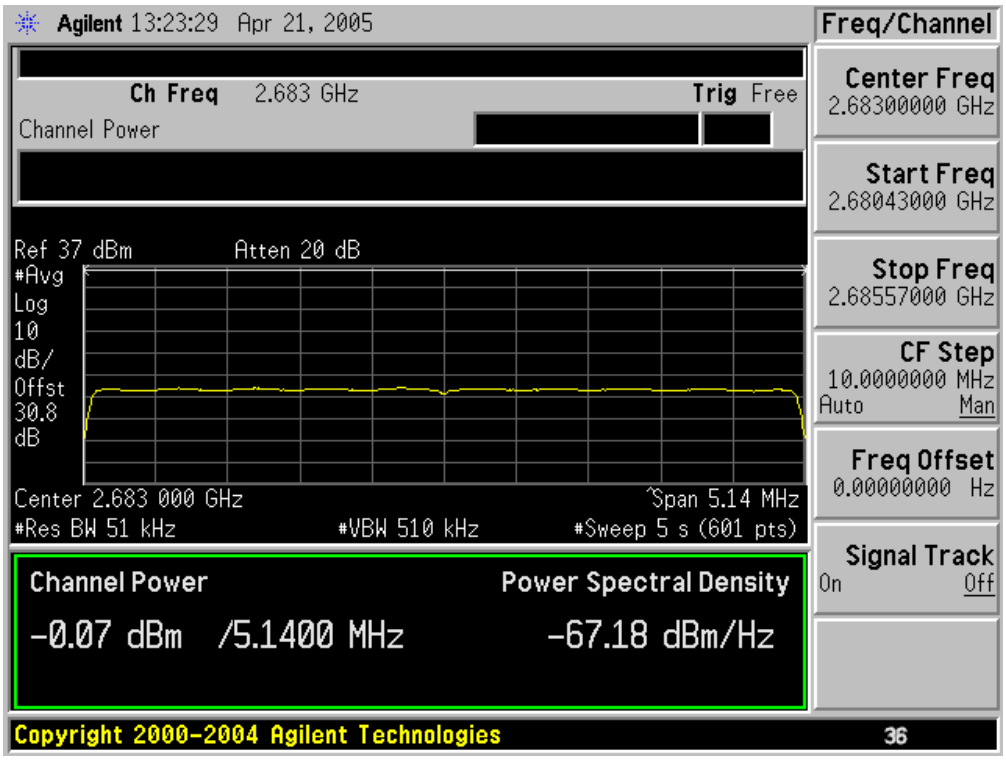
# 5W RF Power Output – Conducted (Minimum)
# 64-QAM (Cont'd)



# 5W RF Power Output – Conducted (Minimum)
# 64-QAM (Cont'd)



# Modulation Characteristics

Rule Parts:

| | |
|---|---|
| 2.1047(d) | *Other types of equipment.* A curve or equivalent data which shows that the equipment will meet the modulation requirements of the rules under which the equipment is to be licensed. |
| 27.53(l)(2) | (l) For BRS and EBS stations, the power of any emissions outside the licensee's frequency bands of operation shall be attenuated below the transmitter power (P) measured in watts.<br>(2) For fixed and temporary fixed digital stations, the attenuation shall be not less than 43 + 10 log (P) dB |
| 27.53(l)(6) | Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. |
| Specifications: | Attenuation at band edge = 43 + 10*log(P), P= 2 watts<br>Attenuation at band edge = 43 + 10*log(2) = 43 + 3<br>Attenuation at band edge = 46 dB (equates to -13 dBm)<br><br>Attenuation at band edge = 43 + 10*log(P), P= 5 watts<br>Attenuation at band edge = 43 + 10*log(5) = 43 + 7<br>Attenuation at band edge = 50 dB (equates to -13 dBm)<br><br>Compliance to the above requirements is verified by comparing the transmitter total power (P) to the integrated out of band power measured in 1 MHz bandwidths. |
| Standard: | 47CFR27.53(l)(3) |

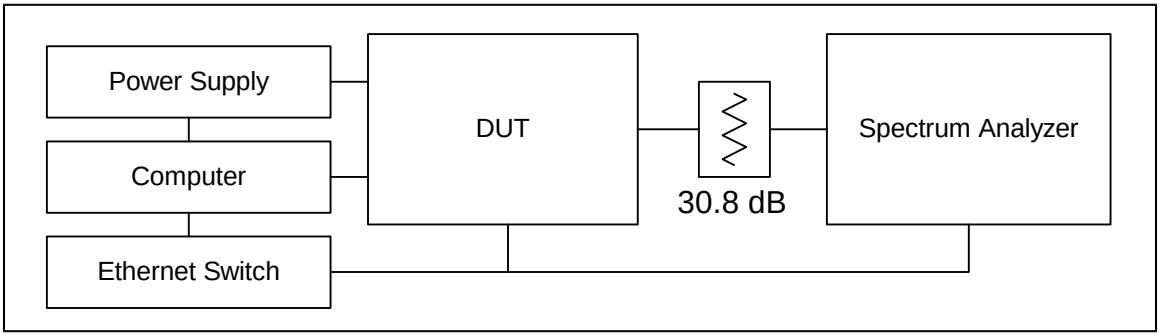
# Modulation Characteristics

Test Procedure: The Orthogonal Frequency Division Multiplexing (OFDM) modulated Time Division Duplex (TDD) RF signal from the test unit is applied to a spectrum analyzer. An RMS detector is used to measure the average power of the transmission. The emission power is measured with the power measurement function in the spectrum analyzer which integrates all of the energy contained within the 1 MHz span of spectrum. The resolution bandwidth is set to 1 MHz for emissions beyond the first 1 MHz of the band edge. For measurements within the 1 MHz of the band edge, the resolution bandwidth is adjusted to 56 kHz or 62 kHz depending on the channel bandwidth. The transmitter is enabled in test mode with the attached computer. The RF loss of the attenuators and coax was measured and is noted in the block diagram below. Measurements are performed at frequencies across the band, for each of the modulation formats available (4-, 16-, and 64-QAM) and channel bandwidths (5.5 MHz and 6.0 MHz). Spectrum analyzer plots for the 2499 MHz 2-watt channel and 2503 MHz 5-watt channel are included after the complied data pages. All of the measurements on the other channels had similar results. Measurement of the emissions in the ±1 to ±2 MHz bins is done with both a 1% resolution bandwidth and a 1 MHz resolution bandwidth.

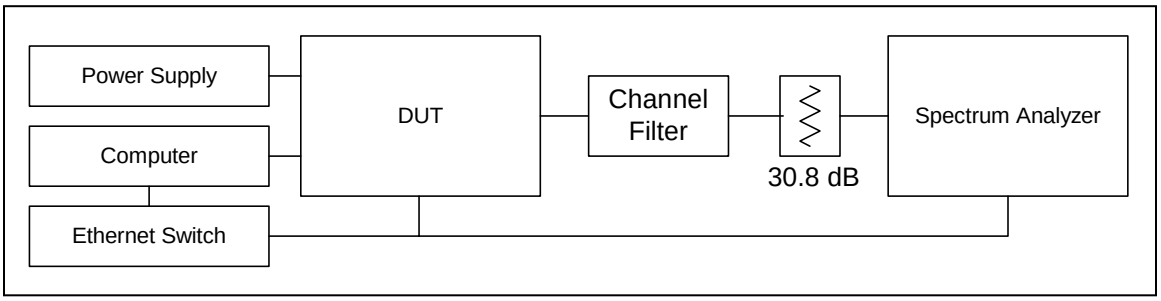
Test Conditions: 2-Watt Frequencies:
5.5 MHz channels: 2504.75, 2565.25, 2626.75, 2687.25 MHz
6.0 MHz channels: 2499, 2575, and 2621 MHz

5-Watt Frequencies:
Both 5.5 and 6.0 MHz channels: 2503, 2593, and 2683 MHz (these channels were tested at both bandwidths due to availability of channel filters)

Temperature = 25° C
Supply Voltage = 48.0 VDC Nominal to DUT




**2W Modulation Characteristics Test Setup**




**5W Modulation Characteristics Test Setup**

## Modulation Characteristics Test Results Summary (2W)

Pass modulation characteristics across frequency band and modulation format.

## Modulation Characteristics Test Results Summary (5W)

Pass modulation characteristics across frequency band and modulation format.

There are 9 data points that appear to not comply to the mask when measured with a 1 MHz resolution bandwidth. One occurrence is depicted in the graphs contained on page 85 of this document. As is seen in these graphs, the 1 MHz resolution bandwidth is allowing energy from the edge of the transmitted spectrum into the measurement integration and distorting the true value of the ±1 to ±2 MHz bins. Reducing the resolution bandwidth and integrating the energy over the full 1 MHz bandwidth as allowed by 27.53(l)(6) produces an accurate representation for the measured value of this section of spectrum. All of the 1% resolution bandwidth measurements pass the -13 dBm requirement.

# 2499 MHz, 6.0 MHz 2W Channel, 4-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Channel Center Freq (MHz)** | | | **2499** | | **4/13/2005** | | |
| | **Channel BW (MHz)** | | | **6** | | **48 VDC Nom** | | |
| | **Channel Bandedge - Low (MHz)** | | | **2496** | | **4-QAM** | | |
| | **Channel Bandedge - High (MHz)** | | | **2502** | | | | |
| **Resolution Bandwidth (kHz)** | | **1 MHz Band Center Freq (MHz)** | **1 MHz Band Low Freq (MHz)** | **1 MHz Band High Freq (MHz)** | **Emission Power in 1 MHz BW (dBm)** | **Spec (dBm/MHz)** | **Margin (dB)** | **Result** |
| 1000 | - 6 MHz bin | 2490.5 | 2490 | 2491 | -36.23 | -13 | -23.23 | Complies |
| | - 5 MHz bin | 2491.5 | 2491 | 2492 | -33.62 | -13 | -20.62 | Complies |
| | - 4 MHz bin | 2492.5 | 2492 | 2493 | -30.66 | -13 | -17.66 | Complies |
| | - 3 MHz bin | 2493.5 | 2493 | 2494 | -28.16 | -13 | -15.16 | Complies |
| | - 2 MHz bin | 2494.5 | 2494 | 2495 | -15.35 | -13 | -2.35 | Complies |
| 62 | - 2 MHz bin | 2494.5 | 2494 | 2495 | -26.42 | -13 | -13.42 | Complies |
| | - 1 MHz bin | 2495.5 | 2495 | 2496 | -20.3 | -13 | -7.3 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2502.5 | 2502 | 2503 | -19.53 | -13 | -6.53 | Complies |
| | + 2 MHz bin | 2503.5 | 2503 | 2504 | -24.83 | -13 | -11.83 | Complies |
| 1000 | + 2 MHz bin | 2503.5 | 2503 | 2504 | -14.77 | -13 | -1.77 | Complies |
| | + 3 MHz bin | 2504.5 | 2504 | 2505 | -26.66 | -13 | -13.66 | Complies |
| | + 4 MHz bin | 2505.5 | 2505 | 2506 | -29.41 | -13 | -16.41 | Complies |
| | + 5 MHz bin | 2506.5 | 2506 | 2507 | -32.86 | -13 | -19.86 | Complies |
| | + 6 MHz bin | 2507.5 | 2507 | 2508 | -41.37 | -13 | -28.37 | Complies |

# 2499 MHz, 6.0 MHz 2W Channel, 16-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2499 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2496 | | 16-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2502 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2490.5 | 2490 | 2491 | -36.23 | -13 | -23.23 | Complies |
| | - 5 MHz bin | 2491.5 | 2491 | 2492 | -33.56 | -13 | -20.56 | Complies |
| | - 4 MHz bin | 2492.5 | 2492 | 2493 | -30.51 | -13 | -17.51 | Complies |
| | - 3 MHz bin | 2493.5 | 2493 | 2494 | -27.89 | -13 | -14.89 | Complies |
| | - 2 MHz bin | 2494.5 | 2494 | 2495 | -15.31 | -13 | -2.31 | Complies |
| 62 | - 2 MHz bin | 2494.5 | 2494 | 2495 | -26.25 | -13 | -13.25 | Complies |
| | - 1 MHz bin | 2495.5 | 2495 | 2496 | -20.28 | -13 | -7.28 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2502.5 | 2502 | 2503 | -19.59 | -13 | -6.59 | Complies |
| | + 2 MHz bin | 2503.5 | 2503 | 2504 | -24.72 | -13 | -11.72 | Complies |
| 1000 | + 2 MHz bin | 2503.5 | 2503 | 2504 | -14.74 | -13 | -1.74 | Complies |
| | + 3 MHz bin | 2504.5 | 2504 | 2505 | -26.51 | -13 | -13.51 | Complies |
| | + 4 MHz bin | 2505.5 | 2505 | 2506 | -29.32 | -13 | -16.32 | Complies |
| | + 5 MHz bin | 2506.5 | 2506 | 2507 | -32.85 | -13 | -19.85 | Complies |
| | + 6 MHz bin | 2507.5 | 2507 | 2508 | -36.01 | -13 | -23.01 | Complies |

# Modulation Characteristics

## 2499 MHz, 6.0 MHz 2W Channel, 64-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Channel Center Freq (MHz)** | | | **2499** | | **4/13/2005** | | |
| | **Channel BW (MHz)** | | | **6** | | **48 VDC Nom** | | |
| | **Channel Bandedge - Low (MHz)** | | | **2496** | | **64-QAM** | | |
| | **Channel Bandedge - High (MHz)** | | | **2502** | | | | |
| **Resolution Bandwidth (kHz)** | | **1 MHz Band Center Freq (MHz)** | **1 MHz Band Low Freq (MHz)** | **1 MHz Band High Freq (MHz)** | **Emission Power in 1 MHz BW (dBm)** | **Spec (dBm/MHz)** | **Margin (dB)** | **Result** |
| 1000 | - 6 MHz bin | 2490.5 | 2490 | 2491 | -36.18 | -13 | -23.18 | Complies |
| | - 5 MHz bin | 2491.5 | 2491 | 2492 | -33.48 | -13 | -20.48 | Complies |
| | - 4 MHz bin | 2492.5 | 2492 | 2493 | -30.43 | -13 | -17.43 | Complies |
| | - 3 MHz bin | 2493.5 | 2493 | 2494 | -34.03 | -13 | -21.03 | Complies |
| | - 2 MHz bin | 2494.5 | 2494 | 2495 | -15.30 | -13 | -2.3 | Complies |
| 62 | - 2 MHz bin | 2494.5 | 2494 | 2495 | -25.75 | -13 | -12.75 | Complies |
| | - 1 MHz bin | 2495.5 | 2495 | 2496 | -20.42 | -13 | -7.42 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2502.5 | 2502 | 2503 | -19.61 | -13 | -6.61 | Complies |
| | + 2 MHz bin | 2503.5 | 2503 | 2504 | -24.48 | -13 | -11.48 | Complies |
| 1000 | + 2 MHz bin | 2503.5 | 2503 | 2504 | -14.74 | -13 | -1.74 | Complies |
| | + 3 MHz bin | 2504.5 | 2504 | 2505 | -26.31 | -13 | -13.31 | Complies |
| | + 4 MHz bin | 2505.5 | 2505 | 2506 | -29.30 | -13 | -16.3 | Complies |
| | + 5 MHz bin | 2506.5 | 2506 | 2507 | -32.82 | -13 | -19.82 | Complies |
| | + 6 MHz bin | 2507.5 | 2507 | 2508 | -35.99 | -13 | -22.99 | Complies |

## 2504.750 MHz, 5.5 MHz 2W Channel, 4-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2504.75 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2502 | | 4-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2507.5 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2496.5 | 2496 | 2497 | -36.66 | -13 | -23.66 | Complies |
| | - 5 MHz bin | 2497.5 | 2497 | 2498 | -34.06 | -13 | -21.06 | Complies |
| | - 4 MHz bin | 2498.5 | 2498 | 2499 | -30.52 | -13 | -17.52 | Complies |
| | - 3 MHz bin | 2499.5 | 2499 | 2500 | -27.07 | -13 | -14.07 | Complies |
| | - 2 MHz bin | 2500.5 | 2500 | 2501 | -15.49 | -13 | -2.49 | Complies |
| 56 | - 2 MHz bin | 2500.5 | 2500 | 2501 | -24.97 | -13 | -11.97 | Complies |
| | - 1 MHz bin | 2501.5 | 2501 | 2502 | -21.32 | -13 | -8.32 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2508 | 2507.5 | 2508.5 | -19.96 | -13 | -6.96 | Complies |
| | + 2 MHz bin | 2509 | 2508.5 | 2509.5 | -23.61 | -13 | -10.61 | Complies |
| 1000 | + 2 MHz bin | 2509 | 2508.5 | 2509.5 | -14.93 | -13 | -1.93 | Complies |
| | + 3 MHz bin | 2510 | 2509.5 | 2510.5 | -25.72 | -13 | -12.72 | Complies |
| | + 4 MHz bin | 2511 | 2510.5 | 2511.5 | -29.42 | -13 | -16.42 | Complies |
| | + 5 MHz bin | 2512 | 2511.5 | 2512.5 | -33.58 | -13 | -20.58 | Complies |
| | + 6 MHz bin | 2513 | 2512.5 | 2513.5 | -36.45 | -13 | -23.45 | Complies |

# Modulation Characteristics

## 2504.750 MHz, 5.5 MHz 2W Channel, 16-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2504.75 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2502 | | 16-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2507.5 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2496.5 | 2496 | 2497 | -36.60 | -13 | -23.6 | Complies |
| | - 5 MHz bin | 2497.5 | 2497 | 2498 | -33.98 | -13 | -20.98 | Complies |
| | - 4 MHz bin | 2498.5 | 2498 | 2499 | -30.46 | -13 | -17.46 | Complies |
| | - 3 MHz bin | 2499.5 | 2499 | 2500 | -27.33 | -13 | -14.33 | Complies |
| | - 2 MHz bin | 2500.5 | 2500 | 2501 | -15.50 | -13 | -2.5 | Complies |
| 56 | - 2 MHz bin | 2500.5 | 2500 | 2501 | -24.99 | -13 | -11.99 | Complies |
| | - 1 MHz bin | 2501.5 | 2501 | 2502 | -21.52 | -13 | -8.52 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2508 | 2507.5 | 2508.5 | -20.06 | -13 | -7.06 | Complies |
| | + 2 MHz bin | 2509 | 2508.5 | 2509.5 | -23.80 | -13 | -10.8 | Complies |
| 1000 | + 2 MHz bin | 2509 | 2508.5 | 2509.5 | -14.94 | -13 | -1.94 | Complies |
| | + 3 MHz bin | 2510 | 2509.5 | 2510.5 | -26.11 | -13 | -13.11 | Complies |
| | + 4 MHz bin | 2511 | 2510.5 | 2511.5 | -29.53 | -13 | -16.53 | Complies |
| | + 5 MHz bin | 2512 | 2511.5 | 2512.5 | -33.57 | -13 | -20.57 | Complies |
| | + 6 MHz bin | 2513 | 2512.5 | 2513.5 | -36.44 | -13 | -23.44 | Complies |

## 2504.750 MHz, 5.5 MHz 2W Channel, 64-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2504.75 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2502 | | 64-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2507.5 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2496.5 | 2496 | 2497 | -36.61 | -13 | -23.61 | Complies |
| | - 5 MHz bin | 2497.5 | 2497 | 2498 | -33.97 | -13 | -20.97 | Complies |
| | - 4 MHz bin | 2498.5 | 2498 | 2499 | -30.39 | -13 | -17.39 | Complies |
| | - 3 MHz bin | 2499.5 | 2499 | 2500 | -26.89 | -13 | -13.89 | Complies |
| | - 2 MHz bin | 2500.5 | 2500 | 2501 | -15.43 | -13 | -2.43 | Complies |
| 56 | - 2 MHz bin | 2500.5 | 2500 | 2501 | -24.33 | -13 | -11.33 | Complies |
| | - 1 MHz bin | 2501.5 | 2501 | 2502 | -21.27 | -13 | -8.27 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2508 | 2507.5 | 2508.5 | -20.16 | -13 | -7.16 | Complies |
| | + 2 MHz bin | 2509 | 2508.5 | 2509.5 | -23.69 | -13 | -10.69 | Complies |
| 1000 | + 2 MHz bin | 2509 | 2508.5 | 2509.5 | -14.87 | -13 | -1.87 | Complies |
| | + 3 MHz bin | 2510 | 2509.5 | 2510.5 | -25.7 | -13 | -12.7 | Complies |
| | + 4 MHz bin | 2511 | 2510.5 | 2511.5 | -29.36 | -13 | -16.36 | Complies |
| | + 5 MHz bin | 2512 | 2511.5 | 2512.5 | -33.51 | -13 | -20.51 | Complies |
| | + 6 MHz bin | 2513 | 2512.5 | 2513.5 | -36.4 | -13 | -23.4 | Complies |

# Modulation Characteristics

## 2565.250 MHz, 5.5 MHz 2W Channel, 4-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2565.25 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2562.5 | | 4-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2568 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2557 | 2556.5 | 2557.5 | -36.22 | -13 | -23.22 | Complies |
| | - 5 MHz bin | 2558 | 2557.5 | 2558.5 | -33.37 | -13 | -20.37 | Complies |
| | - 4 MHz bin | 2559 | 2558.5 | 2559.5 | -37.75 | -13 | -24.75 | Complies |
| | - 3 MHz bin | 2560 | 2559.5 | 2560.5 | -26.81 | -13 | -13.81 | Complies |
| | - 2 MHz bin | 2561 | 2560.5 | 2561.5 | -15.48 | -13 | -2.48 | Complies |
| 56 | - 2 MHz bin | 2561 | 2560.5 | 2561.5 | -24.71 | -13 | -11.71 | Complies |
| | - 1 MHz bin | 2562 | 2561.5 | 2562.5 | -21.49 | -13 | -8.49 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2568.5 | 2568 | 2569 | -20.12 | -13 | -7.12 | Complies |
| | + 2 MHz bin | 2569.5 | 2569 | 2570 | -23.03 | -13 | -10.03 | Complies |
| 1000 | + 2 MHz bin | 2569.5 | 2569 | 2570 | -14.65 | -13 | -1.65 | Complies |
| | + 3 MHz bin | 2570.5 | 2570 | 2571 | -24.99 | -13 | -11.99 | Complies |
| | + 4 MHz bin | 2571.5 | 2571 | 2572 | -28.09 | -13 | -15.09 | Complies |
| | + 5 MHz bin | 2572.5 | 2572 | 2573 | -31.5 | -13 | -18.5 | Complies |
| | + 6 MHz bin | 2573.5 | 2573 | 2574 | -34.2 | -13 | -21.2 | Complies |

## 2565.250 MHz, 5.5 MHz 2W Channel, 16-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2565.25 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2562.5 | | 16-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2568 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2557 | 2556.5 | 2557.5 | -36.22 | -13 | -23.22 | Complies |
| | - 5 MHz bin | 2558 | 2557.5 | 2558.5 | -33.34 | -13 | -20.34 | Complies |
| | - 4 MHz bin | 2559 | 2558.5 | 2559.5 | -29.88 | -13 | -16.88 | Complies |
| | - 3 MHz bin | 2560 | 2559.5 | 2560.5 | -26.76 | -13 | -13.76 | Complies |
| | - 2 MHz bin | 2561 | 2560.5 | 2561.5 | -15.52 | -13 | -2.52 | Complies |
| 56 | - 2 MHz bin | 2561 | 2560.5 | 2561.5 | -24.69 | -13 | -11.69 | Complies |
| | - 1 MHz bin | 2562 | 2561.5 | 2562.5 | -21.1 | -13 | -8.1 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2568.5 | 2568 | 2569 | -19.75 | -13 | -6.75 | Complies |
| | + 2 MHz bin | 2569.5 | 2569 | 2570 | -23 | -13 | -10 | Complies |
| 1000 | + 2 MHz bin | 2569.5 | 2569 | 2570 | -14.65 | -13 | -1.65 | Complies |
| | + 3 MHz bin | 2570.5 | 2570 | 2571 | -25.01 | -13 | -12.01 | Complies |
| | + 4 MHz bin | 2571.5 | 2571 | 2572 | -28.09 | -13 | -15.09 | Complies |
| | + 5 MHz bin | 2572.5 | 2572 | 2573 | -31.5 | -13 | -18.5 | Complies |
| | + 6 MHz bin | 2573.5 | 2573 | 2574 | -34.2 | -13 | -21.2 | Complies |

# Modulation Characteristics

## 2565.250 MHz, 5.5 MHz 2W Channel, 64-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2565.25 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2562.5 | | 64-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2568 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2557 | 2556.5 | 2557.5 | -36.23 | -13 | -23.23 | Complies |
| | - 5 MHz bin | 2558 | 2557.5 | 2558.5 | -33.37 | -13 | -20.37 | Complies |
| | - 4 MHz bin | 2559 | 2558.5 | 2559.5 | -29.93 | -13 | -16.93 | Complies |
| | - 3 MHz bin | 2560 | 2559.5 | 2560.5 | -26.95 | -13 | -13.95 | Complies |
| | - 2 MHz bin | 2561 | 2560.5 | 2561.5 | -15.55 | -13 | -2.55 | Complies |
| 56 | - 2 MHz bin | 2561 | 2560.5 | 2561.5 | -24.93 | -13 | -11.93 | Complies |
| | - 1 MHz bin | 2562 | 2561.5 | 2562.5 | -21.2 | -13 | -8.2 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2568.5 | 2568 | 2569 | -19.51 | -13 | -6.51 | Complies |
| | + 2 MHz bin | 2569.5 | 2569 | 2570 | -23.15 | -13 | -10.15 | Complies |
| 1000 | + 2 MHz bin | 2569.5 | 2569 | 2570 | -14.71 | -13 | -1.71 | Complies |
| | + 3 MHz bin | 2570.5 | 2570 | 2571 | -25.1 | -13 | -12.1 | Complies |
| | + 4 MHz bin | 2571.5 | 2571 | 2572 | -28.1 | -13 | -15.1 | Complies |
| | + 5 MHz bin | 2572.5 | 2572 | 2573 | -31.54 | -13 | -18.54 | Complies |
| | + 6 MHz bin | 2573.5 | 2573 | 2574 | -34.26 | -13 | -21.26 | Complies |

## 2575 MHz, 6.0 MHz 2W Channel, 4-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2575 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2572 | | 4-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2578 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2566.5 | 2566 | 2567 | -35.71 | -13 | -22.71 | Complies |
| | - 5 MHz bin | 2567.5 | 2567 | 2568 | -33.29 | -13 | -20.29 | Complies |
| | - 4 MHz bin | 2568.5 | 2568 | 2569 | -30.73 | -13 | -17.73 | Complies |
| | - 3 MHz bin | 2569.5 | 2569 | 2570 | -28.45 | -13 | -15.45 | Complies |
| | - 2 MHz bin | 2570.5 | 2570 | 2571 | -15.35 | -13 | -2.35 | Complies |
| 62 | - 2 MHz bin | 2570.5 | 2570 | 2571 | -26.64 | -13 | -13.64 | Complies |
| | - 1 MHz bin | 2571.5 | 2571 | 2572 | -20.38 | -13 | -7.38 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2578.5 | 2578 | 2579 | -19.31 | -13 | -6.31 | Complies |
| | + 2 MHz bin | 2579.5 | 2579 | 2580 | -24.79 | -13 | -11.79 | Complies |
| 1000 | + 2 MHz bin | 2579.5 | 2579 | 2580 | -14.55 | -13 | -1.55 | Complies |
| | + 3 MHz bin | 2580.5 | 2580 | 2581 | -26.43 | -13 | -13.43 | Complies |
| | + 4 MHz bin | 2581.5 | 2581 | 2582 | -39.04 | -13 | -26.04 | Complies |
| | + 5 MHz bin | 2582.5 | 2582 | 2583 | -31.56 | -13 | -18.56 | Complies |
| | + 6 MHz bin | 2583.5 | 2583 | 2584 | -34.09 | -13 | -21.09 | Complies |

# Modulation Characteristics

## 2575 MHz, 6.0 MHz 2W Channel, 16-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2575 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2572 | | 16-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2578 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2566.5 | 2566 | 2567 | -35.72 | -13 | -22.72 | Complies |
| | - 5 MHz bin | 2567.5 | 2567 | 2568 | -33.24 | -13 | -20.24 | Complies |
| | - 4 MHz bin | 2568.5 | 2568 | 2569 | -30.69 | -13 | -17.69 | Complies |
| | - 3 MHz bin | 2569.5 | 2569 | 2570 | -28.44 | -13 | -15.44 | Complies |
| | - 2 MHz bin | 2570.5 | 2570 | 2571 | -15.38 | -13 | -2.38 | Complies |
| 62 | - 2 MHz bin | 2570.5 | 2570 | 2571 | -26.91 | -13 | -13.91 | Complies |
| | - 1 MHz bin | 2571.5 | 2571 | 2572 | -20.67 | -13 | -7.67 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2578.5 | 2578 | 2579 | -19.67 | -13 | -6.67 | Complies |
| | + 2 MHz bin | 2579.5 | 2579 | 2580 | -24.99 | -13 | -11.99 | Complies |
| 1000 | + 2 MHz bin | 2579.5 | 2579 | 2580 | -14.58 | -13 | -1.58 | Complies |
| | + 3 MHz bin | 2580.5 | 2580 | 2581 | -26.52 | -13 | -13.52 | Complies |
| | + 4 MHz bin | 2581.5 | 2581 | 2582 | -28.8 | -13 | -15.8 | Complies |
| | + 5 MHz bin | 2582.5 | 2582 | 2583 | -31.53 | -13 | -18.53 | Complies |
| | + 6 MHz bin | 2583.5 | 2583 | 2584 | -34.03 | -13 | -21.03 | Complies |

## 2575 MHz, 6.0 MHz 2W Channel, 64-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2575 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2572 | | 64-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2578 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2566.5 | 2566 | 2567 | -35.75 | -13 | -22.75 | Complies |
| | - 5 MHz bin | 2567.5 | 2567 | 2568 | -33.35 | -13 | -20.35 | Complies |
| | - 4 MHz bin | 2568.5 | 2568 | 2569 | -30.88 | -13 | -17.88 | Complies |
| | - 3 MHz bin | 2569.5 | 2569 | 2570 | -28.6 | -13 | -15.6 | Complies |
| | - 2 MHz bin | 2570.5 | 2570 | 2571 | -15.4 | -13 | -2.4 | Complies |
| 62 | - 2 MHz bin | 2570.5 | 2570 | 2571 | -26.74 | -13 | -13.74 | Complies |
| | - 1 MHz bin | 2571.5 | 2571 | 2572 | -20.75 | -13 | -7.75 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2578.5 | 2578 | 2579 | -19.81 | -13 | -6.81 | Complies |
| | + 2 MHz bin | 2579.5 | 2579 | 2580 | -24.94 | -13 | -11.94 | Complies |
| 1000 | + 2 MHz bin | 2579.5 | 2579 | 2580 | -14.61 | -13 | -1.61 | Complies |
| | + 3 MHz bin | 2580.5 | 2580 | 2581 | -26.57 | -13 | -13.57 | Complies |
| | + 4 MHz bin | 2581.5 | 2581 | 2582 | -28.9 | -13 | -15.9 | Complies |
| | + 5 MHz bin | 2582.5 | 2582 | 2583 | -31.56 | -13 | -18.56 | Complies |
| | + 6 MHz bin | 2583.5 | 2583 | 2584 | -34.03 | -13 | -21.03 | Complies |

# Modulation Characteristics

## 2621 MHz, 6.0 MHz 2W Channel, 4-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2621 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2618 | | 4-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2624 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2612.5 | 2612 | 2613 | -40.35 | -13 | -27.35 | Complies |
| | - 5 MHz bin | 2613.5 | 2613 | 2614 | -39.09 | -13 | -26.09 | Complies |
| | - 4 MHz bin | 2614.5 | 2614 | 2615 | -37.01 | -13 | -24.01 | Complies |
| | - 3 MHz bin | 2615.5 | 2615 | 2616 | -34.08 | -13 | -21.08 | Complies |
| | - 2 MHz bin | 2616.5 | 2616 | 2617 | -15.63 | -13 | -2.63 | Complies |
| 62 | - 2 MHz bin | 2616.5 | 2616 | 2617 | -31.48 | -13 | -18.48 | Complies |
| | - 1 MHz bin | 2617.5 | 2617 | 2618 | -21.92 | -13 | -8.92 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2624.5 | 2624 | 2625 | -21.66 | -13 | -8.66 | Complies |
| | + 2 MHz bin | 2625.5 | 2625 | 2626 | -30.61 | -13 | -17.61 | Complies |
| 1000 | + 2 MHz bin | 2625.5 | 2625 | 2626 | -15.15 | -13 | -2.15 | Complies |
| | + 3 MHz bin | 2626.5 | 2626 | 2627 | -32.87 | -13 | -19.87 | Complies |
| | + 4 MHz bin | 2627.5 | 2627 | 2628 | -35.67 | -13 | -22.67 | Complies |
| | + 5 MHz bin | 2628.5 | 2628 | 2629 | -38.45 | -13 | -25.45 | Complies |
| | + 6 MHz bin | 2629.5 | 2629 | 2630 | -40.26 | -13 | -27.26 | Complies |

## 2621 MHz, 6.0 MHz 2W Channel, 16-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2621 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2618 | | 16-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2624 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2612.5 | 2612 | 2613 | -40.28 | -13 | -27.28 | Complies |
| | - 5 MHz bin | 2613.5 | 2613 | 2614 | -39 | -13 | -26 | Complies |
| | - 4 MHz bin | 2614.5 | 2614 | 2615 | -36.66 | -13 | -23.66 | Complies |
| | - 3 MHz bin | 2615.5 | 2615 | 2616 | -32.94 | -13 | -19.94 | Complies |
| | - 2 MHz bin | 2616.5 | 2616 | 2617 | -15.59 | -13 | -2.59 | Complies |
| 62 | - 2 MHz bin | 2616.5 | 2616 | 2617 | -30.62 | -13 | -17.62 | Complies |
| | - 1 MHz bin | 2617.5 | 2617 | 2618 | -21.79 | -13 | -8.79 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2624.5 | 2624 | 2625 | -21.9 | -13 | -8.9 | Complies |
| | + 2 MHz bin | 2625.5 | 2625 | 2626 | -30.27 | -13 | -17.27 | Complies |
| 1000 | + 2 MHz bin | 2625.5 | 2625 | 2626 | -15.13 | -13 | -2.13 | Complies |
| | + 3 MHz bin | 2626.5 | 2626 | 2627 | -32.22 | -13 | -19.22 | Complies |
| | + 4 MHz bin | 2627.5 | 2627 | 2628 | -35.55 | -13 | -22.55 | Complies |
| | + 5 MHz bin | 2628.5 | 2628 | 2629 | -38.44 | -13 | -25.44 | Complies |
| | + 6 MHz bin | 2629.5 | 2629 | 2630 | -40.24 | -13 | -27.24 | Complies |

# Modulation Characteristics

## 2621 MHz, 6.0 MHz 2W Channel, 64-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2621 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2618 | | 64-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2624 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2612.5 | 2612 | 2613 | -40.28 | -13 | -27.28 | Complies |
| | - 5 MHz bin | 2613.5 | 2613 | 2614 | -38.25 | -13 | -25.25 | Complies |
| | - 4 MHz bin | 2614.5 | 2614 | 2615 | -36.95 | -13 | -23.95 | Complies |
| | - 3 MHz bin | 2615.5 | 2615 | 2616 | -32.6 | -13 | -19.6 | Complies |
| | - 2 MHz bin | 2616.5 | 2616 | 2617 | -15.58 | -13 | -2.58 | Complies |
| 62 | - 2 MHz bin | 2616.5 | 2616 | 2617 | -30.3 | -13 | -17.3 | Complies |
| | - 1 MHz bin | 2617.5 | 2617 | 2618 | -22.01 | -13 | -9.01 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2624.5 | 2624 | 2625 | -21.37 | -13 | -8.37 | Complies |
| | + 2 MHz bin | 2625.5 | 2625 | 2626 | -30.34 | -13 | -17.34 | Complies |
| 1000 | + 2 MHz bin | 2625.5 | 2625 | 2626 | -15.11 | -13 | -2.11 | Complies |
| | + 3 MHz bin | 2626.5 | 2626 | 2627 | -32.19 | -13 | -19.19 | Complies |
| | + 4 MHz bin | 2627.5 | 2627 | 2628 | -35.41 | -13 | -22.41 | Complies |
| | + 5 MHz bin | 2628.5 | 2628 | 2629 | -38.36 | -13 | -25.36 | Complies |
| | + 6 MHz bin | 2629.5 | 2629 | 2630 | -40.21 | -13 | -27.21 | Complies |

## 2626.750 MHz, 5.5 MHz 2W Channel, 4-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2626.75 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2624 | | 4-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2629.5 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2618.5 | 2618 | 2619 | -40.82 | -13 | -27.82 | Complies |
| | - 5 MHz bin | 2619.5 | 2619 | 2620 | -39.57 | -13 | -26.57 | Complies |
| | - 4 MHz bin | 2620.5 | 2620 | 2621 | -36.6 | -13 | -23.6 | Complies |
| | - 3 MHz bin | 2621.5 | 2621 | 2622 | -31.2 | -13 | -18.2 | Complies |
| | - 2 MHz bin | 2622.5 | 2622 | 2623 | -15.87 | -13 | -2.87 | Complies |
| 56 | - 2 MHz bin | 2622.5 | 2622 | 2623 | -30.78 | -13 | -17.78 | Complies |
| | - 1 MHz bin | 2623.5 | 2623 | 2624 | -24.65 | -13 | -11.65 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2630 | 2629.5 | 2630.5 | -24.31 | -13 | -11.31 | Complies |
| | + 2 MHz bin | 2631 | 2630.5 | 2631.5 | -29.84 | -13 | -16.84 | Complies |
| 1000 | + 2 MHz bin | 2631 | 2630.5 | 2631.5 | -15.41 | -13 | -2.41 | Complies |
| | + 3 MHz bin | 2632 | 2631.5 | 2632.5 | -32.26 | -13 | -19.26 | Complies |
| | + 4 MHz bin | 2633 | 2632.5 | 2633.5 | -36.14 | -13 | -23.14 | Complies |
| | + 5 MHz bin | 2634 | 2633.5 | 2634.5 | -39.37 | -13 | -26.37 | Complies |
| | + 6 MHz bin | 2635 | 2634.5 | 2635.5 | -41.84 | -13 | -28.84 | Complies |

# Modulation Characteristics

## 2626.750 MHz, 5.5 MHz 2W Channel, 16-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2626.75 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2624 | | 16-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2629.5 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2618.5 | 2618 | 2619 | -40.8 | -13 | -27.8 | Complies |
| | - 5 MHz bin | 2619.5 | 2619 | 2620 | -39.55 | -13 | -26.55 | Complies |
| | - 4 MHz bin | 2620.5 | 2620 | 2621 | -36.87 | -13 | -23.87 | Complies |
| | - 3 MHz bin | 2621.5 | 2621 | 2622 | -32.17 | -13 | -19.17 | Complies |
| | - 2 MHz bin | 2622.5 | 2622 | 2623 | -15.84 | -13 | -2.84 | Complies |
| 56 | - 2 MHz bin | 2622.5 | 2622 | 2623 | -29.05 | -13 | -16.05 | Complies |
| | - 1 MHz bin | 2623.5 | 2623 | 2624 | -24.49 | -13 | -11.49 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2630 | 2629.5 | 2630.5 | -22.96 | -13 | -9.96 | Complies |
| | + 2 MHz bin | 2631 | 2630.5 | 2631.5 | -29.05 | -13 | -16.05 | Complies |
| 1000 | + 2 MHz bin | 2631 | 2630.5 | 2631.5 | -15.37 | -13 | -2.37 | Complies |
| | + 3 MHz bin | 2632 | 2631.5 | 2632.5 | -30.42 | -13 | -17.42 | Complies |
| | + 4 MHz bin | 2633 | 2632.5 | 2633.5 | -39.01 | -13 | -26.01 | Complies |
| | + 5 MHz bin | 2634 | 2633.5 | 2634.5 | -39.19 | -13 | -26.19 | Complies |
| | + 6 MHz bin | 2635 | 2634.5 | 2635.5 | -40.77 | -13 | -27.77 | Complies |

## 2626.750 MHz, 5.5 MHz 2W Channel, 64-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2626.75 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2624 | | 64-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2629.5 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2618.5 | 2618 | 2619 | -40.81 | -13 | -27.81 | Complies |
| | - 5 MHz bin | 2619.5 | 2619 | 2620 | -39.59 | -13 | -26.59 | Complies |
| | - 4 MHz bin | 2620.5 | 2620 | 2621 | -36.96 | -13 | -23.96 | Complies |
| | - 3 MHz bin | 2621.5 | 2621 | 2622 | -32.32 | -13 | -19.32 | Complies |
| | - 2 MHz bin | 2622.5 | 2622 | 2623 | -15.85 | -13 | -2.85 | Complies |
| 56 | - 2 MHz bin | 2622.5 | 2622 | 2623 | -29.67 | -13 | -16.67 | Complies |
| | - 1 MHz bin | 2623.5 | 2623 | 2624 | -24.67 | -13 | -11.67 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2630 | 2629.5 | 2630.5 | -23.61 | -13 | -10.61 | Complies |
| | + 2 MHz bin | 2631 | 2630.5 | 2631.5 | -29.27 | -13 | -16.27 | Complies |
| 1000 | + 2 MHz bin | 2631 | 2630.5 | 2631.5 | -15.38 | -13 | -2.38 | Complies |
| | + 3 MHz bin | 2632 | 2631.5 | 2632.5 | -31.11 | -13 | -18.11 | Complies |
| | + 4 MHz bin | 2633 | 2632.5 | 2633.5 | -35.6 | -13 | -22.6 | Complies |
| | + 5 MHz bin | 2634 | 2633.5 | 2634.5 | -39.27 | -13 | -26.27 | Complies |
| | + 6 MHz bin | 2635 | 2634.5 | 2635.5 | -40.78 | -13 | -27.78 | Complies |

# Modulation Characteristics

## 2687.250 MHz, 5.5 MHz 2W Channel, 4-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2687.25 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2684.5 | | 4-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2690 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2679 | 2678.5 | 2679.5 | -36.81 | -13 | -23.81 | Complies |
| | - 5 MHz bin | 2680 | 2679.5 | 2680.5 | -34.51 | -13 | -21.51 | Complies |
| | - 4 MHz bin | 2681 | 2680.5 | 2681.5 | -31.92 | -13 | -18.92 | Complies |
| | - 3 MHz bin | 2682 | 2681.5 | 2682.5 | -29.04 | -13 | -16.04 | Complies |
| | - 2 MHz bin | 2683 | 2682.5 | 2683.5 | -14.62 | -13 | -1.62 | Complies |
| 56 | - 2 MHz bin | 2683 | 2682.5 | 2683.5 | -26.81 | -13 | -13.81 | Complies |
| | - 1 MHz bin | 2684 | 2683.5 | 2684.5 | -22.43 | -13 | -9.43 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2690.5 | 2690 | 2691 | -21.38 | -13 | -8.38 | Complies |
| | + 2 MHz bin | 2691.5 | 2691 | 2692 | -25.85 | -13 | -12.85 | Complies |
| 1000 | + 2 MHz bin | 2691.5 | 2691 | 2692 | -14.15 | -13 | -1.15 | Complies |
| | + 3 MHz bin | 2692.5 | 2692 | 2693 | -27.74 | -13 | -14.74 | Complies |
| | + 4 MHz bin | 2693.5 | 2693 | 2694 | -30.88 | -13 | -17.88 | Complies |
| | + 5 MHz bin | 2694.5 | 2694 | 2695 | -33.87 | -13 | -20.87 | Complies |
| | + 6 MHz bin | 2695.5 | 2695 | 2696 | -36.12 | -13 | -23.12 | Complies |

## 2687.250 MHz, 5.5 MHz 2W Channel, 16-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2687.25 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2684.5 | | 16-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2690 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2679 | 2678.5 | 2679.5 | -36.78 | -13 | -23.78 | Complies |
| | - 5 MHz bin | 2680 | 2679.5 | 2680.5 | -34.45 | -13 | -21.45 | Complies |
| | - 4 MHz bin | 2681 | 2680.5 | 2681.5 | -31.66 | -13 | -18.66 | Complies |
| | - 3 MHz bin | 2682 | 2681.5 | 2682.5 | -28.28 | -13 | -15.28 | Complies |
| | - 2 MHz bin | 2683 | 2682.5 | 2683.5 | -14.57 | -13 | -1.57 | Complies |
| 56 | - 2 MHz bin | 2683 | 2682.5 | 2683.5 | -26.12 | -13 | -13.12 | Complies |
| | - 1 MHz bin | 2684 | 2683.5 | 2684.5 | -22.12 | -13 | -9.12 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2690.5 | 2690 | 2691 | -21.16 | -13 | -8.16 | Complies |
| | + 2 MHz bin | 2691.5 | 2691 | 2692 | -25.55 | -13 | -12.55 | Complies |
| 1000 | + 2 MHz bin | 2691.5 | 2691 | 2692 | -14.12 | -13 | -1.12 | Complies |
| | + 3 MHz bin | 2692.5 | 2692 | 2693 | -27.37 | -13 | -14.37 | Complies |
| | + 4 MHz bin | 2693.5 | 2693 | 2694 | -30.75 | -13 | -17.75 | Complies |
| | + 5 MHz bin | 2694.5 | 2694 | 2695 | -33.83 | -13 | -20.83 | Complies |
| | + 6 MHz bin | 2695.5 | 2695 | 2696 | -36.11 | -13 | -23.11 | Complies |

# Modulation Characteristics

## 2687.250 MHz, 5.5 MHz 2W Channel, 64-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2687.25 | | 4/13/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Bandedge - Low (MHz) | | | 2684.5 | | 64-QAM | | |
| | Channel Bandedge - High (MHz) | | | 2690 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 MHz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2679 | 2678.5 | 2679.5 | -36.8 | -13 | -23.8 | Complies |
| | - 5 MHz bin | 2680 | 2679.5 | 2680.5 | -34.47 | -13 | -21.47 | Complies |
| | - 4 MHz bin | 2681 | 2680.5 | 2681.5 | -31.85 | -13 | -18.85 | Complies |
| | - 3 MHz bin | 2682 | 2681.5 | 2682.5 | -28.96 | -13 | -15.96 | Complies |
| | - 2 MHz bin | 2683 | 2682.5 | 2683.5 | -14.61 | -13 | -1.61 | Complies |
| 56 | - 2 MHz bin | 2683 | 2682.5 | 2683.5 | -26.83 | -13 | -13.83 | Complies |
| | - 1 MHz bin | 2684 | 2683.5 | 2684.5 | -22.2 | -13 | -9.2 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2690.5 | 2690 | 2691 | -21.37 | -13 | -8.37 | Complies |
| | + 2 MHz bin | 2691.5 | 2691 | 2692 | -25.76 | -13 | -12.76 | Complies |
| 1000 | + 2 MHz bin | 2691.5 | 2691 | 2692 | -14.14 | -13 | -1.14 | Complies |
| | + 3 MHz bin | 2692.5 | 2692 | 2693 | -27.79 | -13 | -14.79 | Complies |
| | + 4 MHz bin | 2693.5 | 2693 | 2694 | -30.86 | -13 | -17.86 | Complies |
| | + 5 MHz bin | 2694.5 | 2694 | 2695 | -33.84 | -13 | -20.84 | Complies |
| | + 6 MHz bin | 2695.5 | 2695 | 2696 | -36.15 | -13 | -23.15 | Complies |

# Modulation Characteristics Test Results Summary (5W)

Pass modulation characteristics across frequency band and modulation format.

## 2503 MHz, 6.0 MHz 5W Channel, 4-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2503 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2500 | | 4-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2506 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2494.5 | 2494 | 2495 | -42.28 | -13 | -29.28 | Complies |
| | - 5 MHz bin | 2495.5 | 2495 | 2496 | -41.89 | -13 | -28.89 | Complies |
| | - 4 MHz bin | 2496.5 | 2496 | 2497 | -39.81 | -13 | -26.81 | Complies |
| | - 3 MHz bin | 2497.5 | 2497 | 2498 | -34.76 | -13 | -21.76 | Complies |
| | - 2 MHz bin | 2498.5 | 2498 | 2499 | -13.05 | -13 | -0.05 | Complies |
| 62 | - 2 MHz bin | 2498.5 | 2498 | 2499 | -29.56 | -13 | -16.56 | Complies |
| | - 1 MHz bin | 2499.5 | 2499 | 2500 | -17.99 | -13 | -4.99 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2506.5 | 2506 | 2507 | -16.11 | -13 | -3.11 | Complies |
| | + 2 MHz bin | 2507.5 | 2507 | 2508 | -27.45 | -13 | -14.45 | Complies |
| 1000 | + 2 MHz bin | 2507.5 | 2507 | 2508 | -12.76 | -13 | 0.24 | |
| | + 3 MHz bin | 2508.5 | 2508 | 2509 | -31.57 | -13 | -18.57 | Complies |
| | + 4 MHz bin | 2509.5 | 2509 | 2510 | -36.65 | -13 | -23.65 | Complies |
| | + 5 MHz bin | 2510.5 | 2510 | 2511 | -40.32 | -13 | -27.32 | Complies |
| | + 6 MHz bin | 2511.5 | 2511 | 2512 | -41.83 | -13 | -28.83 | Complies |

## 2503 MHz, 6.0 MHz 5W Channel, 16-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2503 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2500 | | 16-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2506 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2494.5 | 2494 | 2495 | -42.34 | -13 | -29.34 | Complies |
| | - 5 MHz bin | 2495.5 | 2495 | 2496 | -42.05 | -13 | -29.05 | Complies |
| | - 4 MHz bin | 2496.5 | 2496 | 2497 | -40.34 | -13 | -27.34 | Complies |
| | - 3 MHz bin | 2497.5 | 2497 | 2498 | -35.43 | -13 | -22.43 | Complies |
| | - 2 MHz bin | 2498.5 | 2498 | 2499 | -13.16 | -13 | -0.16 | Complies |
| 62 | - 2 MHz bin | 2498.5 | 2498 | 2499 | -30.23 | -13 | -17.23 | Complies |
| | - 1 MHz bin | 2499.5 | 2499 | 2500 | -17.98 | -13 | -4.98 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2506.5 | 2506 | 2507 | -16.31 | -13 | -3.31 | Complies |
| | + 2 MHz bin | 2507.5 | 2507 | 2508 | -27.67 | -13 | -14.67 | Complies |
| 1000 | + 2 MHz bin | 2507.5 | 2507 | 2508 | -12.79 | -13 | 0.21 | |
| | + 3 MHz bin | 2508.5 | 2508 | 2509 | -31.63 | -13 | -18.63 | Complies |
| | + 4 MHz bin | 2509.5 | 2509 | 2510 | -36.72 | -13 | -23.72 | Complies |
| | + 5 MHz bin | 2510.5 | 2510 | 2511 | -40.34 | -13 | -27.34 | Complies |
| | + 6 MHz bin | 2511.5 | 2511 | 2512 | -41.84 | -13 | -28.84 | Complies |

# Modulation Characteristics

## 2503 MHz, 6.0 MHz 5W Channel, 64-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2503 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2500 | | 64-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2506 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2494.5 | 2494 | 2495 | -42.34 | -13 | -29.34 | Complies |
| | - 5 MHz bin | 2495.5 | 2495 | 2496 | -42.05 | -13 | -29.05 | Complies |
| | - 4 MHz bin | 2496.5 | 2496 | 2497 | -40.36 | -13 | -27.36 | Complies |
| | - 3 MHz bin | 2497.5 | 2497 | 2498 | -35.54 | -13 | -22.54 | Complies |
| | - 2 MHz bin | 2498.5 | 2498 | 2499 | -13.18 | -13 | -0.18 | Complies |
| 62 | - 2 MHz bin | 2498.5 | 2498 | 2499 | -30.33 | -13 | -17.33 | Complies |
| | - 1 MHz bin | 2499.5 | 2499 | 2500 | -18.15 | -13 | -5.15 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2506.5 | 2506 | 2507 | -16.42 | -13 | -3.42 | Complies |
| | + 2 MHz bin | 2507.5 | 2507 | 2508 | -27.84 | -13 | -14.84 | Complies |
| 1000 | + 2 MHz bin | 2507.5 | 2507 | 2508 | -12.84 | -13 | 0.16 | |
| | + 3 MHz bin | 2508.5 | 2508 | 2509 | -31.89 | -13 | -18.89 | Complies |
| | + 4 MHz bin | 2509.5 | 2509 | 2510 | -36.93 | -13 | -23.93 | Complies |
| | + 5 MHz bin | 2510.5 | 2510 | 2511 | -40.46 | -13 | -27.46 | Complies |
| | + 6 MHz bin | 2511.5 | 2511 | 2512 | -41.88 | -13 | -28.88 | Complies |

## 2503 MHz, 5.5 MHz 5W Channel, 4-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2503 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2500.25 | | 4-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2505.75 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2494.75 | 2494.25 | 2495.25 | -42.3 | -13 | -29.3 | Complies |
| | - 5 MHz bin | 2495.75 | 2495.25 | 2496.25 | -41.75 | -13 | -28.75 | Complies |
| | - 4 MHz bin | 2496.75 | 2496.25 | 2497.25 | -38.87 | -13 | -25.87 | Complies |
| | - 3 MHz bin | 2497.75 | 2497.25 | 2498.25 | -32.78 | -13 | -19.78 | Complies |
| | - 2 MHz bin | 2498.75 | 2498.25 | 2499.25 | -12.75 | -13 | 0.25 | |
| 56 | - 2 MHz bin | 2498.75 | 2498.25 | 2499.25 | -28 | -13 | -15 | Complies |
| | - 1 MHz bin | 2499.75 | 2499.25 | 2500.25 | -14.79 | -13 | -1.79 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2506.25 | 2505.75 | 2506.75 | -13.17 | -13 | -0.17 | Complies |
| | + 2 MHz bin | 2507.25 | 2506.75 | 2507.75 | -25.99 | -13 | -12.99 | Complies |
| 1000 | + 2 MHz bin | 2507.25 | 2506.75 | 2507.75 | -12.56 | -13 | 0.44 | |
| | + 3 MHz bin | 2508.25 | 2507.75 | 2508.75 | -29.99 | -13 | -16.99 | Complies |
| | + 4 MHz bin | 2509.25 | 2508.75 | 2509.75 | -35.74 | -13 | -22.74 | Complies |
| | + 5 MHz bin | 2510.25 | 2509.75 | 2510.75 | -40.16 | -13 | -27.16 | Complies |
| | + 6 MHz bin | 2511.25 | 2510.75 | 2511.75 | -41.81 | -13 | -28.81 | Complies |

# Modulation Characteristics

## 2503 MHz, 5.5 MHz 5W Channel, 16-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2503 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2500.25 | | 16-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2505.75 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2494.75 | 2494.25 | 2495.25 | -42.36 | -13 | -29.36 | Complies |
| | - 5 MHz bin | 2495.75 | 2495.25 | 2496.25 | -42.00 | -13 | -29 | Complies |
| | - 4 MHz bin | 2496.75 | 2496.25 | 2497.25 | -39.80 | -13 | -26.8 | Complies |
| | - 3 MHz bin | 2497.75 | 2497.25 | 2498.25 | -34.14 | -13 | -21.14 | Complies |
| | - 2 MHz bin | 2498.75 | 2498.25 | 2499.25 | -13.04 | -13 | -0.04 | Complies |
| 56 | - 2 MHz bin | 2498.75 | 2498.25 | 2499.25 | -28.91 | -13 | -15.91 | Complies |
| | - 1 MHz bin | 2499.75 | 2499.25 | 2500.25 | -15.65 | -13 | -2.65 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2506.25 | 2505.75 | 2506.75 | -13.86 | -13 | -0.86 | Complies |
| | + 2 MHz bin | 2507.25 | 2506.75 | 2507.75 | -26.68 | -13 | -13.68 | Complies |
| 1000 | + 2 MHz bin | 2507.25 | 2506.75 | 2507.75 | -12.68 | -13 | 0.32 | |
| | + 3 MHz bin | 2508.25 | 2507.75 | 2508.75 | -30.47 | -13 | -17.47 | Complies |
| | + 4 MHz bin | 2509.25 | 2508.75 | 2509.75 | -36.08 | -13 | -23.08 | Complies |
| | + 5 MHz bin | 2510.25 | 2509.75 | 2510.75 | -40.30 | -13 | -27.3 | Complies |
| | + 6 MHz bin | 2511.25 | 2510.75 | 2511.75 | -41.84 | -13 | -28.84 | Complies |

## 2503 MHz, 5.5 MHz 5W Channel, 64-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2503 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2500.25 | | 64-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2505.75 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2494.75 | 2494.25 | 2495.25 | -42.37 | -13 | -29.37 | Complies |
| | - 5 MHz bin | 2495.75 | 2495.25 | 2496.25 | -42.01 | -13 | -29.01 | Complies |
| | - 4 MHz bin | 2496.75 | 2496.25 | 2497.25 | -39.83 | -13 | -26.83 | Complies |
| | - 3 MHz bin | 2497.75 | 2497.25 | 2498.25 | -34.21 | -13 | -21.21 | Complies |
| | - 2 MHz bin | 2498.75 | 2498.25 | 2499.25 | -13.07 | -13 | -0.07 | Complies |
| 56 | - 2 MHz bin | 2498.75 | 2498.25 | 2499.25 | -29.12 | -13 | -16.12 | Complies |
| | - 1 MHz bin | 2499.75 | 2499.25 | 2500.25 | -15.88 | -13 | -2.88 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2506.25 | 2505.75 | 2506.75 | -14.26 | -13 | -1.26 | Complies |
| | + 2 MHz bin | 2507.25 | 2506.75 | 2507.75 | -27.09 | -13 | -14.09 | Complies |
| 1000 | + 2 MHz bin | 2507.25 | 2506.75 | 2507.75 | -12.82 | -13 | 0.18 | |
| | + 3 MHz bin | 2508.25 | 2507.75 | 2508.75 | -30.89 | -13 | -17.89 | Complies |
| | + 4 MHz bin | 2509.25 | 2508.75 | 2509.75 | -36.52 | -13 | -23.52 | Complies |
| | + 5 MHz bin | 2510.25 | 2509.75 | 2510.75 | -40.49 | -13 | -27.49 | Complies |
| | + 6 MHz bin | 2511.25 | 2510.75 | 2511.75 | -41.91 | -13 | -28.91 | Complies |

# Modulation Characteristics

## 2593 MHz, 6.0 MHz 5W Channel, 4-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2593 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2590 | | 4-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2596 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2584.5 | 2584 | 2585 | -42.29 | -13 | -29.29 | Complies |
| | - 5 MHz bin | 2585.5 | 2585 | 2586 | -41.96 | -13 | -28.96 | Complies |
| | - 4 MHz bin | 2586.5 | 2586 | 2587 | -40.26 | -13 | -27.26 | Complies |
| | - 3 MHz bin | 2587.5 | 2587 | 2588 | -35.71 | -13 | -22.71 | Complies |
| | - 2 MHz bin | 2588.5 | 2588 | 2589 | -12.76 | -13 | 0.24 | |
| 56 | - 2 MHz bin | 2588.5 | 2588 | 2589 | -28.18 | -13 | -15.18 | Complies |
| | - 1 MHz bin | 2589.5 | 2589 | 2590 | -19.52 | -13 | -6.52 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2596.5 | 2596 | 2597 | -19.37 | -13 | -6.37 | Complies |
| | + 2 MHz bin | 2597.5 | 2597 | 2598 | -27.83 | -13 | -14.83 | Complies |
| 1000 | + 2 MHz bin | 2597.5 | 2597 | 2598 | -12.77 | -13 | 0.23 | |
| | + 3 MHz bin | 2598.5 | 2598 | 2599 | -31.85 | -13 | -18.85 | Complies |
| | + 4 MHz bin | 2599.5 | 2599 | 2600 | -36.85 | -13 | -23.85 | Complies |
| | + 5 MHz bin | 2600.5 | 2600 | 2601 | -40.47 | -13 | -27.47 | Complies |
| | + 6 MHz bin | 2601.5 | 2601 | 2602 | -41.87 | -13 | -28.87 | Complies |

## 2593 MHz, 6.0 MHz 5W Channel, 16-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2593 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2590 | | 16-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2596 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2584.5 | 2584 | 2585 | -42.40 | -13 | -29.4 | Complies |
| | - 5 MHz bin | 2585.5 | 2585 | 2586 | -42.33 | -13 | -29.33 | Complies |
| | - 4 MHz bin | 2586.5 | 2586 | 2587 | -41.91 | -13 | -28.91 | Complies |
| | - 3 MHz bin | 2587.5 | 2587 | 2588 | -39.92 | -13 | -26.92 | Complies |
| | - 2 MHz bin | 2588.5 | 2588 | 2589 | -14.16 | -13 | -1.16 | Complies |
| 56 | - 2 MHz bin | 2588.5 | 2588 | 2589 | -37.10 | -13 | -24.1 | Complies |
| | - 1 MHz bin | 2589.5 | 2589 | 2590 | -21.65 | -13 | -8.65 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2596.5 | 2596 | 2597 | -22.33 | -13 | -9.33 | Complies |
| | + 2 MHz bin | 2597.5 | 2597 | 2598 | -35.59 | -13 | -22.59 | Complies |
| 1000 | + 2 MHz bin | 2597.5 | 2597 | 2598 | -14.14 | -13 | -1.14 | Complies |
| | + 3 MHz bin | 2598.5 | 2598 | 2599 | -38.05 | -13 | -25.05 | Complies |
| | + 4 MHz bin | 2599.5 | 2599 | 2600 | -40.96 | -13 | -27.96 | Complies |
| | + 5 MHz bin | 2600.5 | 2600 | 2601 | -42.03 | -13 | -29.03 | Complies |
| | + 6 MHz bin | 2601.5 | 2601 | 2602 | -42.33 | -13 | -29.33 | Complies |

# Modulation Characteristics

## 2593 MHz, 6.0 MHz 5W Channel, 64-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2593 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2590 | | 64-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2596 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2584.5 | 2584 | 2585 | -42.39 | -13 | -29.39 | Complies |
| | - 5 MHz bin | 2585.5 | 2585 | 2586 | -42.32 | -13 | -29.32 | Complies |
| | - 4 MHz bin | 2586.5 | 2586 | 2587 | -41.87 | -13 | -28.87 | Complies |
| | - 3 MHz bin | 2587.5 | 2587 | 2588 | -39.76 | -13 | -26.76 | Complies |
| | - 2 MHz bin | 2588.5 | 2588 | 2589 | -14.06 | -13 | -1.06 | Complies |
| 56 | - 2 MHz bin | 2588.5 | 2588 | 2589 | -36.68 | -13 | -23.68 | Complies |
| | - 1 MHz bin | 2589.5 | 2589 | 2590 | -21.54 | -13 | -8.54 | Complies |
| | | | | | | | | |
| 56 | + 1 MHz bin | 2596.5 | 2596 | 2597 | -22.02 | -13 | -9.02 | Complies |
| | + 2 MHz bin | 2597.5 | 2597 | 2598 | -34.70 | -13 | -21.7 | Complies |
| 1000 | + 2 MHz bin | 2597.5 | 2597 | 2598 | -13.93 | -13 | -0.93 | Complies |
| | + 3 MHz bin | 2598.5 | 2598 | 2599 | -37.26 | -13 | -24.26 | Complies |
| | + 4 MHz bin | 2599.5 | 2599 | 2600 | -40.53 | -13 | -27.53 | Complies |
| | + 5 MHz bin | 2600.5 | 2600 | 2601 | -41.87 | -13 | -28.87 | Complies |
| | + 6 MHz bin | 2601.5 | 2601 | 2602 | -42.27 | -13 | -29.27 | Complies |

## 2593 MHz, 5.5 MHz 5W Channel, 4-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2593 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2590.25 | | 4-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2595.75 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2584.75 | 2584.25 | 2585.25 | -42.42 | -13 | -29.42 | Complies |
| | - 5 MHz bin | 2585.75 | 2585.25 | 2586.25 | -42.34 | -13 | -29.34 | Complies |
| | - 4 MHz bin | 2586.75 | 2586.25 | 2587.25 | -41.89 | -13 | -28.89 | Complies |
| | - 3 MHz bin | 2587.75 | 2587.25 | 2588.25 | -39.32 | -13 | -26.32 | Complies |
| | - 2 MHz bin | 2588.75 | 2588.25 | 2589.25 | -14.42 | -13 | -1.42 | Complies |
| 62 | - 2 MHz bin | 2588.75 | 2588.25 | 2589.25 | -36.29 | -13 | -23.29 | Complies |
| | - 1 MHz bin | 2589.75 | 2589.25 | 2590.25 | -21.89 | -13 | -8.89 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2596.25 | 2595.75 | 2596.75 | -22.09 | -13 | -9.09 | Complies |
| | + 2 MHz bin | 2597.25 | 2596.75 | 2597.75 | -35.59 | -13 | -22.59 | Complies |
| 1000 | + 2 MHz bin | 2597.25 | 2596.75 | 2597.75 | -14.22 | -13 | -1.22 | Complies |
| | + 3 MHz bin | 2598.25 | 2597.75 | 2598.75 | -37.32 | -13 | -24.32 | Complies |
| | + 4 MHz bin | 2599.25 | 2598.75 | 2599.75 | -40.84 | -13 | -27.84 | Complies |
| | + 5 MHz bin | 2600.25 | 2599.75 | 2600.75 | -42.04 | -13 | -29.04 | Complies |
| | + 6 MHz bin | 2601.25 | 2600.75 | 2601.75 | -42.32 | -13 | -29.32 | Complies |

# Modulation Characteristics

## 2593 MHz, 5.5 MHz 5W Channel, 16-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2593 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2590.25 | | 16-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2595.75 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2584.75 | 2584.25 | 2585.25 | -42.41 | -13 | -29.41 | Complies |
| | - 5 MHz bin | 2585.75 | 2585.25 | 2586.25 | -42.30 | -13 | -29.3 | Complies |
| | - 4 MHz bin | 2586.75 | 2586.25 | 2587.25 | -41.73 | -13 | -28.73 | Complies |
| | - 3 MHz bin | 2587.75 | 2587.25 | 2588.25 | -39.18 | -13 | -26.18 | Complies |
| | - 2 MHz bin | 2588.75 | 2588.25 | 2589.25 | -14.11 | -13 | -1.11 | Complies |
| 62 | - 2 MHz bin | 2588.75 | 2588.25 | 2589.25 | -36.00 | -13 | -23 | Complies |
| | - 1 MHz bin | 2589.75 | 2589.25 | 2590.25 | -22.35 | -13 | -9.35 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2596.25 | 2595.75 | 2596.75 | -22.18 | -13 | -9.18 | Complies |
| | + 2 MHz bin | 2597.25 | 2596.75 | 2597.75 | -35.18 | -13 | -22.18 | Complies |
| 1000 | + 2 MHz bin | 2597.25 | 2596.75 | 2597.75 | -14.10 | -13 | -1.1 | Complies |
| | + 3 MHz bin | 2598.25 | 2597.75 | 2598.75 | -37.41 | -13 | -24.41 | Complies |
| | + 4 MHz bin | 2599.25 | 2598.75 | 2599.75 | -40.78 | -13 | -27.78 | Complies |
| | + 5 MHz bin | 2600.25 | 2599.75 | 2600.75 | -42.01 | -13 | -29.01 | Complies |
| | + 6 MHz bin | 2601.25 | 2600.75 | 2601.75 | -42.32 | -13 | -29.32 | Complies |

## 2593 MHz, 5.5 MHz 5W Channel, 64-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2593 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2590.25 | | 64-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2595.75 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2584.75 | 2584.25 | 2585.25 | -42.41 | -13 | -29.41 | Complies |
| | - 5 MHz bin | 2585.75 | 2585.25 | 2586.25 | -42.30 | -13 | -29.3 | Complies |
| | - 4 MHz bin | 2586.75 | 2586.25 | 2587.25 | -41.70 | -13 | -28.7 | Complies |
| | - 3 MHz bin | 2587.75 | 2587.25 | 2588.25 | -38.93 | -13 | -25.93 | Complies |
| | - 2 MHz bin | 2588.75 | 2588.25 | 2589.25 | -14.07 | -13 | -1.07 | Complies |
| 62 | - 2 MHz bin | 2588.75 | 2588.25 | 2589.25 | -35.51 | -13 | -22.51 | Complies |
| | - 1 MHz bin | 2589.75 | 2589.25 | 2590.25 | -22.09 | -13 | -9.09 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2596.25 | 2595.75 | 2596.75 | -21.41 | -13 | -8.41 | Complies |
| | + 2 MHz bin | 2597.25 | 2596.75 | 2597.75 | -34.55 | -13 | -21.55 | Complies |
| 1000 | + 2 MHz bin | 2597.25 | 2596.75 | 2597.75 | -13.94 | -13 | -0.94 | Complies |
| | + 3 MHz bin | 2598.25 | 2597.75 | 2598.75 | -36.64 | -13 | -23.64 | Complies |
| | + 4 MHz bin | 2599.25 | 2598.75 | 2599.75 | -40.38 | -13 | -27.38 | Complies |
| | + 5 MHz bin | 2600.25 | 2599.75 | 2600.75 | -36.64 | -13 | -23.64 | Complies |
| | + 6 MHz bin | 2601.25 | 2600.75 | 2601.75 | -40.37 | -13 | -27.37 | Complies |

# Modulation Characteristics

## 2683 MHz, 6.0 MHz 5W Channel, 4-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2683 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2680 | | 4-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2686 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2674.5 | 2674 | 2675 | -42.21 | -13 | -29.21 | Complies |
| | - 5 MHz bin | 2675.5 | 2675 | 2676 | -41.93 | -13 | -28.93 | Complies |
| | - 4 MHz bin | 2676.5 | 2676 | 2677 | -40.57 | -13 | -27.57 | Complies |
| | - 3 MHz bin | 2677.5 | 2677 | 2678 | -36.57 | -13 | -23.57 | Complies |
| | - 2 MHz bin | 2678.5 | 2678 | 2679 | -13.6 | -13 | -0.6 | Complies |
| 62 | - 2 MHz bin | 2678.5 | 2678 | 2679 | -32.23 | -13 | -19.23 | Complies |
| | - 1 MHz bin | 2679.5 | 2679 | 2680 | -20.88 | -13 | -7.88 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2686.5 | 2686 | 2687 | -20.66 | -13 | -7.66 | Complies |
| | + 2 MHz bin | 2687.5 | 2687 | 2688 | -3215 | -13 | -3202 | Complies |
| 1000 | + 2 MHz bin | 2687.5 | 2687 | 2688 | -13.54 | -13 | -0.54 | Complies |
| | + 3 MHz bin | 2688.5 | 2688 | 2689 | -34.72 | -13 | -21.72 | Complies |
| | + 4 MHz bin | 2689.5 | 2689 | 2690 | -38.66 | -13 | -25.66 | Complies |
| | + 5 MHz bin | 2690.5 | 2690 | 2691 | -41.05 | -13 | -28.05 | Complies |
| | + 6 MHz bin | 2691.5 | 2691 | 2692 | -41.94 | -13 | -28.94 | Complies |

## 2683 MHz, 6.0 MHz 5W Channel, 16-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2683 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2680 | | 16-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2686 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2674.5 | 2674 | 2675 | -42.21 | -13 | -29.21 | Complies |
| | - 5 MHz bin | 2675.5 | 2675 | 2676 | -41.93 | -13 | -28.93 | Complies |
| | - 4 MHz bin | 2676.5 | 2676 | 2677 | -40.61 | -13 | -27.61 | Complies |
| | - 3 MHz bin | 2677.5 | 2677 | 2678 | -36.74 | -13 | -23.74 | Complies |
| | - 2 MHz bin | 2678.5 | 2678 | 2679 | -13.64 | -13 | -0.64 | Complies |
| 62 | - 2 MHz bin | 2678.5 | 2678 | 2679 | -32.44 | -13 | -19.44 | Complies |
| | - 1 MHz bin | 2679.5 | 2679 | 2680 | -20.99 | -13 | -7.99 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2686.5 | 2686 | 2687 | -20.68 | -13 | -7.68 | Complies |
| | + 2 MHz bin | 2687.5 | 2687 | 2688 | -32.25 | -13 | -19.25 | Complies |
| 1000 | + 2 MHz bin | 2687.5 | 2687 | 2688 | -13.56 | -13 | -0.56 | Complies |
| | + 3 MHz bin | 2688.5 | 2688 | 2689 | -34.82 | -13 | -21.82 | Complies |
| | + 4 MHz bin | 2689.5 | 2689 | 2690 | -38.70 | -13 | -25.7 | Complies |
| | + 5 MHz bin | 2690.5 | 2690 | 2691 | -41.06 | -13 | -28.06 | Complies |
| | + 6 MHz bin | 2691.5 | 2691 | 2692 | -41.94 | -13 | -28.94 | Complies |

# Modulation Characteristics

## 2683 MHz, 6.0 MHz 5W Channel, 64-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2683 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 6 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2680 | | 64-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2686 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2674.5 | 2674 | 2675 | -42.21 | -13 | -29.21 | Complies |
| | - 5 MHz bin | 2675.5 | 2675 | 2676 | -41.93 | -13 | -28.93 | Complies |
| | - 4 MHz bin | 2676.5 | 2676 | 2677 | -40.60 | -13 | -27.6 | Complies |
| | - 3 MHz bin | 2677.5 | 2677 | 2678 | -36.72 | -13 | -23.72 | Complies |
| | - 2 MHz bin | 2678.5 | 2678 | 2679 | -13.63 | -13 | -0.63 | Complies |
| 62 | - 2 MHz bin | 2678.5 | 2678 | 2679 | -32.41 | -13 | -19.41 | Complies |
| | - 1 MHz bin | 2679.5 | 2679 | 2680 | -20.73 | -13 | -7.73 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2686.5 | 2686 | 2687 | -20.44 | -13 | -7.44 | Complies |
| | + 2 MHz bin | 2687.5 | 2687 | 2688 | -32.20 | -13 | -19.2 | Complies |
| 1000 | + 2 MHz bin | 2687.5 | 2687 | 2688 | -13.57 | -13 | -0.57 | Complies |
| | + 3 MHz bin | 2688.5 | 2688 | 2689 | -34.80 | -13 | -21.8 | Complies |
| | + 4 MHz bin | 2689.5 | 2689 | 2690 | -38.70 | -13 | -25.7 | Complies |
| | + 5 MHz bin | 2690.5 | 2690 | 2691 | -41.06 | -13 | -28.06 | Complies |
| | + 6 MHz bin | 2691.5 | 2691 | 2692 | -41.95 | -13 | -28.95 | Complies |

## 2683 MHz, 5.5 MHz 5W Channel, 4-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2683 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2680.25 | | 4-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2685.75 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2674.75 | 2674.25 | 2675.25 | -42.16 | -13 | -29.16 | Complies |
| | - 5 MHz bin | 2675.75 | 2675.25 | 2676.25 | -41.67 | -13 | -28.67 | Complies |
| | - 4 MHz bin | 2676.75 | 2676.25 | 2677.25 | -39.42 | -13 | -26.42 | Complies |
| | - 3 MHz bin | 2677.75 | 2677.25 | 2678.25 | -35.16 | -13 | -22.16 | Complies |
| | - 2 MHz bin | 2678.75 | 2678.25 | 2679.25 | -13.3 | -13 | -0.3 | Complies |
| 62 | - 2 MHz bin | 2678.75 | 2678.25 | 2679.25 | -29.87 | -13 | -16.87 | Complies |
| | - 1 MHz bin | 2679.75 | 2679.25 | 2680.25 | -19.03 | -13 | -6.03 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2686.25 | 2685.75 | 2686.75 | -18.32 | -13 | -5.32 | Complies |
| | + 2 MHz bin | 2687.25 | 2686.75 | 2687.75 | -31.18 | -13 | -18.18 | Complies |
| 1000 | + 2 MHz bin | 2687.25 | 2686.75 | 2687.75 | -13.36 | -13 | -0.36 | Complies |
| | + 3 MHz bin | 2688.25 | 2687.75 | 2688.75 | -33.43 | -13 | -20.43 | Complies |
| | + 4 MHz bin | 2689.25 | 2688.75 | 2689.75 | -37.87 | -13 | -24.87 | Complies |
| | + 5 MHz bin | 2690.25 | 2689.75 | 2690.75 | -40.86 | -13 | -27.86 | Complies |
| | + 6 MHz bin | 2691.25 | 2690.75 | 2691.75 | -41.92 | -13 | -28.92 | Complies |

# Modulation Characteristics

## 2683 MHz, 5.5 MHz 5W Channel, 16-QAM

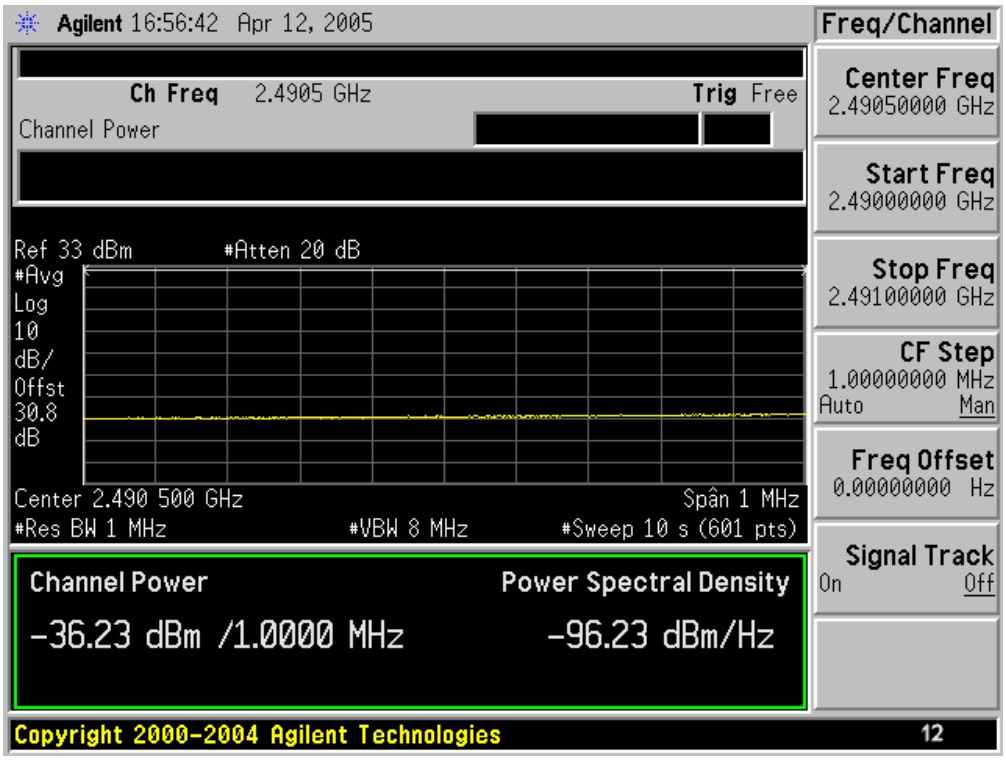
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2683 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2680.25 | | 16-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2685.75 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2674.75 | 2674.25 | 2675.25 | -42.23 | -13 | -29.23 | Complies |
| | - 5 MHz bin | 2675.75 | 2675.25 | 2676.25 | -41.85 | -13 | -28.85 | Complies |
| | - 4 MHz bin | 2676.75 | 2676.25 | 2677.25 | -40.05 | -13 | -27.05 | Complies |
| | - 3 MHz bin | 2677.75 | 2677.25 | 2678.25 | -35.30 | -13 | -22.3 | Complies |
| | - 2 MHz bin | 2678.75 | 2678.25 | 2679.25 | -13.49 | -13 | -0.49 | Complies |
| 62 | - 2 MHz bin | 2678.75 | 2678.25 | 2679.25 | -30.78 | -13 | -17.78 | Complies |
| | - 1 MHz bin | 2679.75 | 2679.25 | 2680.25 | -19.55 | -13 | -6.55 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2686.25 | 2685.75 | 2686.75 | -18.86 | -13 | -5.86 | Complies |
| | + 2 MHz bin | 2687.25 | 2686.75 | 2687.75 | -31.70 | -13 | -18.7 | Complies |
| 1000 | + 2 MHz bin | 2687.25 | 2686.75 | 2687.75 | -13.48 | -13 | -0.48 | Complies |
| | + 3 MHz bin | 2688.25 | 2687.75 | 2688.75 | -33.85 | -13 | -20.85 | Complies |
| | + 4 MHz bin | 2689.25 | 2688.75 | 2689.75 | -38.22 | -13 | -25.22 | Complies |
| | + 5 MHz bin | 2690.25 | 2689.75 | 2690.75 | -40.99 | -13 | -27.99 | Complies |
| | + 6 MHz bin | 2691.25 | 2690.75 | 2691.75 | -41.95 | -13 | -28.95 | Complies |

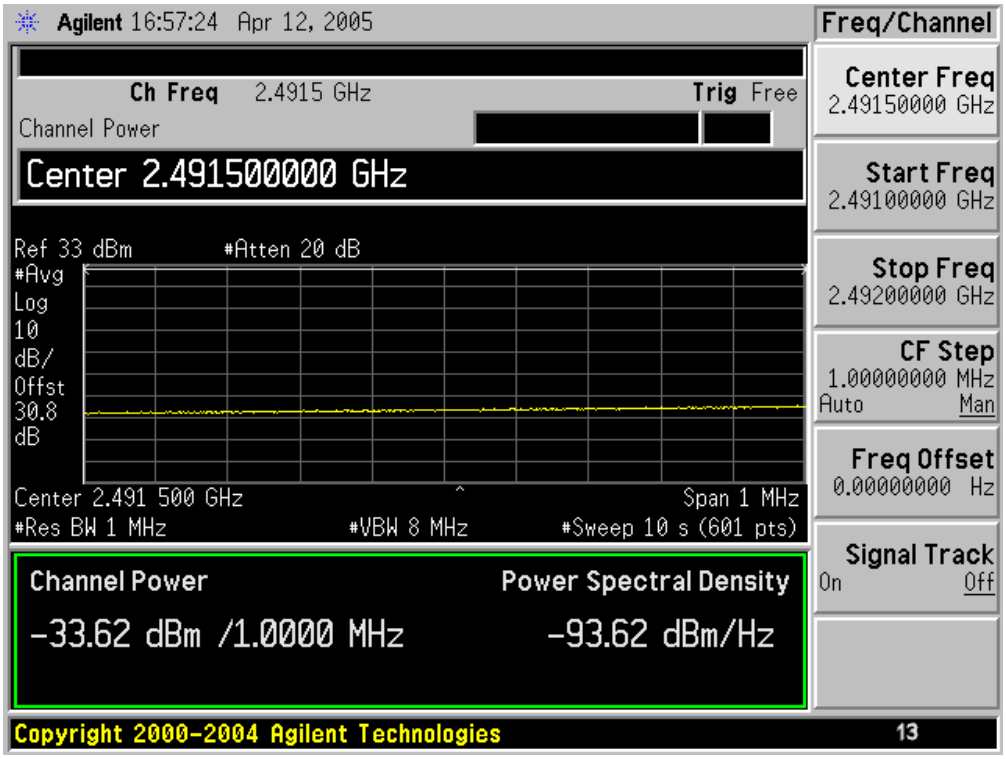
## 2683 MHz, 5.5 MHz 5W Channel, 64-QAM

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Channel Center Freq (MHz) | | | 2683 | | 4/21/2005 | | |
| | Channel BW (MHz) | | | 5.5 | | 48 VDC Nom | | |
| | Channel Band Edge - Low (MHz) | | | 2680.25 | | 64-QAM | | |
| | Channel Band Edge - High (MHz) | | | 2685.75 | | | | |
| Resolution Bandwidth (kHz) | | 1 MHz Band Center Freq (MHz) | 1 Mhz Band Low Freq (MHz) | 1 MHz Band High Freq (MHz) | Emission Power in 1 MHz BW (dBm) | Spec (dBm/MHz) | Margin (dB) | Result |
| 1000 | - 6 MHz bin | 2674.75 | 2674.25 | 2675.25 | -42.23 | -13 | -29.23 | Complies |
| | - 5 MHz bin | 2675.75 | 2675.25 | 2676.25 | -41.88 | -13 | -28.88 | Complies |
| | - 4 MHz bin | 2676.75 | 2676.25 | 2677.25 | -40.16 | -13 | -27.16 | Complies |
| | - 3 MHz bin | 2677.75 | 2677.25 | 2678.25 | -35.58 | -13 | -22.58 | Complies |
| | - 2 MHz bin | 2678.75 | 2678.25 | 2679.25 | -13.55 | -13 | -0.55 | Complies |
| 62 | - 2 MHz bin | 2678.75 | 2678.25 | 2679.25 | -31.13 | -13 | -18.13 | Complies |
| | - 1 MHz bin | 2679.75 | 2679.25 | 2680.25 | -19.62 | -13 | -6.62 | Complies |
| | | | | | | | | |
| 62 | + 1 MHz bin | 2686.25 | 2685.75 | 2686.75 | -19.17 | -13 | -6.17 | Complies |
| | + 2 MHz bin | 2687.25 | 2686.75 | 2687.75 | -31.94 | -13 | -18.94 | Complies |
| 1000 | + 2 MHz bin | 2687.25 | 2686.75 | 2687.75 | -13.50 | -13 | -0.5 | Complies |
| | + 3 MHz bin | 2688.25 | 2687.75 | 2688.75 | -34.00 | -13 | -21 | Complies |
| | + 4 MHz bin | 2689.25 | 2688.75 | 2689.75 | -38.29 | -13 | -25.29 | Complies |
| | + 5 MHz bin | 2690.25 | 2689.75 | 2690.75 | -41.02 | -13 | -28.02 | Complies |
| | + 6 MHz bin | 2691.25 | 2690.75 | 2691.75 | -41.95 | -13 | -28.95 | Complies |

# Modulation Characteristics Spectrum Analyzer Plots (2W)

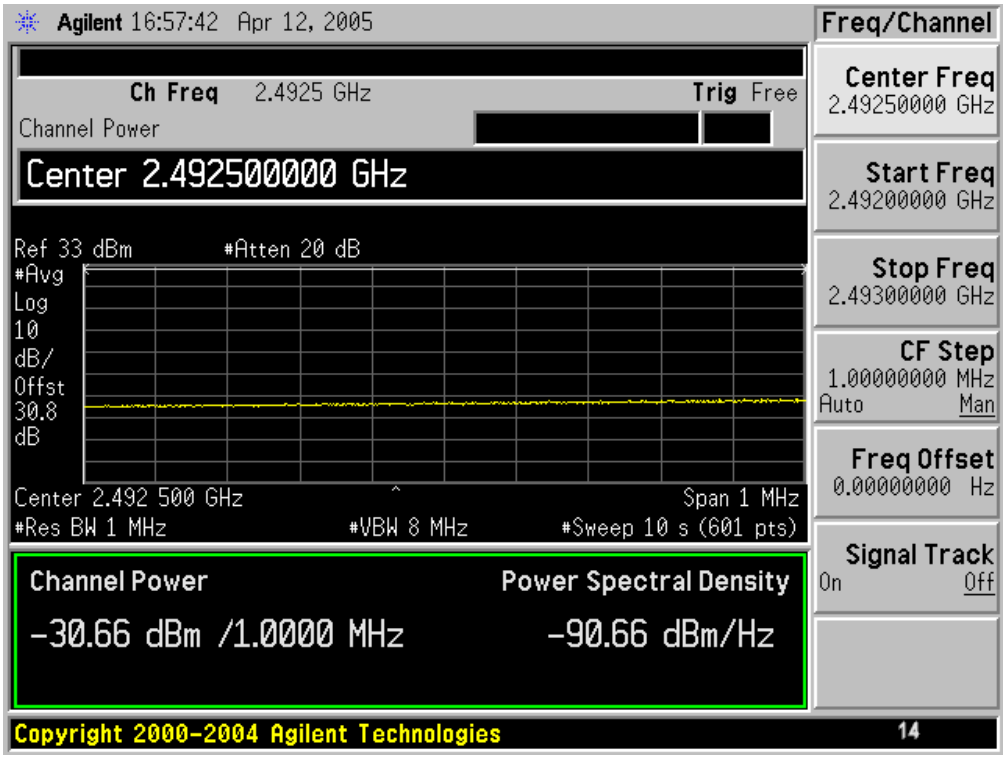
Emissions measurements for F=2499 MHz, 6.0 MHz 2W channel, 4-QAM

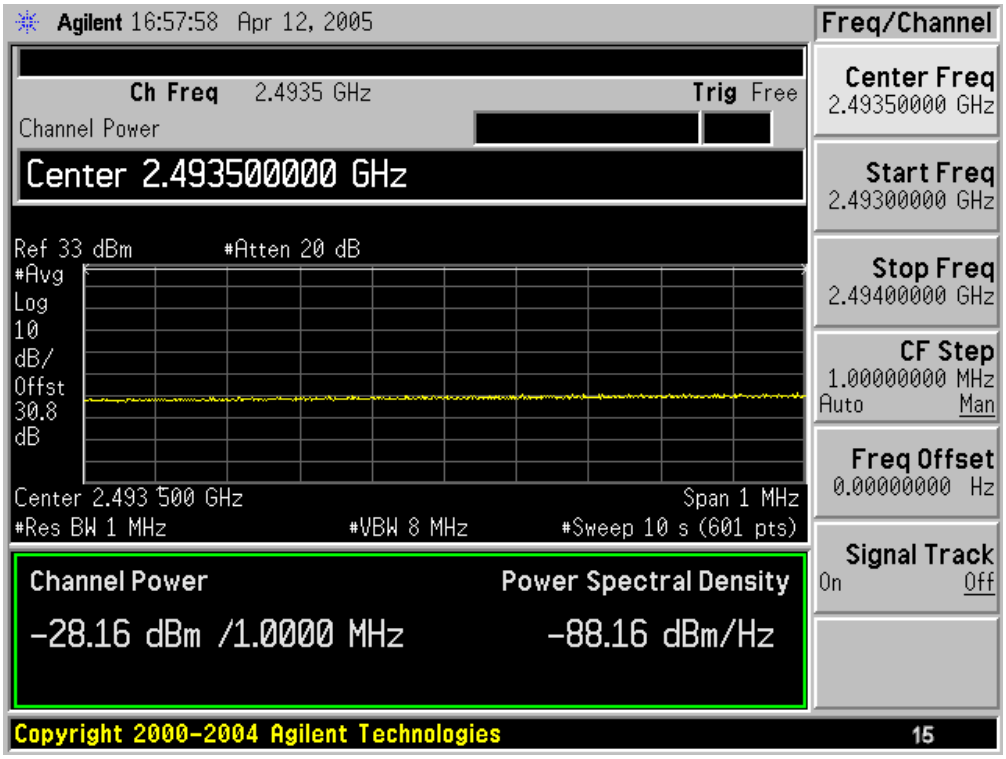


# Modulation Characteristics

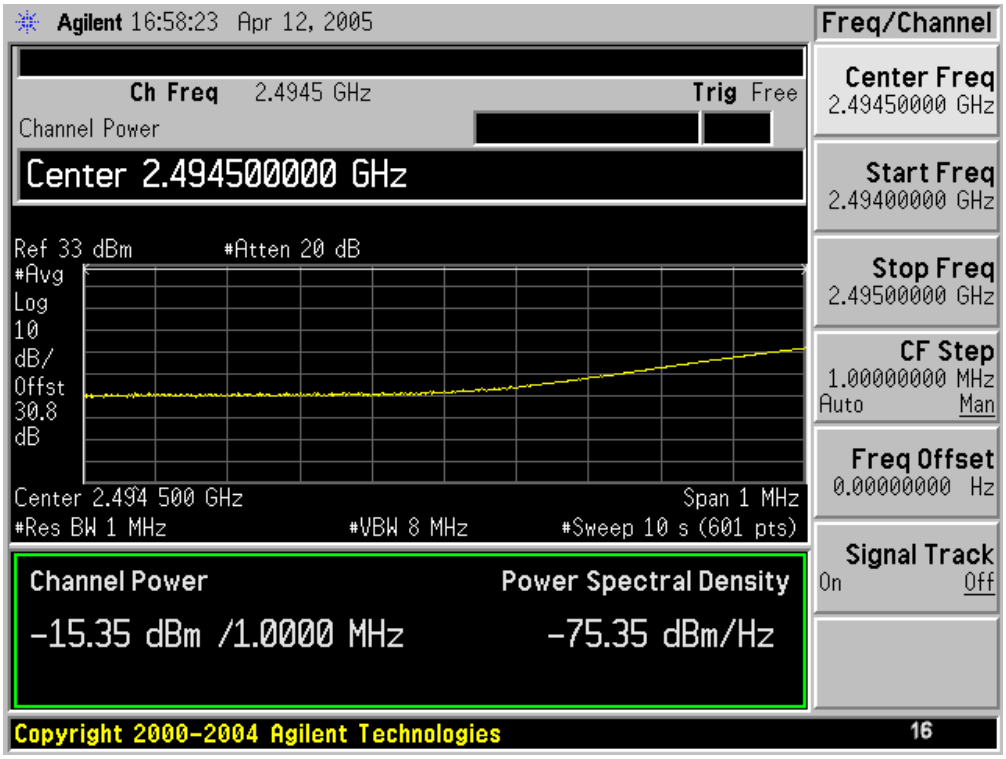
Emissions measurements for F=2499 MHz, 6.0 MHz 2W channel, 4-QAM (Cont'd)

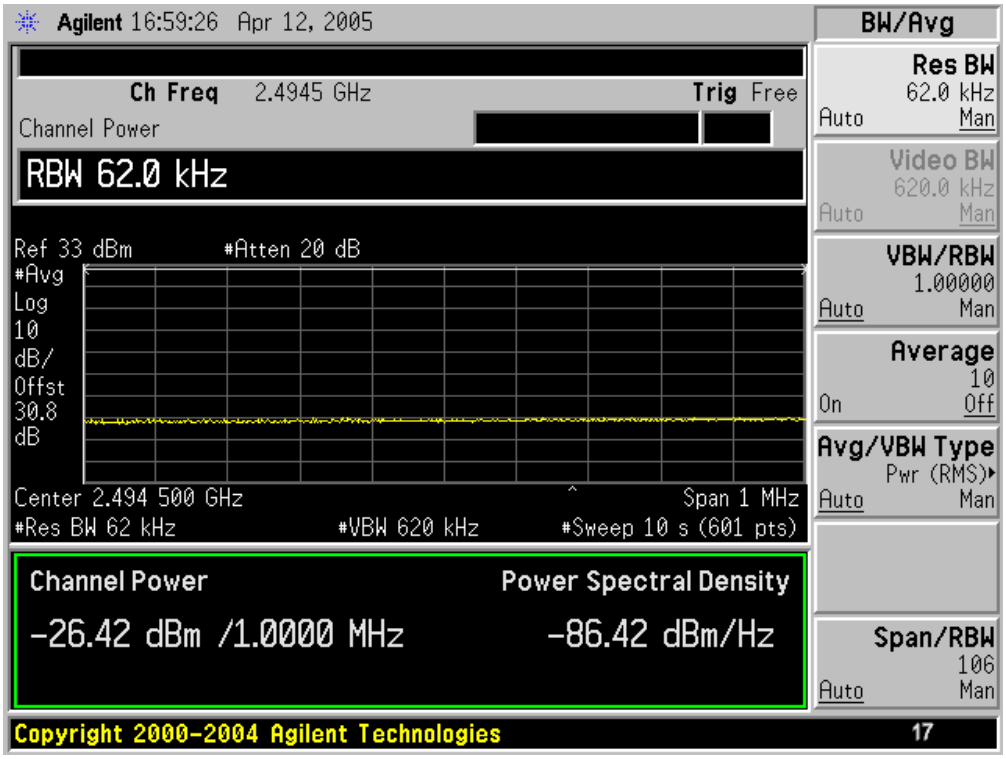


# Modulation Characteristics

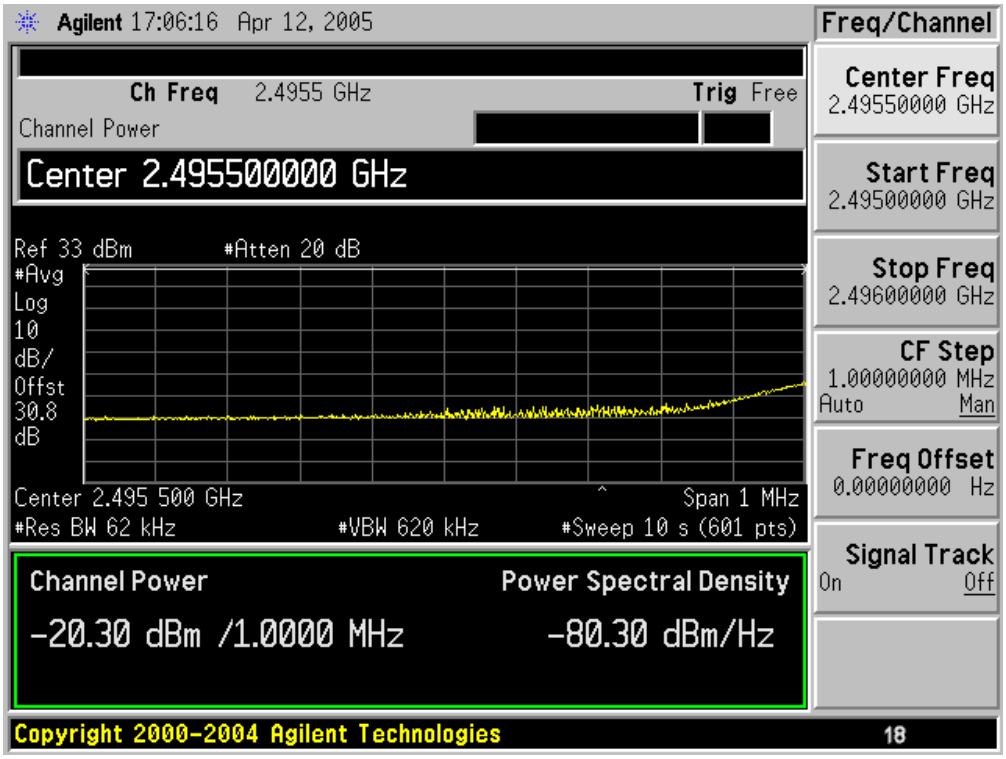
Emissions measurements for F=2499 MHz, 6.0 MHz 2W channel, 4-QAM (Cont'd)

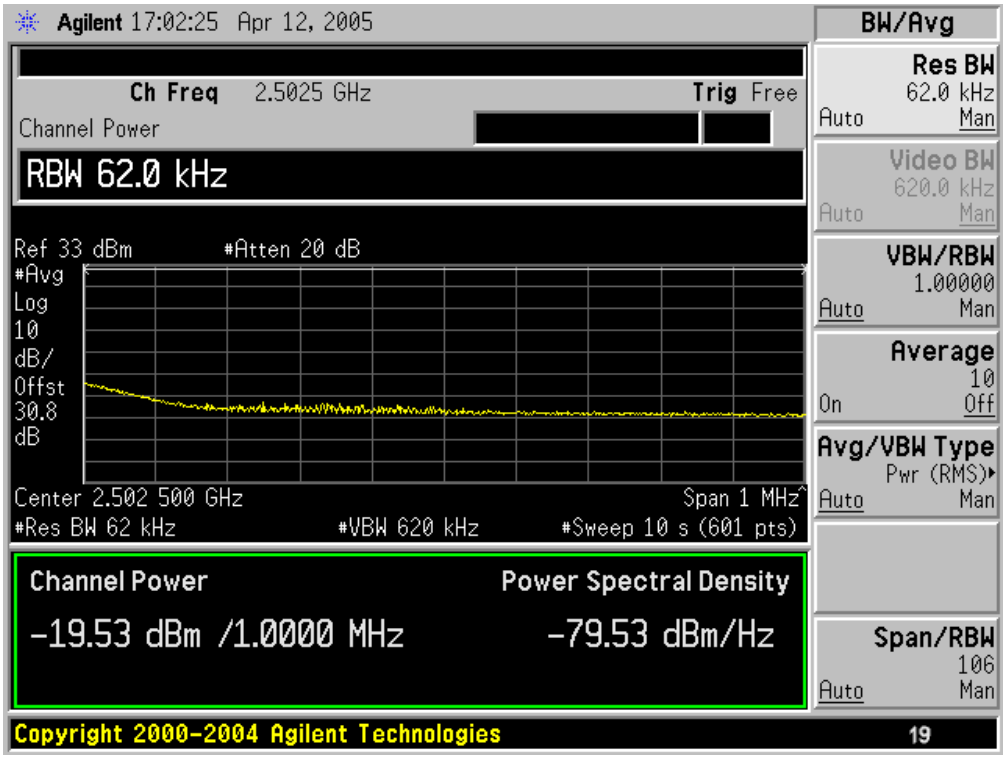


# Modulation Characteristics

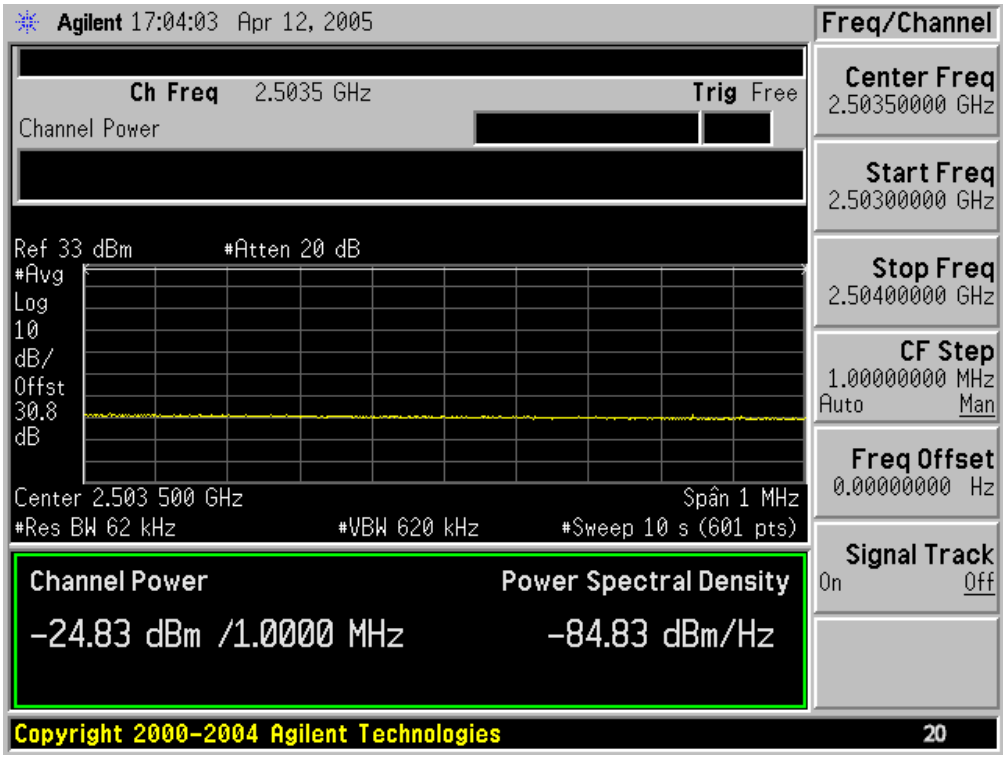
Emissions measurements for F=2499 MHz, 6.0 MHz 2W channel, 4-QAM (Cont'd)

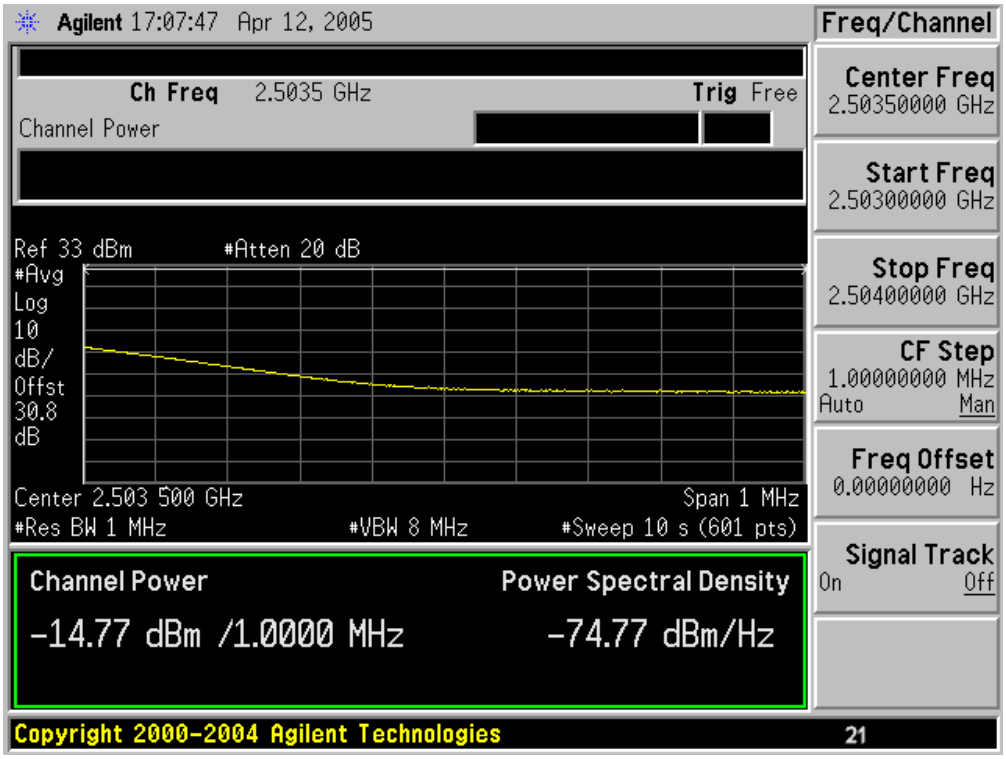


# Modulation Characteristics

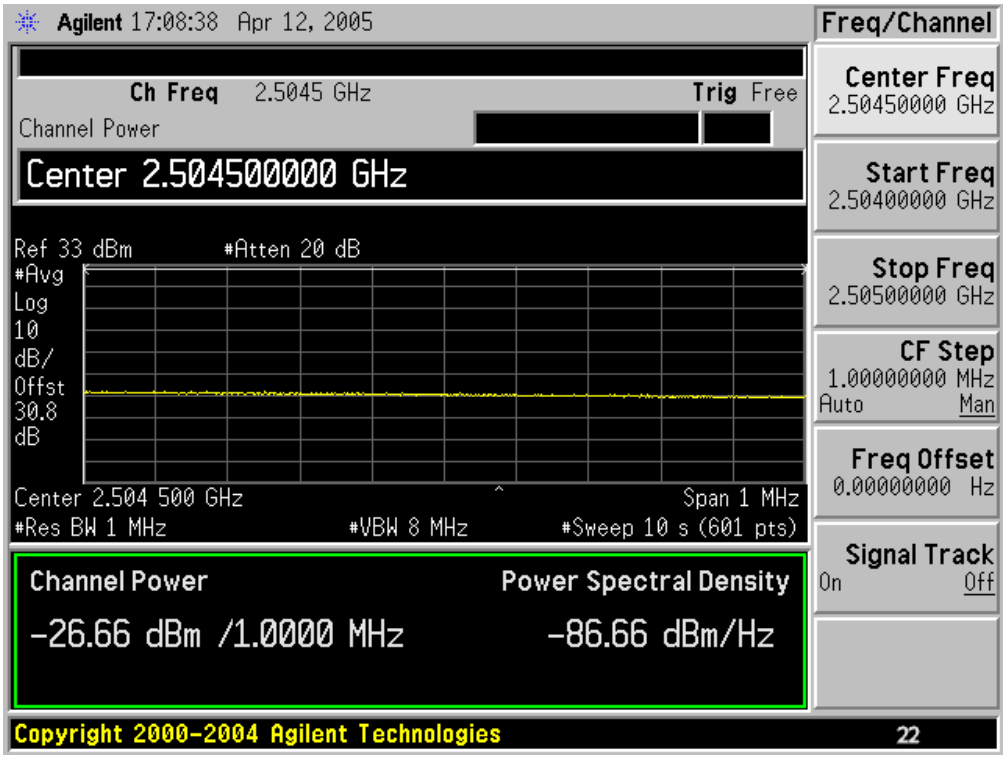
Emissions measurements for F=2499 MHz, 6.0 MHz 2W channel, 4-QAM (Cont'd)

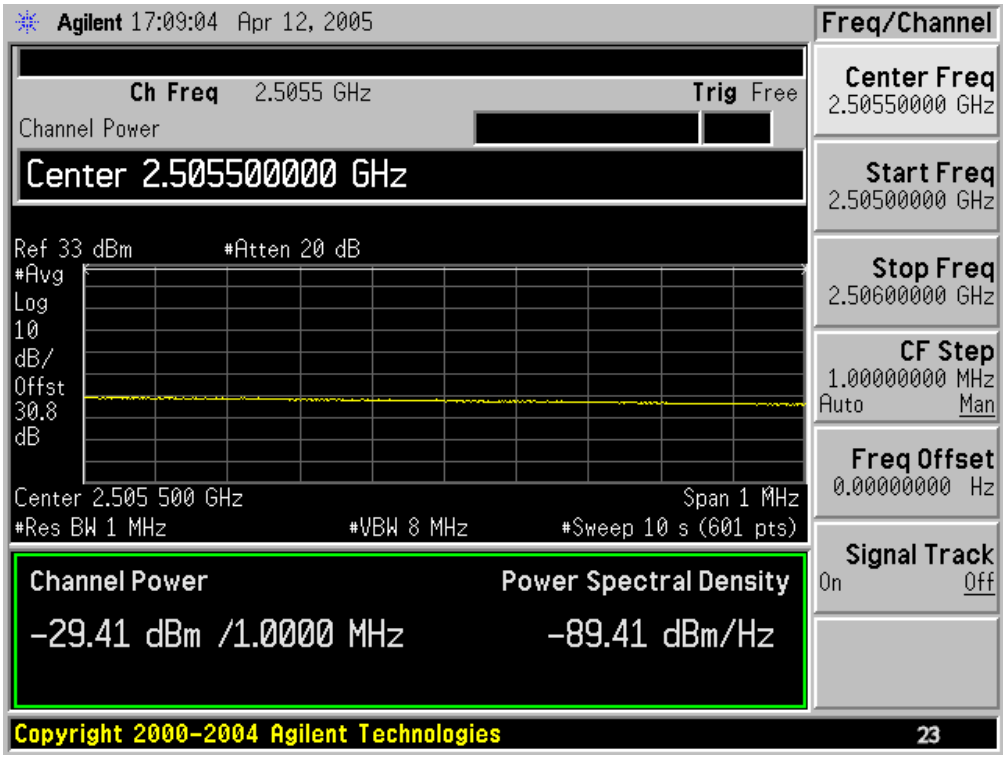


# Modulation Characteristics

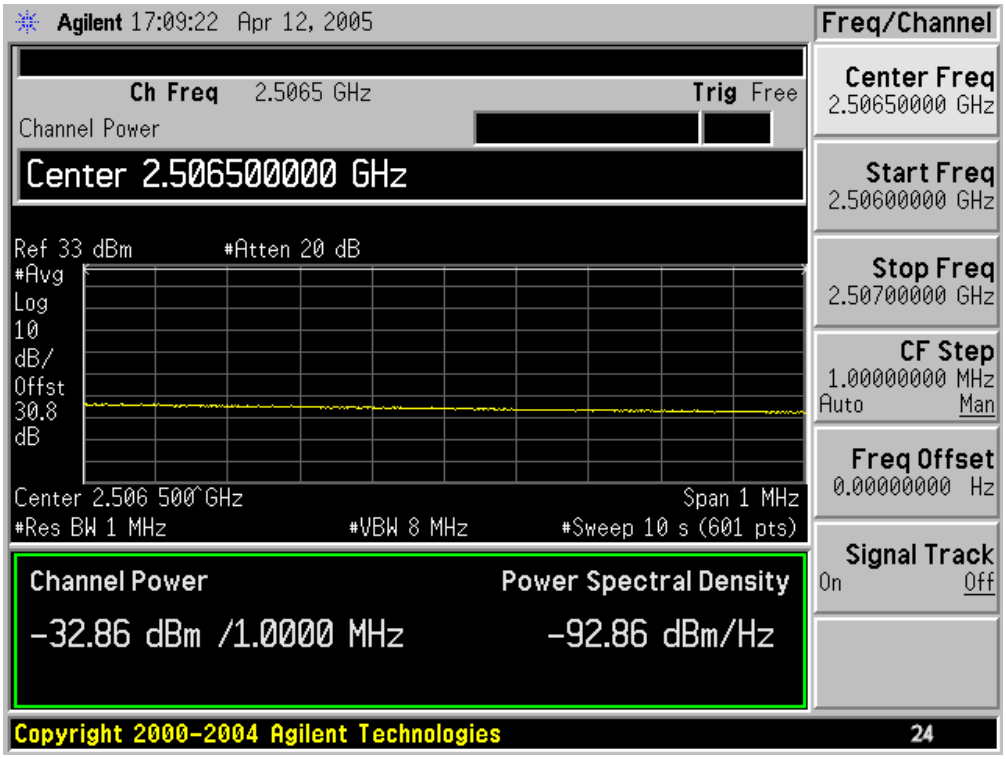
Emissions measurements for F=2499 MHz, 6.0 MHz 2W channel, 4-QAM (Cont'd)

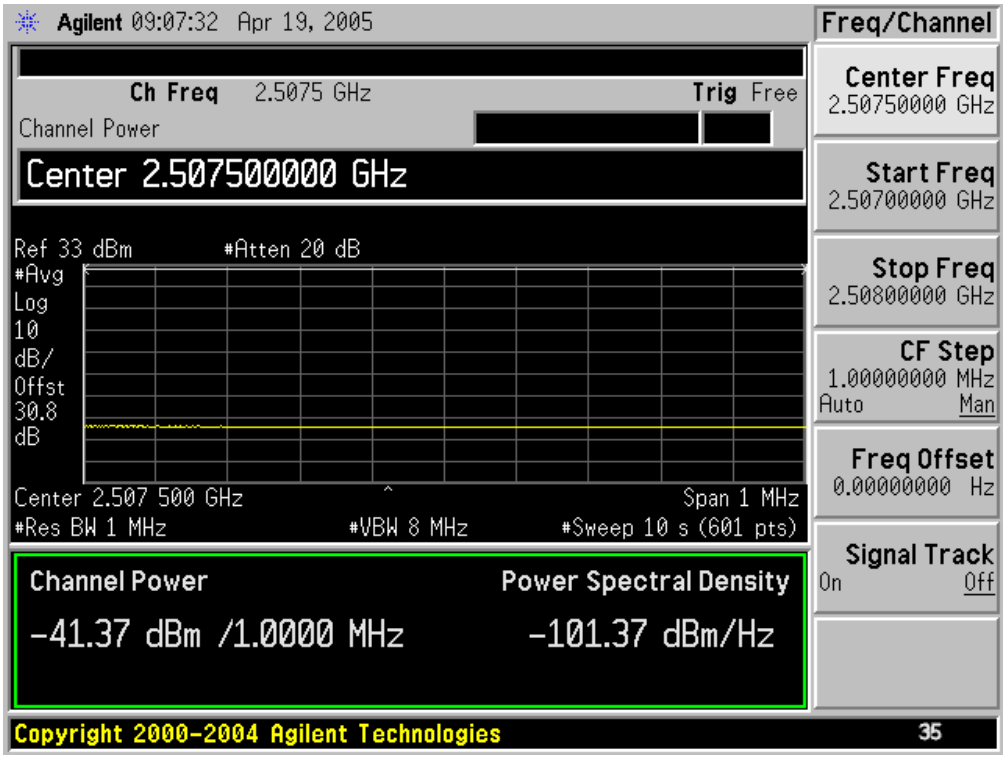


# Modulation Characteristics

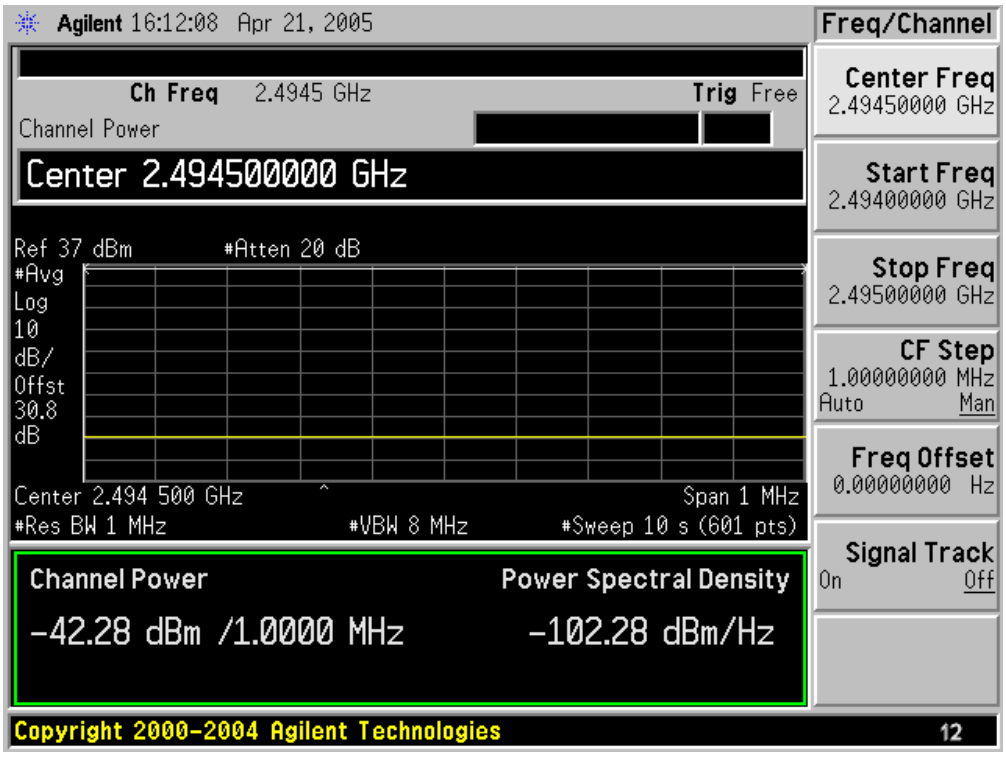
Emissions measurements for F=2499 MHz, 6.0 MHz 2W channel, 4-QAM (Cont'd)

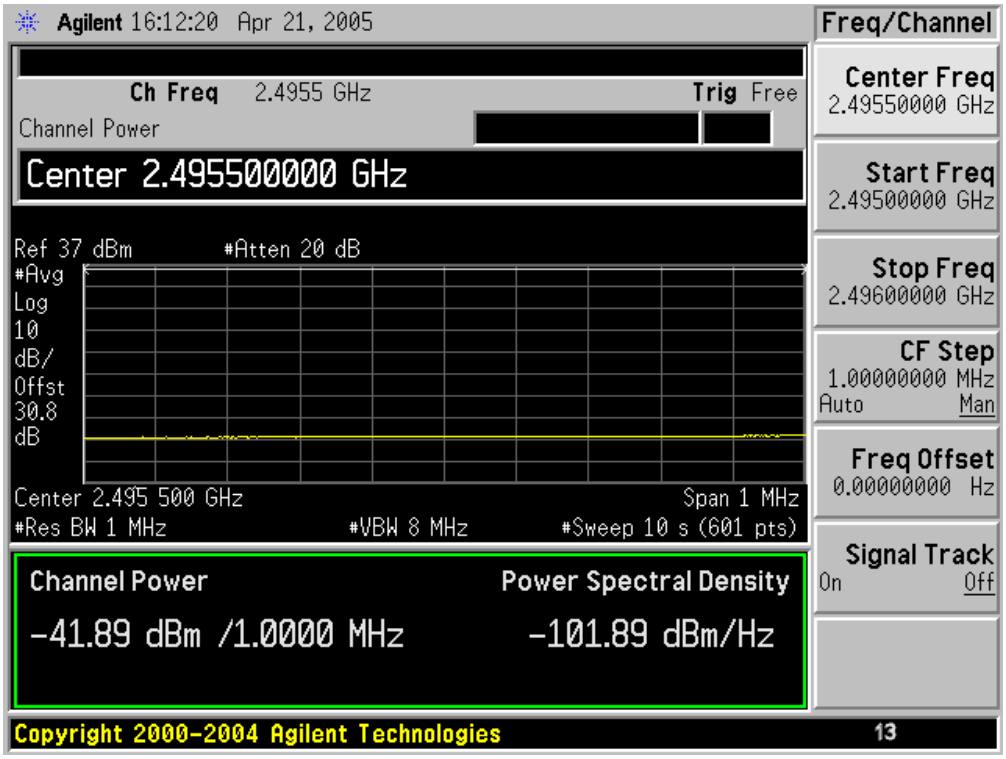


# Modulation Characteristics Spectrum Analyzer Plots (5W)

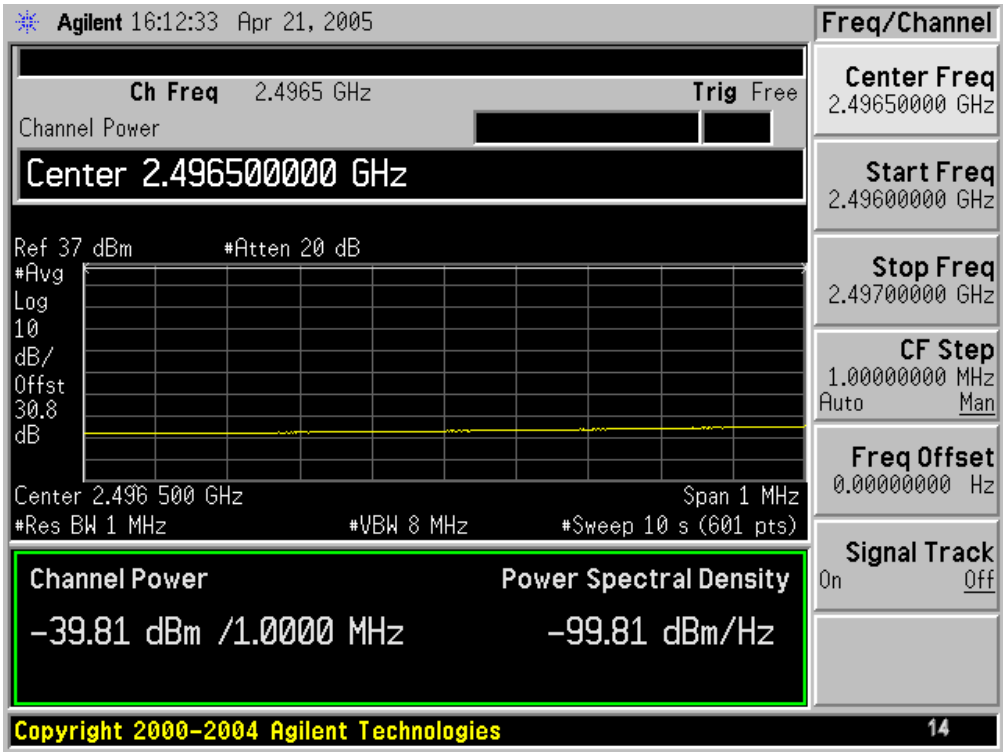
Emissions measurements for F=2503 MHz, 6.0 MHz 5W channel, 4-QAM

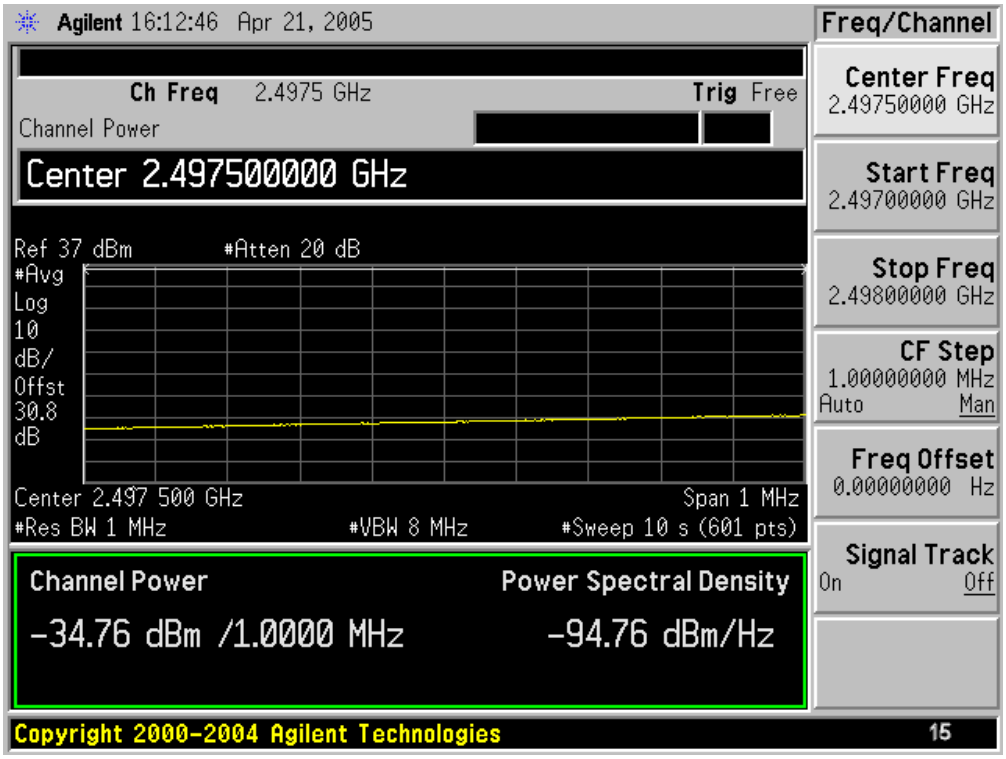


# Modulation Characteristics

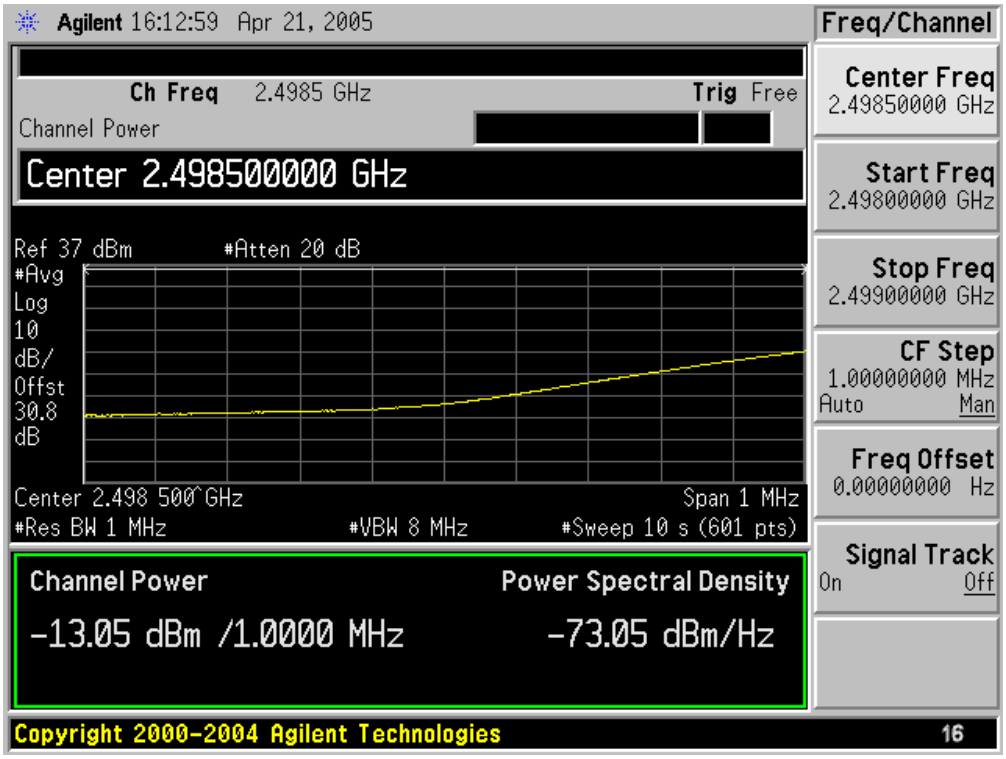
Emissions measurements for F=2503 MHz, 6.0 MHz 5W channel, 4-QAM (Cont'd)

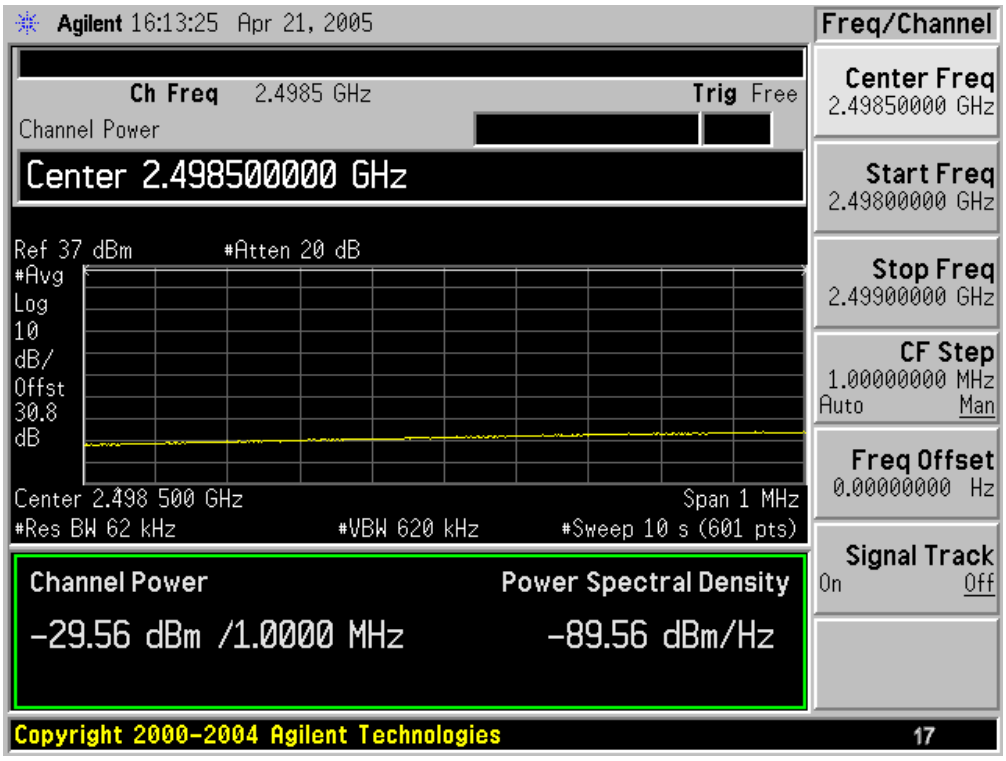


# Modulation Characteristics

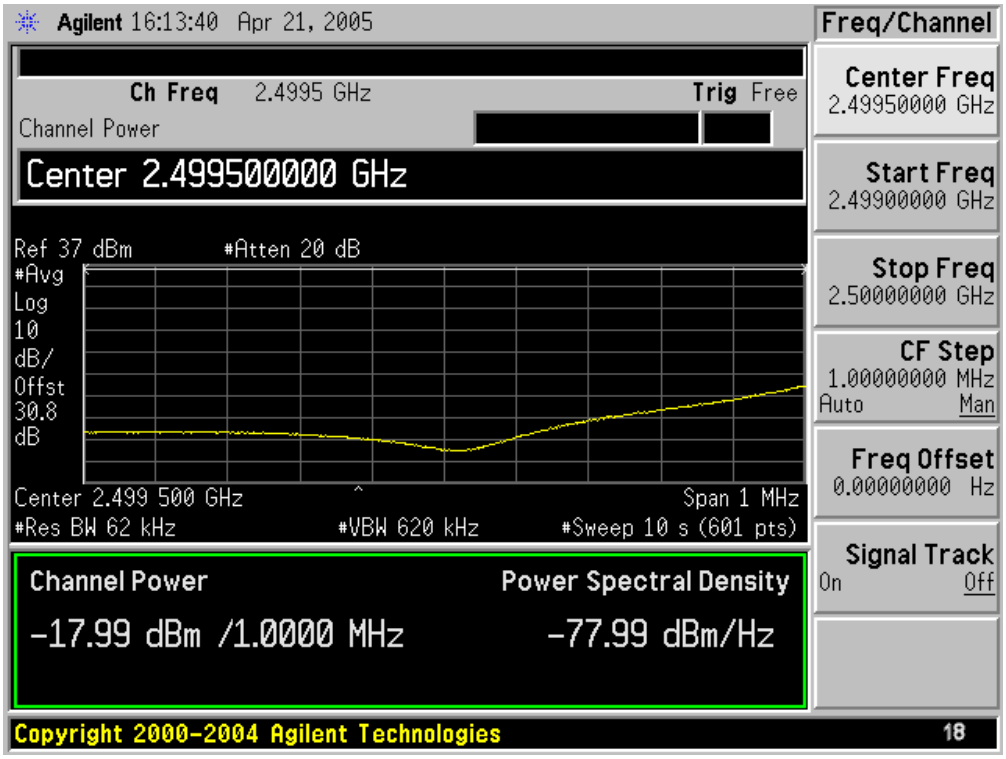
Emissions measurements for F=2503 MHz, 6.0 MHz 5W channel, 4-QAM (Cont'd)

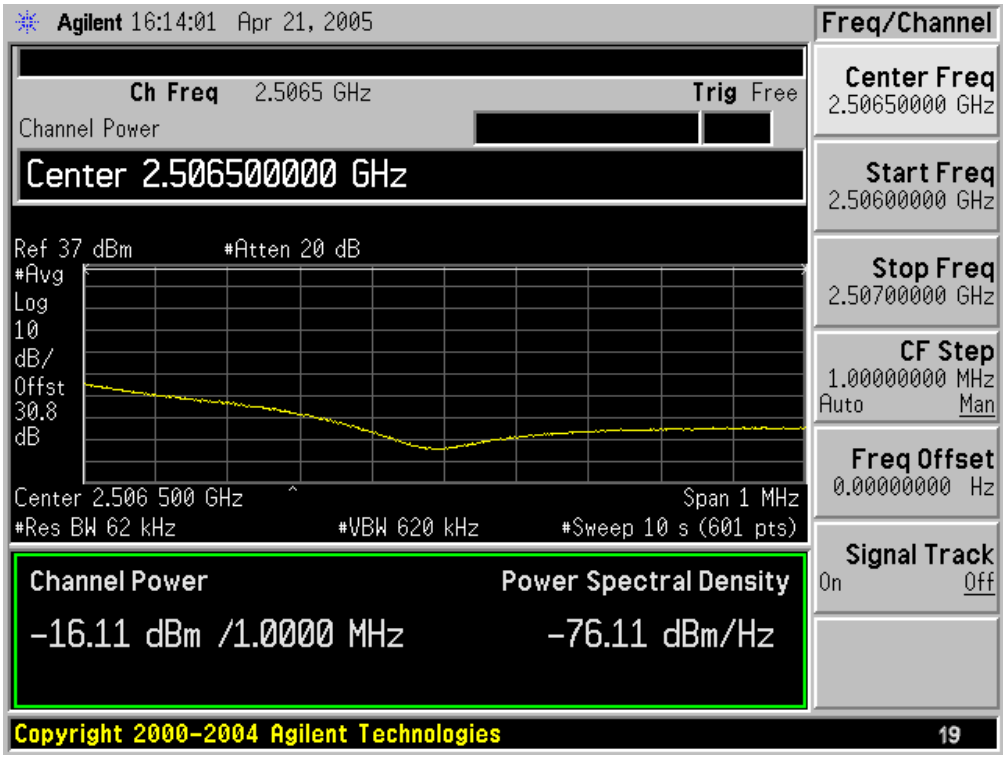


# Modulation Characteristics

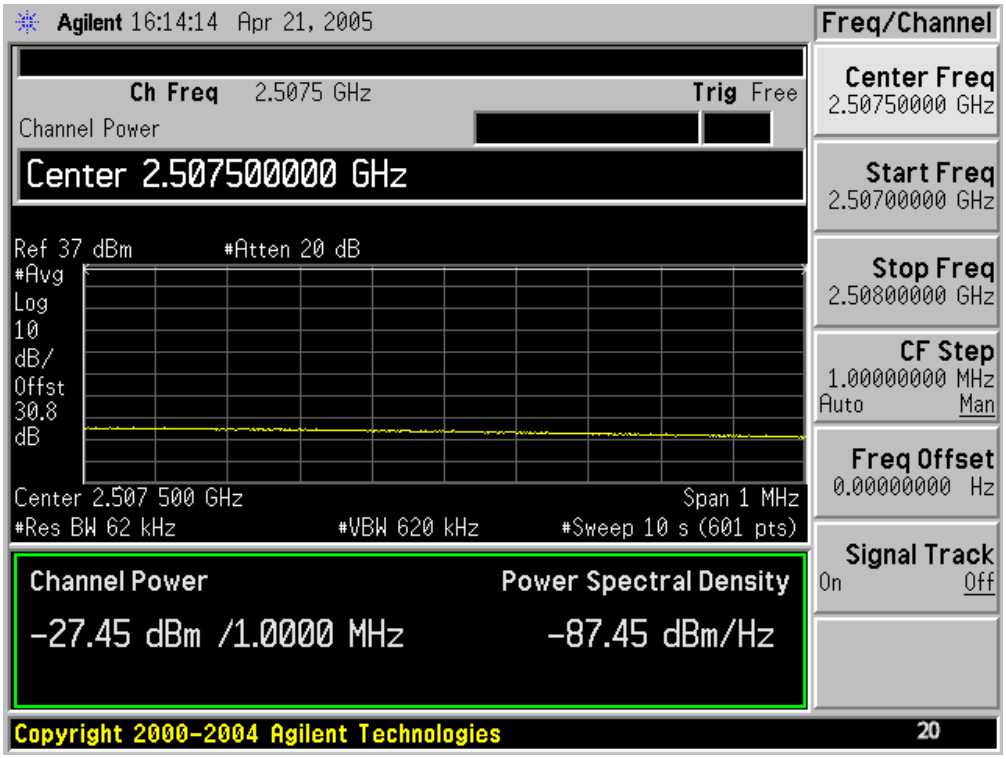
Emissions measurements for F=2503 MHz, 6.0 MHz 5W channel, 4-QAM (Cont'd)

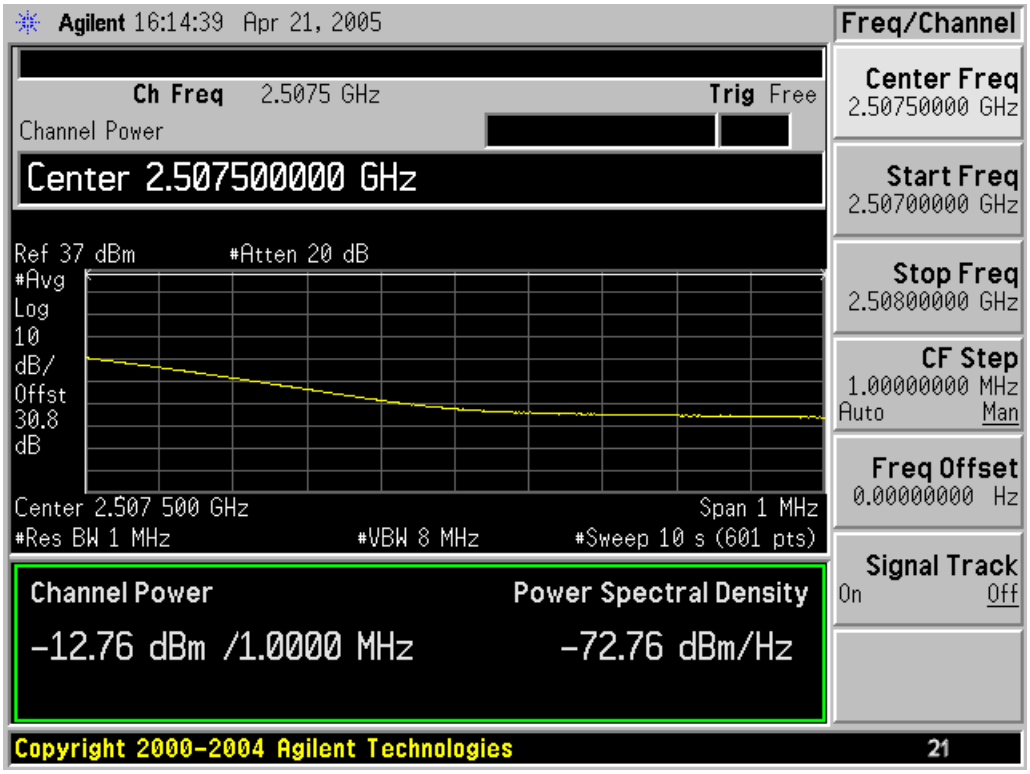


# Modulation Characteristics

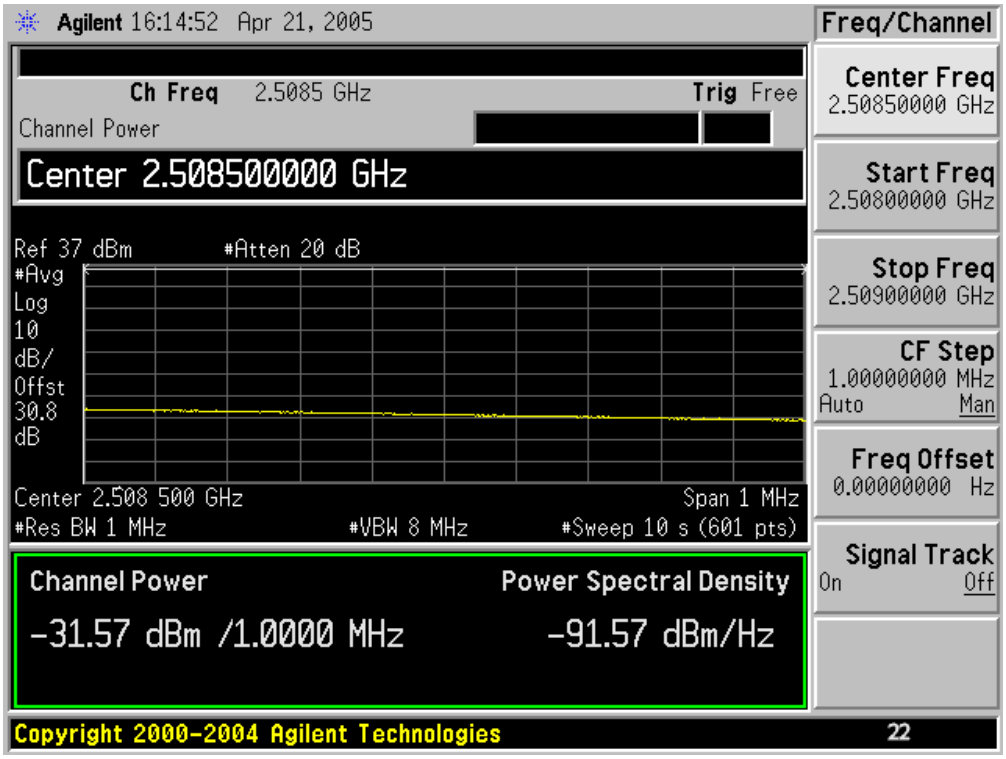
Emissions measurements for F=2503 MHz, 6.0 MHz 5W channel, 4-QAM (Cont'd)

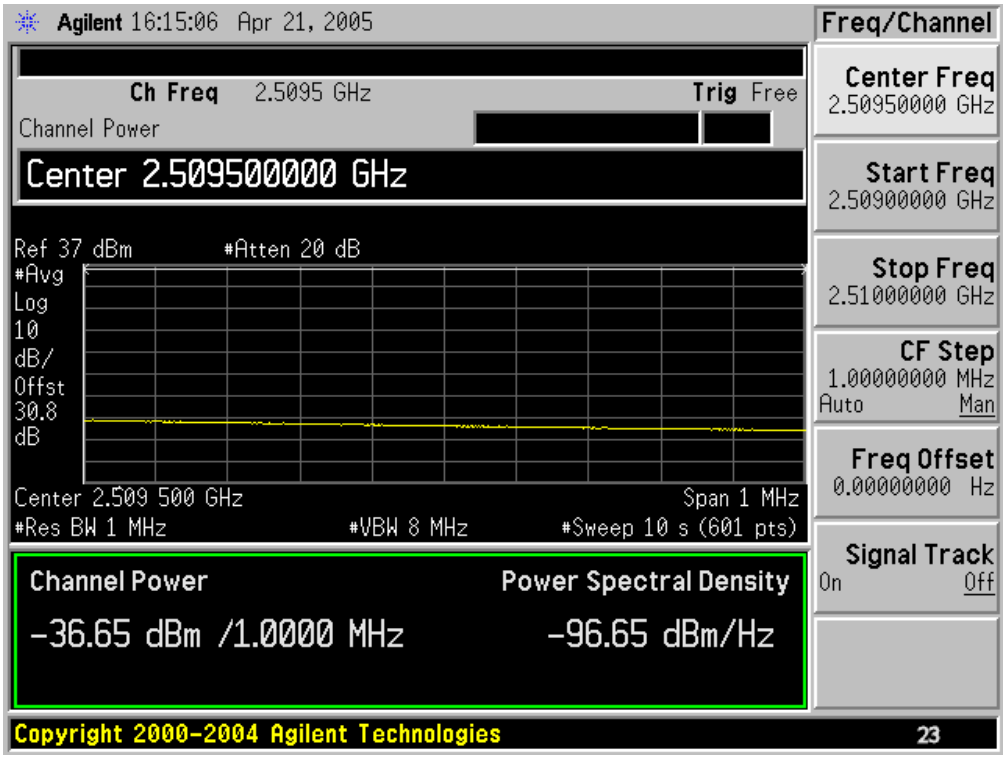


# Modulation Characteristics

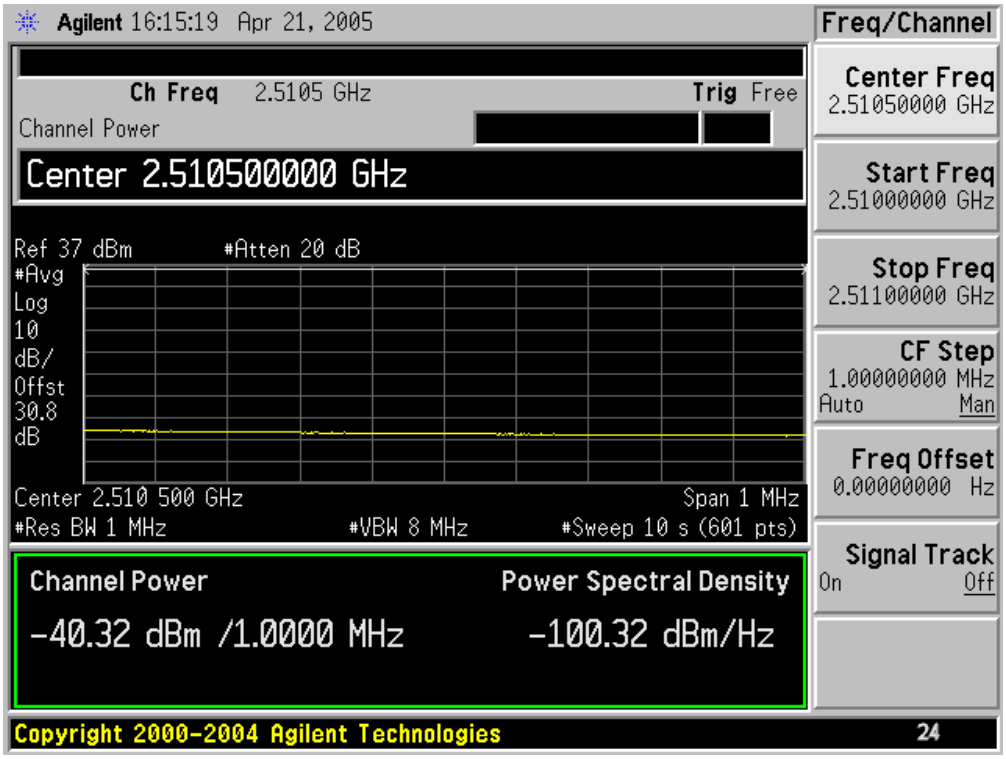
Emissions measurements for F=2503 MHz, 6.0 MHz 5W channel, 4-QAM (Cont'd)

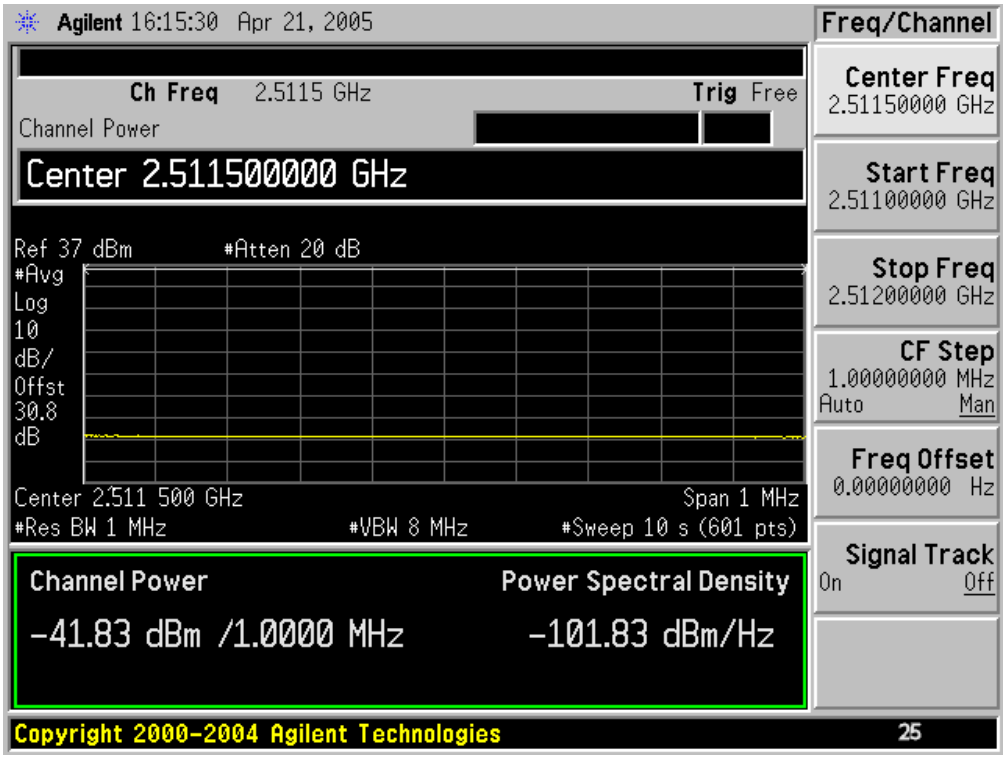


# Modulation Characteristics

Emissions measurements for F=2503 MHz, 6.0 MHz 5W channel, 4-QAM (Cont'd)



# Occupied Bandwidth / Emission Bandwidth

Rule Part Number:

| | |
|---|---|
| 2.1049 | The occupied bandwidth, that is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission shall be measured under the following conditions as applicable: |
| 2.1049(h) | Each authorization issued pursuant to these rules will show, as the emission designator, a symbol representing the class of emission which shall be prefixed by a number specifying the necessary bandwidth. This figure does not necessarily indicate the bandwidth actually occupied by the emission at any instant. In those cases where part 2 of this chapter does not provide a formula for the computation of the necessary bandwidth, the occupied bandwidth may be used in the emission designator. |
| 27.53(l)(6) | Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules. |

# Occupied Bandwidth / Emission Bandwidth

Standard: ANSI C63.4-2003
American National Standard for Methods of Measurement of Radio- Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

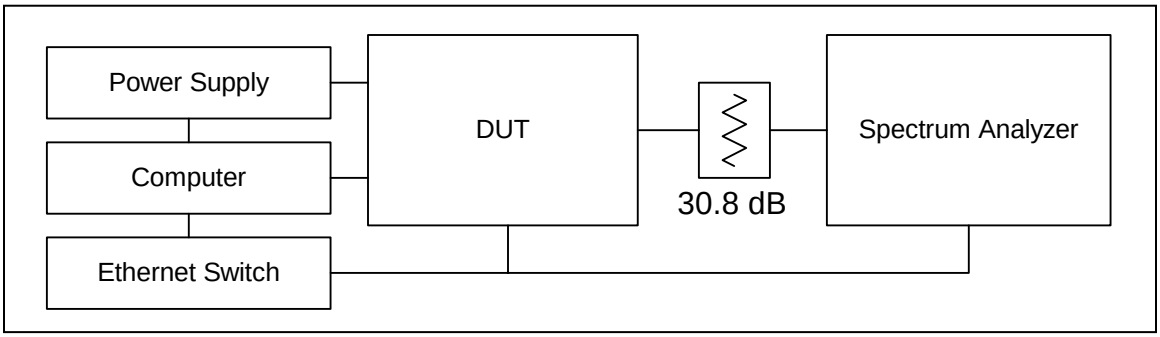
Test Procedure: The Orthogonal Frequency Division Multiplexing (OFDM) modulated Time Division Duplex (TDD) RF signal from the test unit is applied to a spectrum analyzer. The bandwidth of the signal is recorded by measuring the modulation bandwidth with the built in measurement function in the spectrum analyzer. The transmitter is enabled in test mode with the attached computer. The RF loss of the attenuators and coax has been measured and is included in the spectrum analyzer offset level. Measurements are performed at frequencies across the band, for each of the modulation formats available (4, 16, and 64-QAM) and channel bandwidths (5.5 MHz and 6 MHz).

Test Conditions: 2-Watt Frequencies:
5.5 MHz channels: 2504.75, 2565.25, 2626.75, 2687.25 MHz
6.0 MHz channels: 2499, 2575, and 2621 MHz

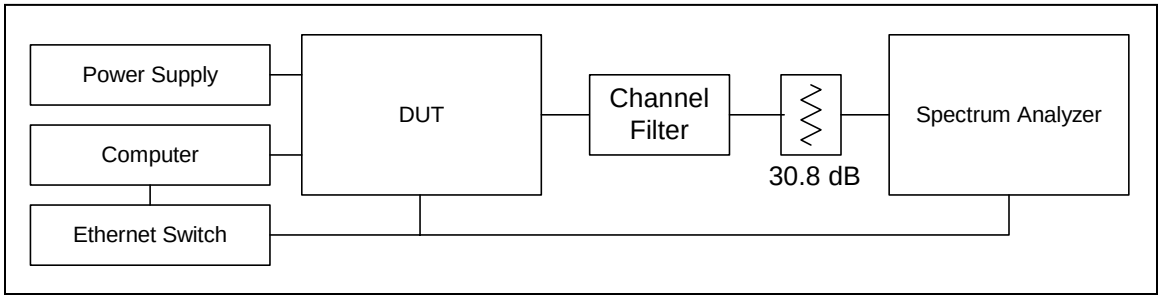
5-Watt Frequencies:
Both 5.5 and 6.0 MHz channels: 2503, 2593, and 2683 MHz (these channels were tested at both bandwidths due to availability of channel filters)

Temperature = 25°C
Supply Voltage = 48.0 VDC Nominal to DUT

Test Setups:




**2W Modulation Characteristics Test Setup**




**5W Modulation Characteristics Test Setup**

## Occupied and Emission Bandwidth Test Results Summary (2W)

### 2-WATT CHANNELS

| Occupied Bandwidth (MHz) for 99.5 % (23 dB BW) | | | | |
|---|---|---|---|---|
| **Freq (MHz)** | **Channel BW (MHz)** | **4-QAM** | **16-QAM** | **64-QAM** |
| 2504.75 | 5.5 | 4.998 | 4.998 | 4.998 |
| 2565.25 | 5.5 | 4.995 | 4.995 | 4.995 |
| 2626.75 | 5.5 | 4.995 | 4.995 | 4.995 |
| 2687.25 | 5.5 | 4.995 | 4.995 | 4.995 |
| 2499 | 6.0 | 5.520 | 5.520 | 5.520 |
| 2575 | 6.0 | 5.520 | 5.520 | 5.520 |
| 2621 | 6.0 | 5.520 | 5.520 | 5.520 |

| Emission Bandwidth (MHz) for 26 dB BW (99.75 %) | | | | |
|---|---|---|---|---|
| **Freq (MHz)** | **Channel BW (MHz)** | **4-QAM** | **16-QAM** | **64-QAM** |
| 2504.75 | 5.5 | 5.184 | 5.184 | 5.181 |
| 2565.25 | 5.5 | 5.180 | 5.182 | 5.182 |
| 2626.75 | 5.5 | 5.184 | 5.178 | 5.179 |
| 2687.25 | 5.5 | 5.183 | 5.183 | 5.179 |
| 2499 | 6.0 | 5.727 | 5.729 | 5.727 |
| 2575 | 6.0 | 5.723 | 5.725 | 5.724 |
| 2621 | 6.0 | 5.726 | 5.725 | 5.722 |

# Occupied and Emission Bandwidth Test Results Summary (5W)

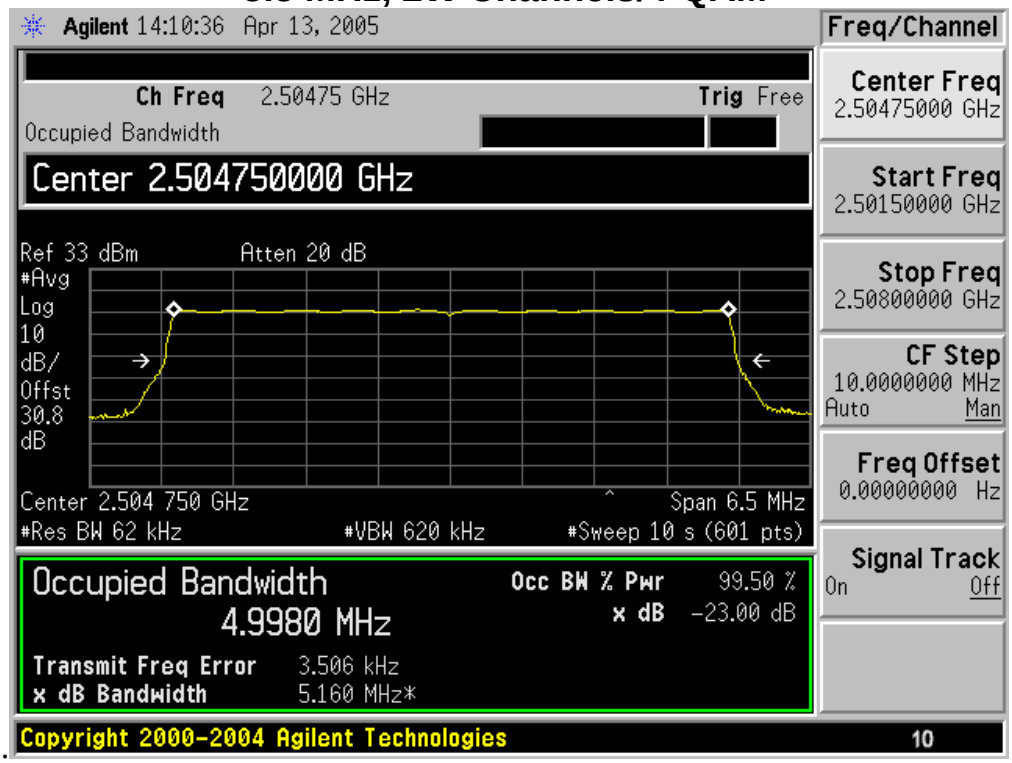
## 5-WATT CHANNELS

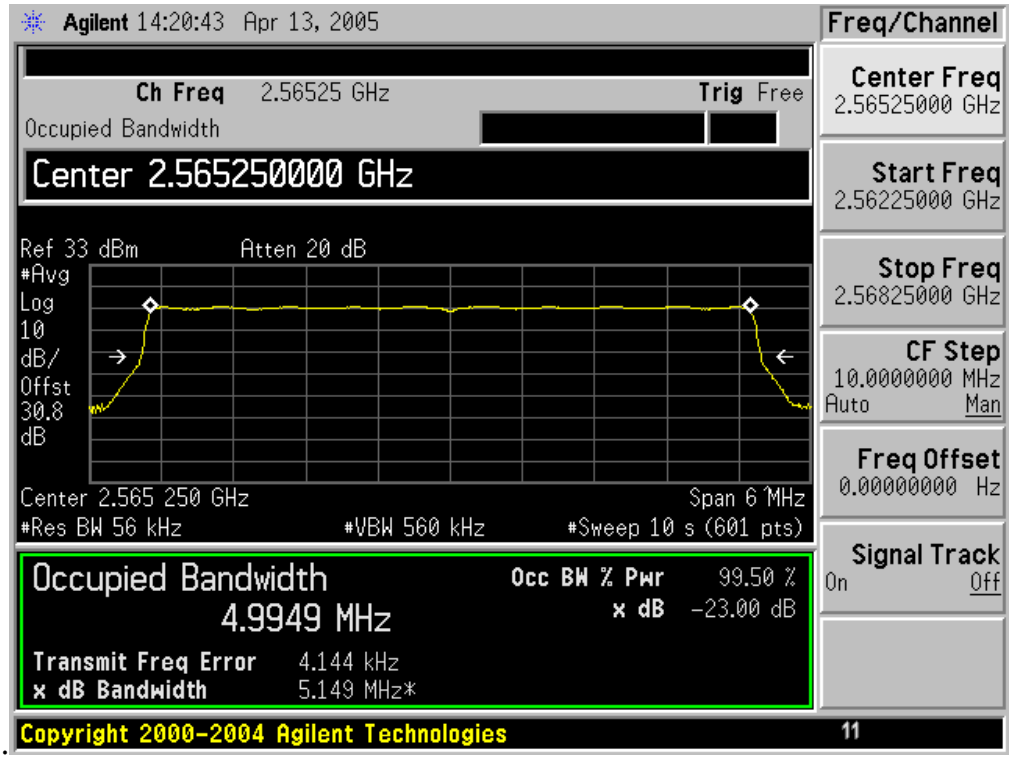
| Occupied Bandwidth (MHz) for 99.5 % (23 dB BW) | | | | |
|---|---|---|---|---|
| **Freq (MHz)** | **Channel BW (MHz)** | **4-QAM** | **16-QAM** | **64-QAM** |
| 2503 | 5.5 | 4.995 | 4.995 | 4.995 |
| 2593 | 5.5 | 4.993 | 4.993 | 4.993 |
| 2683 | 5.5 | 4.992 | 4.992 | 4.992 |
| 2503 | 6.0 | 5.518 | 5.518 | 5.518 |
| 2593 | 6.0 | 5.515 | 5.515 | 5.515 |
| 2683 | 6.0 | 5.514 | 5.514 | 5.514 |

| Emission Bandwidth (MHz) for 26 dB BW (99.75 %) | | | | |
|---|---|---|---|---|
| **Freq (MHz)** | **Channel BW (MHz)** | **4-QAM** | **16-QAM** | **64-QAM** |
| 2503 | 5.5 | 5.178 | 5.184 | 5.181 |
| 2593 | 5.5 | 5.178 | 5.177 | 5.174 |
| 2503 | 5.5 | 5.176 | 5.175 | 5.178 |
| 2503 | 6.0 | 5.723 | 5.723 | 5.717 |
| 2593 | 6.0 | 5.719 | 5.716 | 5.715 |
| 2683 | 6.0 | 5.712 | 5.715 | 5.713 |

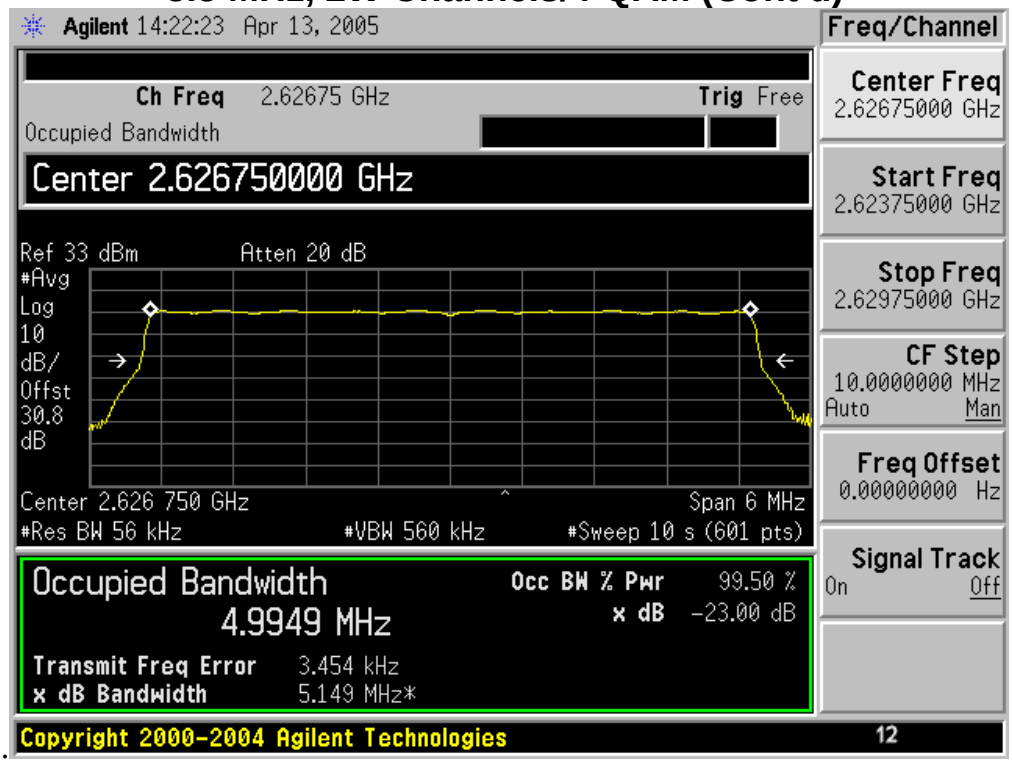
# Occupied Bandwidth Spectrum Analyzer Plots (2W)

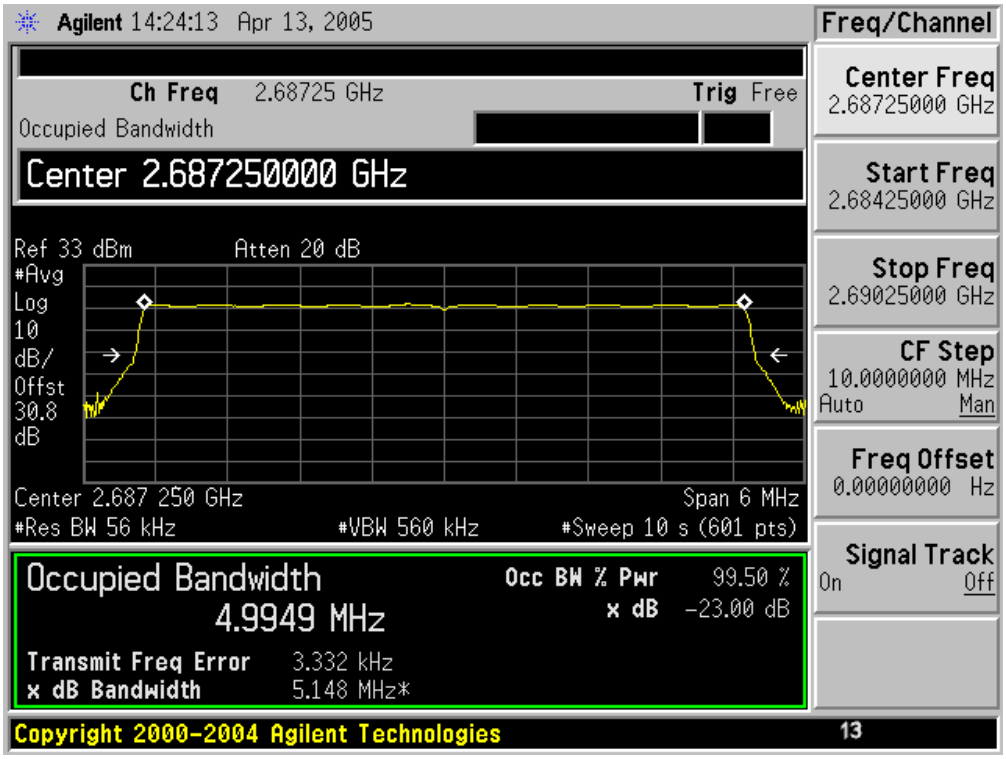
## 5.5 MHz, 2W Channels/4-QAM



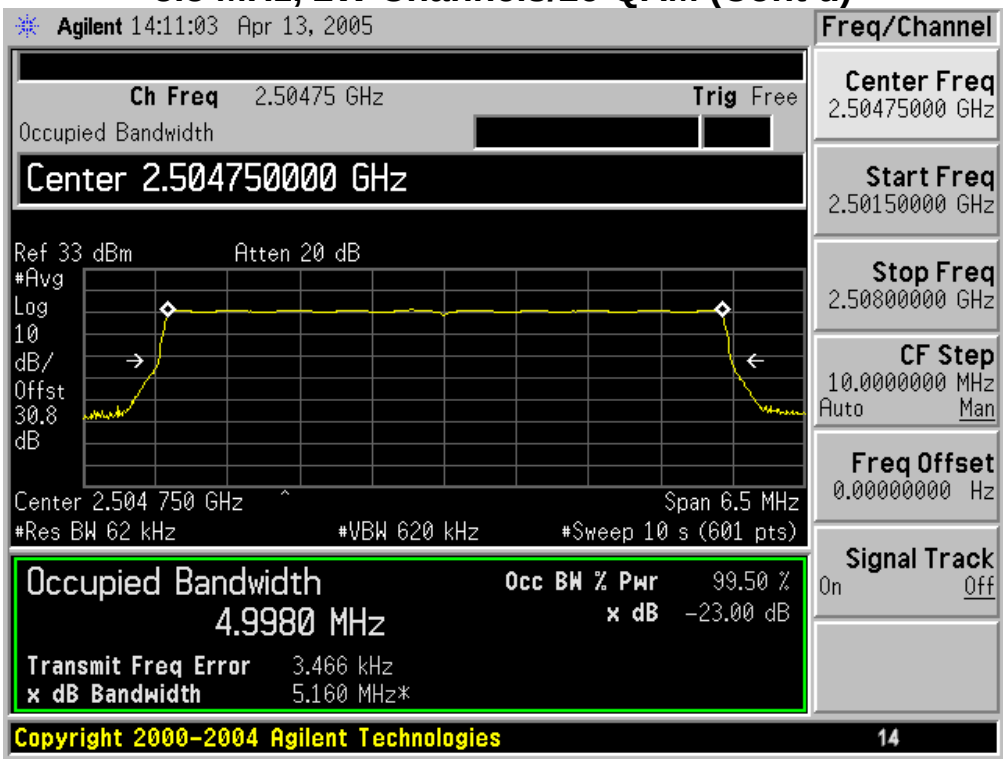



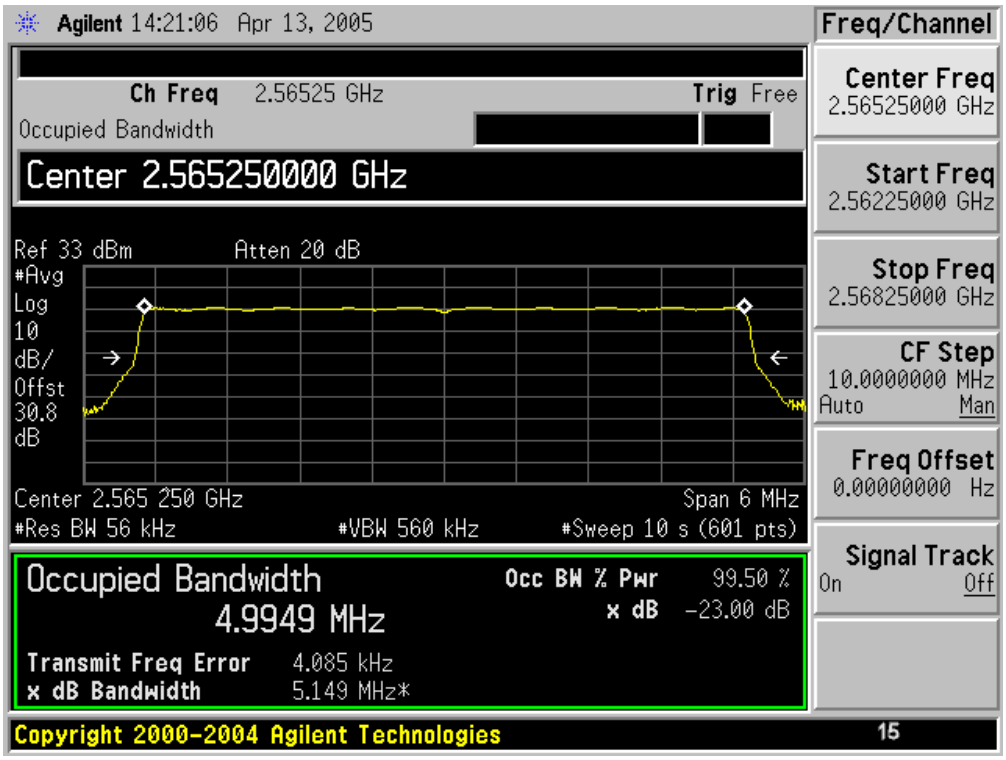
# Occupied Bandwidth
## 5.5 MHz, 2W Channels/4-QAM (Cont'd)



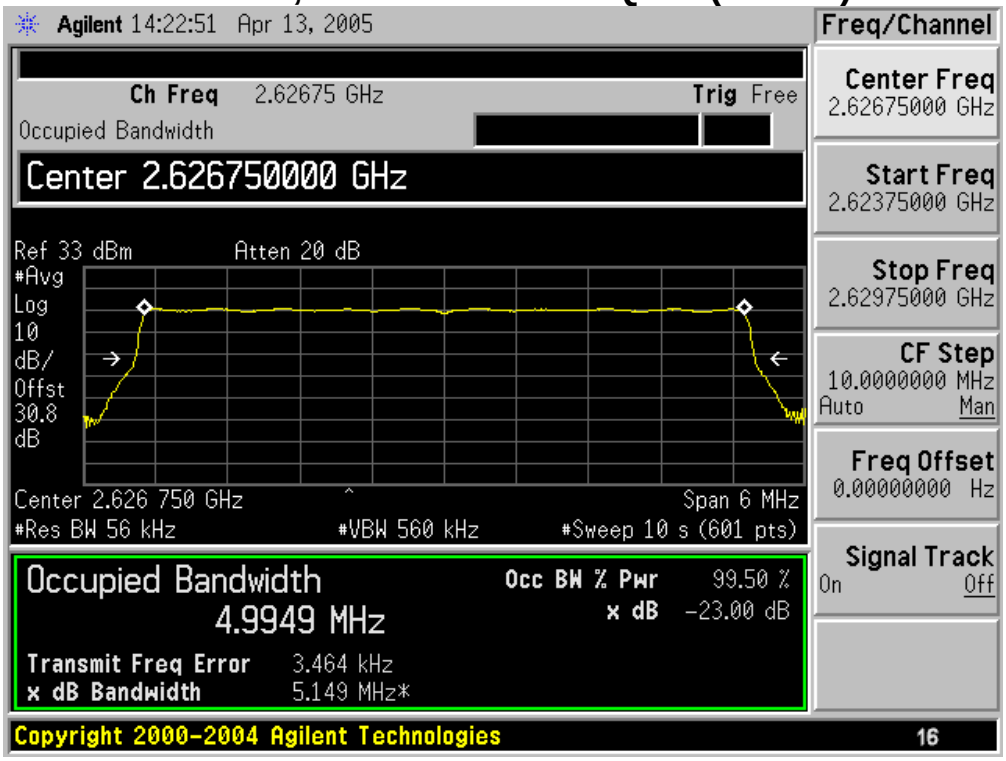



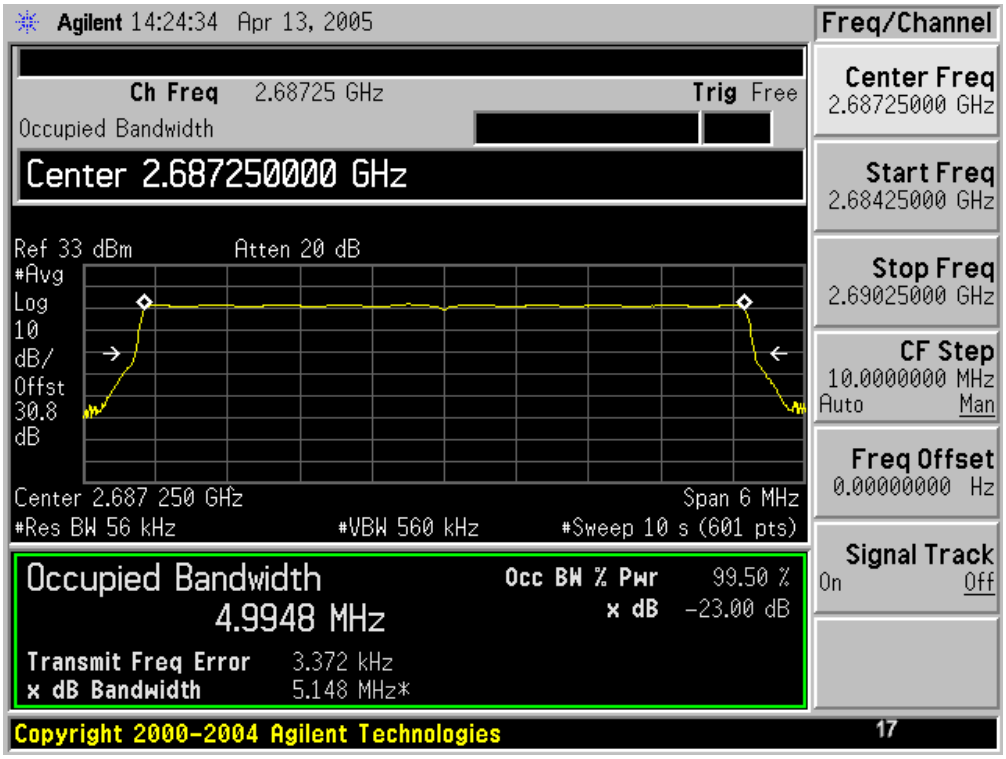
# Occupied Bandwidth
## 5.5 MHz, 2W Channels/16-QAM (Cont'd)



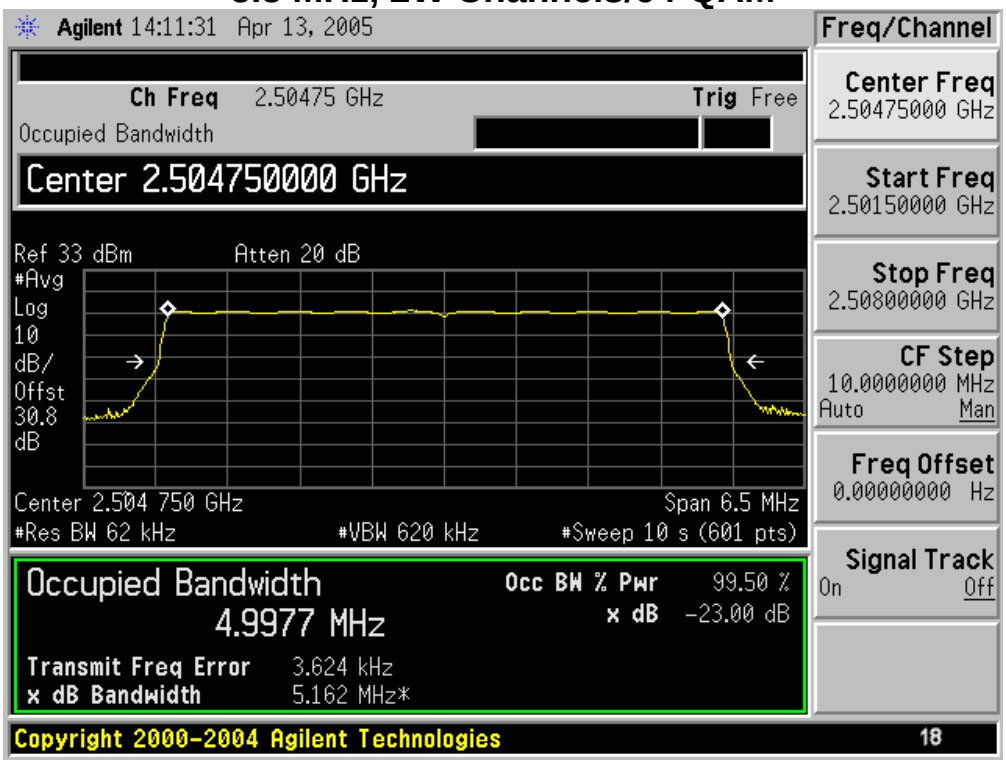



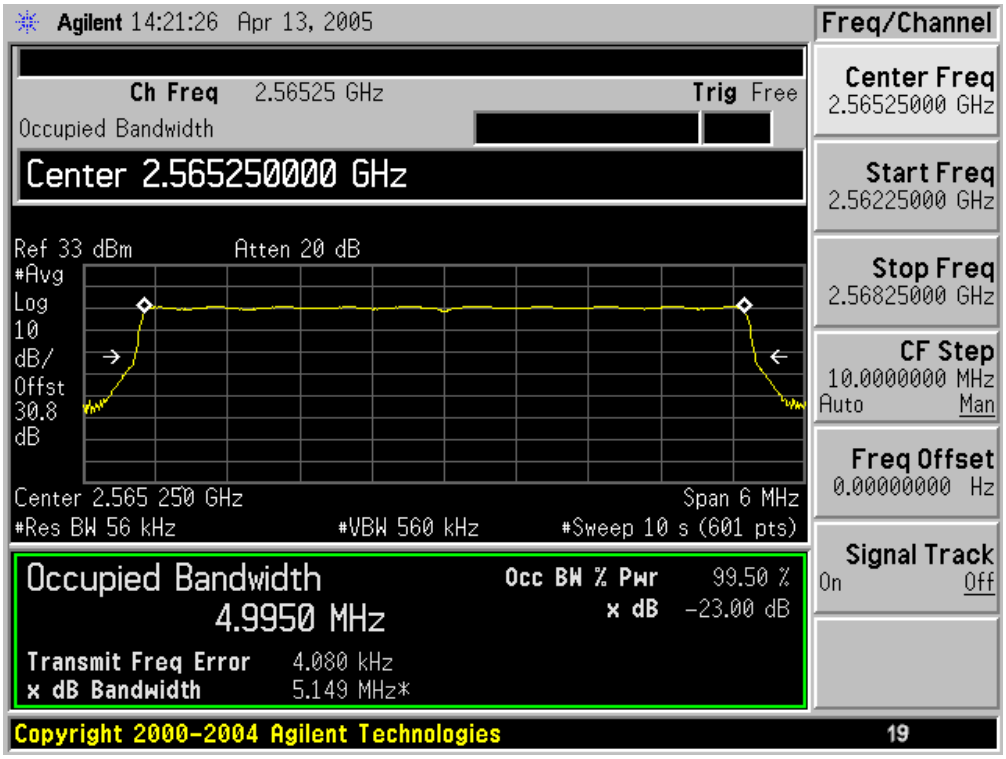
# Occupied Bandwidth
## 5.5 MHz, 2W Channels/16-QAM (Cont'd)



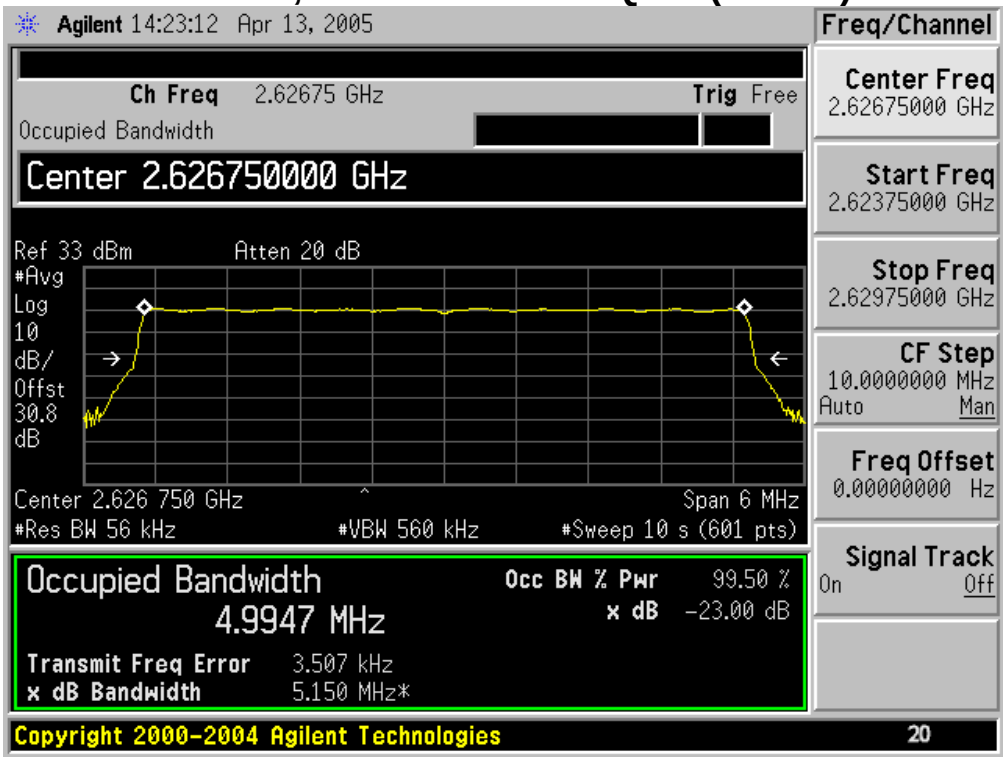



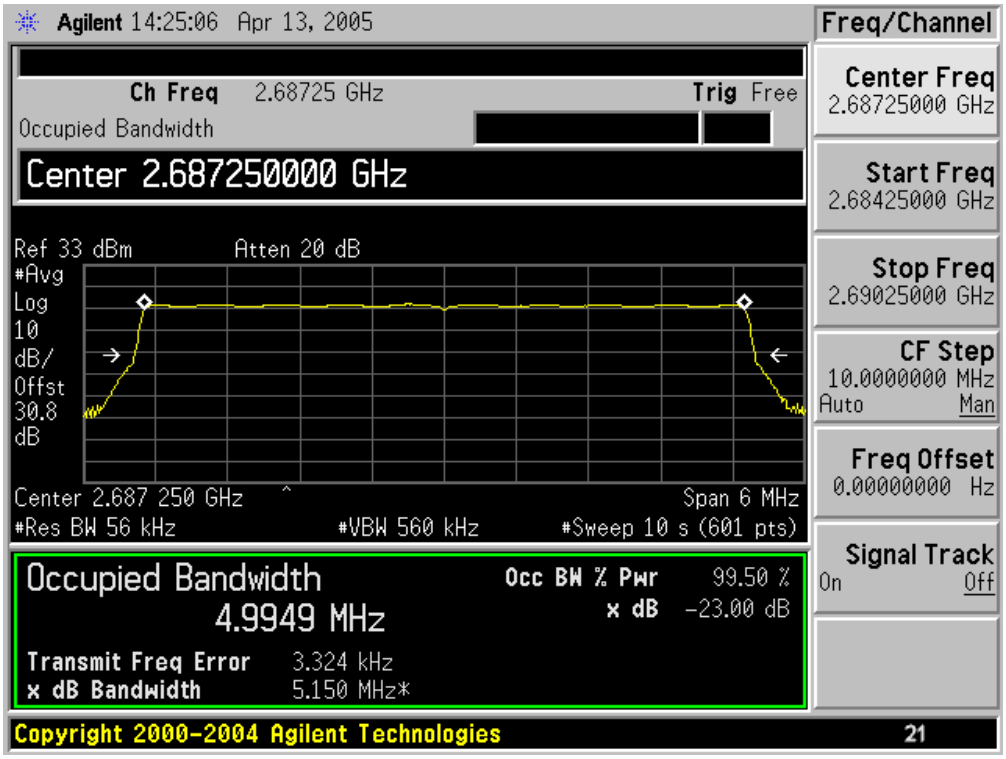
# Occupied Bandwidth
## 5.5 MHz, 2W Channels/64-QAM



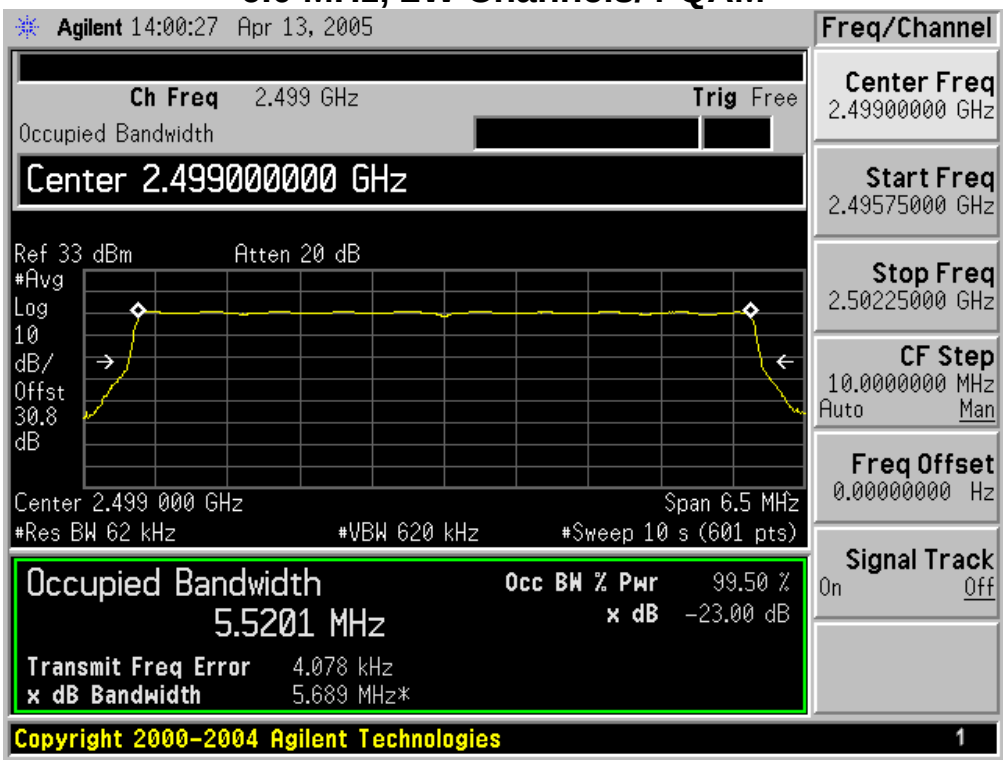



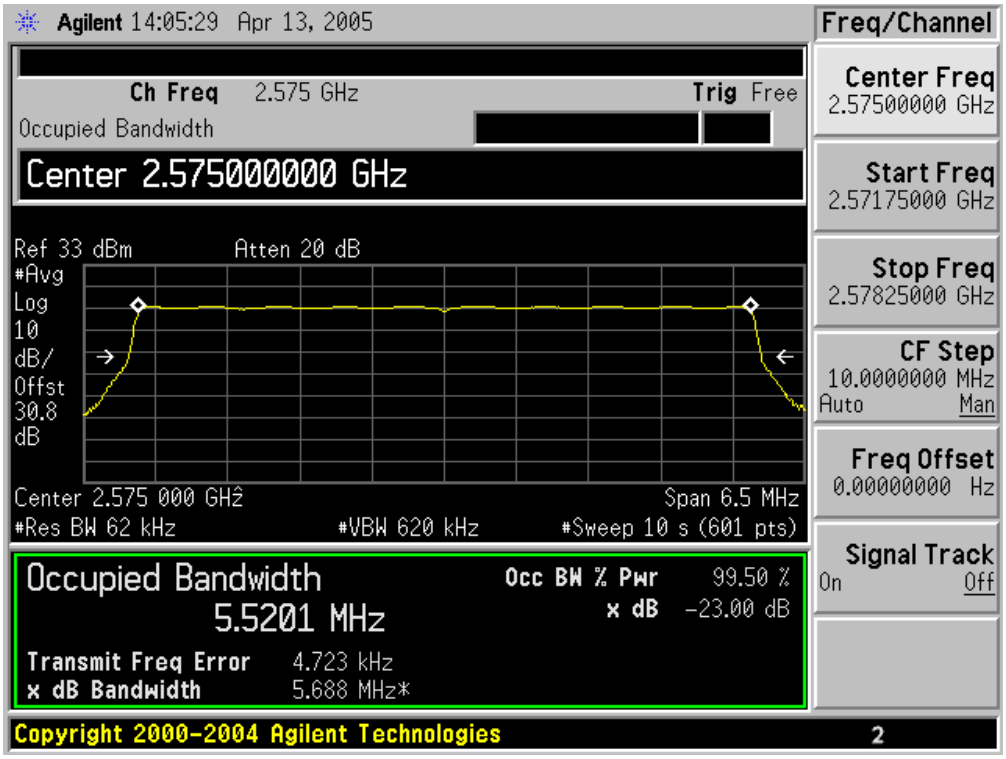
# Occupied Bandwidth
## 5.5 MHz, 2W Channels/64-QAM (Cont'd)



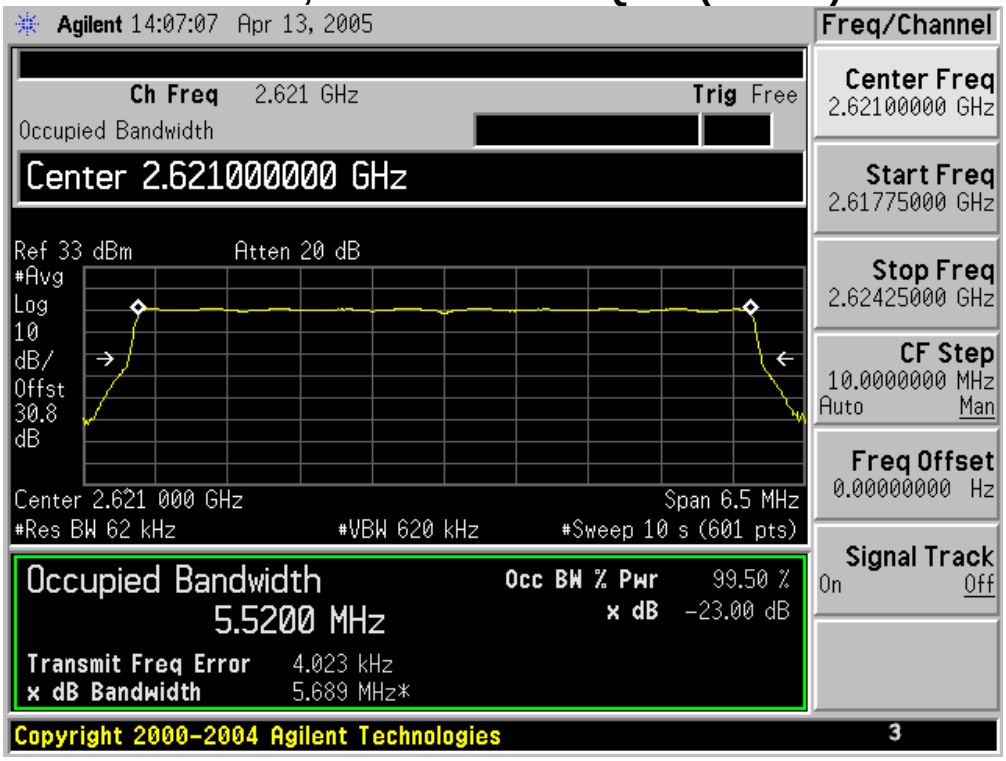



# Occupied Bandwidth
# 6.0 MHz, 2W Channels/4-QAM

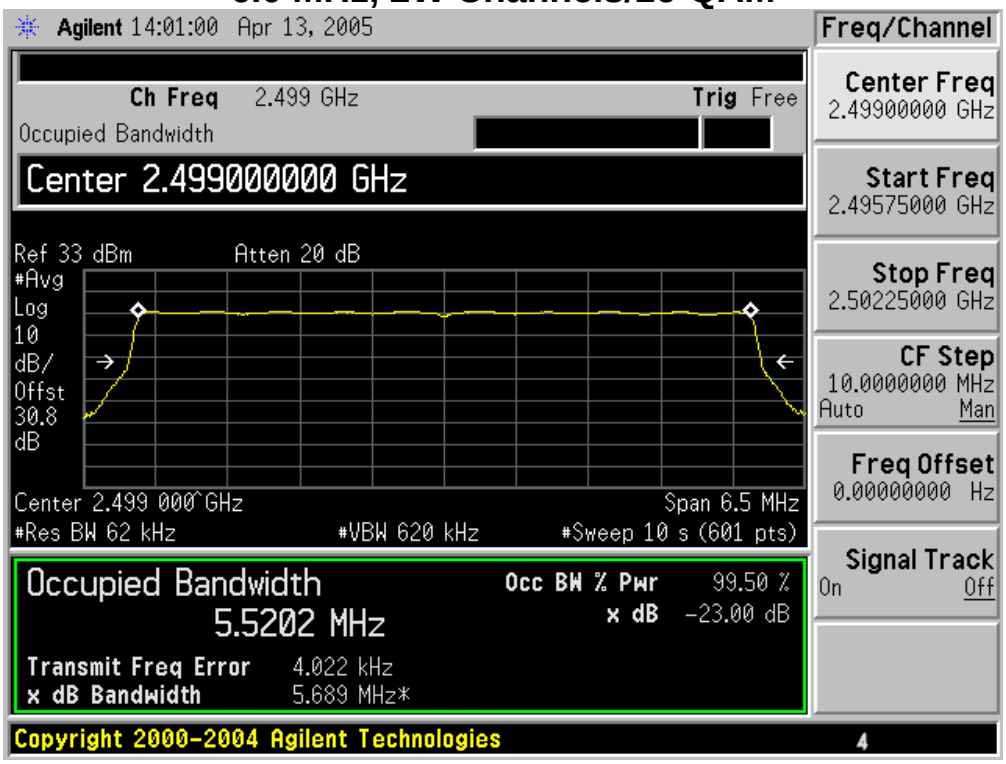


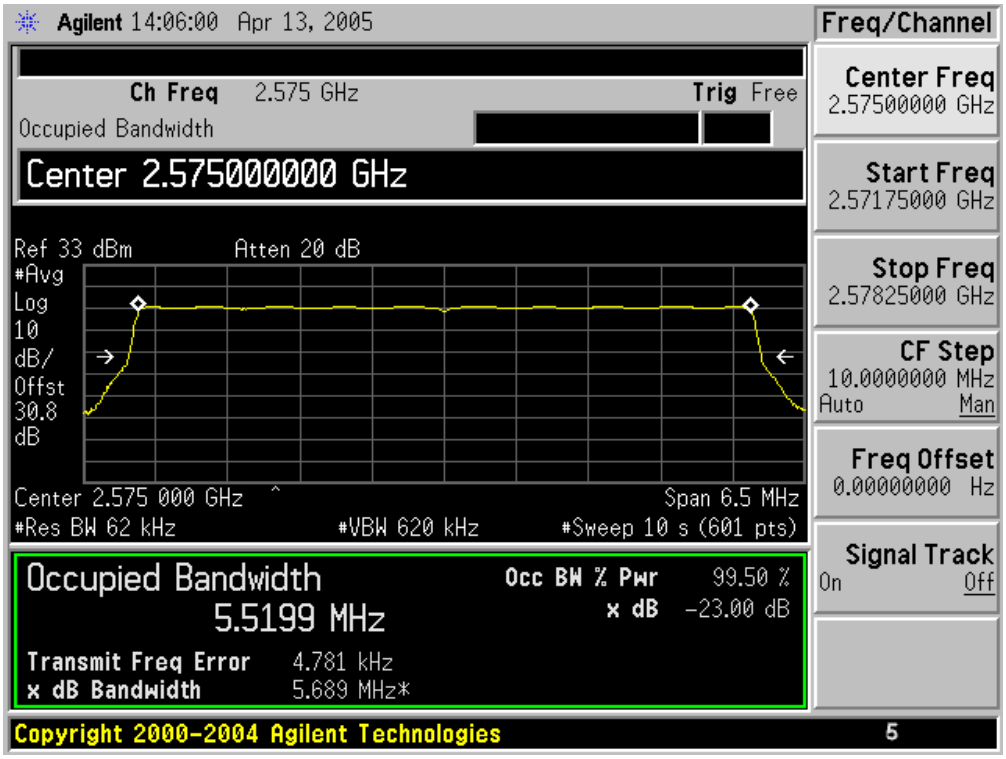



# Occupied Bandwidth
## 6.0 MHz, 2W Channels/4-QAM (Cont'd)

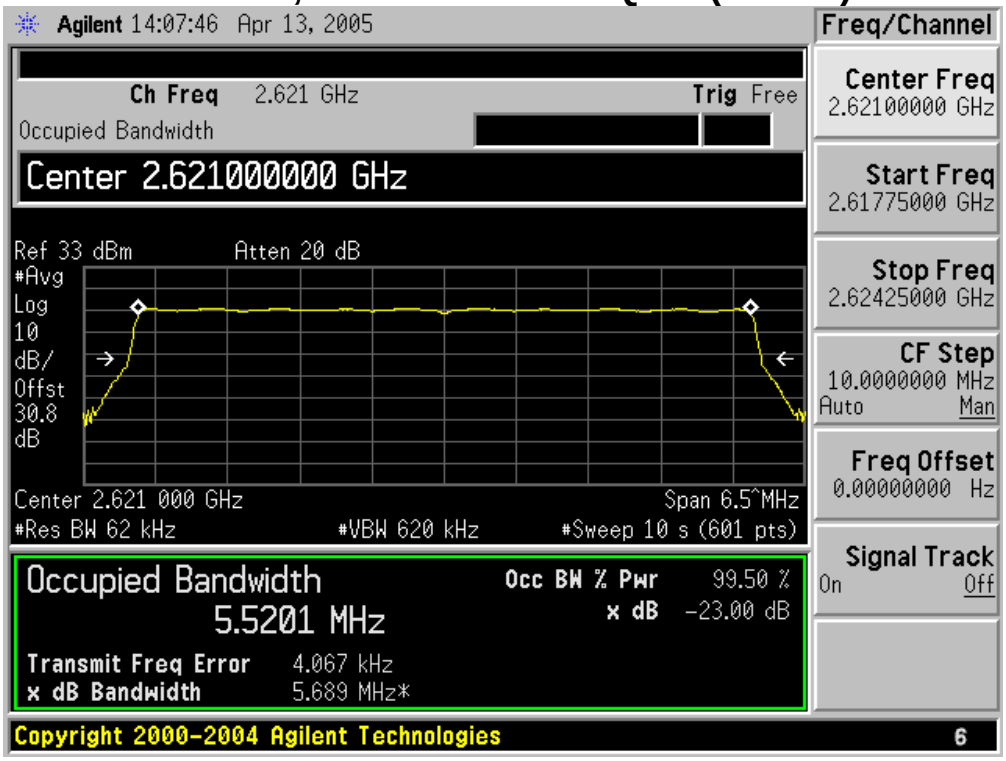


# Occupied Bandwidth
# 6.0 MHz, 2W Channels/16-QAM

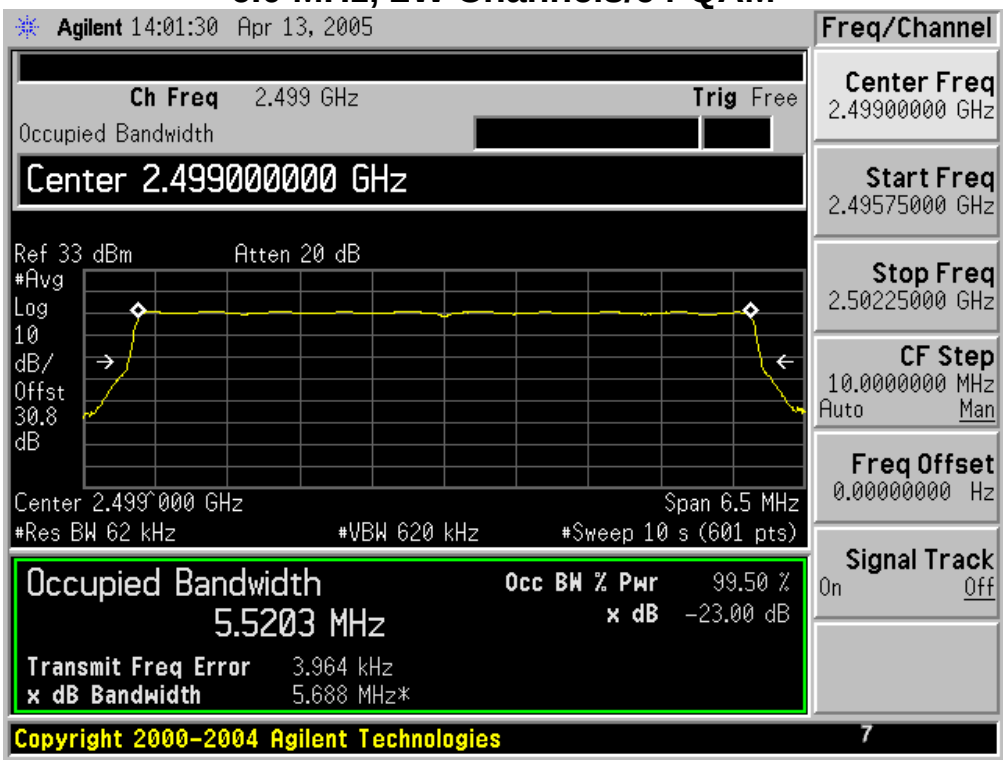


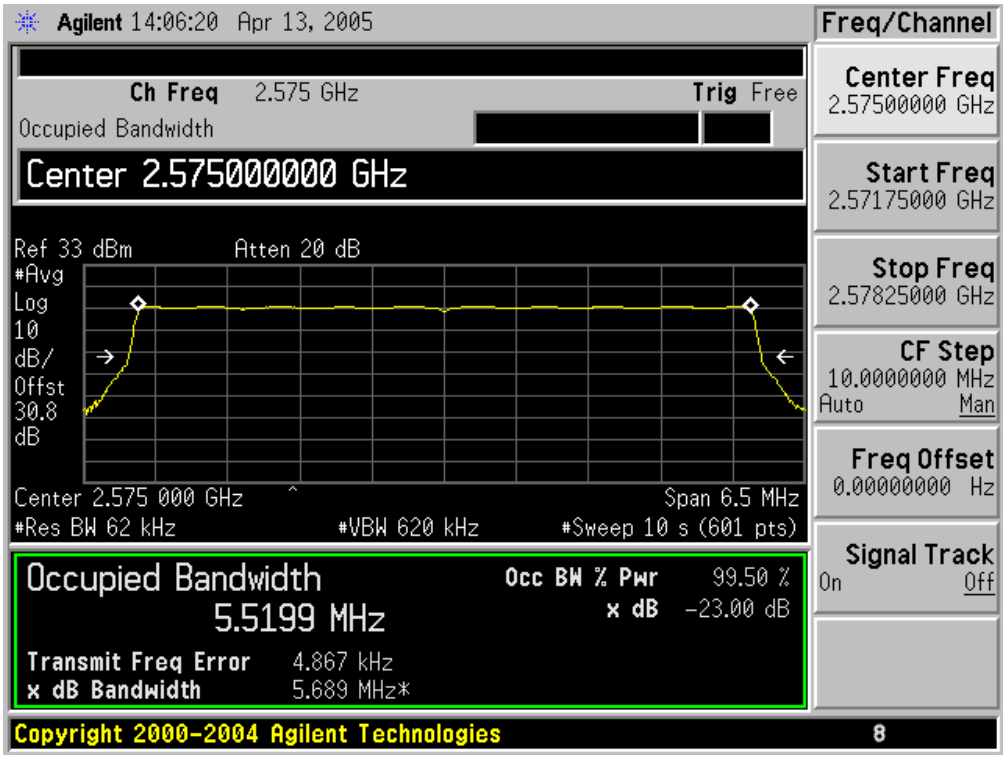



# Occupied Bandwidth
## 6.0 MHz, 2W Channels/16-QAM (Cont'd)

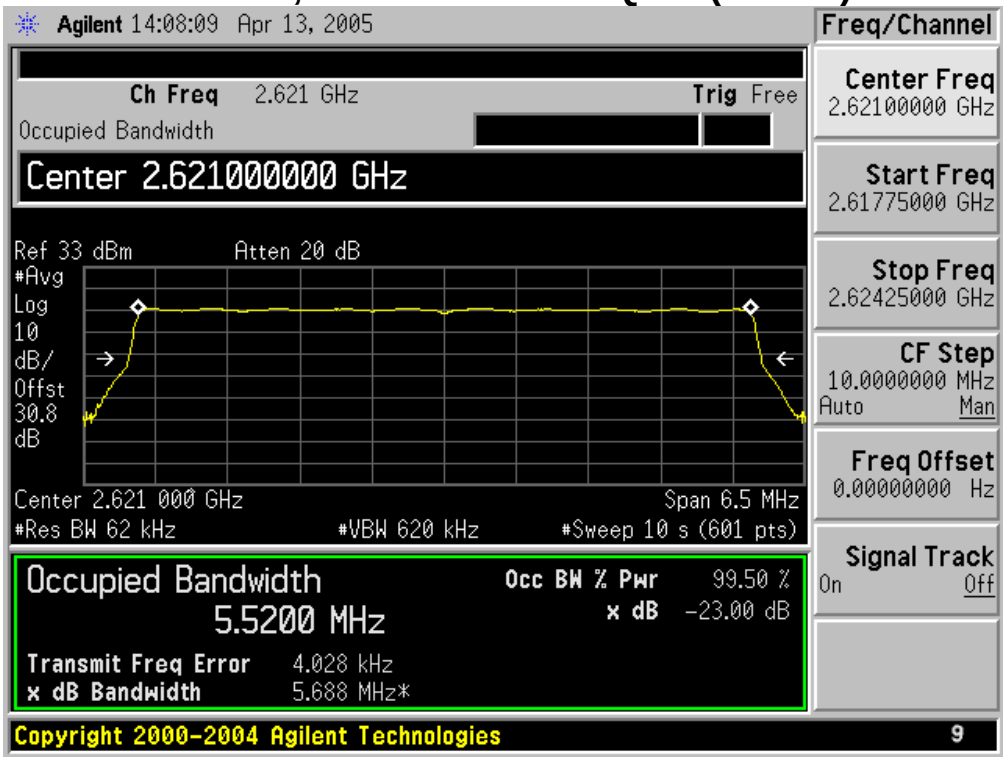


# Occupied Bandwidth
# 6.0 MHz, 2W Channels/64-QAM



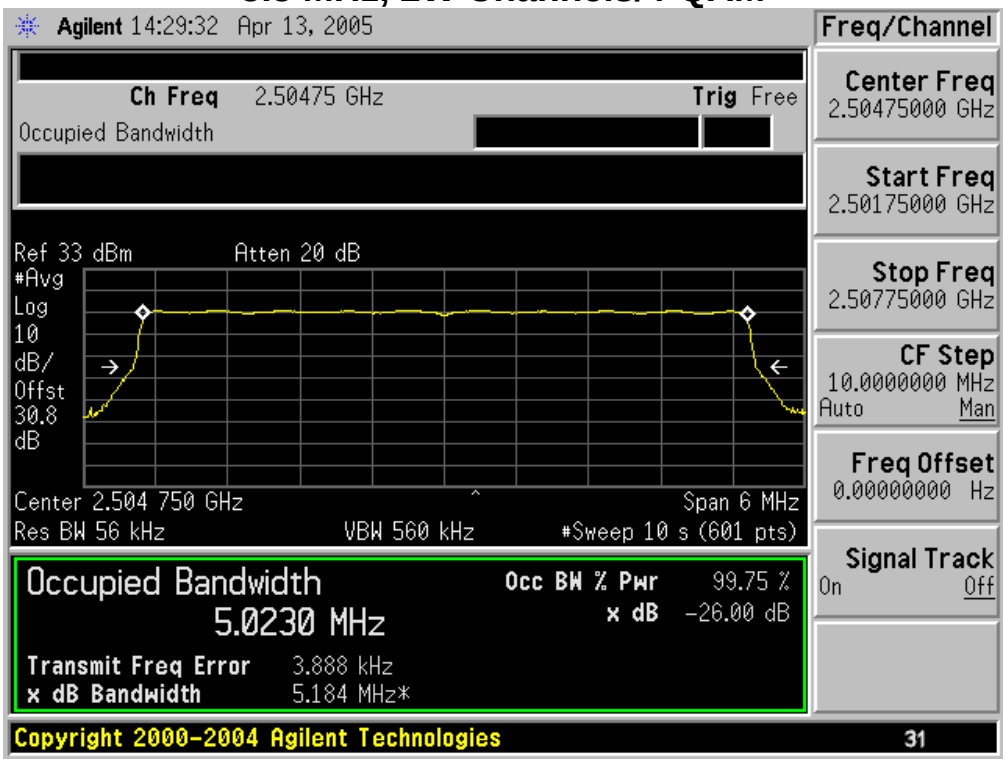



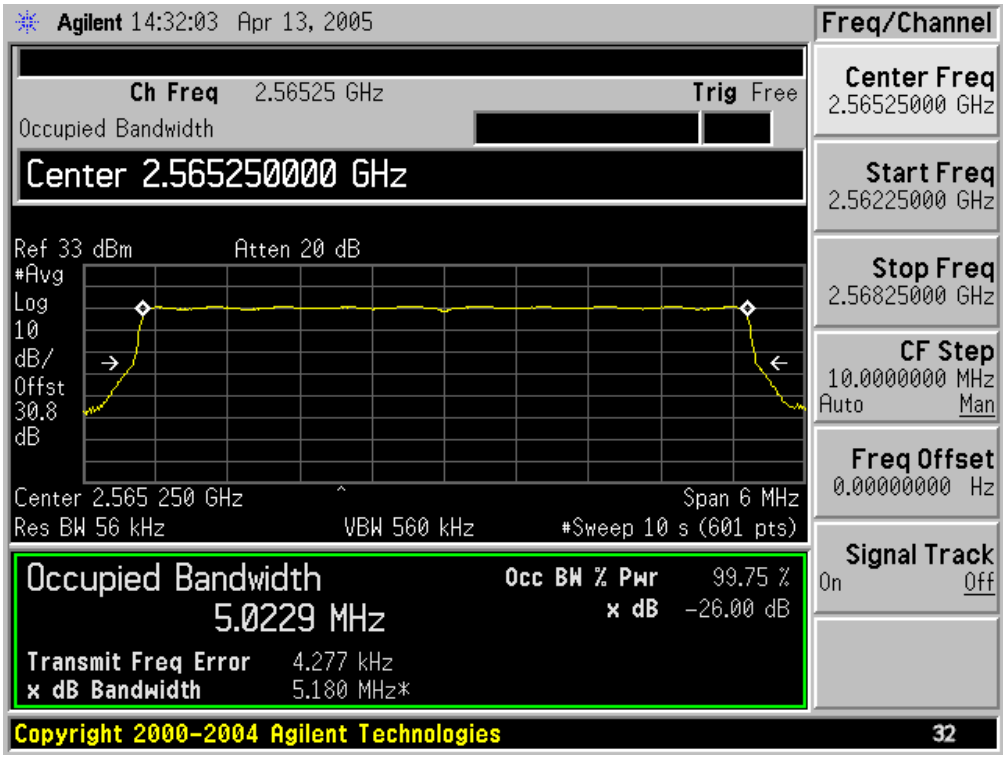
## Occupied Bandwidth
## 6.0 MHz, 2W Channels/64-QAM (Cont'd)



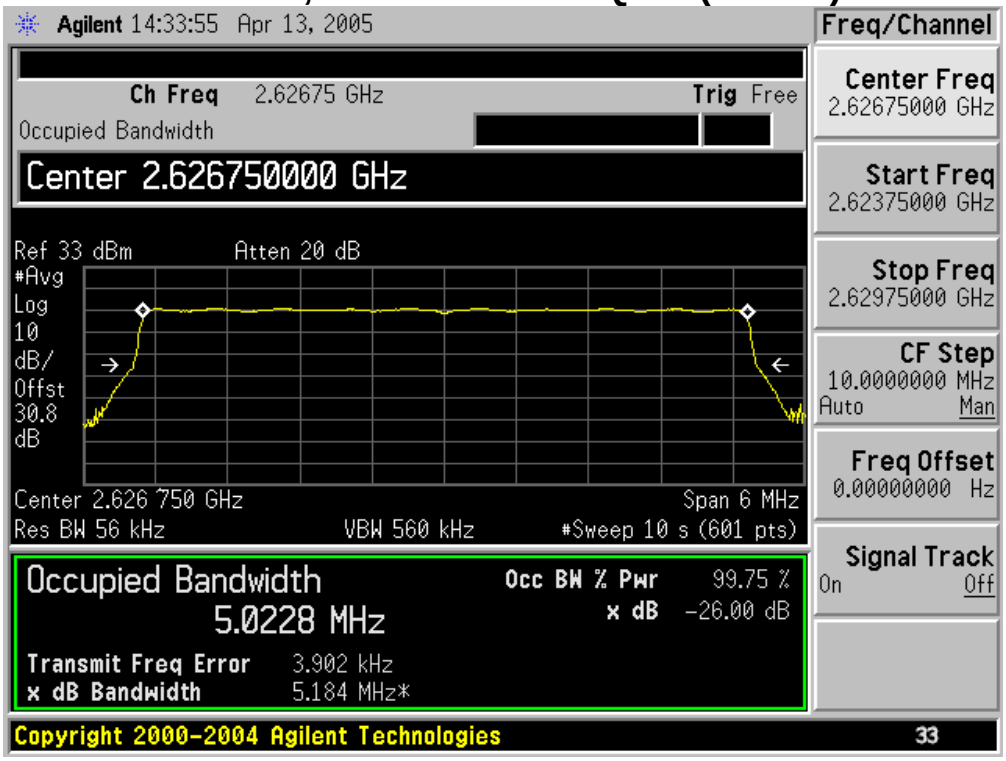
# Emission Bandwidth Spectrum Analyzer Plots (2W)

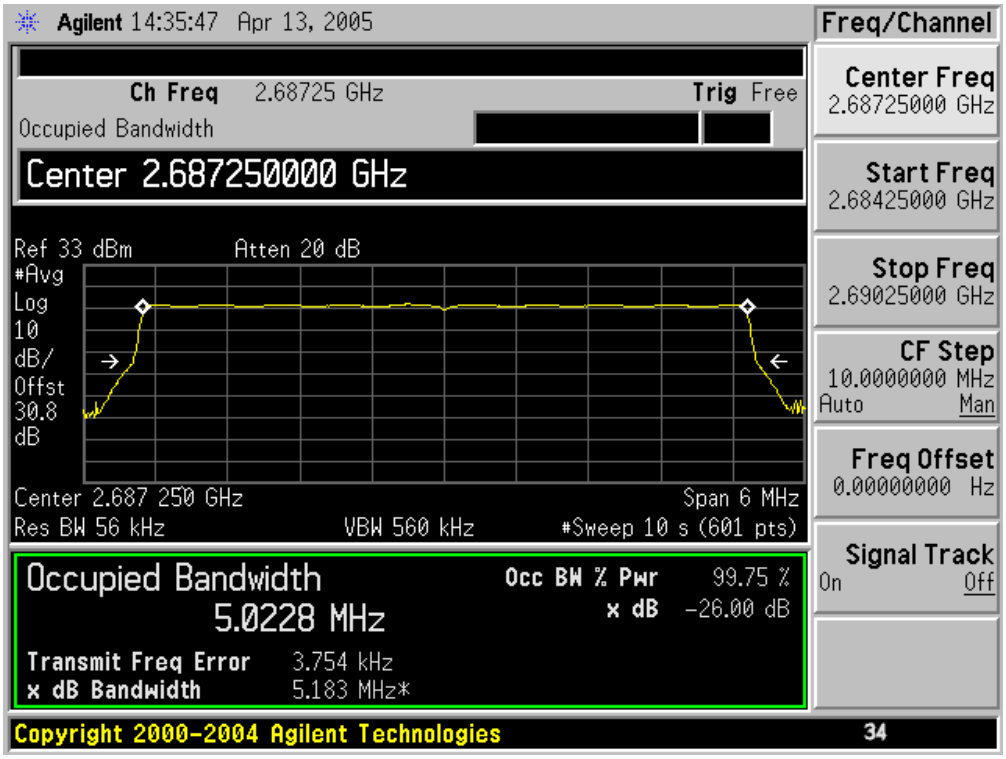
## 5.5 MHz, 2W Channels/4-QAM



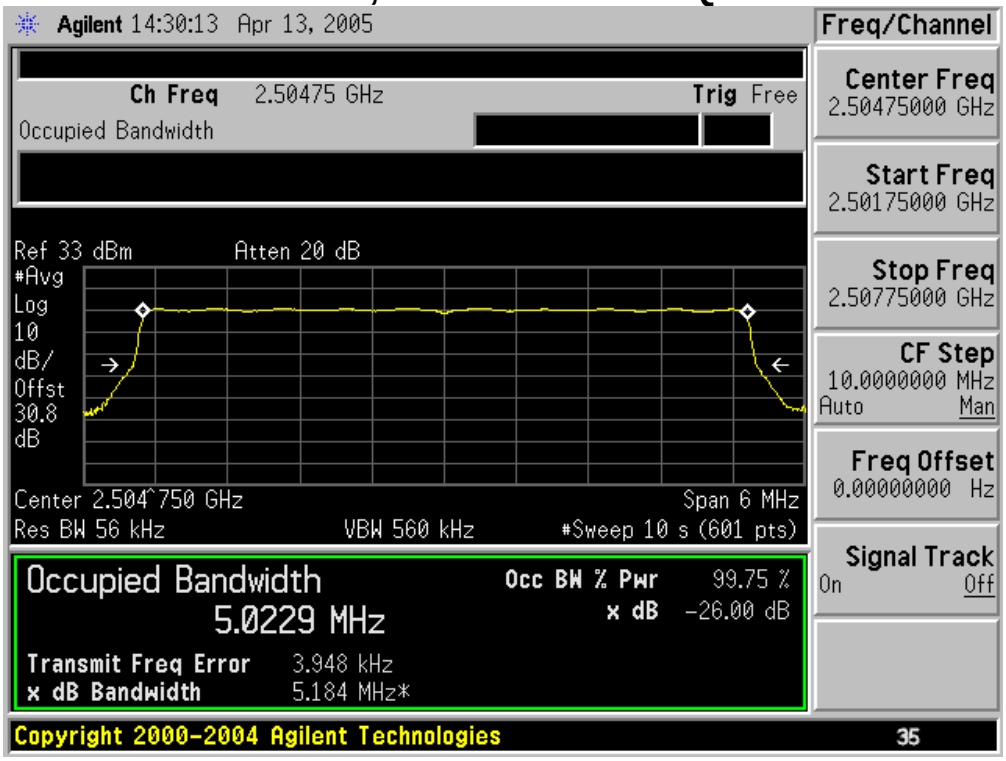



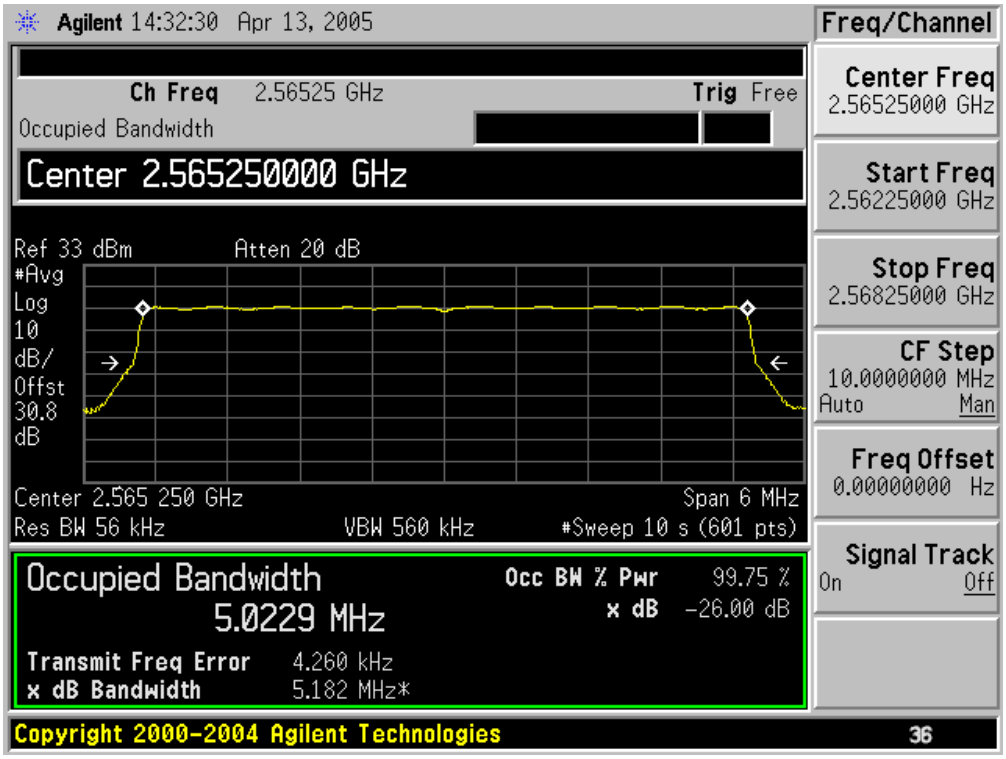
# Emission Bandwidth
## 5.5 MHz, 2W Channels/4-QAM (Cont'd)



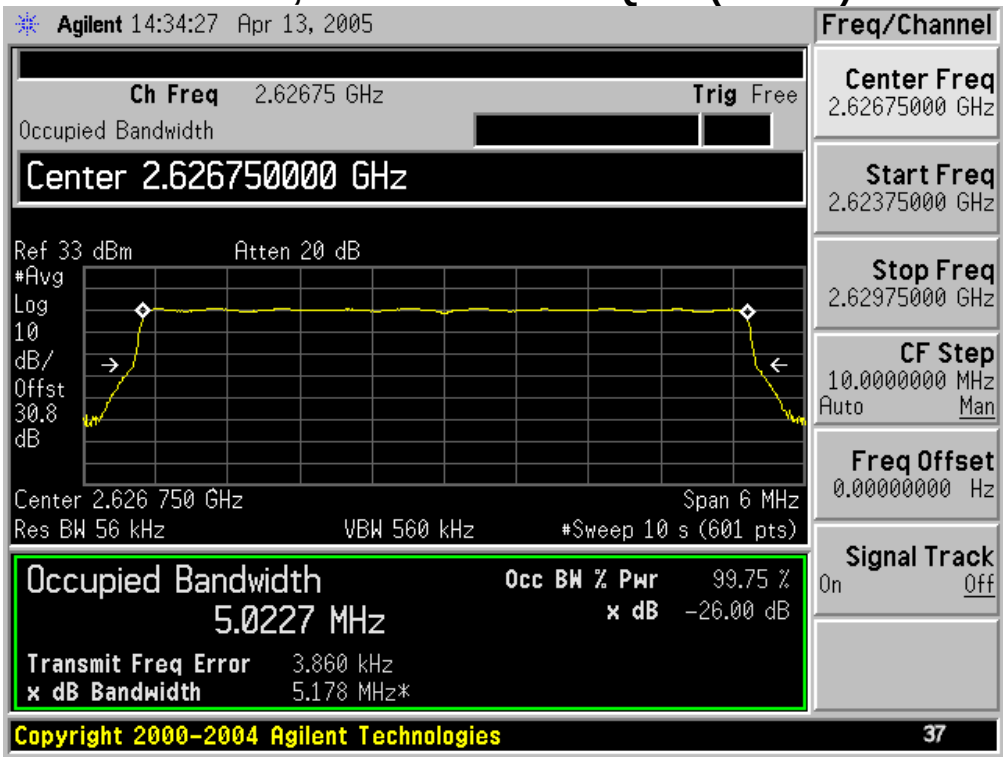



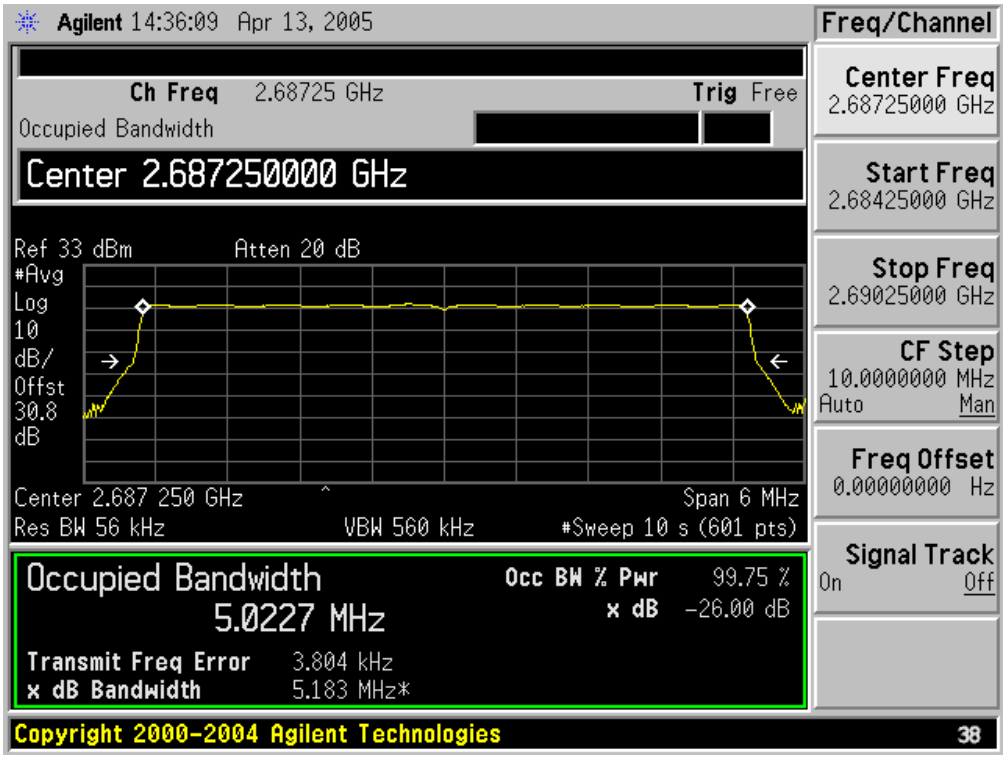
# Emission Bandwidth
## 5.5 MHz, 2W Channels/16-QAM



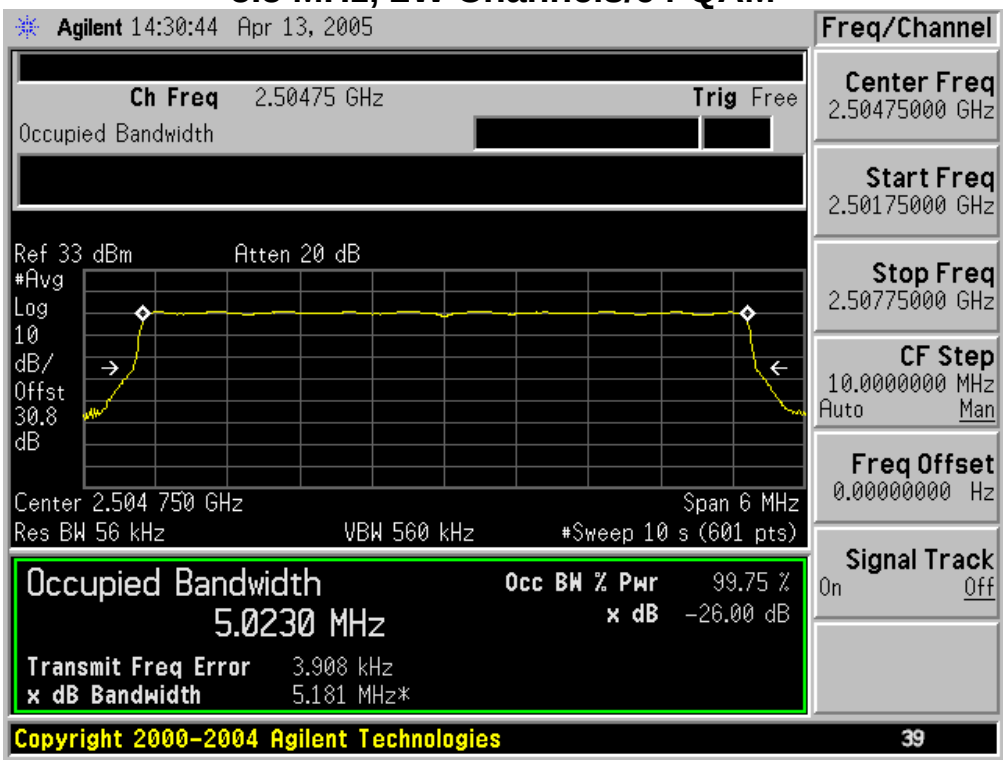



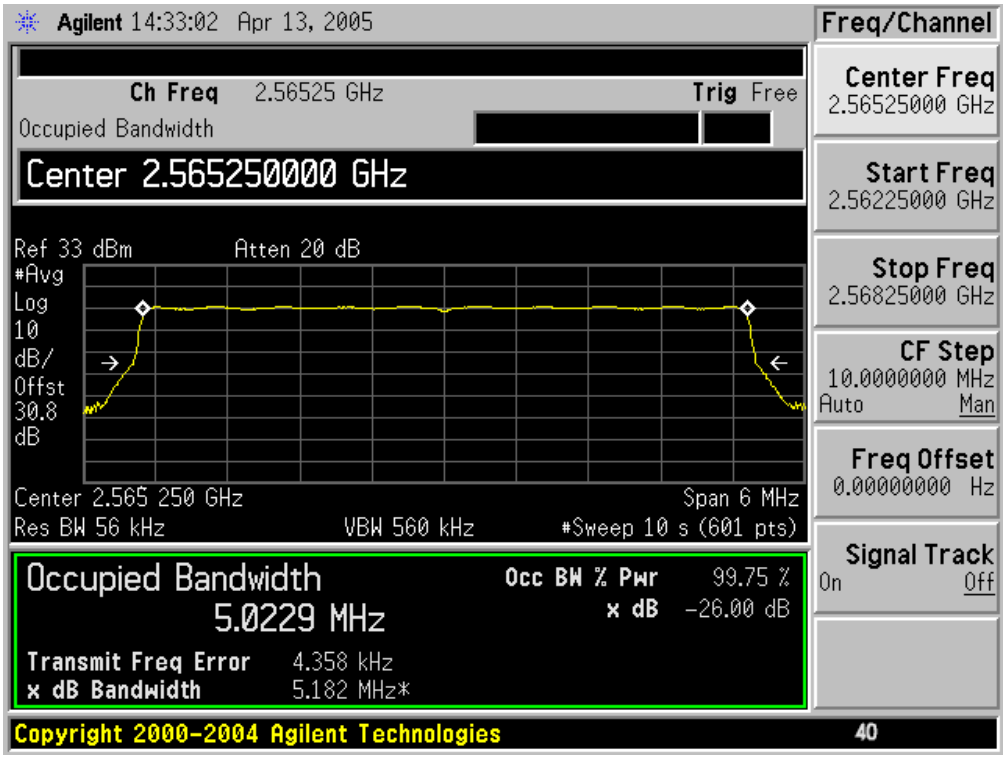
# Emission Bandwidth
## 5.5 MHz, 2W Channels/16-QAM (Cont'd)



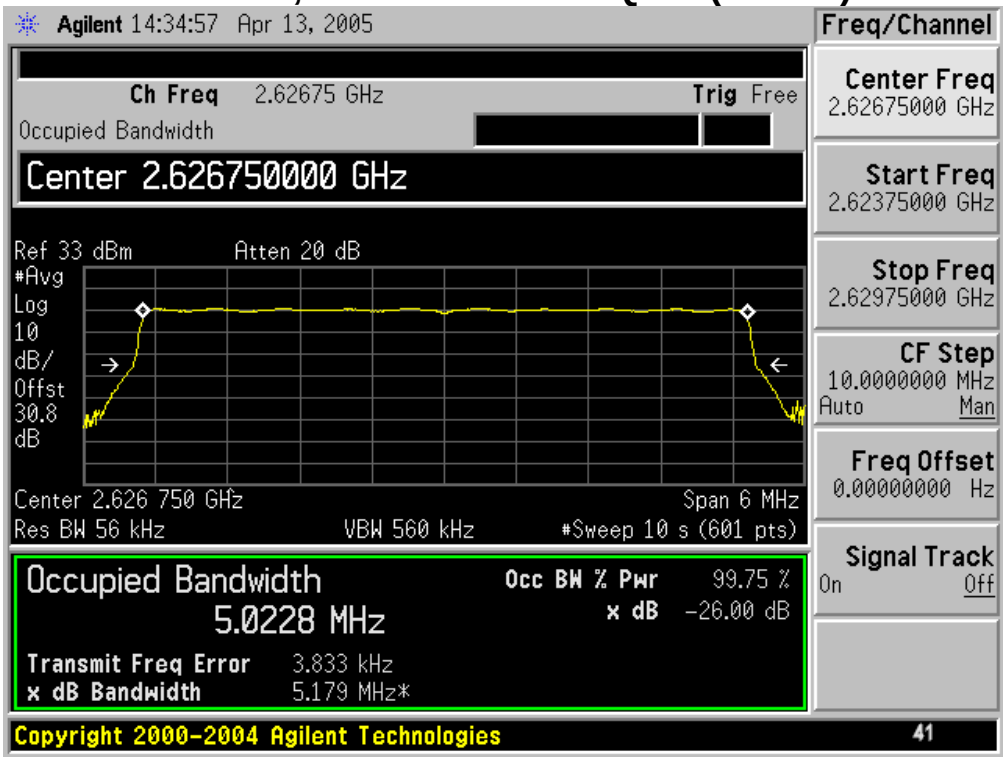



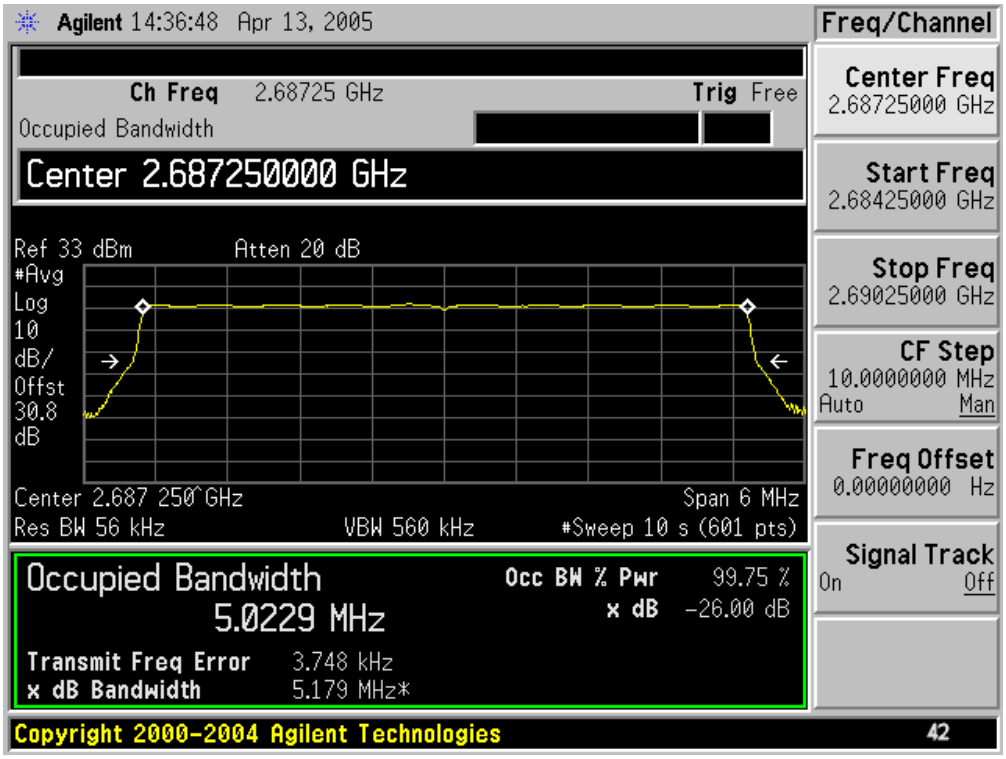
# Emission Bandwidth
## 5.5 MHz, 2W Channels/64-QAM



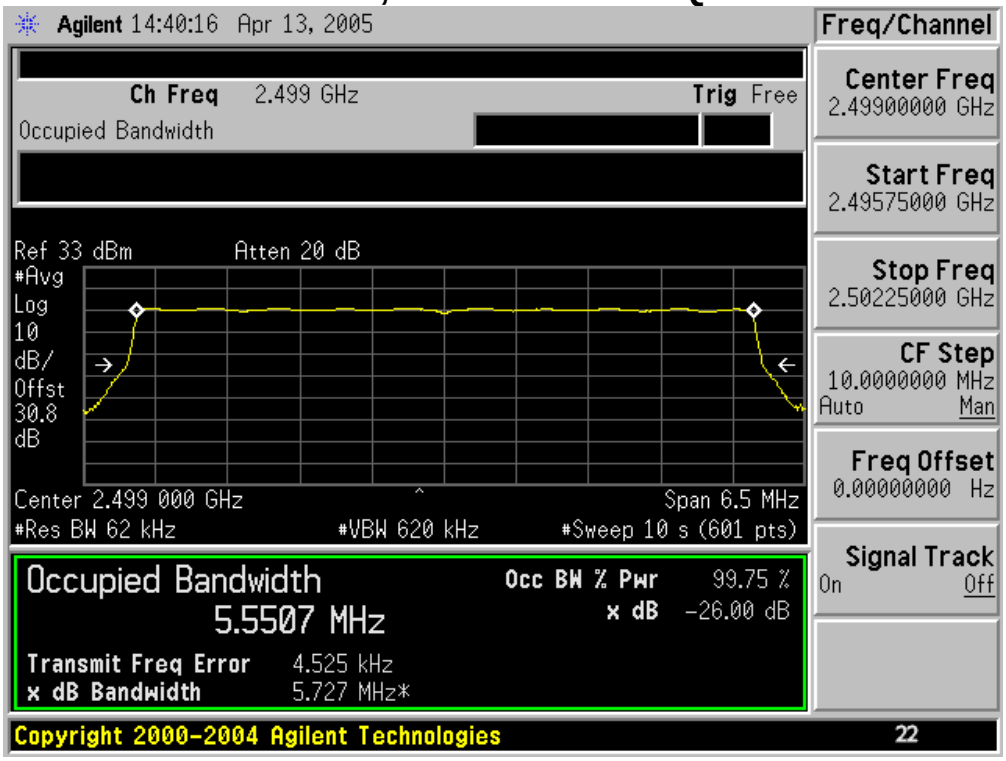



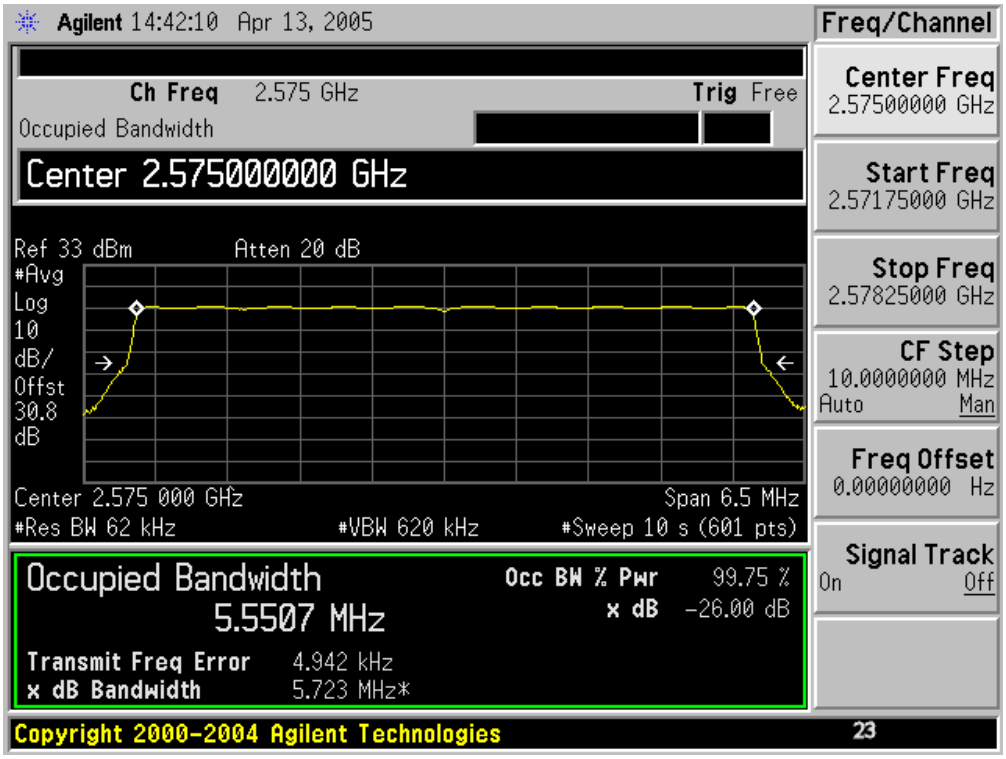
# Emission Bandwidth
## 5.5 MHz, 2W Channels/64-QAM (Cont'd)



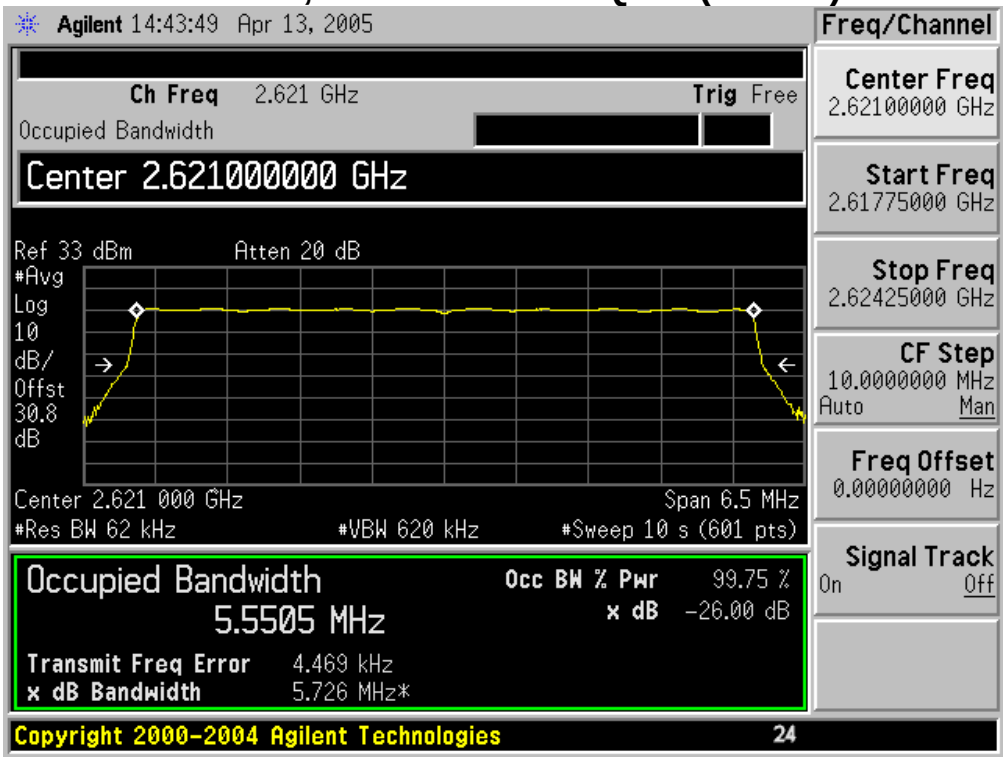



# Emission Bandwidth
# 6.0 MHz, 2W Channels/4-QAM

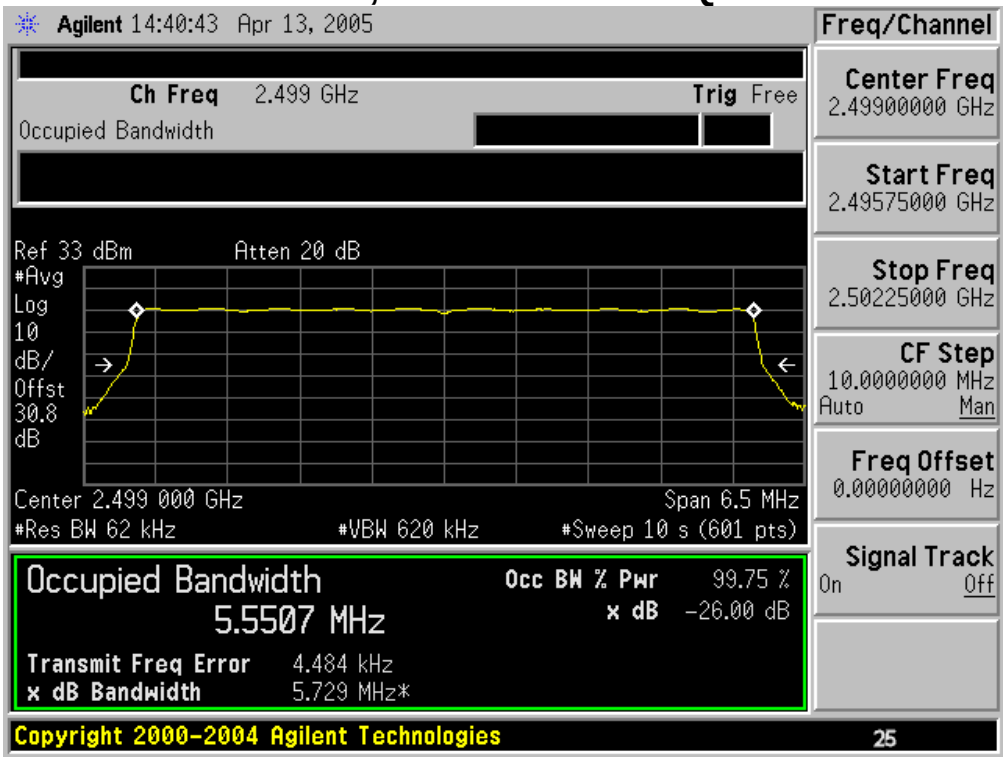


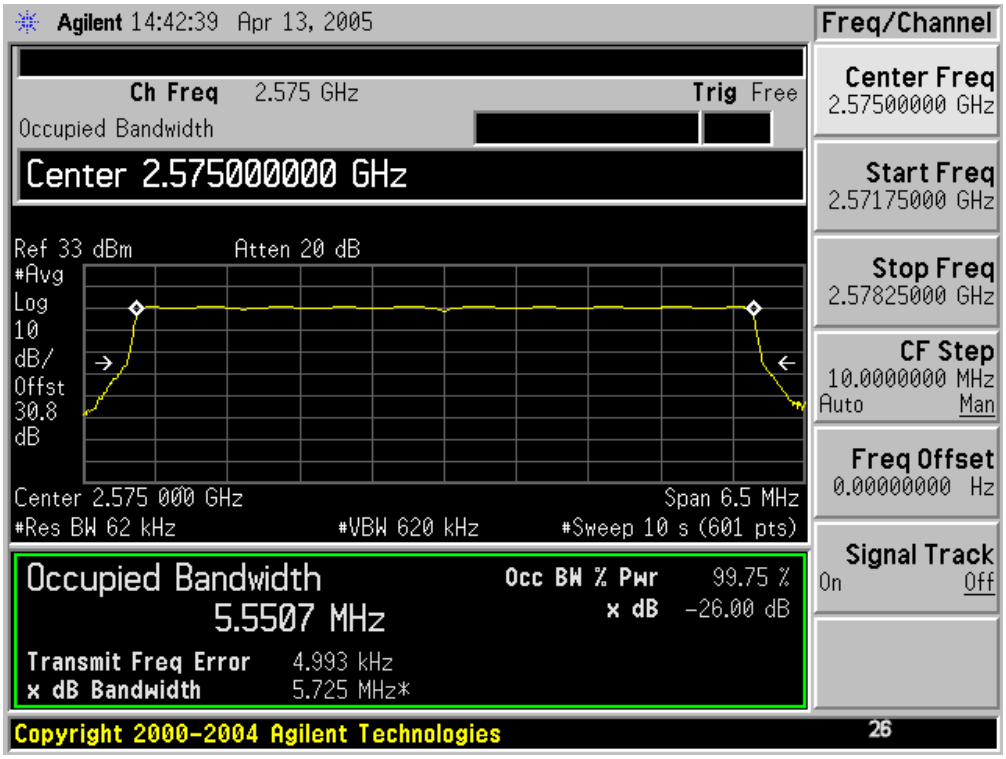



# Emission Bandwidth
## 6.0 MHz, 2W Channels/4-QAM (Cont'd)

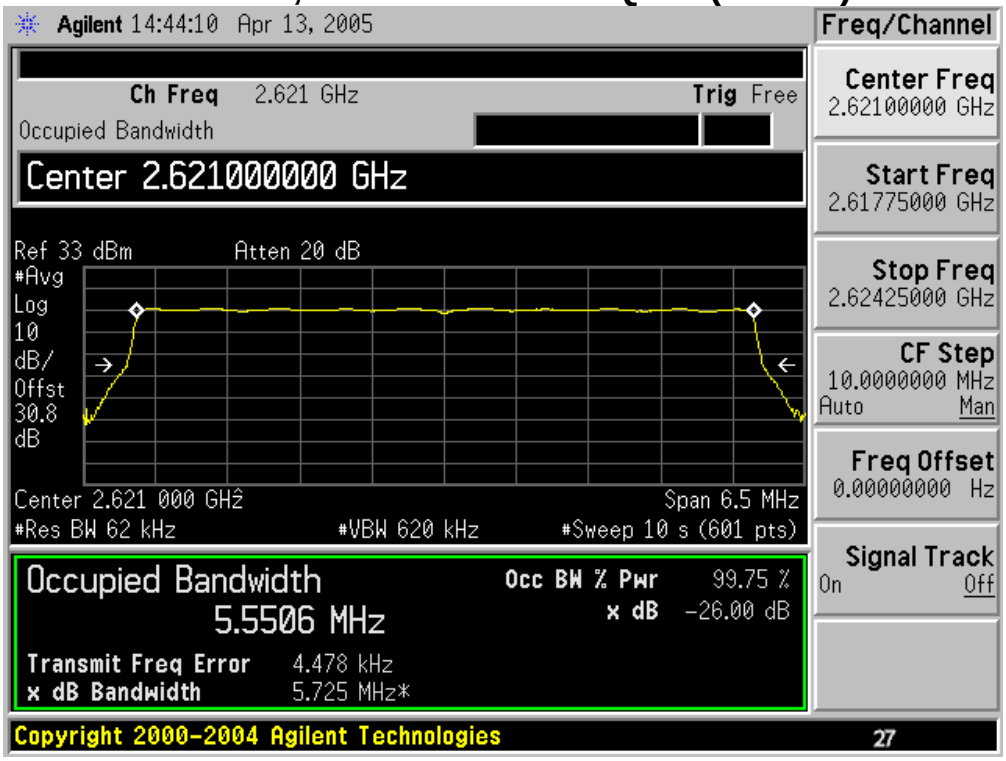


# Emission Bandwidth
# 6.0 MHz, 2W Channels/16-QAM

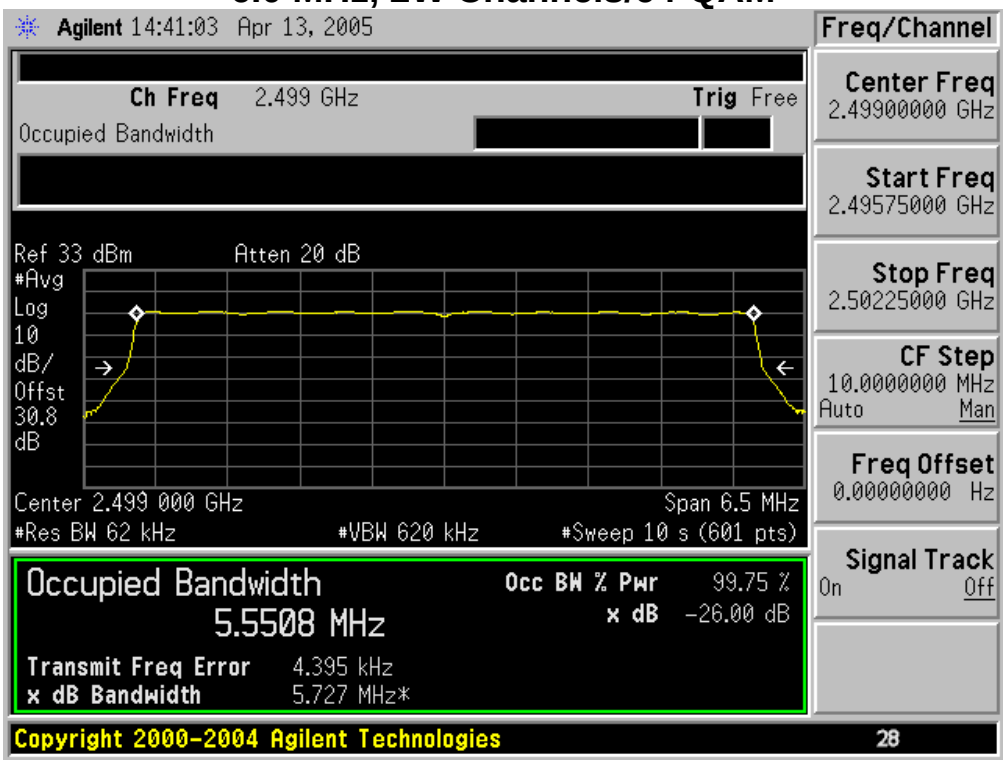


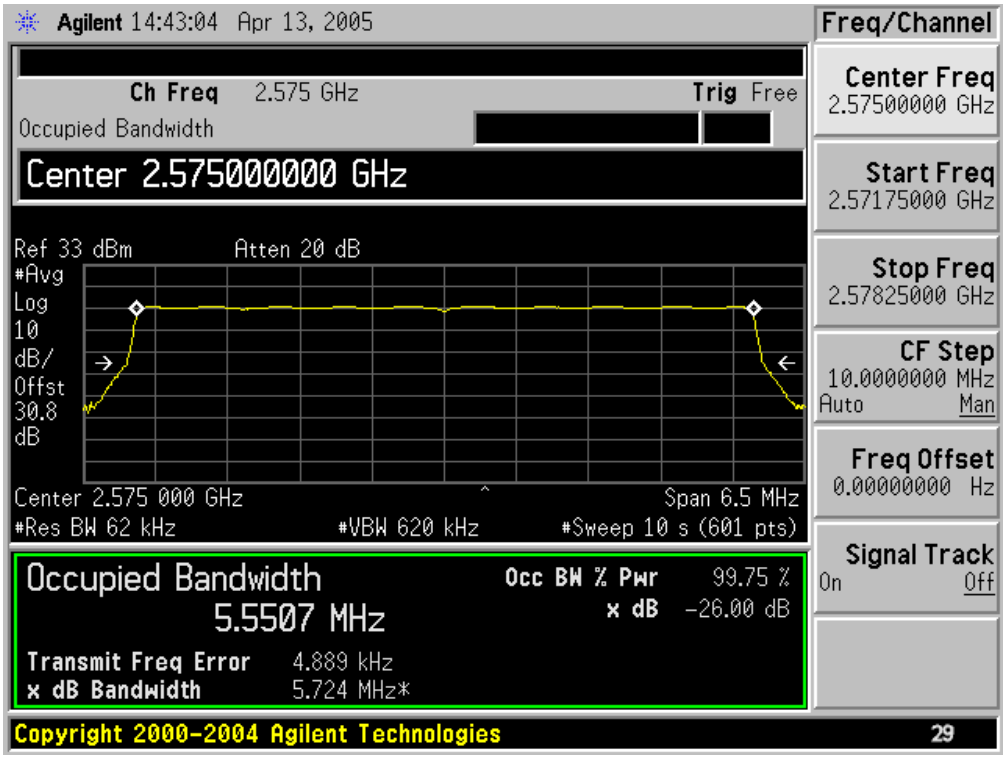



# Emission Bandwidth
## 6.0 MHz, 2W Channels/16-QAM (Cont'd)

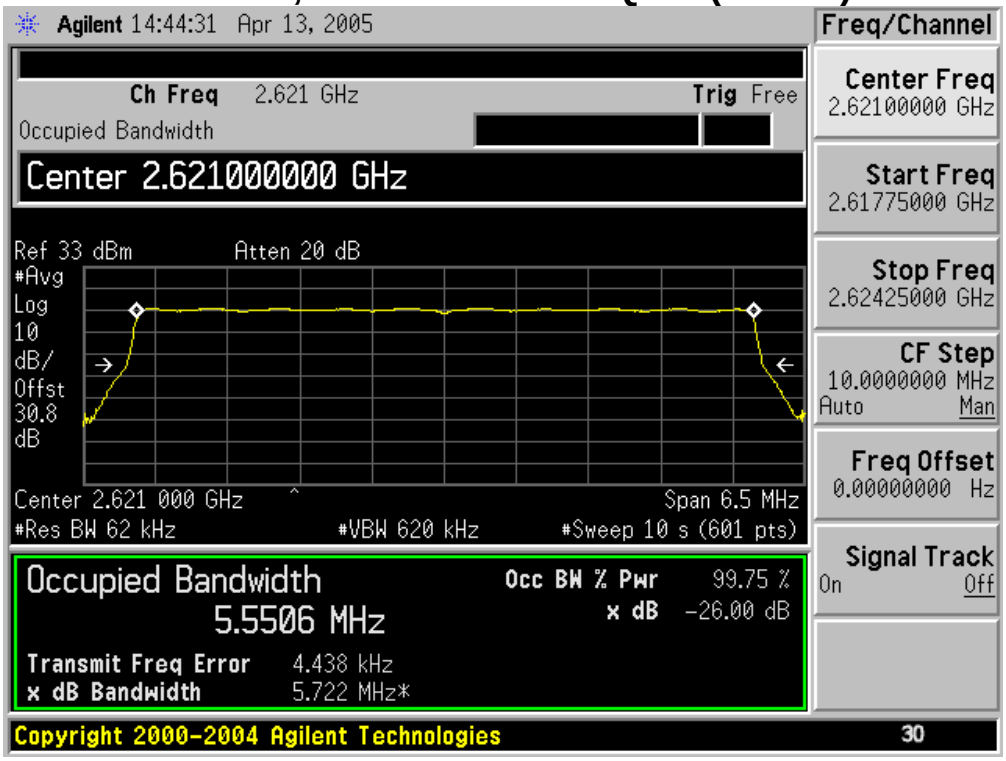


# Emission Bandwidth
# 6.0 MHz, 2W Channels/64-QAM



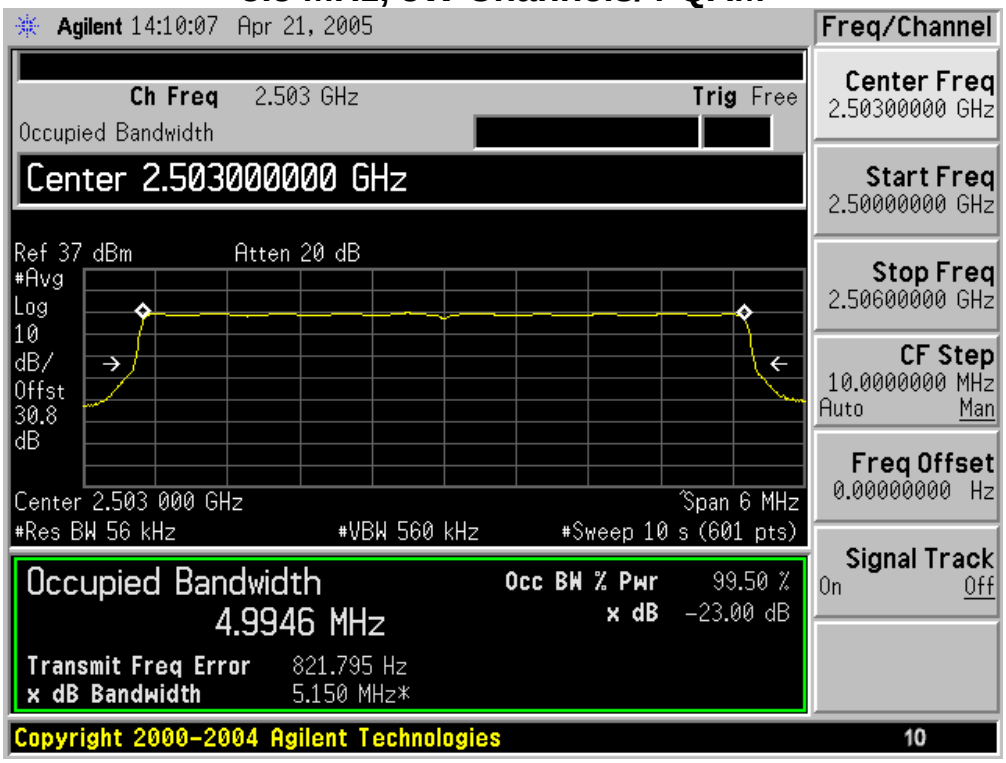



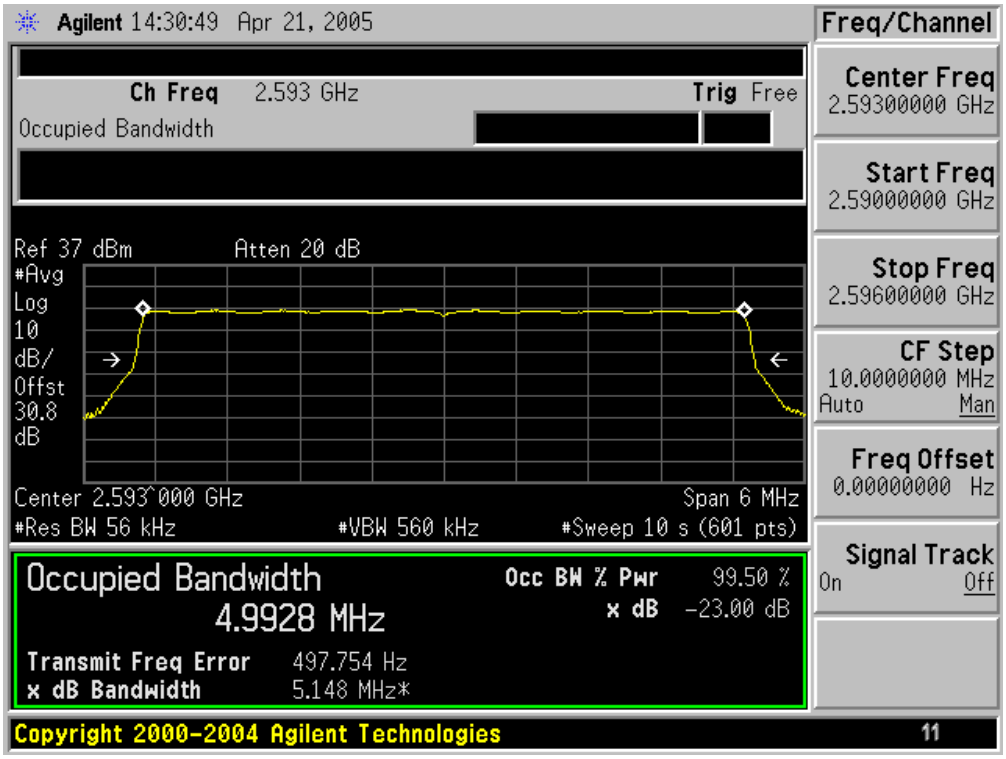
## Emission Bandwidth
## 6.0 MHz, 2W Channels/64-QAM (Cont'd)



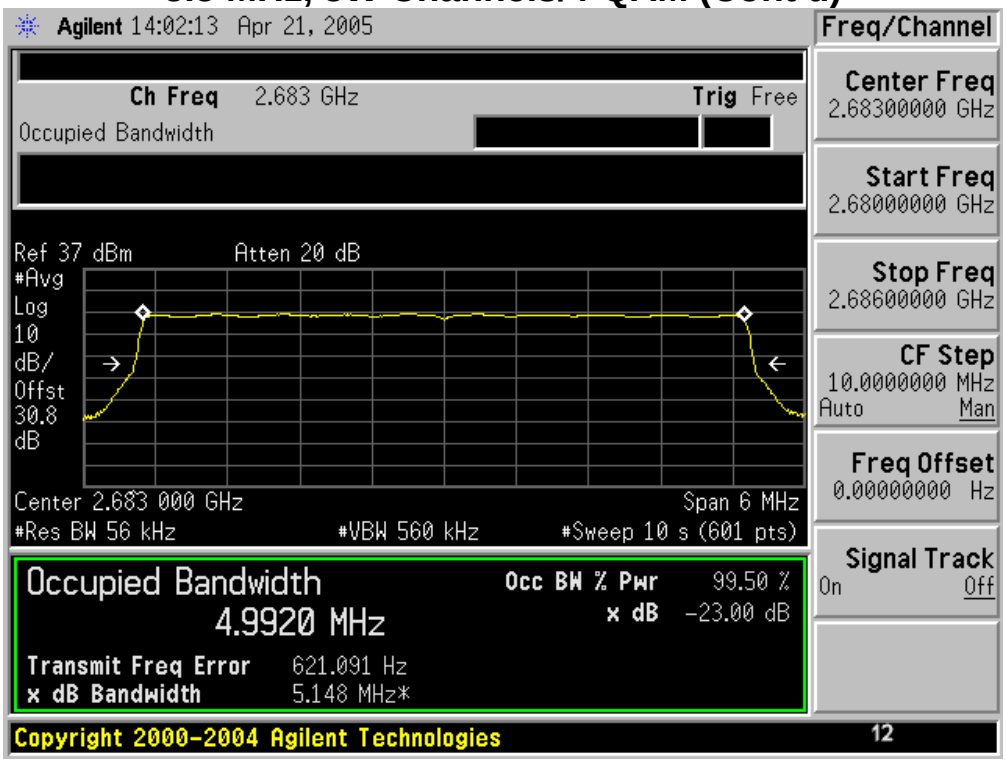
# Occupied Bandwidth Spectrum Analyzer Plots (5W)

## 5.5 MHz, 5W Channels/4-QAM

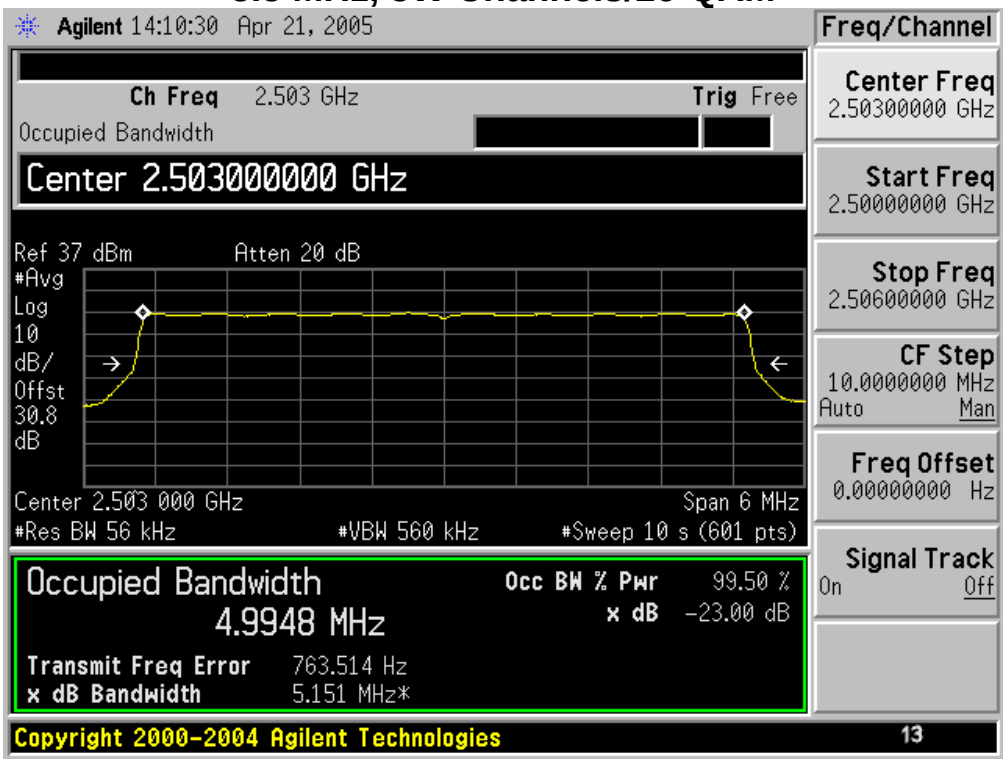


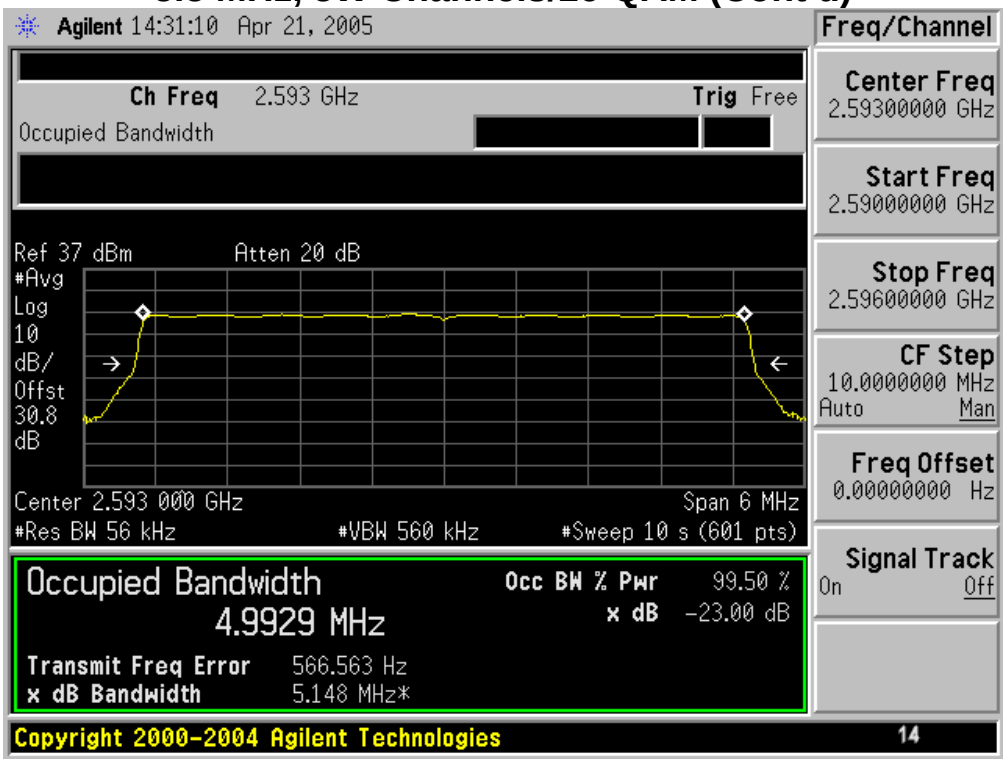
## Occupied Bandwidth
## 5.5 MHz, 5W Channels/4-QAM (Cont'd)

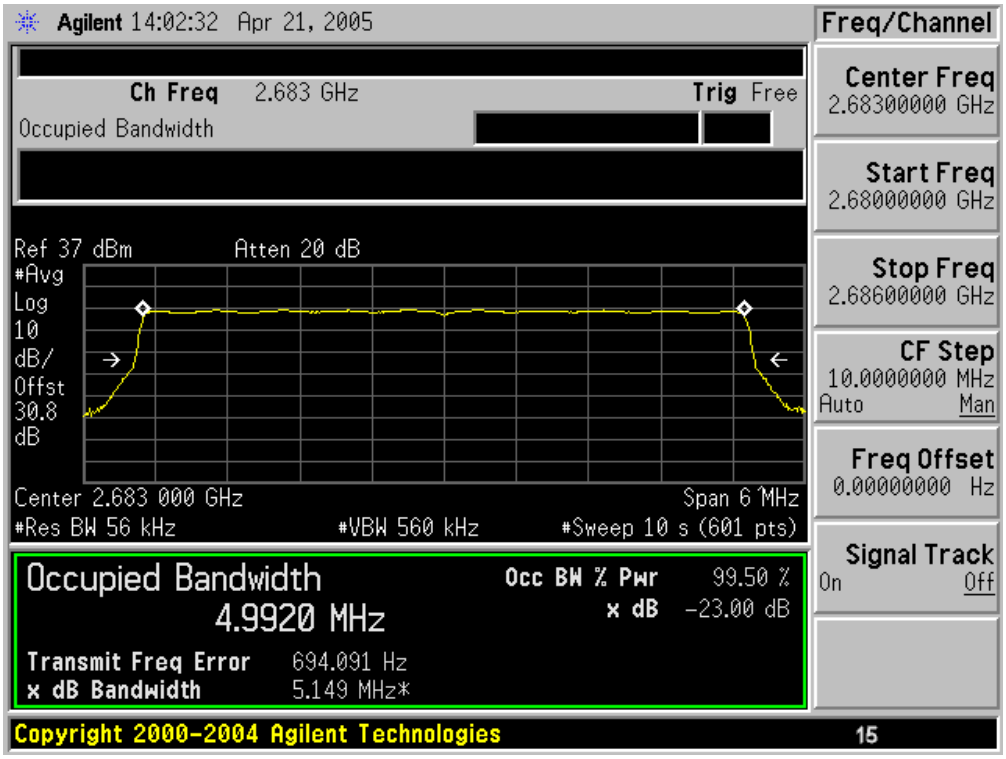



## 5.5 MHz, 5W Channels/16-QAM

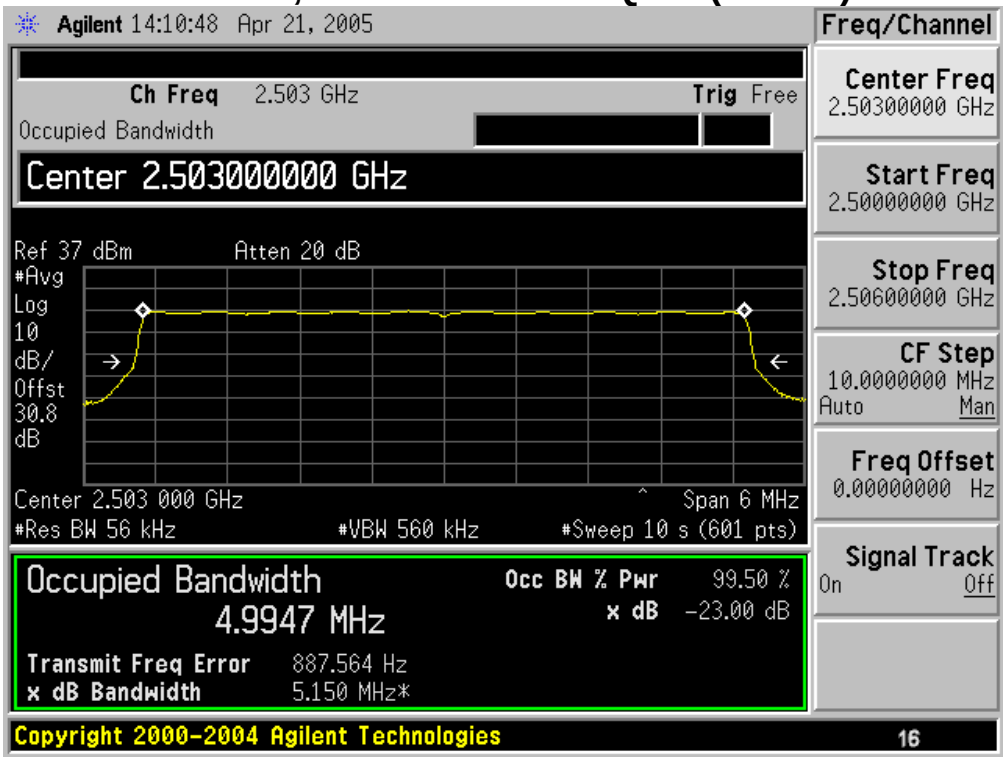


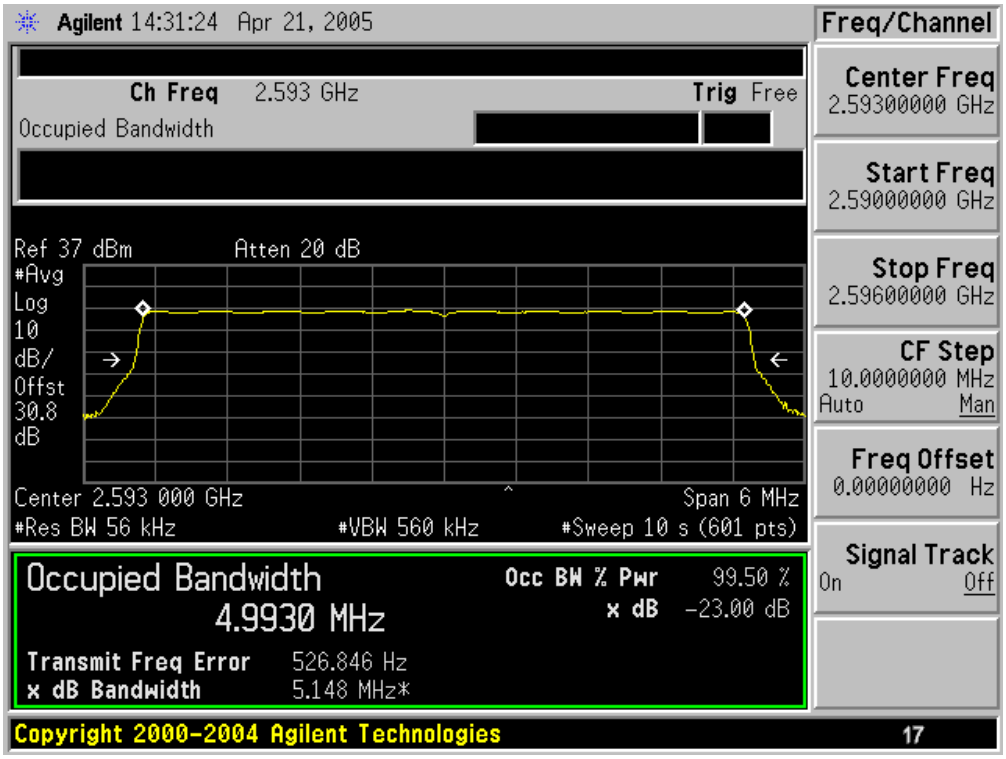
# Occupied Bandwidth
## 5.5 MHz, 5W Channels/16-QAM (Cont'd)



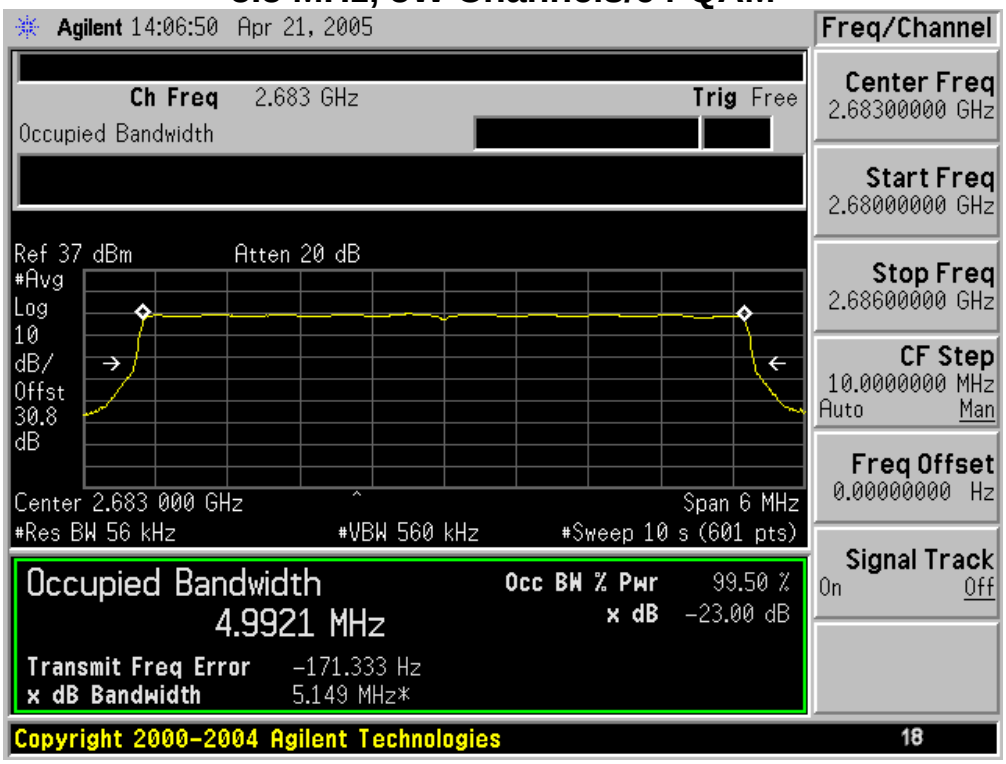



# Occupied Bandwidth
## 5.5 MHz, 5W Channels/64-QAM (Cont'd)

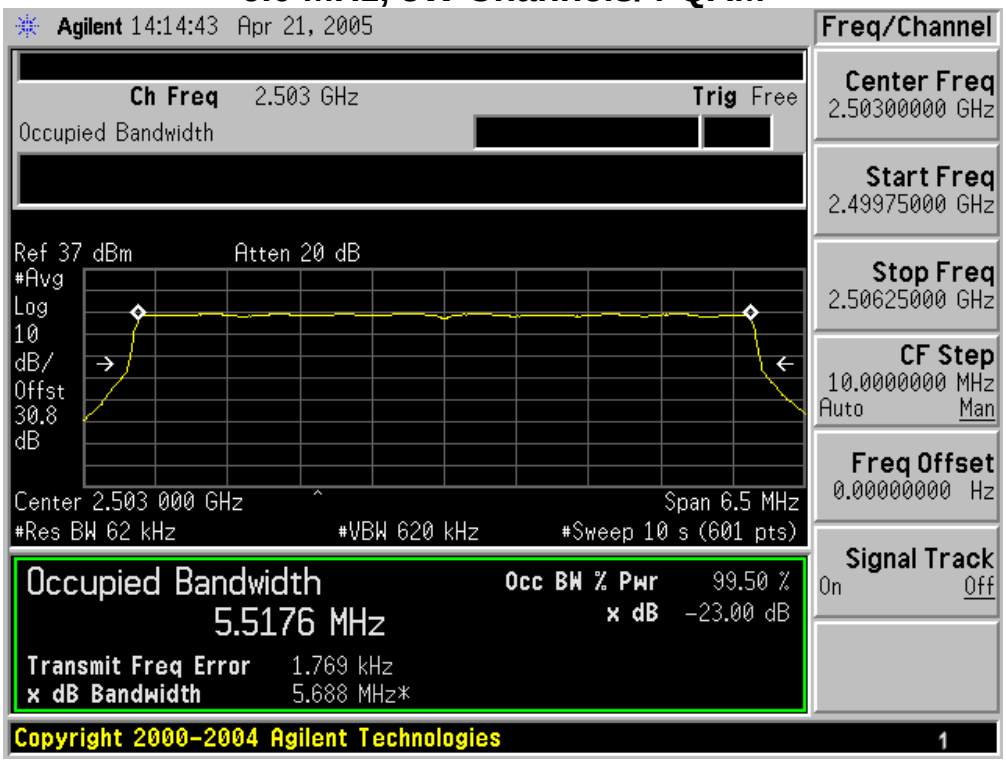


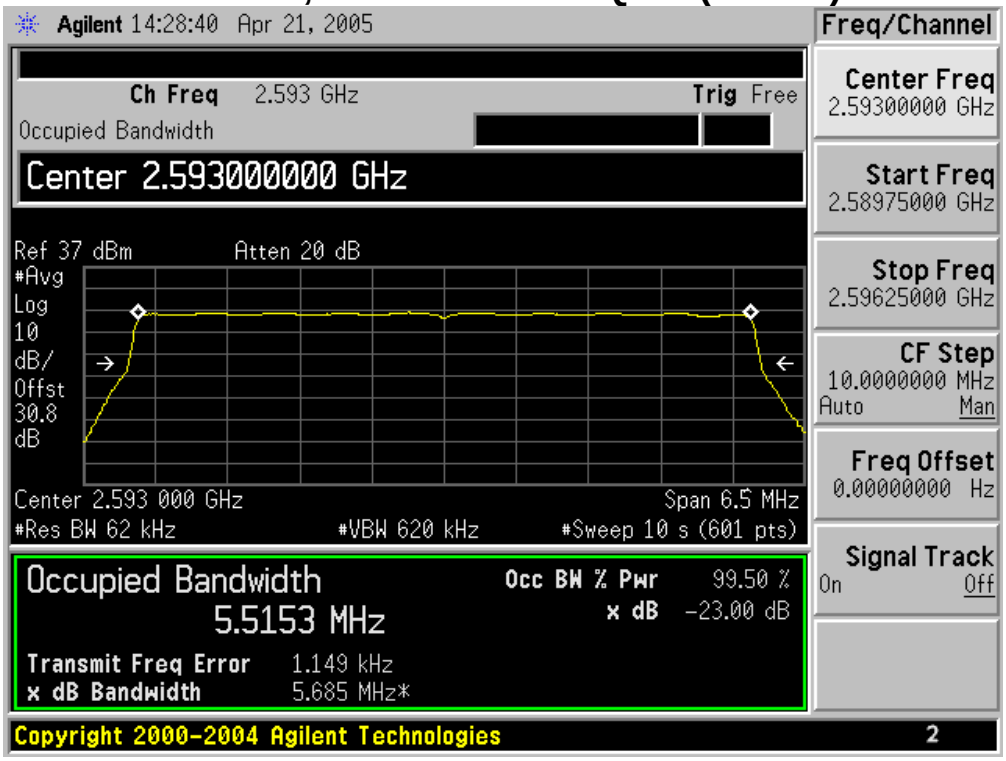
## Occupied Bandwidth
## 5.5 MHz, 5W Channels/64-QAM

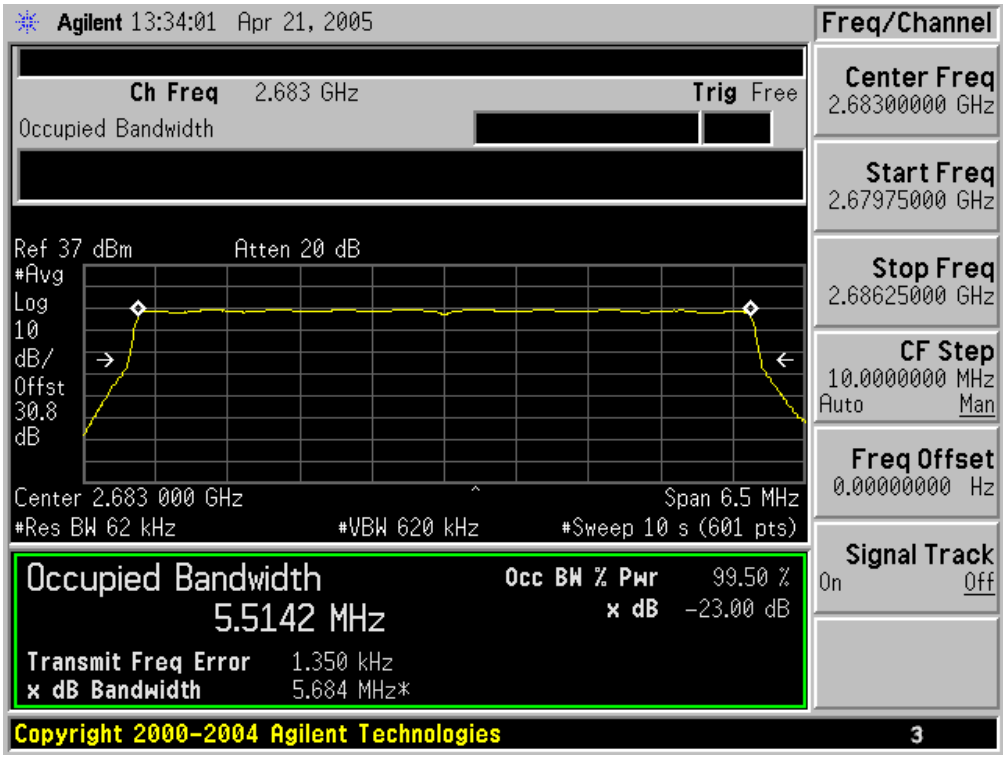



## 6.0 MHz, 5W Channels/4-QAM

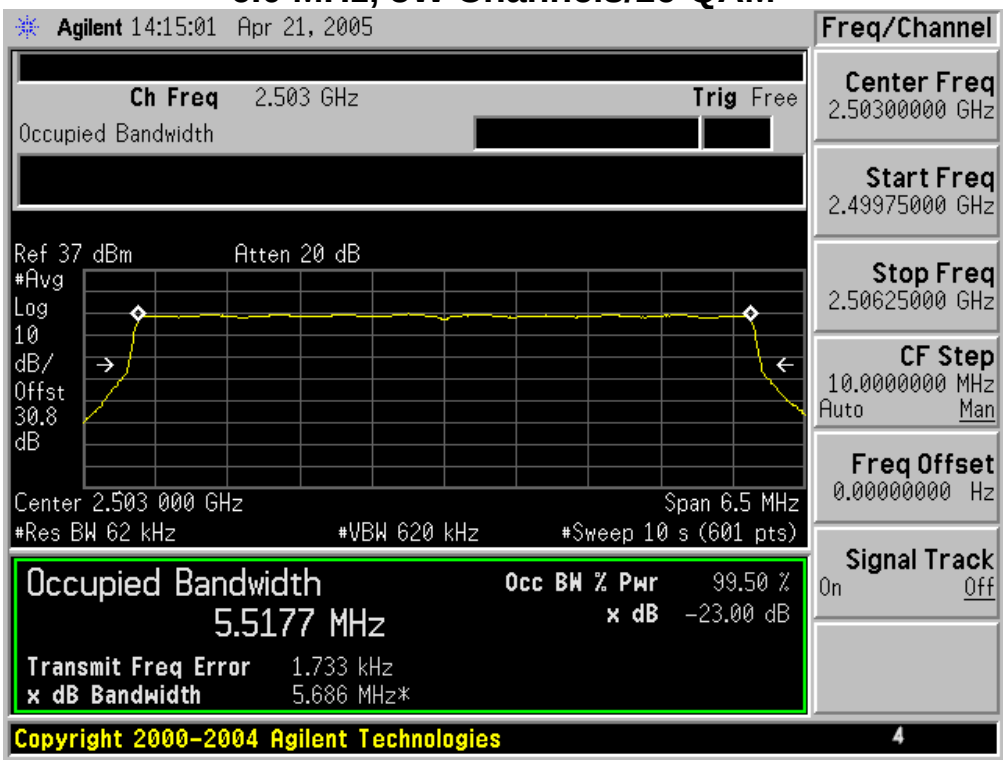


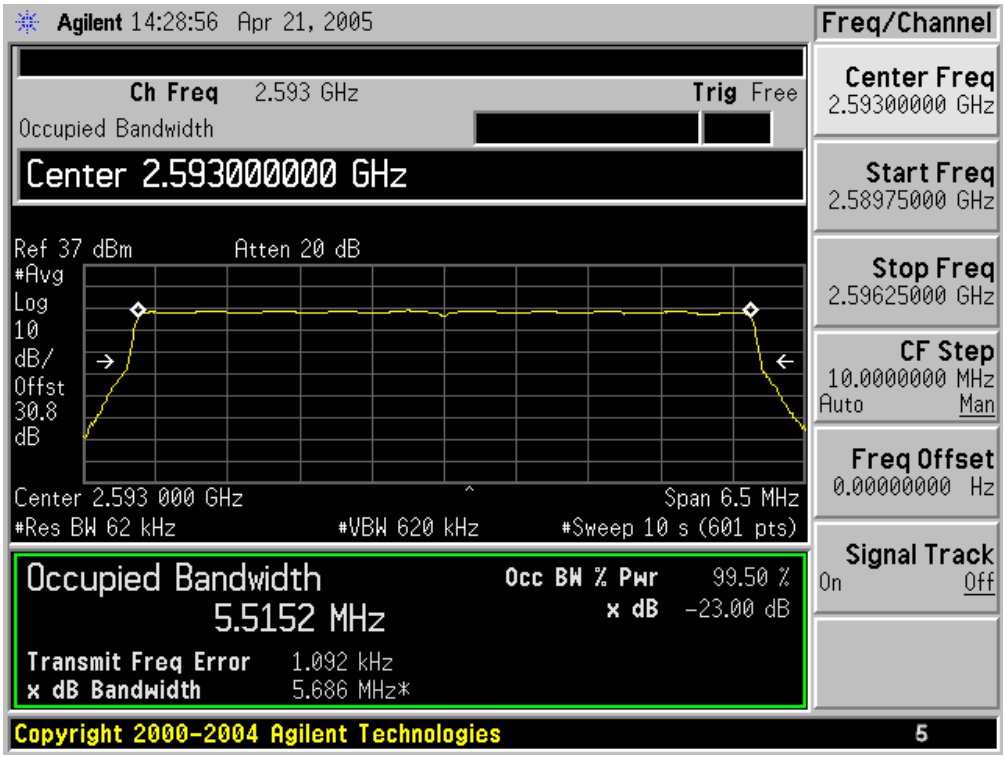
# Occupied Bandwidth
## 6.0 MHz, 5W Channels/4-QAM (Cont'd)



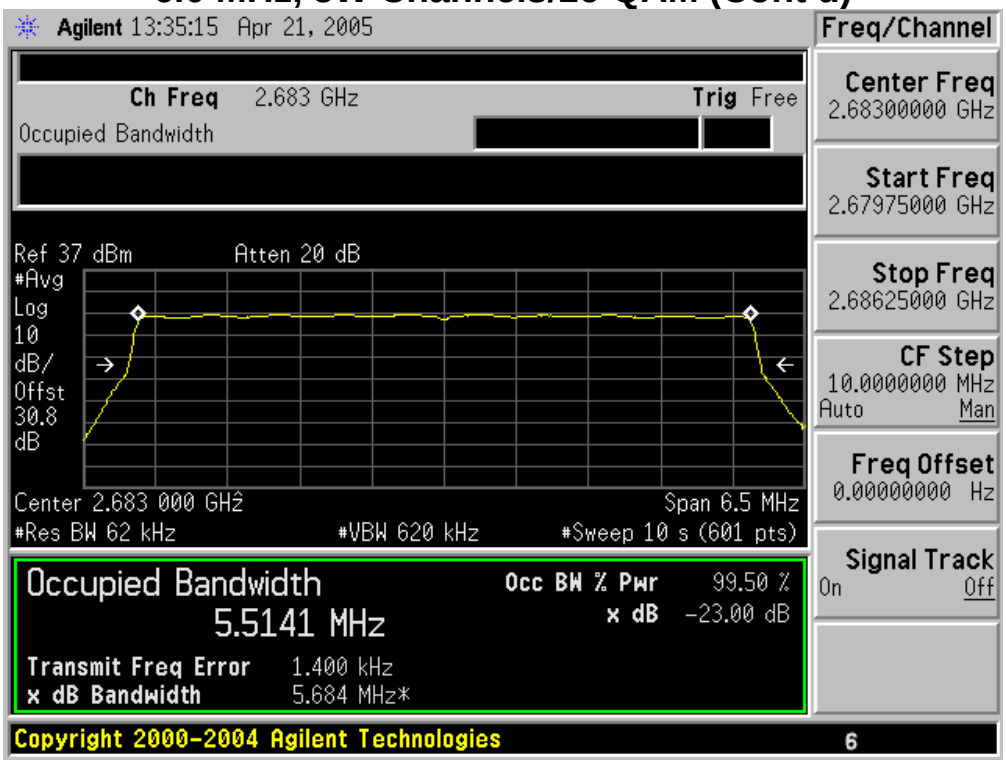



# Occupied Bandwidth
## 6.0 MHz, 5W Channels/16-QAM

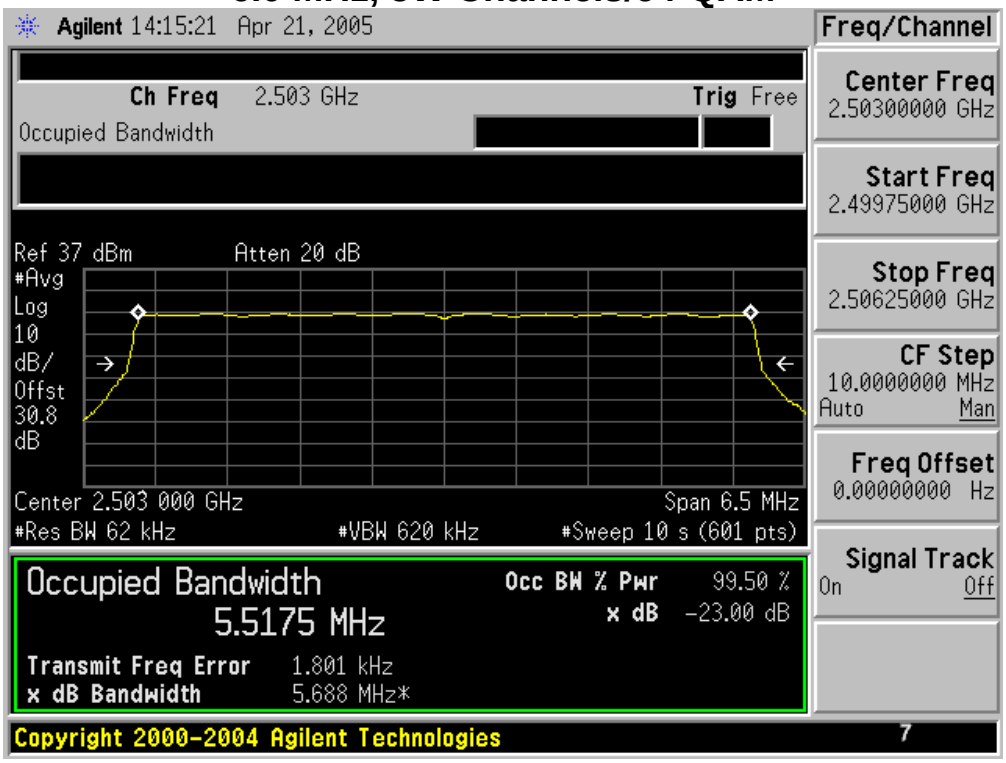


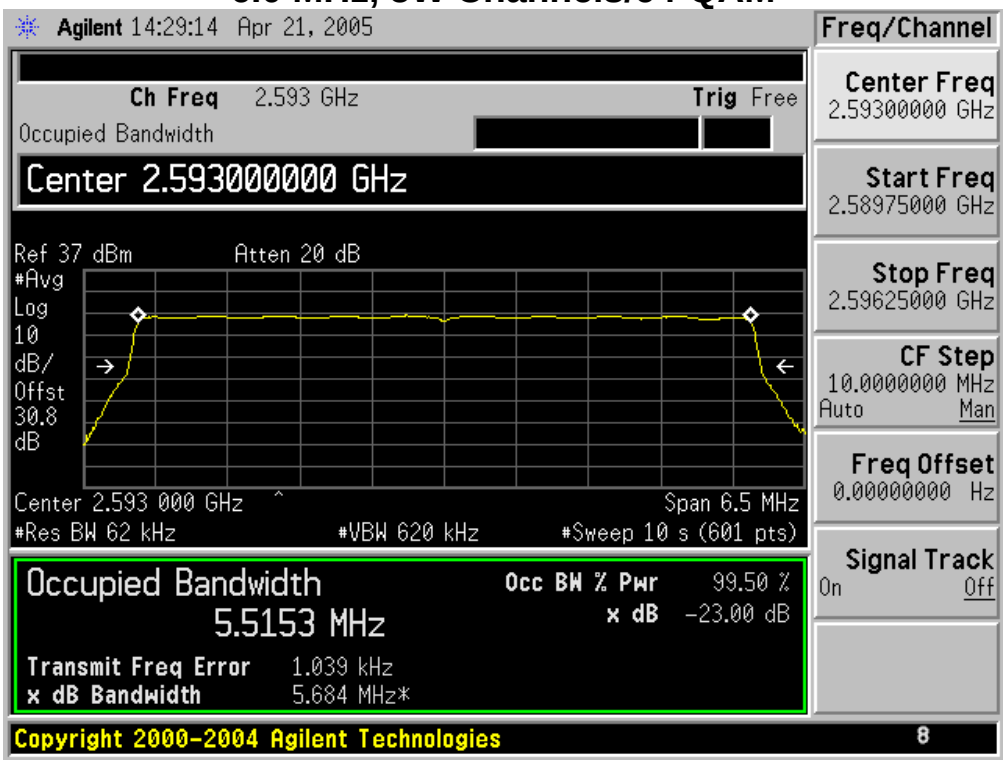
## Occupied Bandwidth
## 6.0 MHz, 5W Channels/16-QAM (Cont'd)

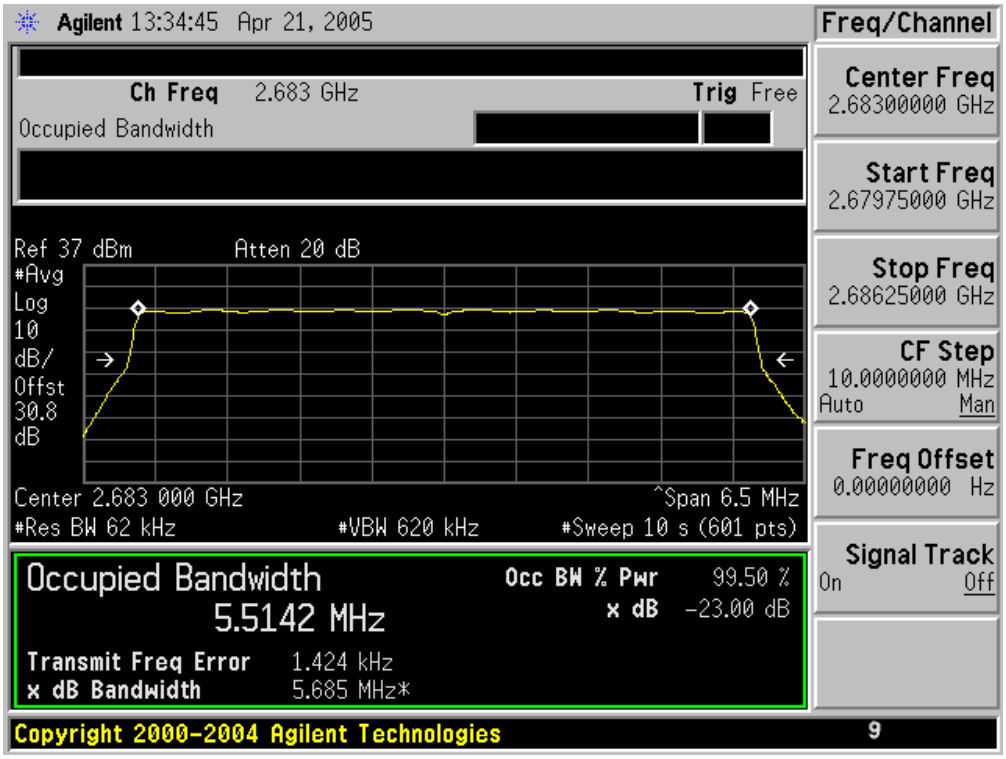



## 6.0 MHz, 5W Channels/64-QAM



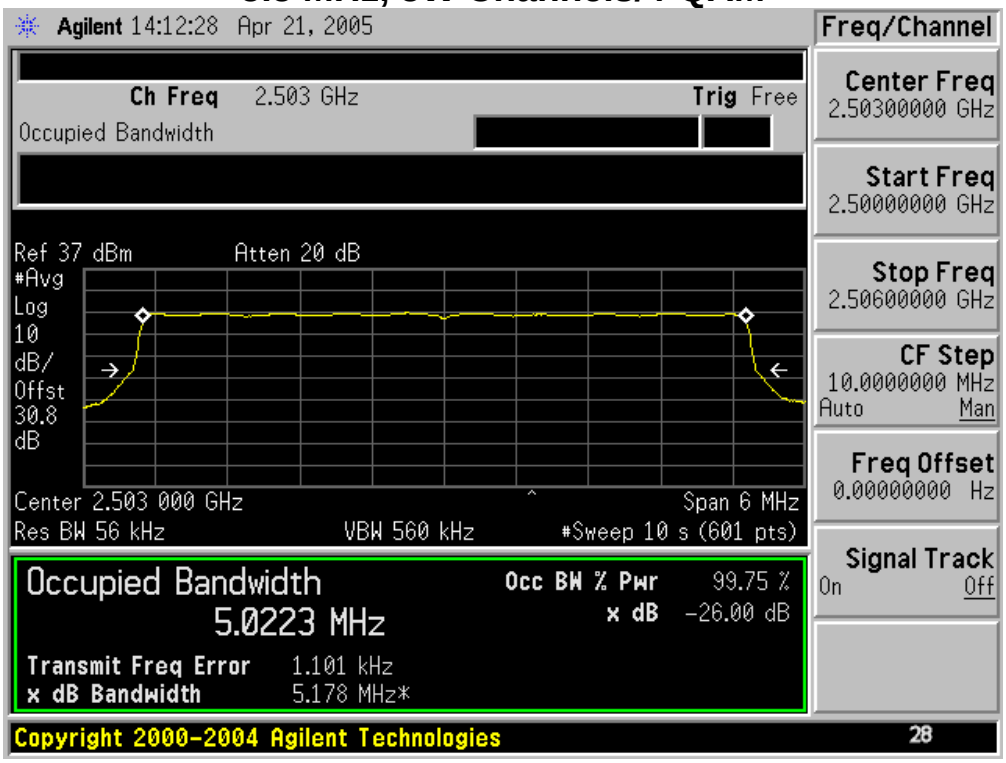
# Occupied Bandwidth
# 6.0 MHz, 5W Channels/64-QAM

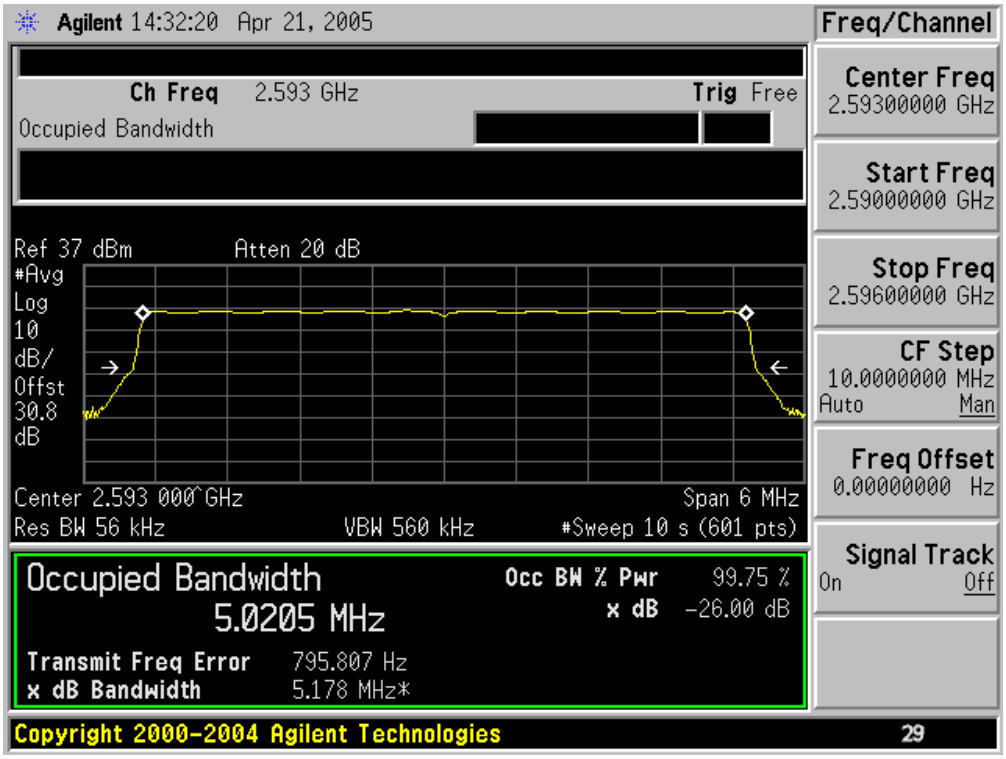


# Emission Bandwidth Spectrum Analyzer Plots (5W)

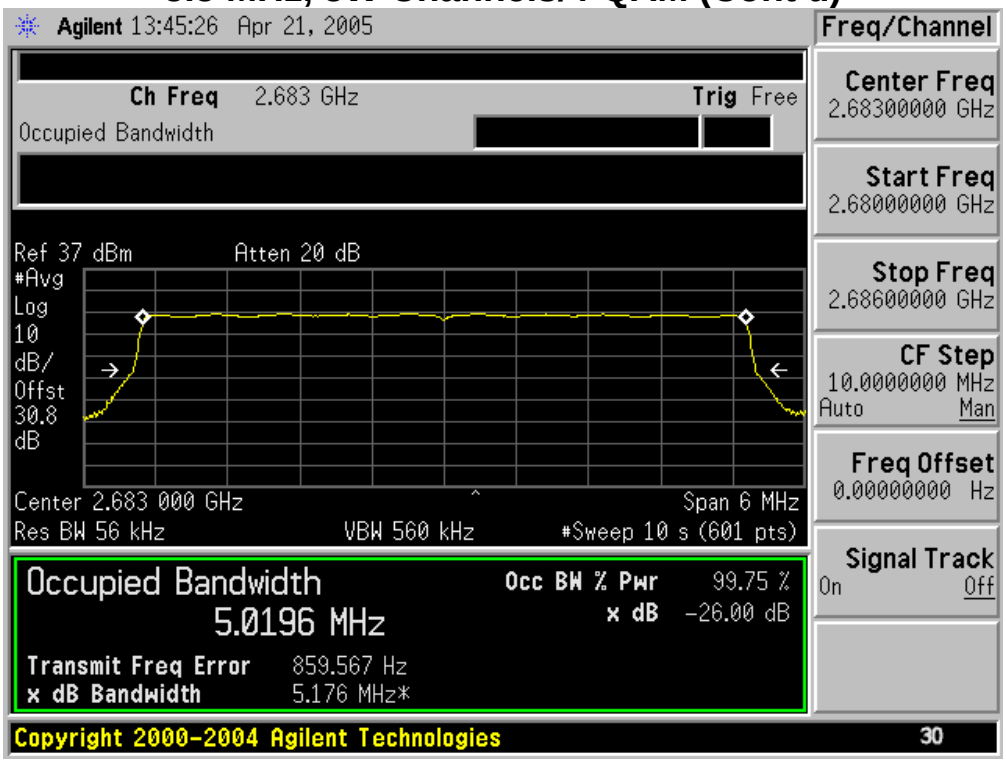
## 5.5 MHz, 5W Channels/4-QAM



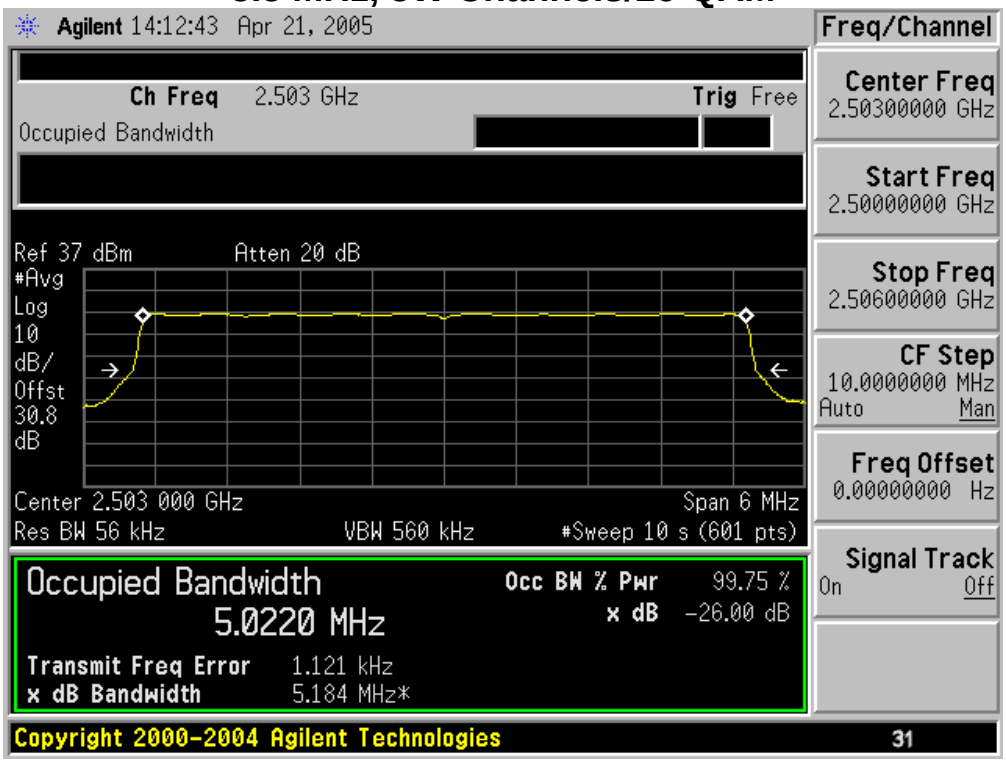



# Emission Bandwidth

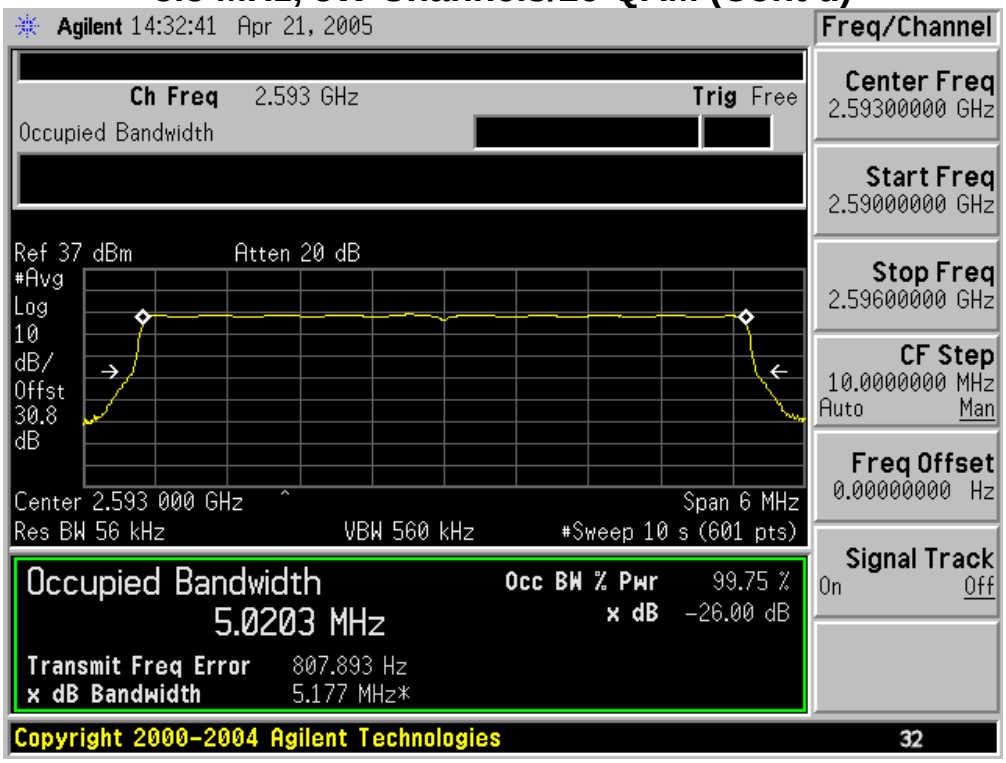
## 5.5 MHz, 5W Channels/4-QAM (Cont'd)

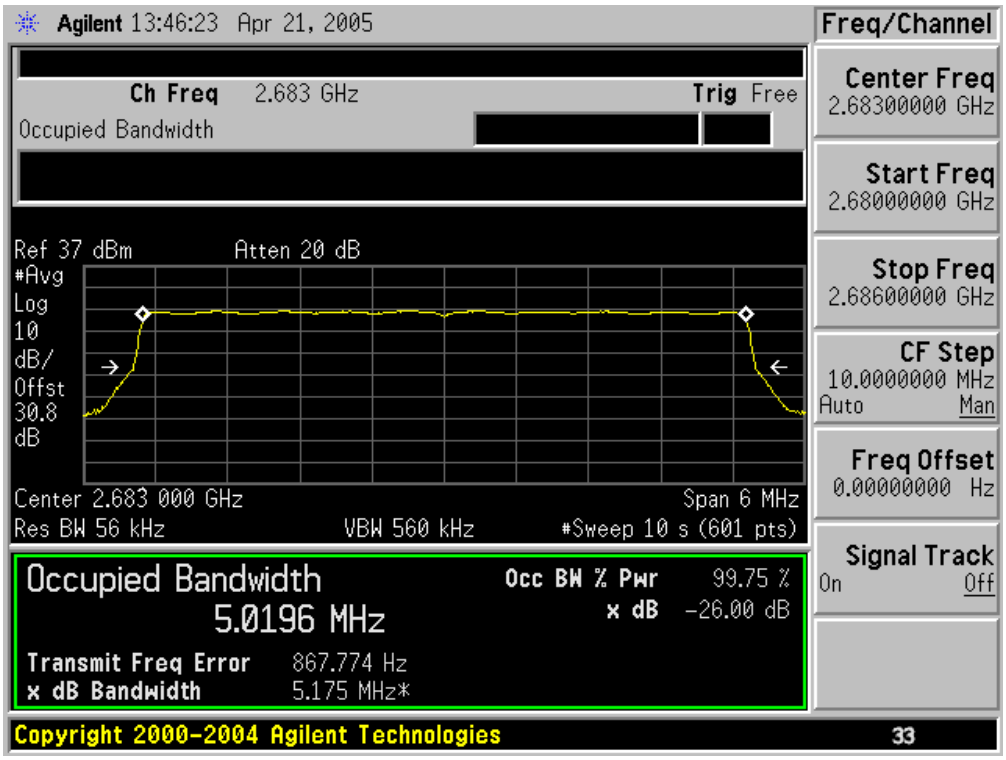



## 5.5 MHz, 5W Channels/16-QAM

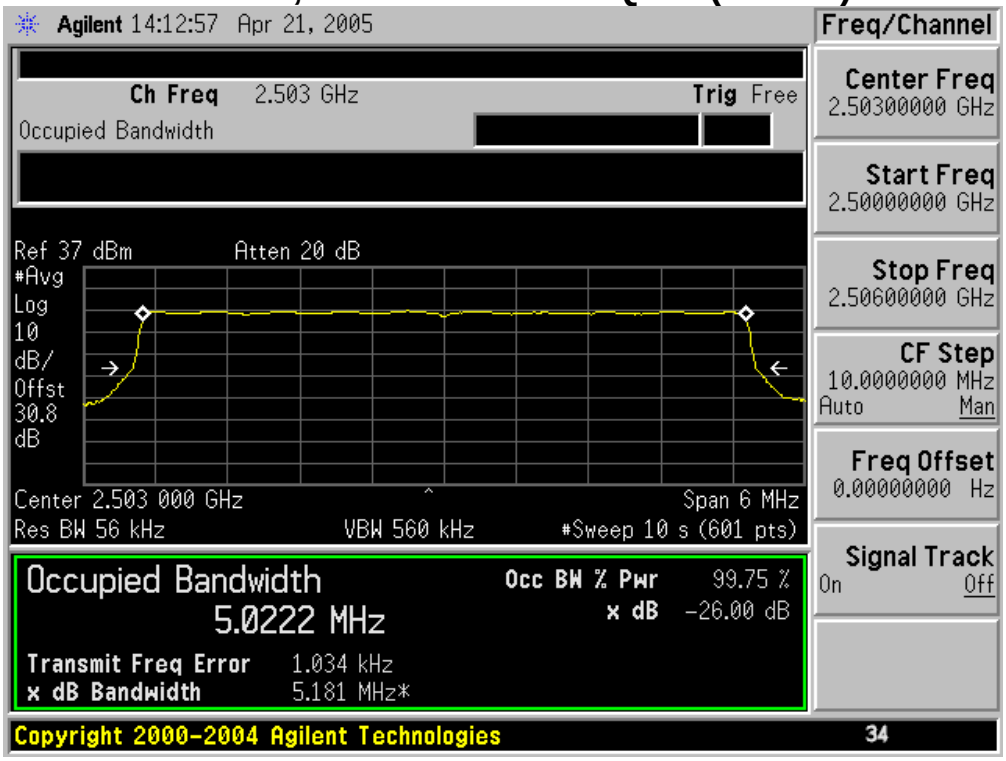


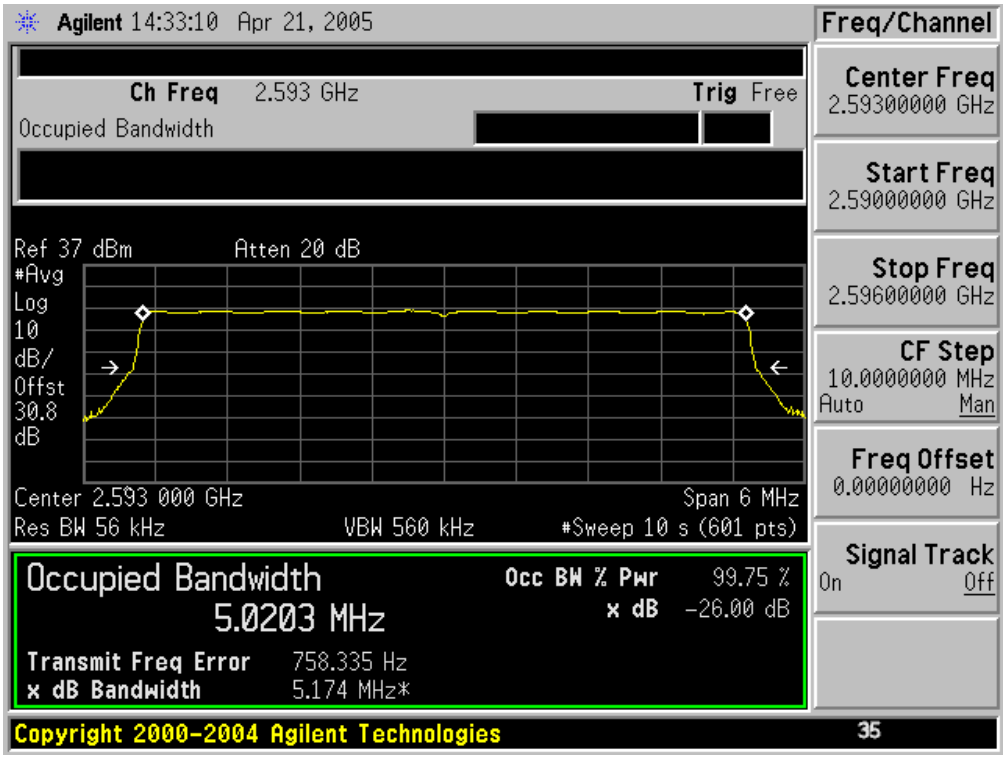
# Emission Bandwidth
## 5.5 MHz, 5W Channels/16-QAM (Cont'd)



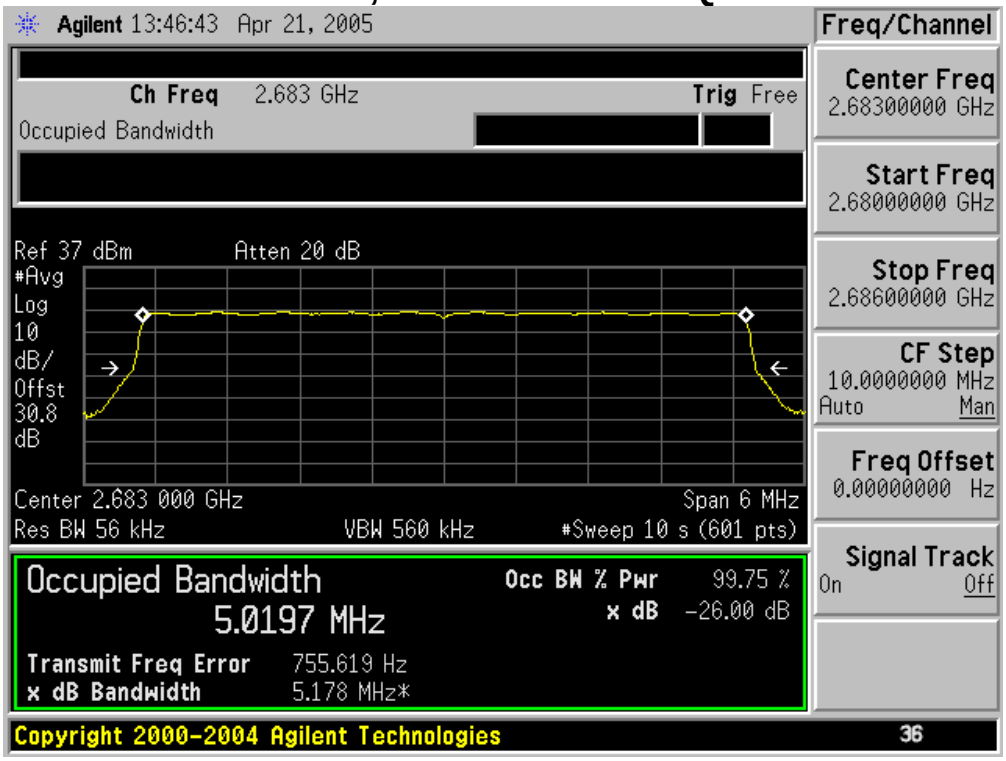



# Emission Bandwidth
## 5.5 MHz, 5W Channels/64-QAM (Cont'd)

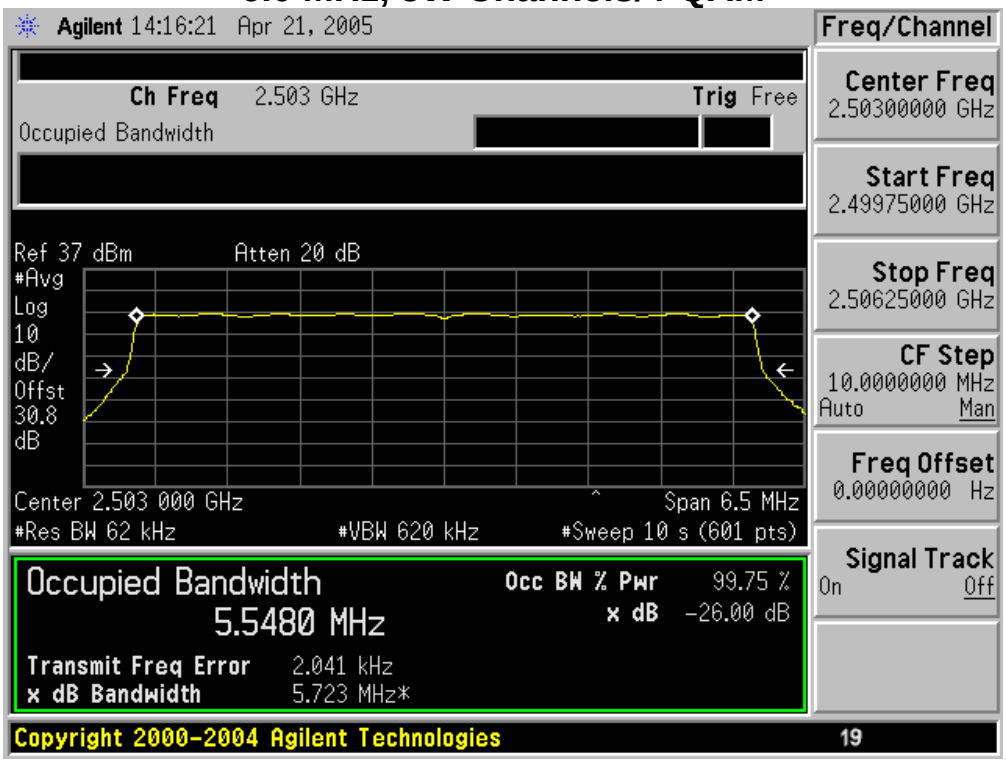


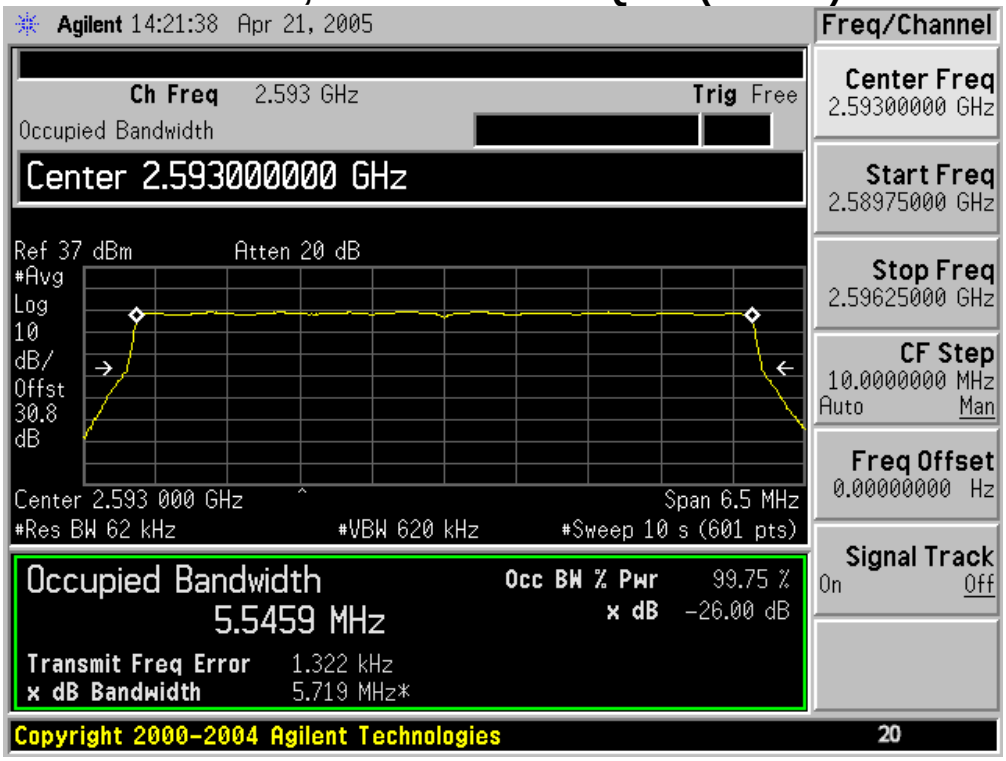
## Emission Bandwidth
## 5.5 MHz, 5W Channels/64-QAM

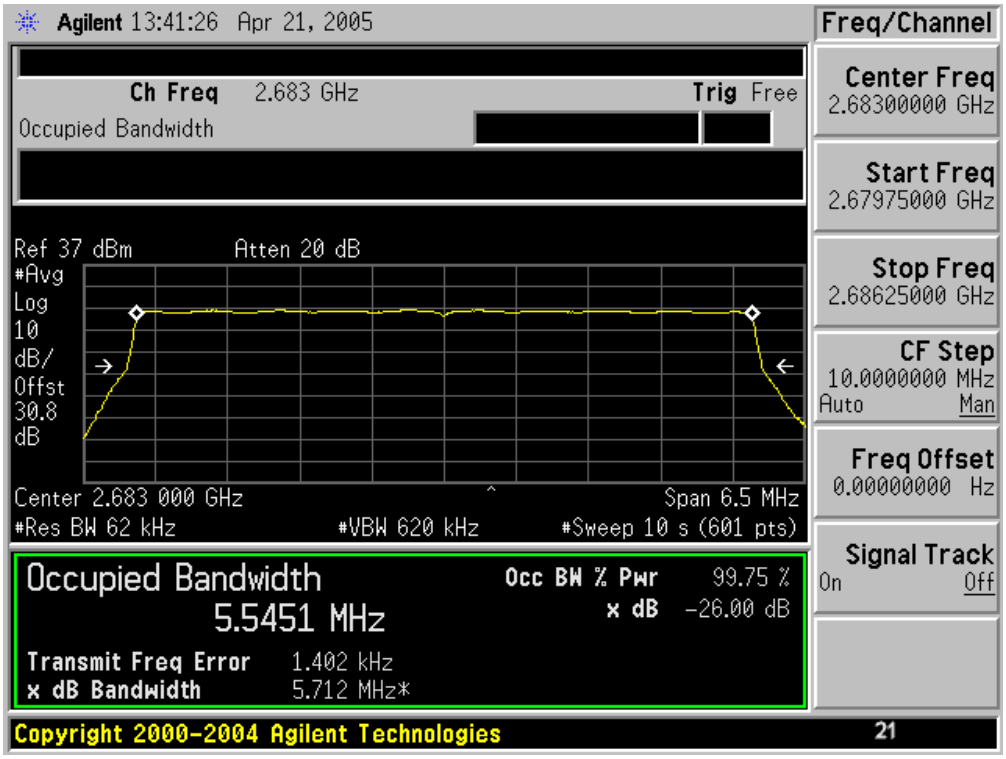



## 6.0 MHz, 5W Channels/4-QAM

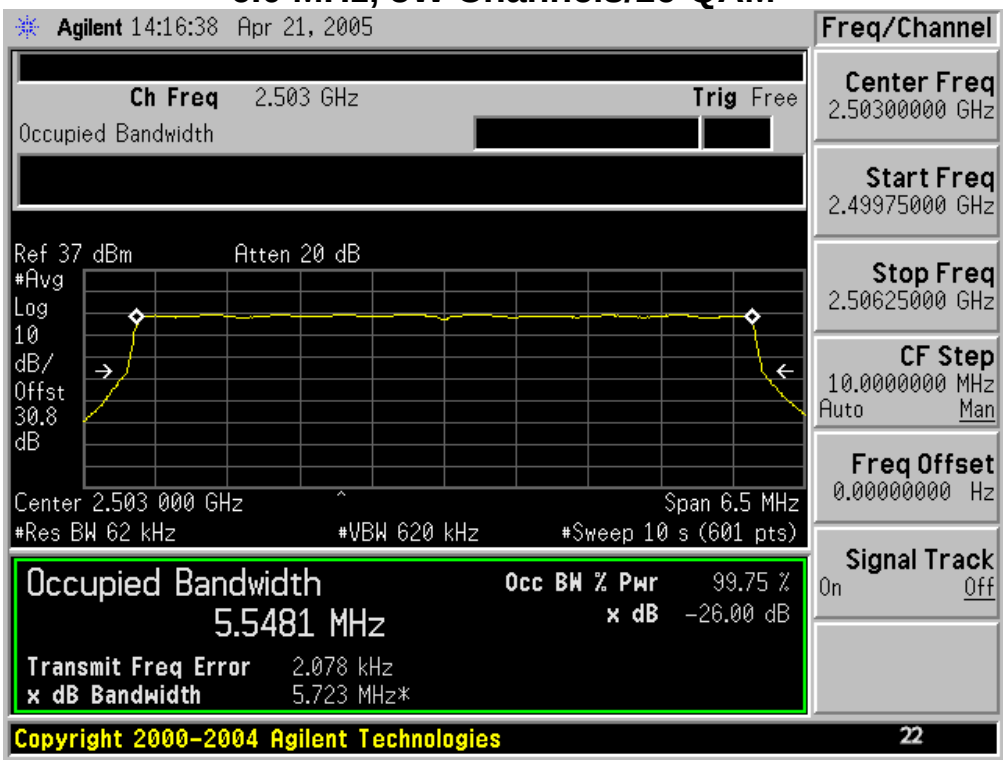


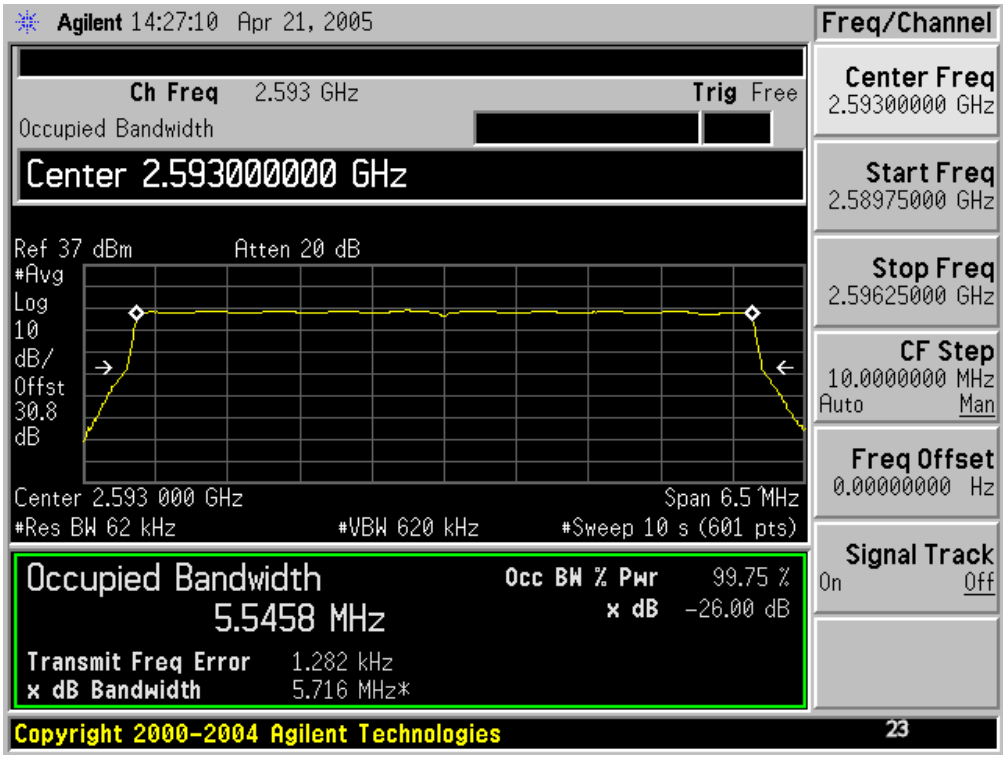
# Emission Bandwidth
## 6.0 MHz, 5W Channels/4-QAM (Cont'd)



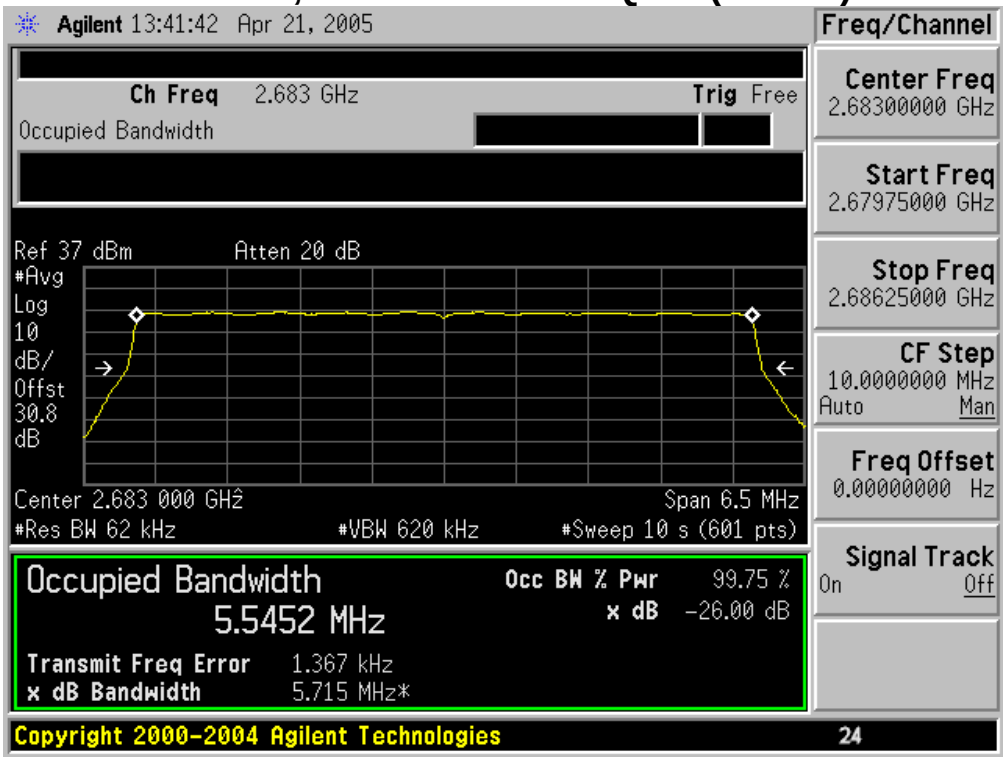



# Emission Bandwidth
# 6.0 MHz, 5W Channels/16-QAM

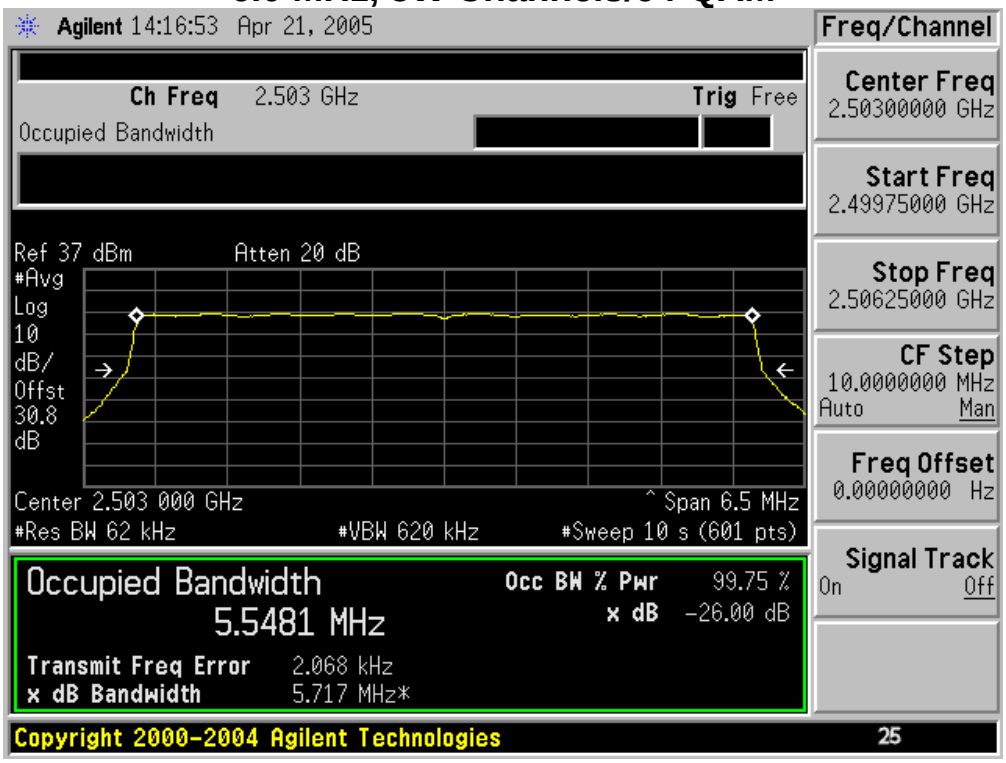


## Emission Bandwidth
## 6.0 MHz, 5W Channels/16-QAM (Cont'd)




## 6.0 MHz, 5W Channels/64-QAM



# Emission Bandwidth
# 6.0 MHz, 5W Channels/64-QAM