

# **Exhibit 6**

## **Test Report**

### **Part 1**

### **FCC Part 27**

## RF Power Output

Rule Part Number: 2.1046, 27.50(h)(2)  
Tx Power  $\leq$  2.0 watts EIRP

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

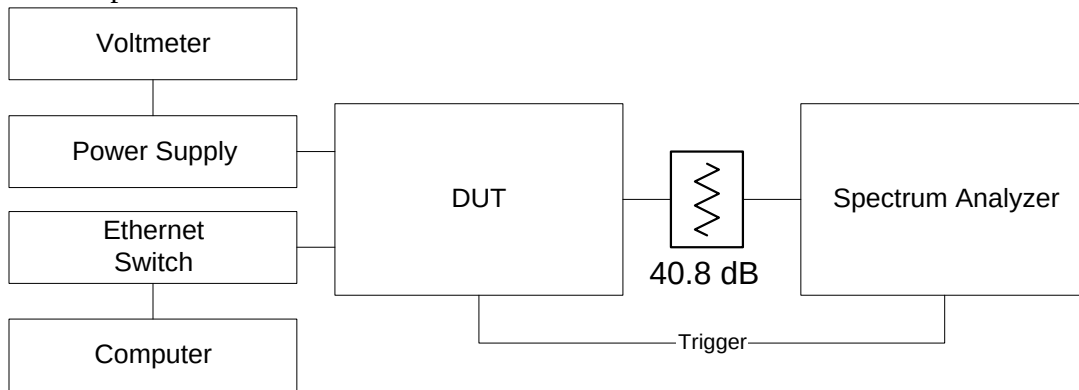
Test Procedure: Conducted RF Power;  
The conducted RF output power was measured with a spectrum analyzer and utilizing the power measurement function. The RF output is applied to an attenuator that is connected to the spectrum analyzer RF input port. The Spectrum Analyzer is time gated, to capture the transmission during the burst. An RMS detector is used to measure the average power during the transmission. 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 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 MHz).

Radiated RF Power;  
The effective isotropic radiated power (EIRP) was measured with the antennas NextNet Wireless recommends for installations. Radiated power measurements were performed on the Dataradio COR Ltd (registration number 152034) open air test site located in Waseca, Minnesota on 5 January 2005. The conducted RF power was verified at  $-10^{\circ}\text{C}$  to ensure that the proper level was being applied to the input of the antenna coax. The spectrum analyzer was gated to measure the power during a transmission by monitoring the TX Enable signal from the MSU. Measurements were performed by rotating the MSU and antenna in a 360 degree rotation and adjusting the measuring antenna for maximum level on the spectrum analyzer. The maximum level for each antenna being tested was recorded. Antenna substitution was performed to determine the path loss of the measurement.

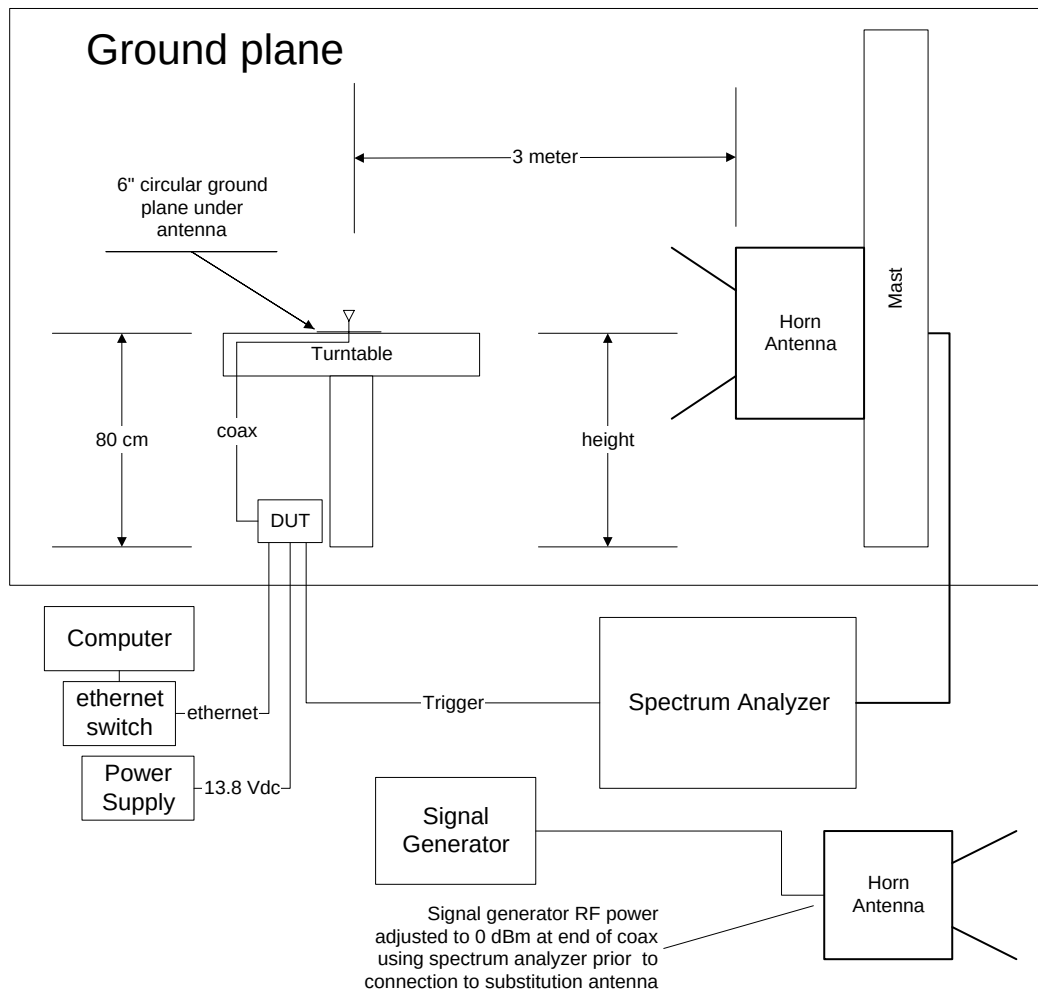
Test Conditions: Frequencies =  
5.5 MHz channels: 2504.75, 2565.25, 2626.75, 2687.25 MHz  
6.0 MHz channels: 2499, 2575, and 2621 MHz  
Temperature =  $25^{\circ}\text{C}$  (conducted measurement)  
Temperature =  $-5^{\circ}\text{C}$  (radiated measurement)  
Supply Voltage = 13.8 Vdc to MSU

## RF Power Output

### Test Set-Up:



### Conducted RF Power



### Radiated RF Power

## RF Power Output

### Test Equipment:

|                                 | Conducted RF Power                                                                                     | Radiated RF Power                                                                              |
|---------------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| DUT                             | NextNet Wireless CPE (MSU-2510-A)<br># 0050-0300-4300924                                               | NextNet Wireless CPE (MSU-2510-A)<br># 0050-0300-4300924                                       |
| Spectrum Analyzer               | Agilent E4440A<br>S/N: MY44022791<br>Calibrated on: 05/30/2004<br>Cal due: 05/30/2006                  | Agilent E4440A<br>S/N: MY44022791<br>Calibrated on: 05/30/2004<br>Cal due: 05/30/2006          |
| Attenuator(s)<br>10 dB<br>20 dB | Pasternak Corporation<br>Model: PE7005-20 (20 dB)<br>Model: PE7005-10 (10 dB) x2<br>Calibrated by user | ---                                                                                            |
| Computer                        | Dell Inspiron 5000<br>Model: PPM<br>S/N: 000832RM-12961-04R-0441                                       | 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: B205335003175                                     | D-Link<br>Model: DSS-5+<br>5 port 10/100Mbps<br>S/N: B205335003175                             |
| Power Supply                    | Agilent E3615A<br>S/N: KR01508898<br>Calibrated with voltmeter listed below.                           | Agilent E3615A<br>S/N: KR01508898<br>Calibrated with voltmeter listed below.                   |
| Voltmeter                       | HP 34401A<br>S/N: 3146A23291<br>Calibrated on: 11-17-2004<br>Cal due: 11-17-2006                       | HP 34401A<br>S/N: 3146A23291<br>Calibrated on: 11-17-2004<br>Cal due: 11-17-2006               |
| Test Antenna                    | ---                                                                                                    | NextNet Wireless<br>Outdoor Subscriber Unit antenna<br>Calibration not required for this test. |
| Substitution Antenna            | ---                                                                                                    | EMCO 3115<br>S/N: 9705-5217<br>Calibrated by user                                              |
| Signal Generator                | ---                                                                                                    | Agilent E4421B<br>S/N: US40051124<br>Calibration not required for this test                    |

## RF Power Output - Conducted

Test Results:

| Conducted             |       |         |        |         |        |         |
|-----------------------|-------|---------|--------|---------|--------|---------|
| Minimum Power setting |       |         |        |         |        |         |
|                       | QPSK  |         | 16 QAM |         | 64 QAM |         |
| Freq (MHz)            | (dBm) | (Watts) | (dBm)  | (Watts) | (dBm)  | (Watts) |
| 2504.75               | 0.16  | 0.00104 | 0.19   | 0.00104 | 0.13   | 0.00103 |
| 2565.25               | -0.37 | 0.00092 | -0.38  | 0.00092 | -0.37  | 0.00092 |
| 2626.75               | -0.46 | 0.00090 | -0.4   | 0.00091 | -0.43  | 0.00091 |
| 2687.25               | 0.06  | 0.00101 | 0.03   | 0.00101 | 0.06   | 0.00101 |
| 2499                  | 0.08  | 0.00102 | 0.07   | 0.00102 | 0.06   | 0.00101 |
| 2575                  | -0.08 | 0.00098 | -0.10  | 0.00098 | -0.10  | 0.00098 |
| 2621                  | 0.14  | 0.00103 | 0.14   | 0.00103 | 0.12   | 0.00103 |
| Maximum Power setting |       |         |        |         |        |         |
|                       | QPSK  |         | 16 QAM |         | 64 QAM |         |
| Freq (MHz)            | (dBm) | (Watts) | (dBm)  | (Watts) | (dBm)  | (Watts) |
| 2504.75               | 32.34 | 1.71396 | 32.35  | 1.71791 | 32.38  | 1.72982 |
| 2565.25               | 32.63 | 1.83231 | 32.65  | 1.84077 | 32.68  | 1.85353 |
| 2626.75               | 32.8  | 1.90546 | 32.8   | 1.90546 | 32.8   | 1.90546 |
| 2687.25               | 32.83 | 1.91867 | 32.83  | 1.91867 | 32.83  | 1.91867 |
| 2499                  | 32.56 | 1.80302 | 32.58  | 1.81134 | 32.60  | 1.81970 |
| 2575                  | 32.96 | 1.97697 | 32.96  | 1.97697 | 32.93  | 1.96336 |
| 2621                  | 32.57 | 1.80717 | 32.55  | 1.79887 | 32.55  | 1.79887 |

## RF Power Output - Radiated

### Test Results Summary:

Pass power limits for mobile station < 2 watts EIRP.

#### Antenna 1 – Maxrad BMMG24000ML195C

| Freq (MHz)                                 | 2499   | 2504.75 | 2565.25 | 2575   | 2621   | 2626.75 | 2687.25 |
|--------------------------------------------|--------|---------|---------|--------|--------|---------|---------|
| Spectrum Analyzer Reading for DUT (dBm)    | -17.06 | -17.25  | -16.74  | -16.18 | -16.11 | -16.82  | -16.88  |
| Power at substitution antenna port (dBm)   | 0      | 0       | 0       | 0      | 0      | 0       | 0       |
| Substitution antenna gain (dBi)            | 11.43  | 11.43   | 11.41   | 11.41  | 11.15  | 11.15   | 10.92   |
| Spectrum Analyzer Substitution Level (dBm) | -36.97 | -36.78  | -37.77  | -37.7  | -37.33 | -38.59  | -37.19  |
| Path Loss (dB)                             | 48.40  | 48.21   | 49.18   | 49.11  | 48.48  | 49.74   | 48.11   |
| EIRP (dBm)                                 | 31.34  | 30.96   | 32.44   | 32.93  | 32.37  | 32.92   | 31.23   |
| EIRP (Watts)                               | 1.36   | 1.25    | 1.75    | 1.96   | 1.73   | 1.96    | 1.33    |

#### Antenna 2 – Mobilemark IMAG0-2600

| Freq (MHz)                                 | 2499   | 2504.75 | 2565.25 | 2575   | 2621   | 2626.75 | 2687.25 |
|--------------------------------------------|--------|---------|---------|--------|--------|---------|---------|
| Spectrum Analyzer Reading for DUT (dBm)    | -16.12 | -16.24  | -16.28  | -16.72 | -17.95 | -16.89  | -17.08  |
| Power at substitution antenna port (dBm)   | 0      | 0       | 0       | 0      | 0      | 0       | 0       |
| Substitution antenna gain (dBi)            | 11.43  | 11.43   | 11.41   | 11.41  | 11.15  | 11.15   | 10.92   |
| Spectrum Analyzer Substitution Level (dBm) | -36.97 | -36.78  | -37.77  | -37.7  | -37.33 | -38.59  | -37.19  |
| Path Loss (dB)                             | 48.40  | 48.21   | 49.18   | 49.11  | 48.48  | 49.74   | 48.11   |
| EIRP (dBm)                                 | 32.28  | 31.97   | 32.90   | 32.39  | 30.53  | 32.85   | 31.03   |
| EIRP (Watts)                               | 1.69   | 1.57    | 1.95    | 1.73   | 1.13   | 1.93    | 1.27    |

## RF Power Output - Conducted (maximum)

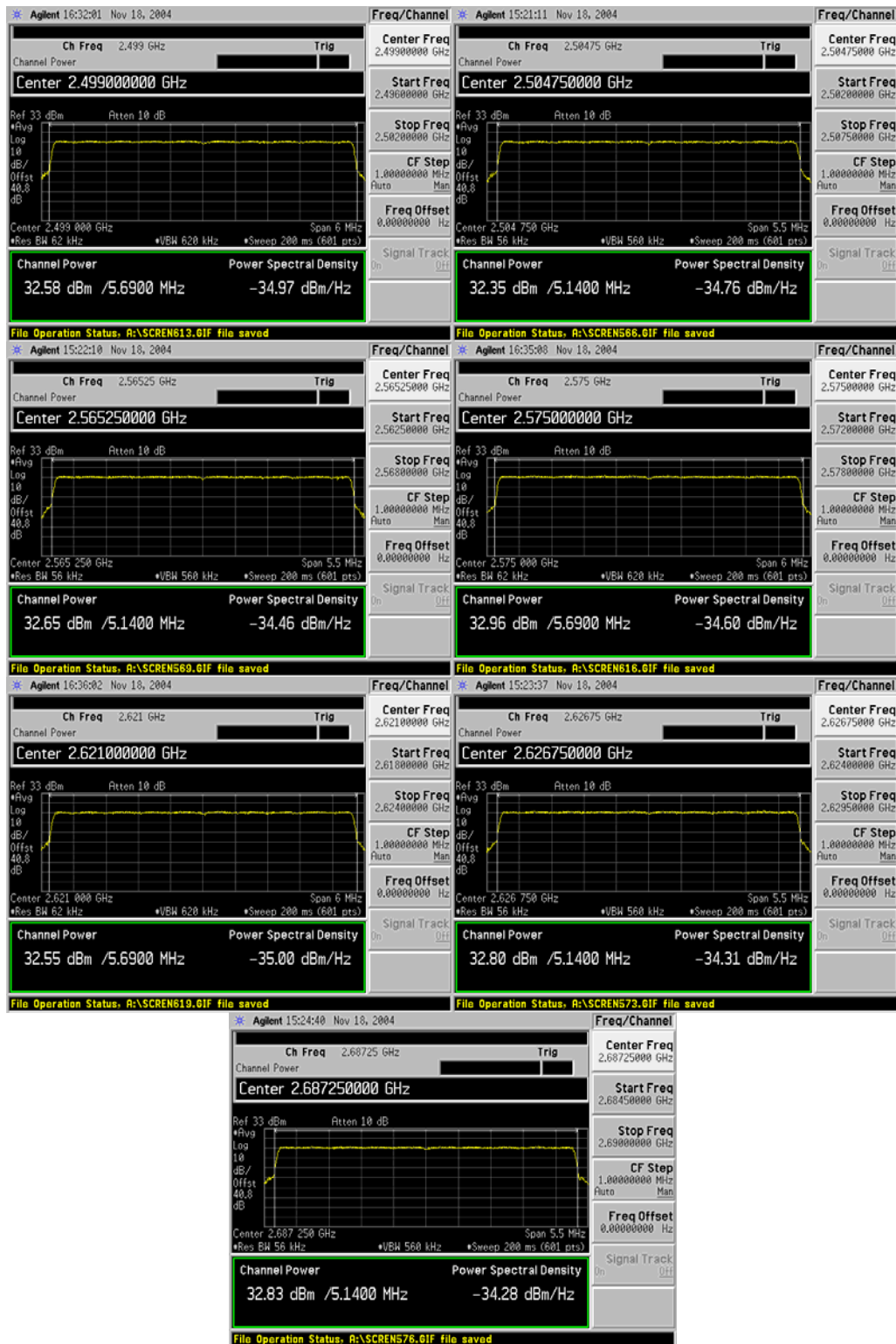


4-QAM

NextNet Wireless, Inc  
9555 James Ave. South Suite 270  
Bloomington, MN 55431

01/05/2005

## RF Power Output - Conducted (maximum)

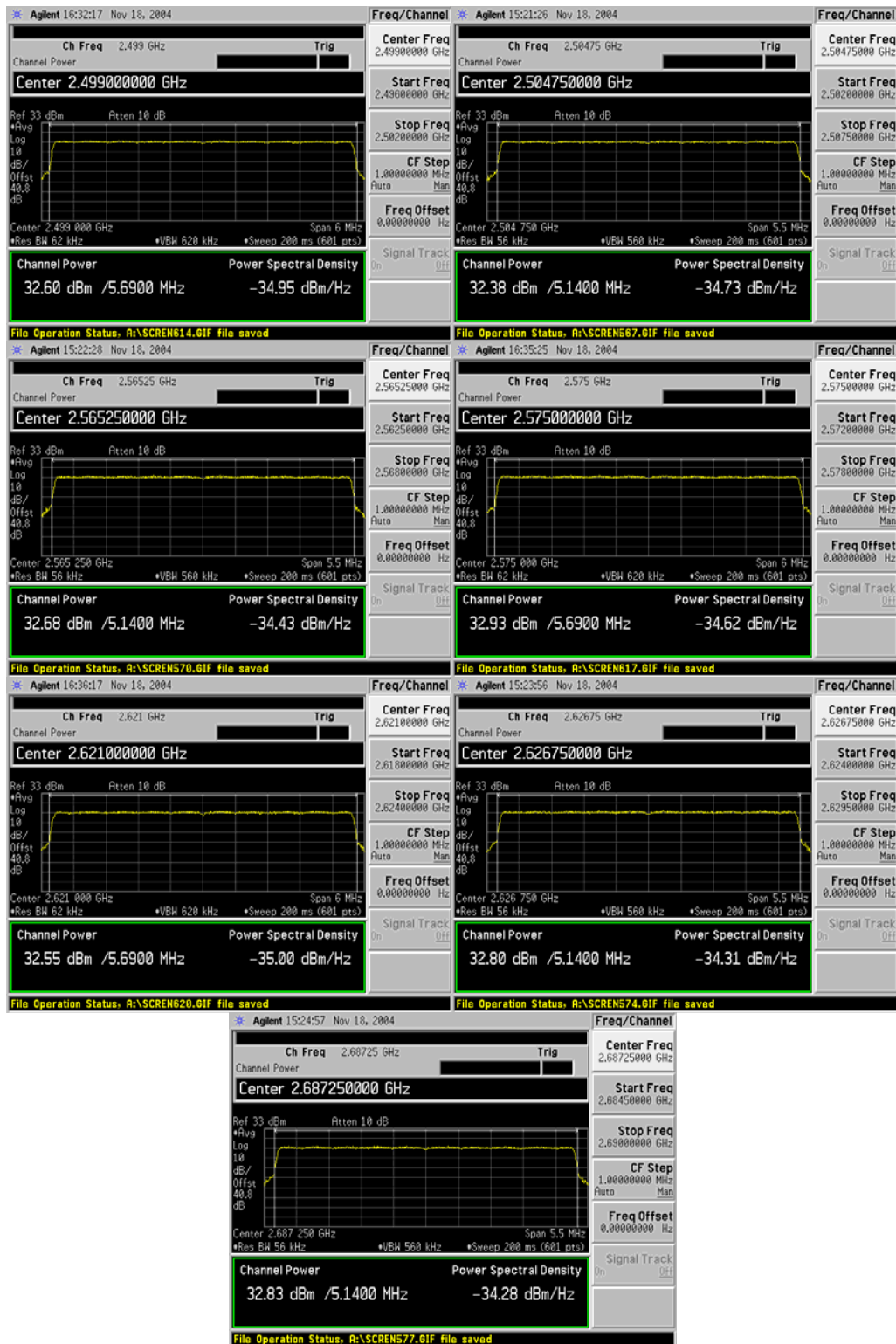


16-QAM

NextNet Wireless, Inc  
9555 James Ave. South Suite 270  
Bloomington, MN 55431

01/05/2005

## RF Power Output - Conducted (maximum)

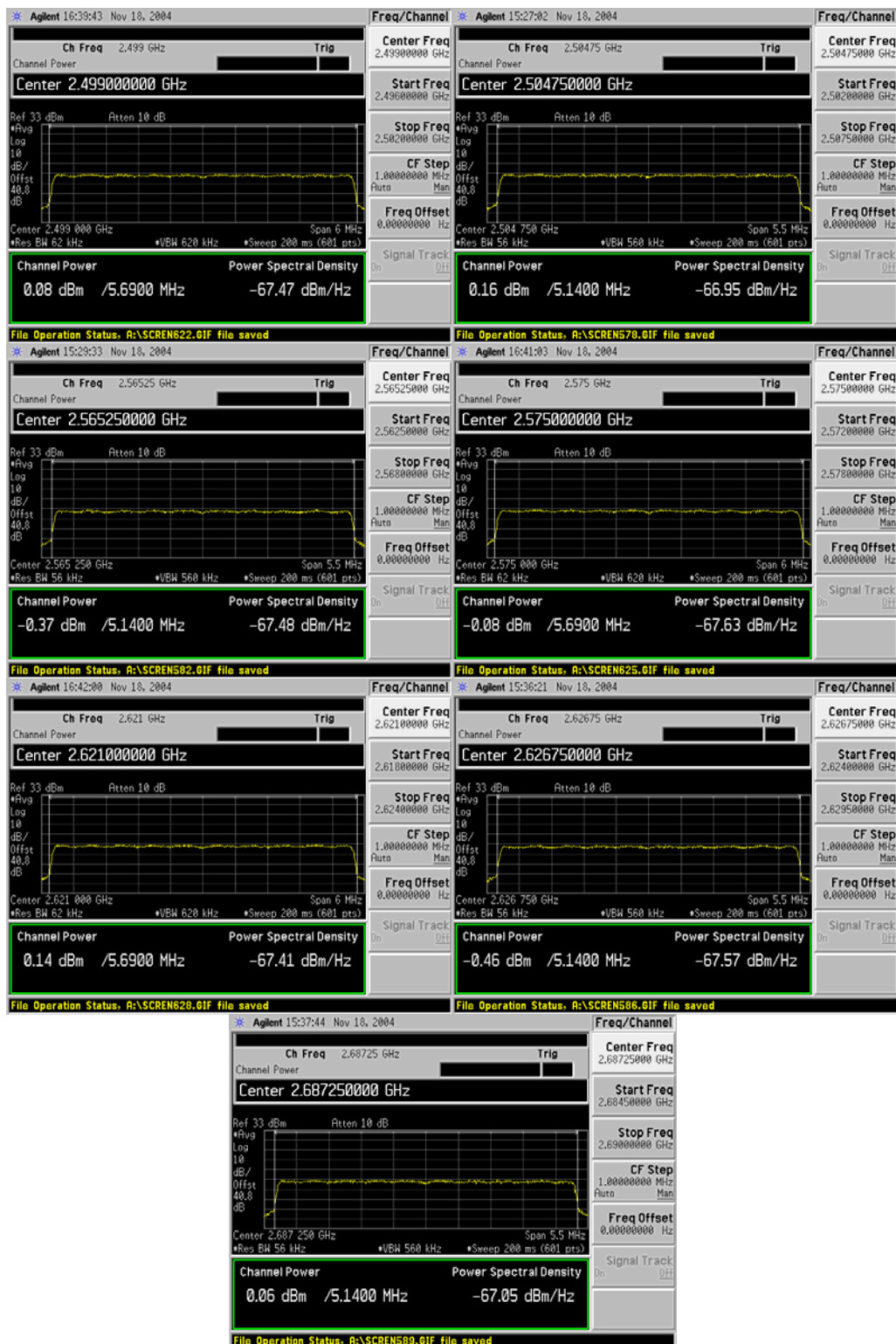


64-QAM

NextNet Wireless, Inc  
9555 James Ave. South Suite 270  
Bloomington, MN 55431

01/05/2005

## RF Power Output - Conducted (minimum)

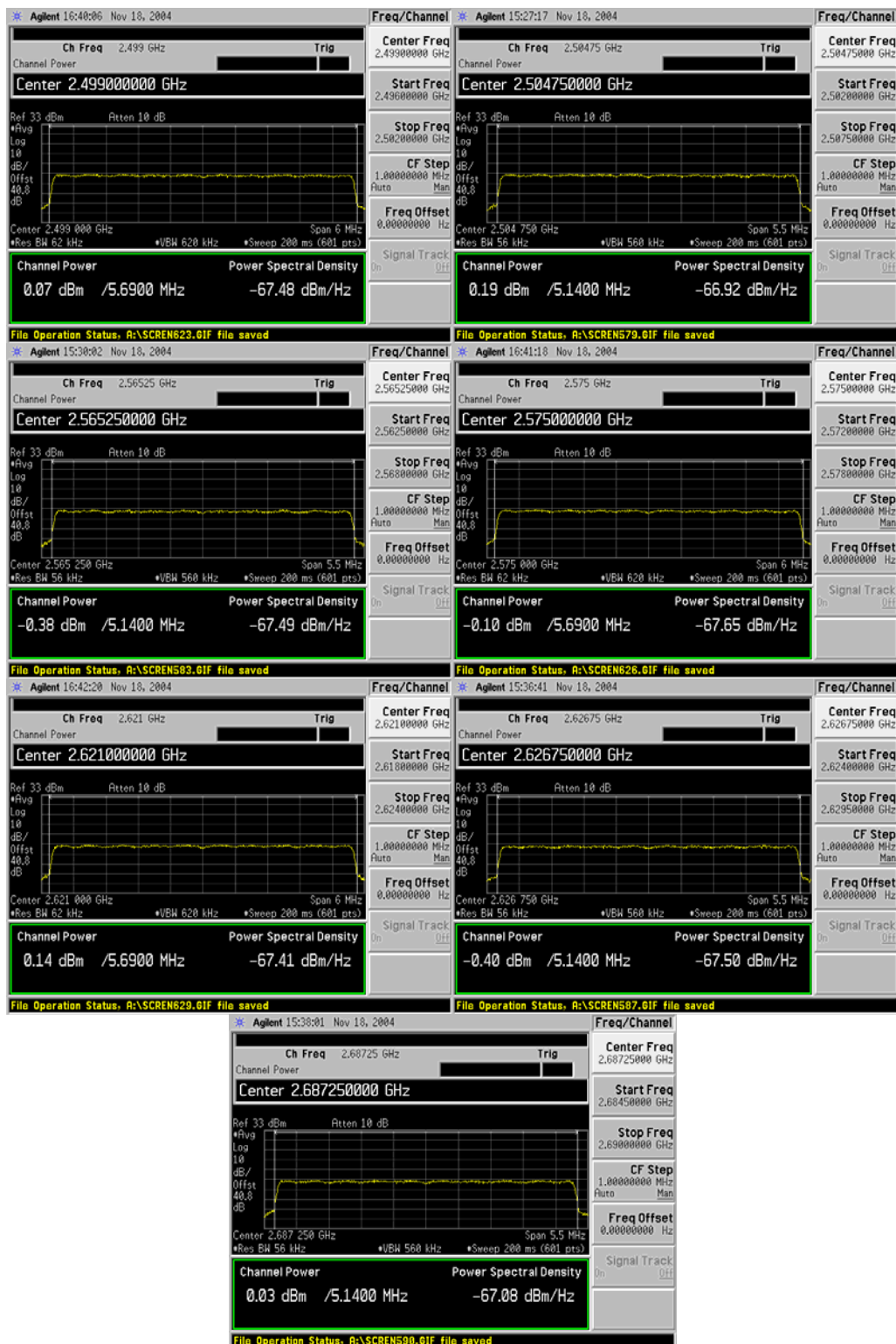


4-QAM

NextNet Wireless, Inc  
9555 James Ave. South Suite 270  
Bloomington, MN 55431

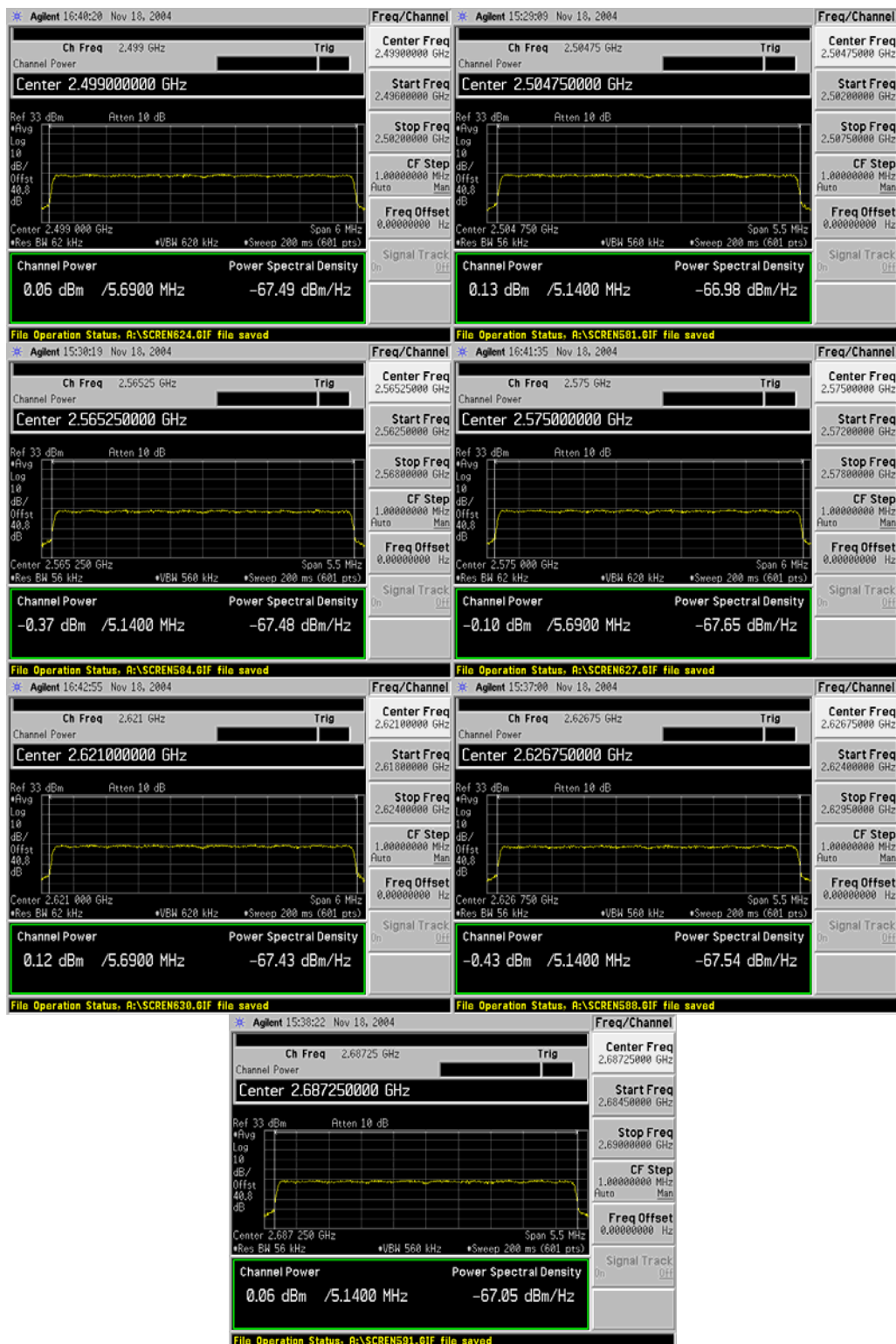
01/05/2005

## RF Power Output - Conducted (minimum)



16-QAM

## RF Power Output - Conducted (minimum)



64-QAM

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Bloomington, MN 55431

01/05/2005

## RF Power Output - Radiated

### Test antenna calibration:

Calibration of the test antenna used for the generator substitution portion of this test was performed by measuring three antennas utilizing the “Standard Site Method” for measurement of Antenna Factors as detailed in the ANSI Standard C63.5-1998, “American National Standard for Electromagnetic Compatibility- Radiated Emission Measurements in Electromagnetic Interference (EMI) Control-Calibration of Antennas (9 kHz to 40 GHz)”. From this procedure, the antenna gains listed in the “Test Results” section of the RF Power Output – Radiated table were determined.

### Sample Calculations:

For the Maxrad antenna at 2499 MHz:

Power recorded on the spectrum analyzer = -17.06 dBm

RF Power into antenna at 2499 MHz = 0 dBm

Generator substitution performed to find “path loss” = -36.97 dB

Substitution antenna gain at 2499 MHz = 11.43 dBi

Path loss = Power into sub antenna – Spec ana level + Sub antenna gain

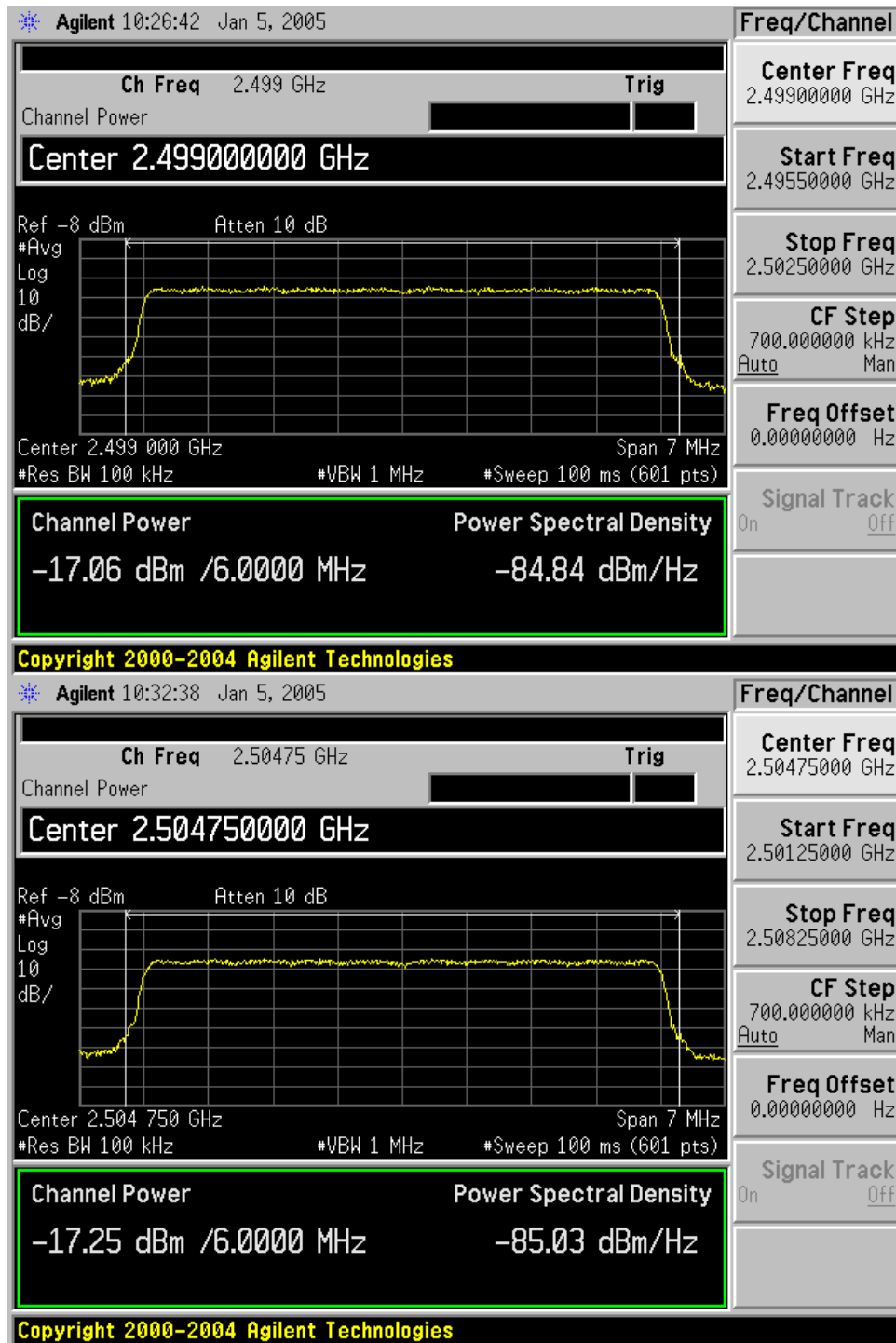
Path loss = 0 dBm – (-36.97 dB) + 11.43 dBi = 48.40 dB

EIRP (dBm) = Spec ana reading for DUT (dBm) + Path loss (dBi)

EIRP (dBm) = -16.12 + 48.40 = 32.28 dBm = 1.69 Watts

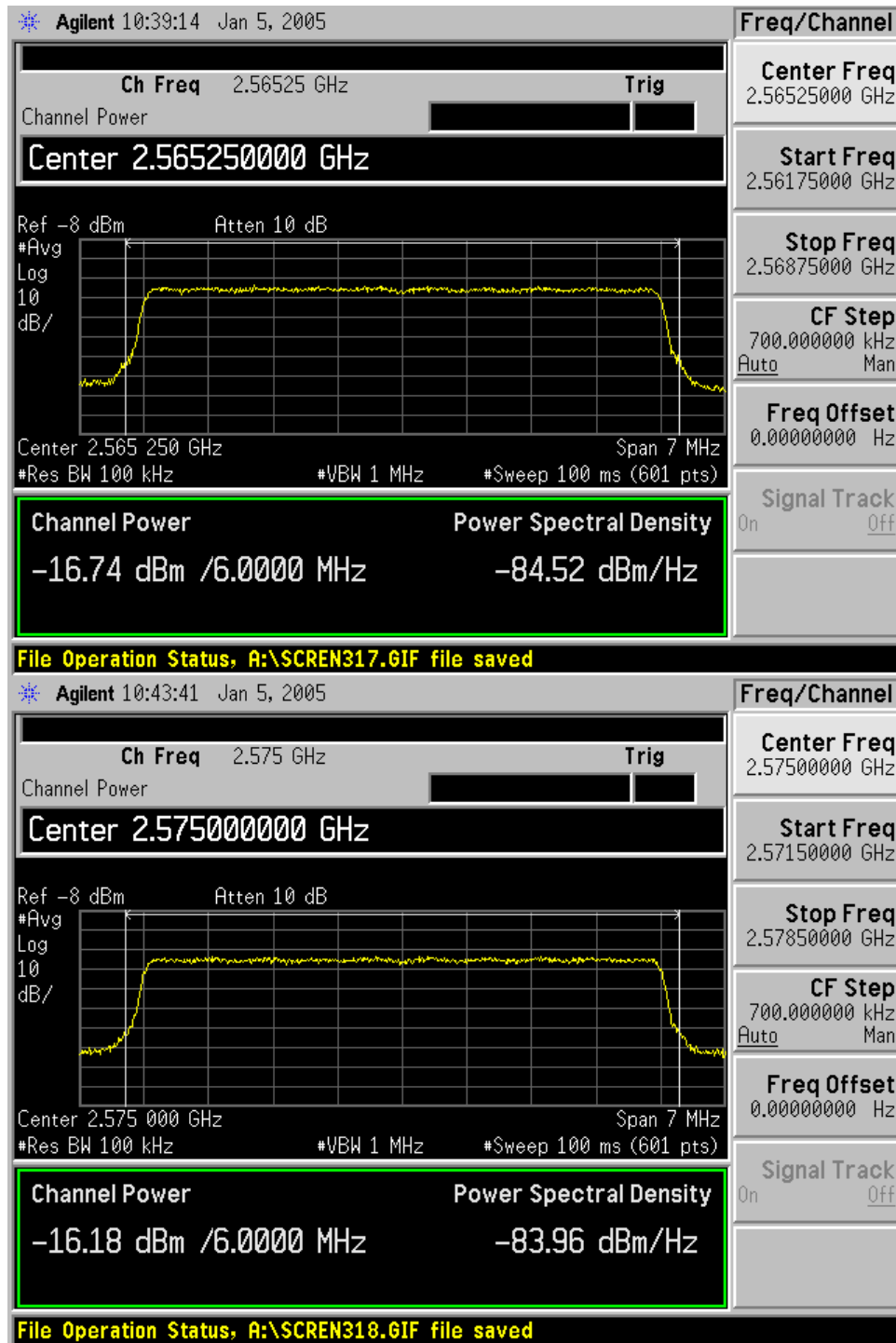
## RF Power Output - Radiated

Antenna: MaxRad, BMMG24000ML195MC, 2.4 GHz ISM, Unity Gain,  
Black Mini-Mag Antenna, 12 Ft ML195 Cable, Male TNC  
Connector (Attached)



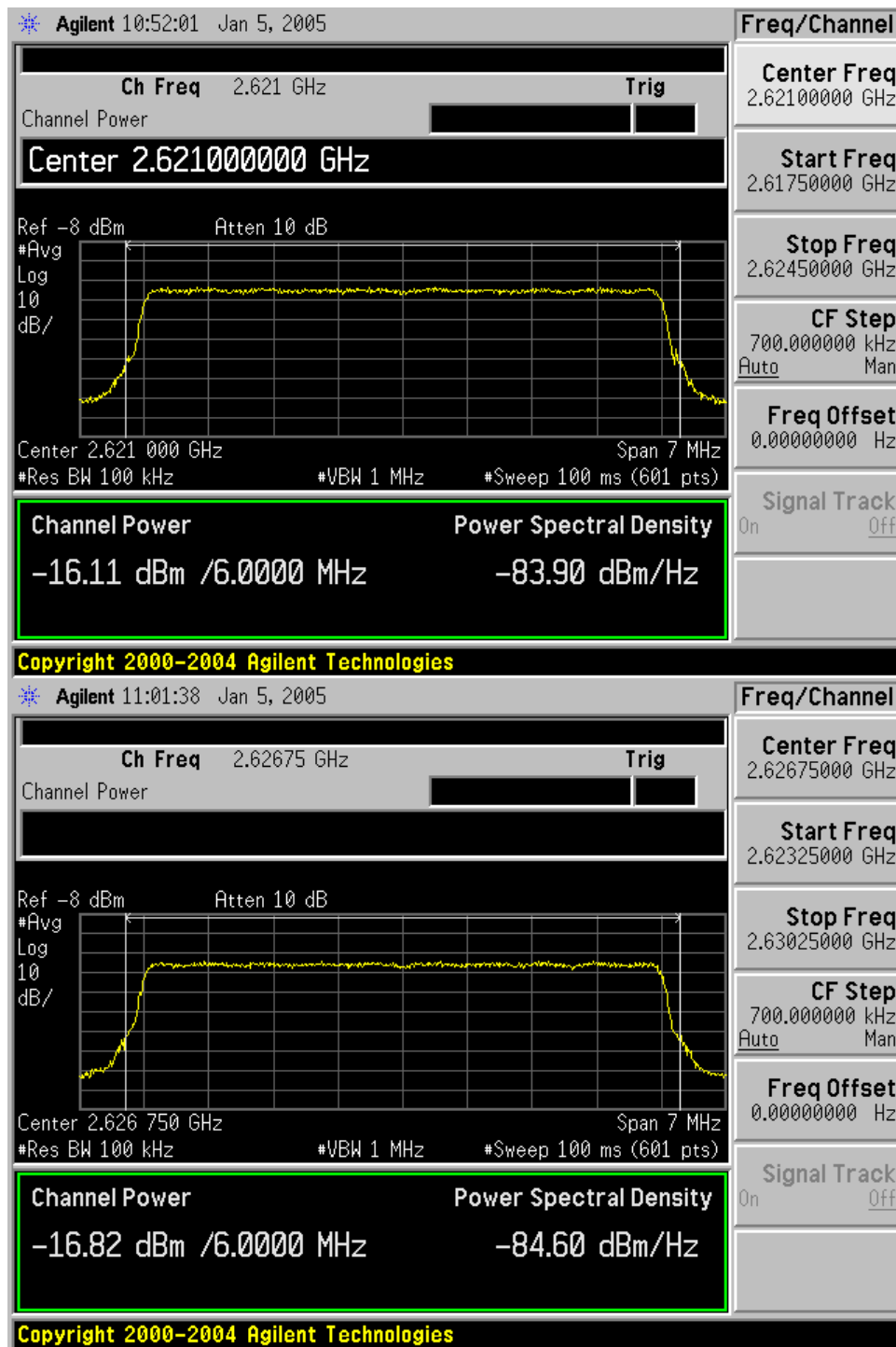
## RF Power Output - Radiated

Antenna: MaxRad, BMMG24000ML195MC, 2.4 GHz ISM, Unity Gain,  
Black Mini-Mag Antenna, 12 Ft ML195 Cable, Male TNC  
Connector (Attached)



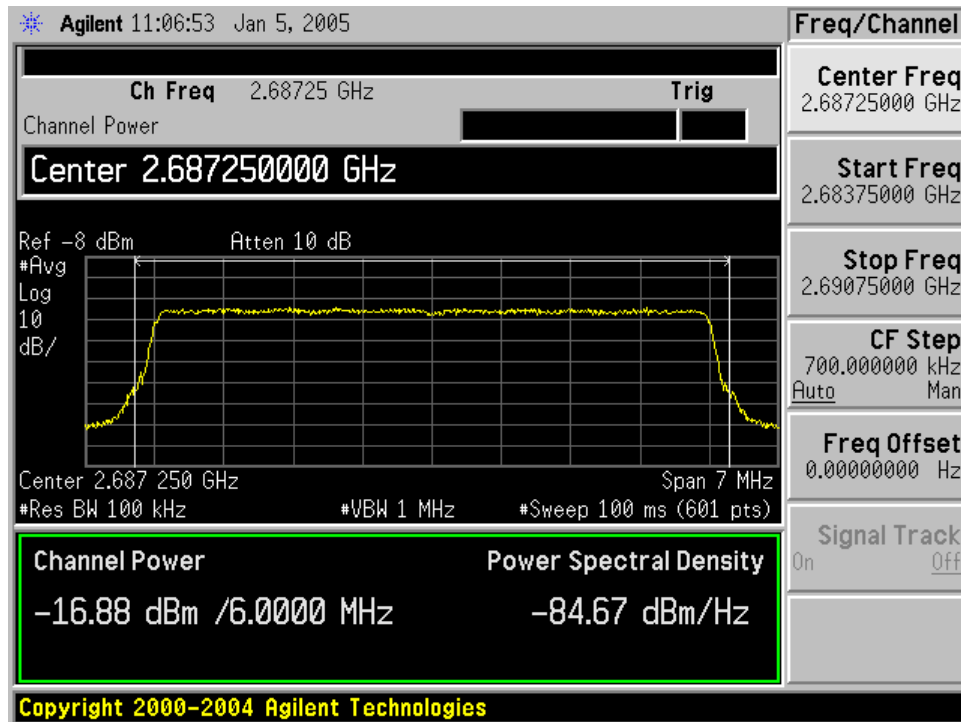
## RF Power Output - Radiated

Antenna: MaxRad, BMMG24000ML195MC, 2.4 GHz ISM, Unity Gain,  
Black Mini-Mag Antenna, 12 Ft ML195 Cable, Male TNC  
Connector (Attached)



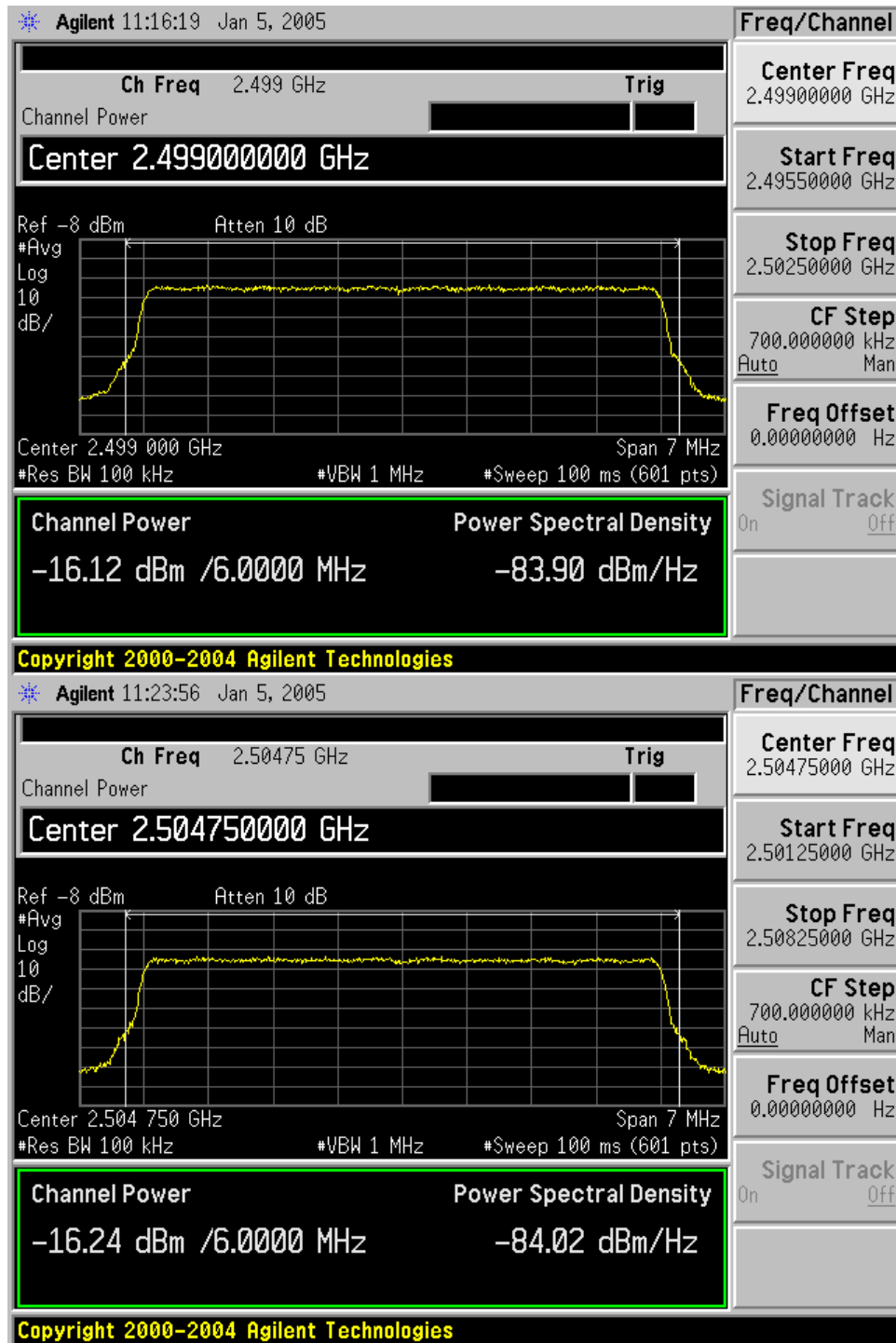
## RF Power Output - Radiated

Antenna: MaxRad, BMMG24000ML195MC, 2.4 GHz ISM, Unity Gain,  
Black Mini-Mag Antenna, 12 Ft ML195 Cable, Male TNC  
Connector (Attached)



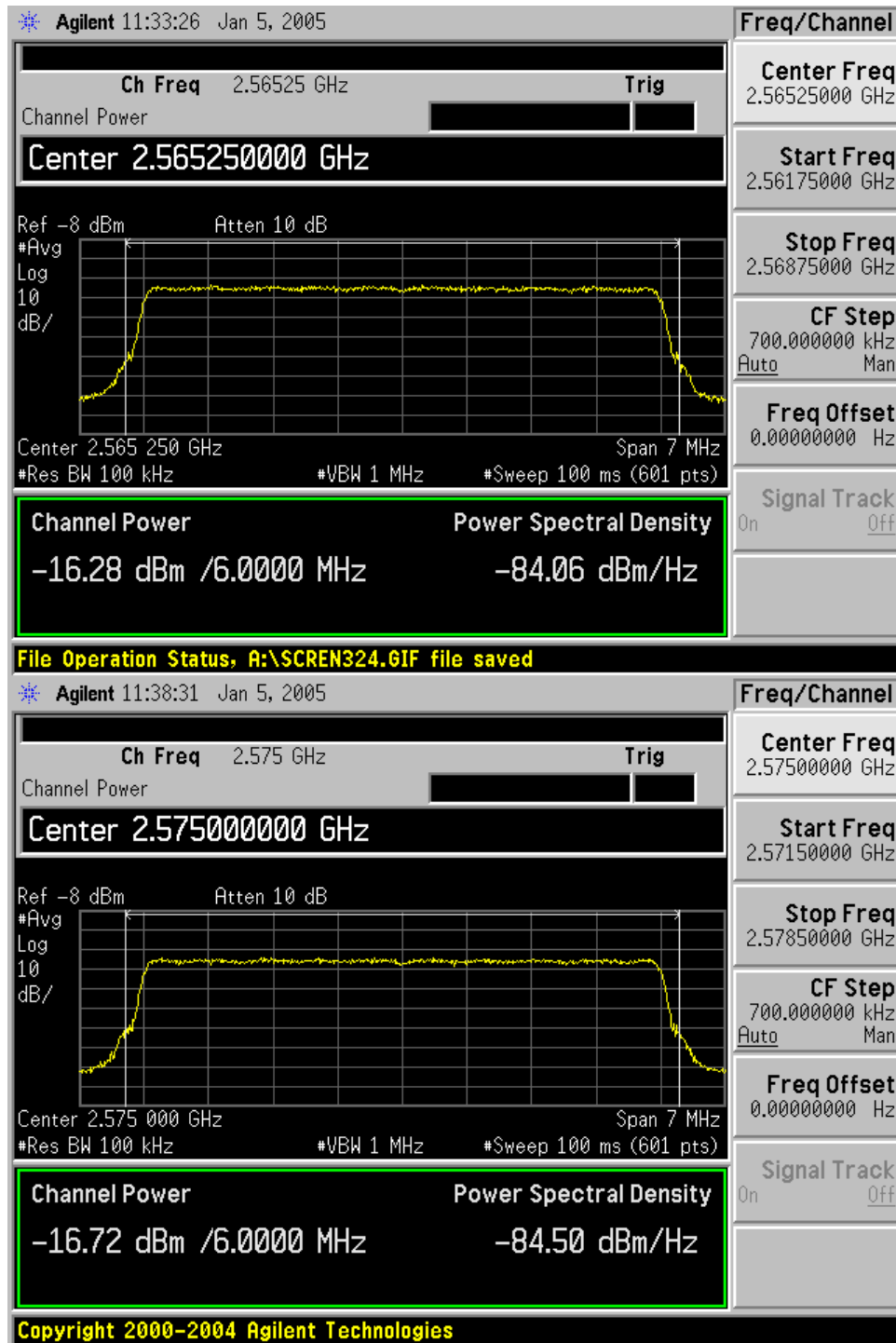
## RF Power Output - Radiated

Antenna: Mobilemark, IMAG0-2600, 10 FT. RF-240 W/ TNC Plug



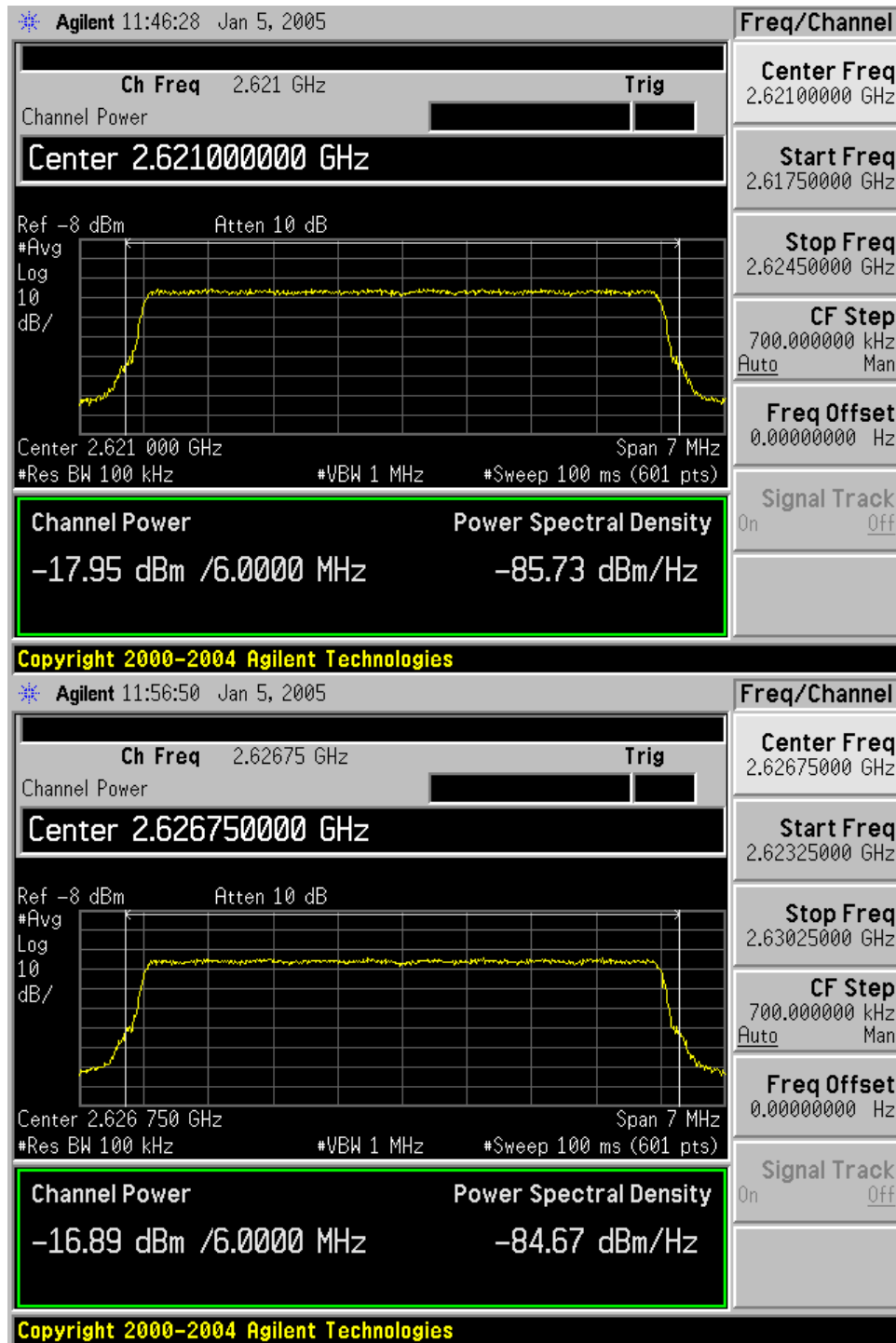
## RF Power Output - Radiated

Antenna: Mobilemark, IMAG0-2600, 10 FT. RF-240 W/ TNC Plug



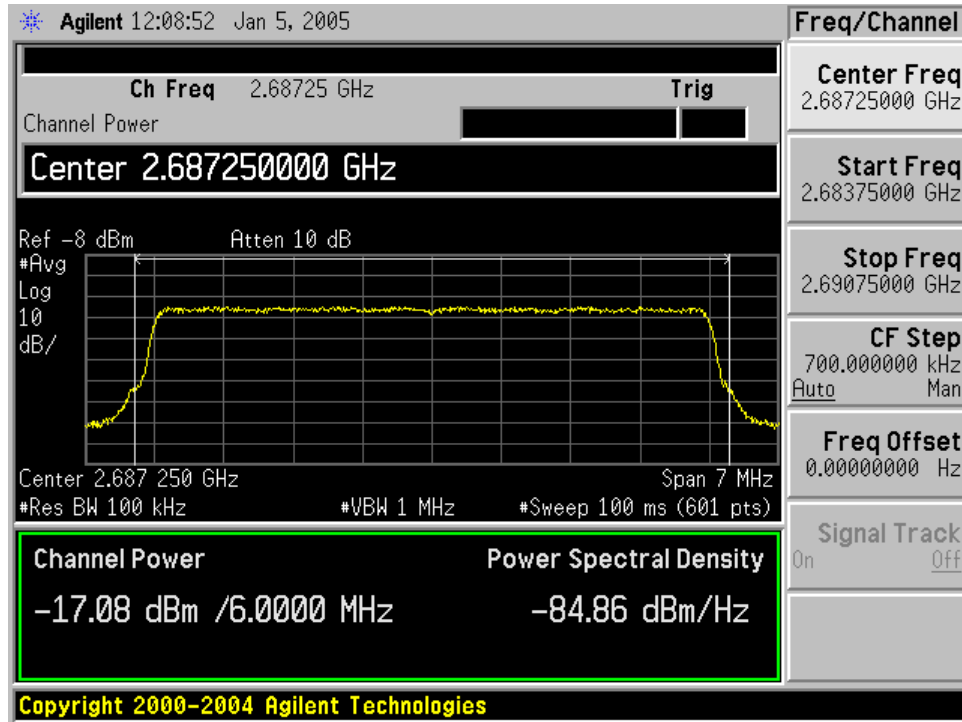
## RF Power Output - Radiated

Antenna: Mobilemark, IMAG0-2600, 10 FT. RF-240 W/ TNC Plug



## RF Power Output - Radiated

Antenna: Mobilemark, IMAG0-2600, 10 FT. RF-240 W/ TNC Plug



## 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)(4) For mobile digital stations, the attenuation factor shall be not less than  $43 + 10 \log(P)$  dB at the channel edge and  $55 + 10 \log(P)$  dB at 5.5 MHz from the channel edges. Mobile Service Satellite licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

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.

Specifications: Attenuation at band edge =  $43 + 10 \log(P)$ ,  $P = 2$  watts  
Attenuation at band edge =  $43 + 10 \log(2) = 43 + 3$   
Attenuation at band edge = 46 dB (equates to -13 dBm)

Attenuation at 5.5 MHz from band edge =  $55 + 10 \log(P)$   
Attenuation at 5.5 MHz from band edge =  $55 + 10 \log(2) = 55 + 3$   
Attenuation at 5.5 MHz from band edge = 58 dB (equates to -25 dBm)

Compliance to the above requirements are verified by comparing the transmitter total power (P) to the out of band power measured in a 1 MHz bandwidth.

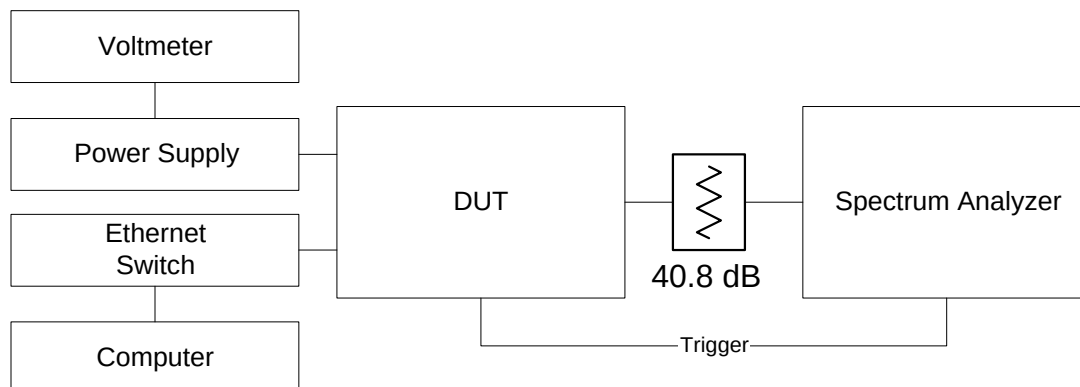
## Modulation Characteristics

Standard: FCC 27.53(l)(?)

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 Spectrum Analyzer is time gated, to capture the transmission during the burst. 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. 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 attenuation 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 MHz). Spectrum analyzer plots for the 2504.75 MHz channel are included after the complied data pages. All of the measurements on the other channels had similar results.

Test Conditions: Frequencies =  
5.5 MHz channel: 2504.75, 2565.25, 2626.75, and 2687.25 MHz  
6.0 MHz channel: 2499, 2575, and 2621 MHz  
Temperature = 25 °C  
Supply Voltage = 13.8 Vdc to MSU

Test Set-Up:



## Modulation Characteristics

Test Equipment:

|                                 |                                                                                                        |
|---------------------------------|--------------------------------------------------------------------------------------------------------|
| DUT                             | NextNet Wireless CPE (MSU-2510-A)<br># 0050-0300-4300924                                               |
| Spectrum Analyzer               | Agilent E4440A<br>S/N: MY44022791<br>Calibrated on: 05/30/2004<br>Cal due: 05/30/2006                  |
| Attenuator(s)<br>10 dB<br>20 dB | Pasternak Corporation<br>Model: PE7005-20 (20 dB)<br>Model: PE7005-10 (10 dB) x2<br>Calibrated by user |
| 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: B205335003175                                     |
| Power Supply                    | Agilent E3615A<br>S/N: KR01508898<br>Calibrated with voltmeter listed below.                           |
| Voltmeter                       | HP 34401A<br>S/N: 3146A23291<br>Calibrated on: 11-17-2004<br>Cal due: 11-17-2006                       |

Test Results Summary:

Pass modulation characteristics across frequency band and modulation format.

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2499                       |                                  | 11/19/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 6                          |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2480                         | 2479.5                    | 2480.5                     | -42.16                           | -25            | -17.16      | Complies |
|                            | - 14.5 MHz bin                | 2481                         | 2480.5                    | 2481.5                     | -42.18                           | -25            | -17.18      | Complies |
|                            | - 13.5 MHz bin                | 2482                         | 2481.5                    | 2482.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | - 12.5 MHz bin                | 2483                         | 2482.5                    | 2483.5                     | -42.21                           | -25            | -17.21      | Complies |
|                            | - 11.5 MHz bin                | 2484                         | 2483.5                    | 2484.5                     | -42.21                           | -25            | -17.21      | Complies |
|                            | - 10.5 MHz bin                | 2485                         | 2484.5                    | 2485.5                     | -42.2                            | -25            | -17.2       | Complies |
|                            | - 9.5 MHz bin                 | 2486                         | 2485.5                    | 2486.5                     | -42.17                           | -25            | -17.17      | Complies |
|                            | - 8.5 MHz bin                 | 2487                         | 2486.5                    | 2487.5                     | -42.08                           | -25            | -17.08      | Complies |
|                            | - 7.5 MHz bin                 | 2488                         | 2487.5                    | 2488.5                     | -41.86                           | -25            | -16.86      | Complies |
|                            | - 6.5 MHz bin                 | 2489                         | 2488.5                    | 2489.5                     | -41.6                            | -25            | -16.6       | Complies |
|                            | - 5.5 MHz bin                 | 2490                         | 2489.5                    | 2490.5                     | -40.85                           | -25            | -15.85      | Complies |
|                            | - 6 MHz bin                   | 2490.5                       | 2490                      | 2491                       | -39.79                           | -13            | -26.79      | Complies |
|                            | - 5 MHz bin                   | 2491.5                       | 2491                      | 2492                       | -35.3                            | -13            | -22.3       | Complies |
|                            | - 4 MHz bin                   | 2492.5                       | 2492                      | 2493                       | -30.87                           | -13            | -17.87      | Complies |
|                            | - 3 MHz bin                   | 2493.5                       | 2493                      | 2494                       | -27.81                           | -13            | -14.81      | Complies |
| 62                         | - 2 MHz bin                   | 2494.5                       | 2494                      | 2495                       | -15.13                           | -13            | -2.13       | Complies |
|                            | - 2 MHz bin                   | 2494.5                       | 2494                      | 2495                       | -25.68                           | -13            | -12.68      | Complies |
|                            | - 1 MHz bin                   | 2495.5                       | 2495                      | 2496                       | -21.37                           | -13            | -8.37       | Complies |
| 62                         | + 1 MHz bin                   | 2502.5                       | 2502                      | 2503                       | -22.46                           | -13            | -9.46       | Complies |
|                            | + 2 MHz bin                   | 2503.5                       | 2503                      | 2504                       | -27.5                            | -13            | -14.5       | Complies |
|                            | + 2 MHz bin                   | 2503.5                       | 2503                      | 2504                       | -14.95                           | -13            | -1.95       | Complies |
| 1000                       | + 3 MHz bin                   | 2504.5                       | 2504                      | 2505                       | -30.03                           | -13            | -17.03      | Complies |
|                            | + 4 MHz bin                   | 2505.5                       | 2505                      | 2506                       | -33.26                           | -13            | -20.26      | Complies |
|                            | + 5 MHz bin                   | 2506.5                       | 2506                      | 2507                       | -37.34                           | -13            | -24.34      | Complies |
|                            | + 6 MHz bin                   | 2507.5                       | 2507                      | 2508                       | -40.75                           | -13            | -27.75      | Complies |
|                            | + 5.5 MHz bin                 | 2508                         | 2507.5                    | 2508.5                     | -41.4                            | -25            | -16.4       | Complies |
|                            | + 6.5 MHz bin                 | 2509                         | 2508.5                    | 2509.5                     | -41.94                           | -25            | -16.94      | Complies |
|                            | + 7.5 MHz bin                 | 2510                         | 2509.5                    | 2510.5                     | -42.11                           | -25            | -17.11      | Complies |
|                            | + 8.5 MHz bin                 | 2511                         | 2510.5                    | 2511.5                     | -42.17                           | -25            | -17.17      | Complies |
|                            | + 9.5 MHz bin                 | 2512                         | 2511.5                    | 2512.5                     | -42.23                           | -25            | -17.23      | Complies |
|                            | + 10.5 MHz bin                | 2513                         | 2512.5                    | 2513.5                     | -42.26                           | -25            | -17.26      | Complies |
|                            | + 11.5 MHz bin                | 2514                         | 2513.5                    | 2514.5                     | -42.27                           | -25            | -17.27      | Complies |
|                            | + 12.5 MHz bin                | 2515                         | 2514.5                    | 2515.5                     | -42.28                           | -25            | -17.28      | Complies |
|                            | + 13.5 MHz bin                | 2516                         | 2515.5                    | 2516.5                     | -42.28                           | -25            | -17.28      | Complies |
|                            | + 14.5 MHz bin                | 2517                         | 2516.5                    | 2517.5                     | -42.26                           | -25            | -17.26      | Complies |
|                            | + 15.5 MHz bin                | 2518                         | 2517.5                    | 2518.5                     | -42.26                           | -25            | -17.26      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2499                       |                                  | 11/19/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 6                          |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2480                         | 2479.5                    | 2480.5                     | -42.17                           | -25            | -17.17      | Complies |
|                            | - 14.5 MHz bin                | 2481                         | 2480.5                    | 2481.5                     | -42.18                           | -25            | -17.18      | Complies |
|                            | - 13.5 MHz bin                | 2482                         | 2481.5                    | 2482.5                     | -42.2                            | -25            | -17.2       | Complies |
|                            | - 12.5 MHz bin                | 2483                         | 2482.5                    | 2483.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | - 11.5 MHz bin                | 2484                         | 2483.5                    | 2484.5                     | -42.2                            | -25            | -17.2       | Complies |
|                            | - 10.5 MHz bin                | 2485                         | 2484.5                    | 2485.5                     | -42.2                            | -25            | -17.2       | Complies |
|                            | - 9.5 MHz bin                 | 2486                         | 2485.5                    | 2486.5                     | -42.17                           | -25            | -17.17      | Complies |
|                            | - 8.5 MHz bin                 | 2487                         | 2486.5                    | 2487.5                     | -42.09                           | -25            | -17.09      | Complies |
|                            | - 7.5 MHz bin                 | 2488                         | 2487.5                    | 2488.5                     | -41.89                           | -25            | -16.89      | Complies |
|                            | - 6.5 MHz bin                 | 2489                         | 2488.5                    | 2489.5                     | -41.63                           | -25            | -16.63      | Complies |
|                            | - 5.5 MHz bin                 | 2490                         | 2489.5                    | 2490.5                     | -40.87                           | -25            | -15.87      | Complies |
|                            | - 6 MHz bin                   | 2490.5                       | 2490                      | 2491                       | -39.93                           | -13            | -26.93      | Complies |
|                            | - 5 MHz bin                   | 2491.5                       | 2491                      | 2492                       | -35.46                           | -13            | -22.46      | Complies |
|                            | - 4 MHz bin                   | 2492.5                       | 2492                      | 2493                       | -31.09                           | -13            | -18.09      | Complies |
|                            | - 3 MHz bin                   | 2493.5                       | 2493                      | 2494                       | -28.05                           | -13            | -15.05      | Complies |
| 62                         | - 2 MHz bin                   | 2494.5                       | 2494                      | 2495                       | -15.24                           | -13            | -2.24       | Complies |
|                            | - 1 MHz bin                   | 2495.5                       | 2495                      | 2496                       | -25.82                           | -13            | -12.82      | Complies |
|                            |                               |                              |                           |                            | -21.53                           | -13            | -8.53       | Complies |
| 1000                       | + 1 MHz bin                   | 2502.5                       | 2502                      | 2503                       | -21.51                           | -13            | -8.51       | Complies |
|                            | + 2 MHz bin                   | 2503.5                       | 2503                      | 2504                       | -26.27                           | -13            | -13.27      | Complies |
|                            | + 2 MHz bin                   | 2503.5                       | 2503                      | 2504                       | -14.47                           | -13            | -1.47       | Complies |
|                            | + 3 MHz bin                   | 2504.5                       | 2504                      | 2505                       | -29.05                           | -13            | -16.05      | Complies |
|                            | + 4 MHz bin                   | 2505.5                       | 2505                      | 2506                       | -32.46                           | -13            | -19.46      | Complies |
|                            | + 5 MHz bin                   | 2506.5                       | 2506                      | 2507                       | -36.74                           | -13            | -23.74      | Complies |
|                            | + 6 MHz bin                   | 2507.5                       | 2507                      | 2508                       | -40.45                           | -13            | -27.45      | Complies |
|                            | + 5.5 MHz bin                 | 2508                         | 2507.5                    | 2508.5                     | -41.17                           | -25            | -16.17      | Complies |
|                            | + 6.5 MHz bin                 | 2509                         | 2508.5                    | 2509.5                     | -41.79                           | -25            | -16.79      | Complies |
|                            | + 7.5 MHz bin                 | 2510                         | 2509.5                    | 2510.5                     | -42.03                           | -25            | -17.03      | Complies |
|                            | + 8.5 MHz bin                 | 2511                         | 2510.5                    | 2511.5                     | -42.11                           | -25            | -17.11      | Complies |
|                            | + 9.5 MHz bin                 | 2512                         | 2511.5                    | 2512.5                     | -42.2                            | -25            | -17.2       | Complies |
|                            | + 10.5 MHz bin                | 2513                         | 2512.5                    | 2513.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | + 11.5 MHz bin                | 2514                         | 2513.5                    | 2514.5                     | -42.25                           | -25            | -17.25      | Complies |
|                            | + 12.5 MHz bin                | 2515                         | 2514.5                    | 2515.5                     | -42.26                           | -25            | -17.26      | Complies |
|                            | + 13.5 MHz bin                | 2516                         | 2515.5                    | 2516.5                     | -42.27                           | -25            | -17.27      | Complies |
|                            | + 14.5 MHz bin                | 2517                         | 2516.5                    | 2517.5                     | -42.26                           | -25            | -17.26      | Complies |
|                            | + 15.5 MHz bin                | 2518                         | 2517.5                    | 2518.5                     | -42.25                           | -25            | -17.25      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2499                       |                                  | 11/19/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 6                          |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2480                         | 2479.5                    | 2480.5                     | -42.16                           | -25            | -17.16      | Complies |
|                            | - 14.5 MHz bin                | 2481                         | 2480.5                    | 2481.5                     | -42.17                           | -25            | -17.17      | Complies |
|                            | - 13.5 MHz bin                | 2482                         | 2481.5                    | 2482.5                     | -42.21                           | -25            | -17.21      | Complies |
|                            | - 12.5 MHz bin                | 2483                         | 2482.5                    | 2483.5                     | -42.21                           | -25            | -17.21      | Complies |
|                            | - 11.5 MHz bin                | 2484                         | 2483.5                    | 2484.5                     | -42.19                           | -25            | -17.19      | Complies |
|                            | - 10.5 MHz bin                | 2485                         | 2484.5                    | 2485.5                     | -42.19                           | -25            | -17.19      | Complies |
|                            | - 9.5 MHz bin                 | 2486                         | 2485.5                    | 2486.5                     | -42.16                           | -25            | -17.16      | Complies |
|                            | - 8.5 MHz bin                 | 2487                         | 2486.5                    | 2487.5                     | -42.06                           | -25            | -17.06      | Complies |
|                            | - 7.5 MHz bin                 | 2488                         | 2487.5                    | 2488.5                     | -41.87                           | -25            | -16.87      | Complies |
|                            | - 6.5 MHz bin                 | 2489                         | 2488.5                    | 2489.5                     | -41.59                           | -25            | -16.59      | Complies |
|                            | - 5.5 MHz bin                 | 2490                         | 2489.5                    | 2490.5                     | -40.79                           | -25            | -15.79      | Complies |
|                            | - 6 MHz bin                   | 2490.5                       | 2490                      | 2491                       | -39.81                           | -13            | -26.81      | Complies |
|                            | - 5 MHz bin                   | 2491.5                       | 2491                      | 2492                       | -35.36                           | -13            | -22.36      | Complies |
|                            | - 4 MHz bin                   | 2492.5                       | 2492                      | 2493                       | -30.96                           | -13            | -17.96      | Complies |
|                            | - 3 MHz bin                   | 2493.5                       | 2493                      | 2494                       | -27.95                           | -13            | -14.95      | Complies |
| 62                         | - 2 MHz bin                   | 2494.5                       | 2494                      | 2495                       | -25.75                           | -13            | -2.18       | Complies |
|                            | - 1 MHz bin                   | 2495.5                       | 2495                      | 2496                       | -21.56                           | -13            | -12.75      | Complies |
|                            |                               |                              |                           |                            |                                  |                | -8.56       | Complies |
| 62                         | + 1 MHz bin                   | 2502.5                       | 2502                      | 2503                       | -22.63                           | -13            | -9.63       | Complies |
|                            | + 2 MHz bin                   | 2503.5                       | 2503                      | 2504                       | -27.59                           | -13            | -14.59      | Complies |
|                            | + 2 MHz bin                   | 2503.5                       | 2503                      | 2504                       | -15.01                           | -13            | -2.01       | Complies |
| 1000                       | + 3 MHz bin                   | 2504.5                       | 2504                      | 2505                       | -30.13                           | -13            | -17.13      | Complies |
|                            | + 4 MHz bin                   | 2505.5                       | 2505                      | 2506                       | -33.35                           | -13            | -20.35      | Complies |
|                            | + 5 MHz bin                   | 2506.5                       | 2506                      | 2507                       | -37.42                           | -13            | -24.42      | Complies |
|                            | + 6 MHz bin                   | 2507.5                       | 2507                      | 2508                       | -40.79                           | -13            | -27.79      | Complies |
|                            | + 5.5 MHz bin                 | 2508                         | 2507.5                    | 2508.5                     | -41.42                           | -25            | -16.42      | Complies |
|                            | + 6.5 MHz bin                 | 2509                         | 2508.5                    | 2509.5                     | -41.96                           | -25            | -16.96      | Complies |
|                            | + 7.5 MHz bin                 | 2510                         | 2509.5                    | 2510.5                     | -42.11                           | -25            | -17.11      | Complies |
|                            | + 8.5 MHz bin                 | 2511                         | 2510.5                    | 2511.5                     | -42.18                           | -25            | -17.18      | Complies |
|                            | + 9.5 MHz bin                 | 2512                         | 2511.5                    | 2512.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | + 10.5 MHz bin                | 2513                         | 2512.5                    | 2513.5                     | -42.25                           | -25            | -17.25      | Complies |
|                            | + 11.5 MHz bin                | 2514                         | 2513.5                    | 2514.5                     | -42.26                           | -25            | -17.26      | Complies |
|                            | + 12.5 MHz bin                | 2515                         | 2514.5                    | 2515.5                     | -42.28                           | -25            | -17.28      | Complies |
|                            | + 13.5 MHz bin                | 2516                         | 2515.5                    | 2516.5                     | -42.28                           | -25            | -17.28      | Complies |
|                            | + 14.5 MHz bin                | 2517                         | 2516.5                    | 2517.5                     | -42.26                           | -25            | -17.26      | Complies |
|                            | + 15.5 MHz bin                | 2518                         | 2517.5                    | 2518.5                     | -42.24                           | -25            | -17.24      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2504.75                    |                                  | 11/18/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 5.5                        |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2486                         | 2485.5                    | 2486.5                     | -42.17                           | -25            | -17.17      | Complies |
|                            | - 14.5 MHz bin                | 2487                         | 2486.5                    | 2487.5                     | -42.19                           | -25            | -17.19      | Complies |
|                            | - 13.5 MHz bin                | 2488                         | 2487.5                    | 2488.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | - 12.5 MHz bin                | 2489                         | 2488.5                    | 2489.5                     | -42.21                           | -25            | -17.21      | Complies |
|                            | - 11.5 MHz bin                | 2490                         | 2489.5                    | 2490.5                     | -42.21                           | -25            | -17.21      | Complies |
|                            | - 10.5 MHz bin                | 2491                         | 2490.5                    | 2491.5                     | -42.2                            | -25            | -17.2       | Complies |
|                            | - 9.5 MHz bin                 | 2492                         | 2491.5                    | 2492.5                     | -42.2                            | -25            | -17.2       | Complies |
|                            | - 8.5 MHz bin                 | 2493                         | 2492.5                    | 2493.5                     | -42.15                           | -25            | -17.15      | Complies |
|                            | - 7.5 MHz bin                 | 2494                         | 2493.5                    | 2494.5                     | -42.08                           | -25            | -17.08      | Complies |
|                            | - 6.5 MHz bin                 | 2495                         | 2494.5                    | 2495.5                     | -42.02                           | -25            | -17.02      | Complies |
|                            | - 5.5 MHz bin                 | 2496                         | 2495.5                    | 2496.5                     | -41.61                           | -25            | -16.61      | Complies |
|                            | - 6 MHz bin                   | 2496.5                       | 2496                      | 2497                       | -41.26                           | -13            | -28.26      | Complies |
|                            | - 5 MHz bin                   | 2497.5                       | 2497                      | 2498                       | -38.31                           | -13            | -25.31      | Complies |
|                            | - 4 MHz bin                   | 2498.5                       | 2498                      | 2499                       | -33.14                           | -13            | -20.14      | Complies |
|                            | - 3 MHz bin                   | 2499.5                       | 2499                      | 2500                       | -29.37                           | -13            | -16.37      | Complies |
| 56                         | - 2 MHz bin                   | 2500.5                       | 2500                      | 2501                       | -15.67                           | -13            | -2.67       | Complies |
|                            | - 2 MHz bin                   | 2500.5                       | 2500                      | 2501                       | -26.65                           | -13            | -13.65      | Complies |
|                            | - 1 MHz bin                   | 2501.5                       | 2501                      | 2502                       | -23.3                            | -13            | -10.3       | Complies |
| 56                         | + 1 MHz bin                   | 2508                         | 2507.5                    | 2508.5                     | -24.56                           | -13            | -11.56      | Complies |
|                            | + 2 MHz bin                   | 2509                         | 2508.5                    | 2509.5                     | -28.66                           | -13            | -15.66      | Complies |
|                            | + 2 MHz bin                   | 2509                         | 2508.5                    | 2509.5                     | -15.62                           | -13            | -2.62       | Complies |
| 1000                       | + 3 MHz bin                   | 2510                         | 2509.5                    | 2510.5                     | -31.61                           | -13            | -18.61      | Complies |
|                            | + 4 MHz bin                   | 2511                         | 2510.5                    | 2511.5                     | -35.59                           | -13            | -22.59      | Complies |
|                            | + 5 MHz bin                   | 2512                         | 2511.5                    | 2512.5                     | -39.86                           | -13            | -26.86      | Complies |
|                            | + 6 MHz bin                   | 2513                         | 2512.5                    | 2513.5                     | -41.71                           | -13            | -28.71      | Complies |
|                            | + 5.5 MHz bin                 | 2513.5                       | 2513                      | 2514                       | -41.95                           | -25            | -16.95      | Complies |
|                            | + 6.5 MHz bin                 | 2514.5                       | 2514                      | 2515                       | -42.24                           | -25            | -17.24      | Complies |
|                            | + 7.5 MHz bin                 | 2515.5                       | 2515                      | 2516                       | -42.26                           | -25            | -17.26      | Complies |
|                            | + 8.5 MHz bin                 | 2516.5                       | 2516                      | 2517                       | -42.25                           | -25            | -17.25      | Complies |
|                            | + 9.5 MHz bin                 | 2517.5                       | 2517                      | 2518                       | -42.27                           | -25            | -17.27      | Complies |
|                            | + 10.5 MHz bin                | 2518.5                       | 2518                      | 2519                       | -42.29                           | -25            | -17.29      | Complies |
|                            | + 11.5 MHz bin                | 2519.5                       | 2519                      | 2520                       | -42.29                           | -25            | -17.29      | Complies |
|                            | + 12.5 MHz bin                | 2520.5                       | 2520                      | 2521                       | -42.31                           | -25            | -17.31      | Complies |
|                            | + 13.5 MHz bin                | 2521.5                       | 2521                      | 2522                       | -42.31                           | -25            | -17.31      | Complies |
|                            | + 14.5 MHz bin                | 2522.5                       | 2522                      | 2523                       | -42.3                            | -25            | -17.3       | Complies |
|                            | + 15.5 MHz bin                | 2523.5                       | 2523                      | 2524                       | -42.29                           | -25            | -17.29      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              | 2504.75                   |                            | 11/18/2004                       |                |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              | 5.5                       |                            | 13.8 Vdc                         |                |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2486                         | 2485.5                    | 2486.5                     | -42.18                           | -25            | -17.18      | Complies |
|                            | - 14.5 MHz bin                | 2487                         | 2486.5                    | 2487.5                     | -42.21                           | -25            | -17.21      | Complies |
|                            | - 13.5 MHz bin                | 2488                         | 2487.5                    | 2488.5                     | -42.24                           | -25            | -17.24      | Complies |
|                            | - 12.5 MHz bin                | 2489                         | 2488.5                    | 2489.5                     | -42.23                           | -25            | -17.23      | Complies |
|                            | - 11.5 MHz bin                | 2490                         | 2489.5                    | 2490.5                     | -42.23                           | -25            | -17.23      | Complies |
|                            | - 10.5 MHz bin                | 2491                         | 2490.5                    | 2491.5                     | -42.21                           | -25            | -17.21      | Complies |
|                            | - 9.5 MHz bin                 | 2492                         | 2491.5                    | 2492.5                     | -42.19                           | -25            | -17.19      | Complies |
|                            | - 8.5 MHz bin                 | 2493                         | 2492.5                    | 2493.5                     | -42.16                           | -25            | -17.16      | Complies |
|                            | - 7.5 MHz bin                 | 2494                         | 2493.5                    | 2494.5                     | -42.1                            | -25            | -17.1       | Complies |
|                            | - 6.5 MHz bin                 | 2495                         | 2494.5                    | 2495.5                     | -42.07                           | -25            | -17.07      | Complies |
|                            | - 5.5 MHz bin                 | 2496                         | 2495.5                    | 2496.5                     | -41.71                           | -25            | -16.71      | Complies |
|                            | - 6 MHz bin                   | 2496.5                       | 2496                      | 2497                       | -41.41                           | -13            | -28.41      | Complies |
|                            | - 5 MHz bin                   | 2497.5                       | 2497                      | 2498                       | -38.59                           | -13            | -25.59      | Complies |
|                            | - 4 MHz bin                   | 2498.5                       | 2498                      | 2499                       | -33.54                           | -13            | -20.54      | Complies |
|                            | - 3 MHz bin                   | 2499.5                       | 2499                      | 2500                       | -29.8                            | -13            | -16.8       | Complies |
| 56                         | - 2 MHz bin                   | 2500.5                       | 2500                      | 2501                       | -15.88                           | -13            | -2.88       | Complies |
|                            | - 2 MHz bin                   | 2500.5                       | 2500                      | 2501                       | -27.2                            | -13            | -14.2       | Complies |
|                            | - 1 MHz bin                   | 2501.5                       | 2501                      | 2502                       | -23.61                           | -13            | -10.61      | Complies |
| 56                         | + 1 MHz bin                   | 2508                         | 2507.5                    | 2508.5                     | -24.84                           | -13            | -11.84      | Complies |
|                            | + 2 MHz bin                   | 2509                         | 2508.5                    | 2509.5                     | -28.9                            | -13            | -15.9       | Complies |
|                            | + 2 MHz bin                   | 2509                         | 2508.5                    | 2509.5                     | -15.71                           | -13            | -2.71       | Complies |
| 1000                       | + 3 MHz bin                   | 2510                         | 2509.5                    | 2510.5                     | -31.9                            | -13            | -18.9       | Complies |
|                            | + 4 MHz bin                   | 2511                         | 2510.5                    | 2511.5                     | -35.83                           | -13            | -22.83      | Complies |
|                            | + 5 MHz bin                   | 2512                         | 2511.5                    | 2512.5                     | -39.99                           | -13            | -26.99      | Complies |
|                            | + 6 MHz bin                   | 2513                         | 2512.5                    | 2513.5                     | -41.77                           | -13            | -28.77      | Complies |
|                            | + 5.5 MHz bin                 | 2513.5                       | 2513                      | 2514                       | -41.98                           | -25            | -16.98      | Complies |
|                            | + 6.5 MHz bin                 | 2514.5                       | 2514                      | 2515                       | -42.25                           | -25            | -17.25      | Complies |
|                            | + 7.5 MHz bin                 | 2515.5                       | 2515                      | 2516                       | -42.25                           | -25            | -17.25      | Complies |
|                            | + 8.5 MHz bin                 | 2516.5                       | 2516                      | 2517                       | -42.26                           | -25            | -17.26      | Complies |
|                            | + 9.5 MHz bin                 | 2517.5                       | 2517                      | 2518                       | -42.28                           | -25            | -17.28      | Complies |
|                            | + 10.5 MHz bin                | 2518.5                       | 2518                      | 2519                       | -42.3                            | -25            | -17.3       | Complies |
|                            | + 11.5 MHz bin                | 2519.5                       | 2519                      | 2520                       | -42.29                           | -25            | -17.29      | Complies |
|                            | + 12.5 MHz bin                | 2520.5                       | 2520                      | 2521                       | -42.3                            | -25            | -17.3       | Complies |
|                            | + 13.5 MHz bin                | 2521.5                       | 2521                      | 2522                       | -42.31                           | -25            | -17.31      | Complies |
|                            | + 14.5 MHz bin                | 2522.5                       | 2522                      | 2523                       | -42.29                           | -25            | -17.29      | Complies |
|                            | + 15.5 MHz bin                | 2523.5                       | 2523                      | 2524                       | -42.29                           | -25            | -17.29      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              | 2504.75                   |                            | 11/18/2004                       |                |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              | 5.5                       |                            | 13.8 Vdc                         |                |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2486                         | 2485.5                    | 2486.5                     | -42.2                            | -25            | -17.2       | Complies |
|                            | - 14.5 MHz bin                | 2487                         | 2486.5                    | 2487.5                     | -42.21                           | -25            | -17.21      | Complies |
|                            | - 13.5 MHz bin                | 2488                         | 2487.5                    | 2488.5                     | -42.24                           | -25            | -17.24      | Complies |
|                            | - 12.5 MHz bin                | 2489                         | 2488.5                    | 2489.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | - 11.5 MHz bin                | 2490                         | 2489.5                    | 2490.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | - 10.5 MHz bin                | 2491                         | 2490.5                    | 2491.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | - 9.5 MHz bin                 | 2492                         | 2491.5                    | 2492.5                     | -42.2                            | -25            | -17.2       | Complies |
|                            | - 8.5 MHz bin                 | 2493                         | 2492.5                    | 2493.5                     | -42.16                           | -25            | -17.16      | Complies |
|                            | - 7.5 MHz bin                 | 2494                         | 2493.5                    | 2494.5                     | -42.11                           | -25            | -17.11      | Complies |
|                            | - 6.5 MHz bin                 | 2495                         | 2494.5                    | 2495.5                     | -42.11                           | -25            | -17.11      | Complies |
|                            | - 5.5 MHz bin                 | 2496                         | 2495.5                    | 2496.5                     | -41.74                           | -25            | -16.74      | Complies |
|                            | - 6 MHz bin                   | 2496.5                       | 2496                      | 2497                       | -41.39                           | -13            | -28.39      | Complies |
|                            | - 5 MHz bin                   | 2497.5                       | 2497                      | 2498                       | -38.64                           | -13            | -25.64      | Complies |
|                            | - 4 MHz bin                   | 2498.5                       | 2498                      | 2499                       | -33.63                           | -13            | -20.63      | Complies |
|                            | - 3 MHz bin                   | 2499.5                       | 2499                      | 2500                       | -29.87                           | -13            | -16.87      | Complies |
| 56                         | - 2 MHz bin                   | 2500.5                       | 2500                      | 2501                       | -15.84                           | -13            | -2.84       | Complies |
|                            | - 2 MHz bin                   | 2500.5                       | 2500                      | 2501                       | -27.15                           | -13            | -14.15      | Complies |
|                            | - 1 MHz bin                   | 2501.5                       | 2501                      | 2502                       | -23.58                           | -13            | -10.58      | Complies |
| 56                         | + 1 MHz bin                   | 2508                         | 2507.5                    | 2508.5                     | -24.87                           | -13            | -11.87      | Complies |
|                            | + 2 MHz bin                   | 2509                         | 2508.5                    | 2509.5                     | -28.95                           | -13            | -15.95      | Complies |
| 1000                       | + 2 MHz bin                   | 2509                         | 2508.5                    | 2509.5                     | -15.72                           | -13            | -2.72       | Complies |
|                            | + 3 MHz bin                   | 2510                         | 2509.5                    | 2510.5                     | -31.89                           | -13            | -18.89      | Complies |
|                            | + 4 MHz bin                   | 2511                         | 2510.5                    | 2511.5                     | -35.82                           | -13            | -22.82      | Complies |
|                            | + 5 MHz bin                   | 2512                         | 2511.5                    | 2512.5                     | -39.99                           | -13            | -26.99      | Complies |
|                            | + 6 MHz bin                   | 2513                         | 2512.5                    | 2513.5                     | -41.76                           | -13            | -28.76      | Complies |
|                            | + 5.5 MHz bin                 | 2513.5                       | 2513                      | 2514                       | -41.99                           | -25            | -16.99      | Complies |
|                            | + 6.5 MHz bin                 | 2514.5                       | 2514                      | 2515                       | -42.26                           | -25            | -17.26      | Complies |
|                            | + 7.5 MHz bin                 | 2515.5                       | 2515                      | 2516                       | -42.24                           | -25            | -17.24      | Complies |
|                            | + 8.5 MHz bin                 | 2516.5                       | 2516                      | 2517                       | -42.26                           | -25            | -17.26      | Complies |
|                            | + 9.5 MHz bin                 | 2517.5                       | 2517                      | 2518                       | -42.27                           | -25            | -17.27      | Complies |
|                            | + 10.5 MHz bin                | 2518.5                       | 2518                      | 2519                       | -42.29                           | -25            | -17.29      | Complies |
|                            | + 11.5 MHz bin                | 2519.5                       | 2519                      | 2520                       | -42.3                            | -25            | -17.3       | Complies |
|                            | + 12.5 MHz bin                | 2520.5                       | 2520                      | 2521                       | -42.29                           | -25            | -17.29      | Complies |
|                            | + 13.5 MHz bin                | 2521.5                       | 2521                      | 2522                       | -42.31                           | -25            | -17.31      | Complies |
|                            | + 14.5 MHz bin                | 2522.5                       | 2522                      | 2523                       | -42.28                           | -25            | -17.28      | Complies |
|                            | + 15.5 MHz bin                | 2523.5                       | 2523                      | 2524                       | -42.28                           | -25            | -17.28      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2565.25                    |                                  | 11/18/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 5.5                        |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2546.5                       | 2546                      | 2547                       | -42.09                           | -25            | -17.09      | Complies |
|                            | - 14.5 MHz bin                | 2547.5                       | 2547                      | 2548                       | -42.12                           | -25            | -17.12      | Complies |
|                            | - 13.5 MHz bin                | 2548.5                       | 2548                      | 2549                       | -42.19                           | -25            | -17.19      | Complies |
|                            | - 12.5 MHz bin                | 2549.5                       | 2549                      | 2550                       | -42.19                           | -25            | -17.19      | Complies |
|                            | - 11.5 MHz bin                | 2550.5                       | 2550                      | 2551                       | -42.2                            | -25            | -17.2       | Complies |
|                            | - 10.5 MHz bin                | 2551.5                       | 2551                      | 2552                       | -42.18                           | -25            | -17.18      | Complies |
|                            | - 9.5 MHz bin                 | 2552.5                       | 2552                      | 2553                       | -42.16                           | -25            | -17.16      | Complies |
|                            | - 8.5 MHz bin                 | 2553.5                       | 2553                      | 2554                       | -42.09                           | -25            | -17.09      | Complies |
|                            | - 7.5 MHz bin                 | 2554.5                       | 2554                      | 2555                       | -41.97                           | -25            | -16.97      | Complies |
|                            | - 6.5 MHz bin                 | 2555.5                       | 2555                      | 2556                       | -41.86                           | -25            | -16.86      | Complies |
|                            | - 5.5 MHz bin                 | 2556.5                       | 2556                      | 2557                       | -41.3                            | -25            | -16.3       | Complies |
|                            | - 6 MHz bin                   | 2557                         | 2556.5                    | 2557.5                     | -40.82                           | -13            | -27.82      | Complies |
|                            | - 5 MHz bin                   | 2558                         | 2557.5                    | 2558.5                     | -38.35                           | -13            | -25.35      | Complies |
|                            | - 4 MHz bin                   | 2559                         | 2558.5                    | 2559.5                     | -34.03                           | -13            | -21.03      | Complies |
|                            | - 3 MHz bin                   | 2560                         | 2559.5                    | 2560.5                     | -30.51                           | -13            | -17.51      | Complies |
| 56                         | - 2 MHz bin                   | 2561                         | 2560.5                    | 2561.5                     | -15.4                            | -13            | -2.4        | Complies |
|                            | - 2 MHz bin                   | 2561                         | 2560.5                    | 2561.5                     | -27.85                           | -13            | -14.85      | Complies |
|                            | - 1 MHz bin                   | 2562                         | 2561.5                    | 2562.5                     | -24.03                           | -13            | -11.03      | Complies |
| 1000                       | + 1 MHz bin                   | 2568.5                       | 2568                      | 2569                       | -25.64                           | -13            | -12.64      | Complies |
|                            | + 2 MHz bin                   | 2569.5                       | 2569                      | 2570                       | -30.26                           | -13            | -17.26      | Complies |
|                            | + 2 MHz bin                   | 2569.5                       | 2569                      | 2570                       | -15.36                           | -13            | -2.36       | Complies |
|                            | + 3 MHz bin                   | 2570.5                       | 2570                      | 2571                       | -33.15                           | -13            | -20.15      | Complies |
|                            | + 4 MHz bin                   | 2571.5                       | 2571                      | 2572                       | -36.66                           | -13            | -23.66      | Complies |
|                            | + 5 MHz bin                   | 2572.5                       | 2572                      | 2573                       | -39.92                           | -13            | -26.92      | Complies |
|                            | + 6 MHz bin                   | 2573.5                       | 2573                      | 2574                       | -41.42                           | -13            | -28.42      | Complies |
|                            | + 5.5 MHz bin                 | 2574                         | 2573.5                    | 2574.5                     | -41.72                           | -25            | -16.72      | Complies |
|                            | + 6.5 MHz bin                 | 2575                         | 2574.5                    | 2575.5                     | -42.13                           | -25            | -17.13      | Complies |
|                            | + 7.5 MHz bin                 | 2576                         | 2575.5                    | 2576.5                     | -42.19                           | -25            | -17.19      | Complies |
|                            | + 8.5 MHz bin                 | 2577                         | 2576.5                    | 2577.5                     | -42.23                           | -25            | -17.23      | Complies |
|                            | + 9.5 MHz bin                 | 2578                         | 2577.5                    | 2578.5                     | -42.25                           | -25            | -17.25      | Complies |
|                            | + 10.5 MHz bin                | 2579                         | 2578.5                    | 2579.5                     | -42.25                           | -25            | -17.25      | Complies |
|                            | + 11.5 MHz bin                | 2580                         | 2579.5                    | 2580.5                     | -42.29                           | -25            | -17.29      | Complies |
|                            | + 12.5 MHz bin                | 2581                         | 2580.5                    | 2581.5                     | -42.29                           | -25            | -17.29      | Complies |
|                            | + 13.5 MHz bin                | 2582                         | 2581.5                    | 2582.5                     | -42.29                           | -25            | -17.29      | Complies |
|                            | + 14.5 MHz bin                | 2583                         | 2582.5                    | 2583.5                     | -42.25                           | -25            | -17.25      | Complies |
|                            | + 15.5 MHz bin                | 2584                         | 2583.5                    | 2584.5                     | -42.21                           | -25            | -17.21      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2565.25                    |                                  | 11/18/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 5.5                        |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2546.5                       | 2546                      | 2547                       | -42.11                           | -25            | -17.11      | Complies |
|                            | - 14.5 MHz bin                | 2547.5                       | 2547                      | 2548                       | -42.14                           | -25            | -17.14      | Complies |
|                            | - 13.5 MHz bin                | 2548.5                       | 2548                      | 2549                       | -42.19                           | -25            | -17.19      | Complies |
|                            | - 12.5 MHz bin                | 2549.5                       | 2549                      | 2550                       | -42.21                           | -25            | -17.21      | Complies |
|                            | - 11.5 MHz bin                | 2550.5                       | 2550                      | 2551                       | -42.19                           | -25            | -17.19      | Complies |
|                            | - 10.5 MHz bin                | 2551.5                       | 2551                      | 2552                       | -42.17                           | -25            | -17.17      | Complies |
|                            | - 9.5 MHz bin                 | 2552.5                       | 2552                      | 2553                       | -42.15                           | -25            | -17.15      | Complies |
|                            | - 8.5 MHz bin                 | 2553.5                       | 2553                      | 2554                       | -42.09                           | -25            | -17.09      | Complies |
|                            | - 7.5 MHz bin                 | 2554.5                       | 2554                      | 2555                       | -42                              | -25            | -17         | Complies |
|                            | - 6.5 MHz bin                 | 2555.5                       | 2555                      | 2556                       | -41.94                           | -25            | -16.94      | Complies |
|                            | - 5.5 MHz bin                 | 2556.5                       | 2556                      | 2557                       | -41.39                           | -25            | -16.39      | Complies |
|                            | - 6 MHz bin                   | 2557                         | 2556.5                    | 2557.5                     | -40.93                           | -13            | -27.93      | Complies |
|                            | - 5 MHz bin                   | 2558                         | 2557.5                    | 2558.5                     | -38.58                           | -13            | -25.58      | Complies |
|                            | - 4 MHz bin                   | 2559                         | 2558.5                    | 2559.5                     | -34.29                           | -13            | -21.29      | Complies |
|                            | - 3 MHz bin                   | 2560                         | 2559.5                    | 2560.5                     | -30.82                           | -13            | -17.82      | Complies |
| 56                         | - 2 MHz bin                   | 2561                         | 2560.5                    | 2561.5                     | -15.48                           | -13            | -2.48       | Complies |
|                            | - 1 MHz bin                   | 2562                         | 2561.5                    | 2562.5                     | -24.08                           | -13            | -11.08      | Complies |
|                            |                               |                              |                           |                            |                                  |                |             |          |
| 56                         | + 1 MHz bin                   | 2568.5                       | 2568                      | 2569                       | -25.62                           | -13            | -12.62      | Complies |
|                            | + 2 MHz bin                   | 2569.5                       | 2569                      | 2570                       | -30.32                           | -13            | -17.32      | Complies |
|                            |                               |                              |                           |                            |                                  |                |             |          |
| 1000                       | + 2 MHz bin                   | 2569.5                       | 2569                      | 2570                       | -15.38                           | -13            | -2.38       | Complies |
|                            | + 3 MHz bin                   | 2570.5                       | 2570                      | 2571                       | -33.26                           | -13            | -20.26      | Complies |
|                            | + 4 MHz bin                   | 2571.5                       | 2571                      | 2572                       | -36.74                           | -13            | -23.74      | Complies |
|                            | + 5 MHz bin                   | 2572.5                       | 2572                      | 2573                       | -39.95                           | -13            | -26.95      | Complies |
|                            | + 6 MHz bin                   | 2573.5                       | 2573                      | 2574                       | -41.4                            | -13            | -28.4       | Complies |
|                            | + 5.5 MHz bin                 | 2574                         | 2573.5                    | 2574.5                     | -41.73                           | -25            | -16.73      | Complies |
|                            | + 6.5 MHz bin                 | 2575                         | 2574.5                    | 2575.5                     | -42.14                           | -25            | -17.14      | Complies |
|                            | + 7.5 MHz bin                 | 2576                         | 2575.5                    | 2576.5                     | -42.2                            | -25            | -17.2       | Complies |
|                            | + 8.5 MHz bin                 | 2577                         | 2576.5                    | 2577.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | + 9.5 MHz bin                 | 2578                         | 2577.5                    | 2578.5                     | -42.26                           | -25            | -17.26      | Complies |
|                            | + 10.5 MHz bin                | 2579                         | 2578.5                    | 2579.5                     | -42.26                           | -25            | -17.26      | Complies |
|                            | + 11.5 MHz bin                | 2580                         | 2579.5                    | 2580.5                     | -42.26                           | -25            | -17.26      | Complies |
|                            | + 12.5 MHz bin                | 2581                         | 2580.5                    | 2581.5                     | -42.27                           | -25            | -17.27      | Complies |
|                            | + 13.5 MHz bin                | 2582                         | 2581.5                    | 2582.5                     | -42.27                           | -25            | -17.27      | Complies |
|                            | + 14.5 MHz bin                | 2583                         | 2582.5                    | 2583.5                     | -42.24                           | -25            | -17.24      | Complies |
|                            | + 15.5 MHz bin                | 2584                         | 2583.5                    | 2584.5                     | -42.21                           | -25            | -17.21      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2565.25                    |                                  | 11/18/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 5.5                        |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2546.5                       | 2546                      | 2547                       | -42.09                           | -25            | -17.09      | Complies |
|                            | - 14.5 MHz bin                | 2547.5                       | 2547                      | 2548                       | -42.14                           | -25            | -17.14      | Complies |
|                            | - 13.5 MHz bin                | 2548.5                       | 2548                      | 2549                       | -42.2                            | -25            | -17.2       | Complies |
|                            | - 12.5 MHz bin                | 2549.5                       | 2549                      | 2550                       | -42.2                            | -25            | -17.2       | Complies |
|                            | - 11.5 MHz bin                | 2550.5                       | 2550                      | 2551                       | -42.2                            | -25            | -17.2       | Complies |
|                            | - 10.5 MHz bin                | 2551.5                       | 2551                      | 2552                       | -42.18                           | -25            | -17.18      | Complies |
|                            | - 9.5 MHz bin                 | 2552.5                       | 2552                      | 2553                       | -42.15                           | -25            | -17.15      | Complies |
|                            | - 8.5 MHz bin                 | 2553.5                       | 2553                      | 2554                       | -42.1                            | -25            | -17.1       | Complies |
|                            | - 7.5 MHz bin                 | 2554.5                       | 2554                      | 2555                       | -42                              | -25            | -17         | Complies |
|                            | - 6.5 MHz bin                 | 2555.5                       | 2555                      | 2556                       | -41.93                           | -25            | -16.93      | Complies |
|                            | - 5.5 MHz bin                 | 2556.5                       | 2556                      | 2557                       | -41.38                           | -25            | -16.38      | Complies |
|                            | - 6 MHz bin                   | 2557                         | 2556.5                    | 2557.5                     | -40.93                           | -13            | -27.93      | Complies |
|                            | - 5 MHz bin                   | 2558                         | 2557.5                    | 2558.5                     | -38.57                           | -13            | -25.57      | Complies |
|                            | - 4 MHz bin                   | 2559                         | 2558.5                    | 2559.5                     | -34.28                           | -13            | -21.28      | Complies |
|                            | - 3 MHz bin                   | 2560                         | 2559.5                    | 2560.5                     | -30.83                           | -13            | -17.83      | Complies |
| 56                         | - 2 MHz bin                   | 2561                         | 2560.5                    | 2561.5                     | -15.42                           | -13            | -2.42       | Complies |
|                            | - 1 MHz bin                   | 2562                         | 2561.5                    | 2562.5                     | -23.86                           | -13            | -10.86      | Complies |
|                            |                               |                              |                           |                            |                                  |                |             |          |
| 56                         | + 1 MHz bin                   | 2568.5                       | 2568                      | 2569                       | -25.68                           | -13            | -12.68      | Complies |
|                            | + 2 MHz bin                   | 2569.5                       | 2569                      | 2570                       | -30.33                           | -13            | -17.33      | Complies |
|                            | + 2 MHz bin                   | 2569.5                       | 2569                      | 2570                       | -15.37                           | -13            | -2.37       | Complies |
| 1000                       | + 3 MHz bin                   | 2570.5                       | 2570                      | 2571                       | -33.26                           | -13            | -20.26      | Complies |
|                            | + 4 MHz bin                   | 2571.5                       | 2571                      | 2572                       | -36.82                           | -13            | -23.82      | Complies |
|                            | + 5 MHz bin                   | 2572.5                       | 2572                      | 2573                       | -39.96                           | -13            | -26.96      | Complies |
|                            | + 6 MHz bin                   | 2573.5                       | 2573                      | 2574                       | -41.41                           | -13            | -28.41      | Complies |
|                            | + 5.5 MHz bin                 | 2574                         | 2573.5                    | 2574.5                     | -41.72                           | -25            | -16.72      | Complies |
|                            | + 6.5 MHz bin                 | 2575                         | 2574.5                    | 2575.5                     | -42.13                           | -25            | -17.13      | Complies |
|                            | + 7.5 MHz bin                 | 2576                         | 2575.5                    | 2576.5                     | -42.21                           | -25            | -17.21      | Complies |
|                            | + 8.5 MHz bin                 | 2577                         | 2576.5                    | 2577.5                     | -42.23                           | -25            | -17.23      | Complies |
|                            | + 9.5 MHz bin                 | 2578                         | 2577.5                    | 2578.5                     | -42.26                           | -25            | -17.26      | Complies |
|                            | + 10.5 MHz bin                | 2579                         | 2578.5                    | 2579.5                     | -42.28                           | -25            | -17.28      | Complies |
|                            | + 11.5 MHz bin                | 2580                         | 2579.5                    | 2580.5                     | -42.28                           | -25            | -17.28      | Complies |
|                            | + 12.5 MHz bin                | 2581                         | 2580.5                    | 2581.5                     | -42.3                            | -25            | -17.3       | Complies |
|                            | + 13.5 MHz bin                | 2582                         | 2581.5                    | 2582.5                     | -42.29                           | -25            | -17.29      | Complies |
|                            | + 14.5 MHz bin                | 2583                         | 2582.5                    | 2583.5                     | -42.24                           | -25            | -17.24      | Complies |
|                            | + 15.5 MHz bin                | 2584                         | 2583.5                    | 2584.5                     | -42.21                           | -25            | -17.21      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2575                       |                                  | 11/19/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 6                          |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2556                         | 2555.5                    | 2556.5                     | -42.17                           | -25            | -17.17      | Complies |
|                            | - 14.5 MHz bin                | 2557                         | 2556.5                    | 2557.5                     | -42.17                           | -25            | -17.17      | Complies |
|                            | - 13.5 MHz bin                | 2558                         | 2557.5                    | 2558.5                     | -42.23                           | -25            | -17.23      | Complies |
|                            | - 12.5 MHz bin                | 2559                         | 2558.5                    | 2559.5                     | -42.24                           | -25            | -17.24      | Complies |
|                            | - 11.5 MHz bin                | 2560                         | 2559.5                    | 2560.5                     | -42.23                           | -25            | -17.23      | Complies |
|                            | - 10.5 MHz bin                | 2561                         | 2560.5                    | 2561.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | - 9.5 MHz bin                 | 2562                         | 2561.5                    | 2562.5                     | -42.19                           | -25            | -17.19      | Complies |
|                            | - 8.5 MHz bin                 | 2563                         | 2562.5                    | 2563.5                     | -42.16                           | -25            | -17.16      | Complies |
|                            | - 7.5 MHz bin                 | 2564                         | 2563.5                    | 2564.5                     | -42.04                           | -25            | -17.04      | Complies |
|                            | - 6.5 MHz bin                 | 2565                         | 2564.5                    | 2565.5                     | -41.95                           | -25            | -16.95      | Complies |
|                            | - 5.5 MHz bin                 | 2566                         | 2565.5                    | 2566.5                     | -41.52                           | -25            | -16.52      | Complies |
|                            | - 6 MHz bin                   | 2566.5                       | 2566                      | 2567                       | -41.01                           | -13            | -28.01      | Complies |
|                            | - 5 MHz bin                   | 2567.5                       | 2567                      | 2568                       | -38.32                           | -13            | -25.32      | Complies |
|                            | - 4 MHz bin                   | 2568.5                       | 2568                      | 2569                       | -34.91                           | -13            | -21.91      | Complies |
|                            | - 3 MHz bin                   | 2569.5                       | 2569                      | 2570                       | -32.13                           | -13            | -19.13      | Complies |
| 62                         | - 2 MHz bin                   | 2570.5                       | 2570                      | 2571                       | -15.83                           | -13            | -2.83       | Complies |
|                            | - 2 MHz bin                   | 2570.5                       | 2570                      | 2571                       | -29.84                           | -13            | -16.84      | Complies |
|                            | - 1 MHz bin                   | 2571.5                       | 2571                      | 2572                       | -23.47                           | -13            | -10.47      | Complies |
| 62                         | + 1 MHz bin                   | 2578.5                       | 2578                      | 2579                       | -24.61                           | -13            | -11.61      | Complies |
|                            | + 2 MHz bin                   | 2579.5                       | 2579                      | 2580                       | -31.89                           | -13            | -18.89      | Complies |
|                            | + 2 MHz bin                   | 2579.5                       | 2579                      | 2580                       | -15.63                           | -13            | -2.63       | Complies |
| 1000                       | + 3 MHz bin                   | 2580.5                       | 2580                      | 2581                       | -34.32                           | -13            | -21.32      | Complies |
|                            | + 4 MHz bin                   | 2581.5                       | 2581                      | 2582                       | -37.06                           | -13            | -24.06      | Complies |
|                            | + 5 MHz bin                   | 2582.5                       | 2582                      | 2583                       | -39.73                           | -13            | -26.73      | Complies |
|                            | + 6 MHz bin                   | 2583.5                       | 2583                      | 2584                       | -41.45                           | -13            | -28.45      | Complies |
|                            | + 5.5 MHz bin                 | 2584                         | 2583.5                    | 2584.5                     | -41.78                           | -25            | -16.78      | Complies |
|                            | + 6.5 MHz bin                 | 2585                         | 2584.5                    | 2585.5                     | -42.14                           | -25            | -17.14      | Complies |
|                            | + 7.5 MHz bin                 | 2586                         | 2585.5                    | 2586.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | + 8.5 MHz bin                 | 2587                         | 2586.5                    | 2587.5                     | -42.26                           | -25            | -17.26      | Complies |
|                            | + 9.5 MHz bin                 | 2588                         | 2587.5                    | 2588.5                     | -42.29                           | -25            | -17.29      | Complies |
|                            | + 10.5 MHz bin                | 2589                         | 2588.5                    | 2589.5                     | -42.28                           | -25            | -17.28      | Complies |
|                            | + 11.5 MHz bin                | 2590                         | 2589.5                    | 2590.5                     | -42.27                           | -25            | -17.27      | Complies |
|                            | + 12.5 MHz bin                | 2591                         | 2590.5                    | 2591.5                     | -42.28                           | -25            | -17.28      | Complies |
|                            | + 13.5 MHz bin                | 2592                         | 2591.5                    | 2592.5                     | -42.3                            | -25            | -17.3       | Complies |
|                            | + 14.5 MHz bin                | 2593                         | 2592.5                    | 2593.5                     | -42.27                           | -25            | -17.27      | Complies |
|                            | + 15.5 MHz bin                | 2594                         | 2593.5                    | 2594.5                     | -42.27                           | -25            | -17.27      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2575                       |                                  | 11/19/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 6                          |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2556                         | 2555.5                    | 2556.5                     | -42.15                           | -25            | -17.15      | Complies |
|                            | - 14.5 MHz bin                | 2557                         | 2556.5                    | 2557.5                     | -42.17                           | -25            | -17.17      | Complies |
|                            | - 13.5 MHz bin                | 2558                         | 2557.5                    | 2558.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | - 12.5 MHz bin                | 2559                         | 2558.5                    | 2559.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | - 11.5 MHz bin                | 2560                         | 2559.5                    | 2560.5                     | -42.21                           | -25            | -17.21      | Complies |
|                            | - 10.5 MHz bin                | 2561                         | 2560.5                    | 2561.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | - 9.5 MHz bin                 | 2562                         | 2561.5                    | 2562.5                     | -42.19                           | -25            | -17.19      | Complies |
|                            | - 8.5 MHz bin                 | 2563                         | 2562.5                    | 2563.5                     | -42.14                           | -25            | -17.14      | Complies |
|                            | - 7.5 MHz bin                 | 2564                         | 2563.5                    | 2564.5                     | -42.03                           | -25            | -17.03      | Complies |
|                            | - 6.5 MHz bin                 | 2565                         | 2564.5                    | 2565.5                     | -41.92                           | -25            | -16.92      | Complies |
|                            | - 5.5 MHz bin                 | 2566                         | 2565.5                    | 2566.5                     | -41.49                           | -25            | -16.49      | Complies |
|                            | - 6 MHz bin                   | 2566.5                       | 2566                      | 2567                       | -40.99                           | -13            | -27.99      | Complies |
|                            | - 5 MHz bin                   | 2567.5                       | 2567                      | 2568                       | -38.31                           | -13            | -25.31      | Complies |
|                            | - 4 MHz bin                   | 2568.5                       | 2568                      | 2569                       | -34.84                           | -13            | -21.84      | Complies |
|                            | - 3 MHz bin                   | 2569.5                       | 2569                      | 2570                       | -32.08                           | -13            | -19.08      | Complies |
| 62                         | - 2 MHz bin                   | 2570.5                       | 2570                      | 2571                       | -15.79                           | -13            | -2.79       | Complies |
|                            | - 2 MHz bin                   | 2570.5                       | 2570                      | 2571                       | -29.83                           | -13            | -16.83      | Complies |
|                            | - 1 MHz bin                   | 2571.5                       | 2571                      | 2572                       | -23.32                           | -13            | -10.32      | Complies |
| 62                         | + 1 MHz bin                   | 2578.5                       | 2578                      | 2579                       | -24.48                           | -13            | -11.48      | Complies |
|                            | + 2 MHz bin                   | 2579.5                       | 2579                      | 2580                       | -31.81                           | -13            | -18.81      | Complies |
|                            | + 2 MHz bin                   | 2579.5                       | 2579                      | 2580                       | -15.59                           | -13            | -2.59       | Complies |
| 1000                       | + 3 MHz bin                   | 2580.5                       | 2580                      | 2581                       | -34.31                           | -13            | -21.31      | Complies |
|                            | + 4 MHz bin                   | 2581.5                       | 2581                      | 2582                       | -37.05                           | -13            | -24.05      | Complies |
|                            | + 5 MHz bin                   | 2582.5                       | 2582                      | 2583                       | -39.73                           | -13            | -26.73      | Complies |
|                            | + 6 MHz bin                   | 2583.5                       | 2583                      | 2584                       | -41.45                           | -13            | -28.45      | Complies |
|                            | + 5.5 MHz bin                 | 2584                         | 2583.5                    | 2584.5                     | -41.76                           | -25            | -16.76      | Complies |
|                            | + 6.5 MHz bin                 | 2585                         | 2584.5                    | 2585.5                     | -42.12                           | -25            | -17.12      | Complies |
|                            | + 7.5 MHz bin                 | 2586                         | 2585.5                    | 2586.5                     | -42.2                            | -25            | -17.2       | Complies |
|                            | + 8.5 MHz bin                 | 2587                         | 2586.5                    | 2587.5                     | -42.23                           | -25            | -17.23      | Complies |
|                            | + 9.5 MHz bin                 | 2588                         | 2587.5                    | 2588.5                     | -42.27                           | -25            | -17.27      | Complies |
|                            | + 10.5 MHz bin                | 2589                         | 2588.5                    | 2589.5                     | -42.27                           | -25            | -17.27      | Complies |
|                            | + 11.5 MHz bin                | 2590                         | 2589.5                    | 2590.5                     | -42.26                           | -25            | -17.26      | Complies |
|                            | + 12.5 MHz bin                | 2591                         | 2590.5                    | 2591.5                     | -42.29                           | -25            | -17.29      | Complies |
|                            | + 13.5 MHz bin                | 2592                         | 2591.5                    | 2592.5                     | -42.28                           | -25            | -17.28      | Complies |
|                            | + 14.5 MHz bin                | 2593                         | 2592.5                    | 2593.5                     | -42.28                           | -25            | -17.28      | Complies |
|                            | + 15.5 MHz bin                | 2594                         | 2593.5                    | 2594.5                     | -42.26                           | -25            | -17.26      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2575                       |                                  | 11/19/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 6                          |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2556                         | 2555.5                    | 2556.5                     | -42.16                           | -25            | -17.16      | Complies |
|                            | - 14.5 MHz bin                | 2557                         | 2556.5                    | 2557.5                     | -42.17                           | -25            | -17.17      | Complies |
|                            | - 13.5 MHz bin                | 2558                         | 2557.5                    | 2558.5                     | -42.21                           | -25            | -17.21      | Complies |
|                            | - 12.5 MHz bin                | 2559                         | 2558.5                    | 2559.5                     | -42.23                           | -25            | -17.23      | Complies |
|                            | - 11.5 MHz bin                | 2560                         | 2559.5                    | 2560.5                     | -42.23                           | -25            | -17.23      | Complies |
|                            | - 10.5 MHz bin                | 2561                         | 2560.5                    | 2561.5                     | -42.22                           | -25            | -17.22      | Complies |
|                            | - 9.5 MHz bin                 | 2562                         | 2561.5                    | 2562.5                     | -42.19                           | -25            | -17.19      | Complies |
|                            | - 8.5 MHz bin                 | 2563                         | 2562.5                    | 2563.5                     | -42.15                           | -25            | -17.15      | Complies |
|                            | - 7.5 MHz bin                 | 2564                         | 2563.5                    | 2564.5                     | -42.03                           | -25            | -17.03      | Complies |
|                            | - 6.5 MHz bin                 | 2565                         | 2564.5                    | 2565.5                     | -41.93                           | -25            | -16.93      | Complies |
|                            | - 5.5 MHz bin                 | 2566                         | 2565.5                    | 2566.5                     | -41.5                            | -25            | -16.5       | Complies |
|                            | - 6 MHz bin                   | 2566.5                       | 2566                      | 2567                       | -40.99                           | -13            | -27.99      | Complies |
|                            | - 5 MHz bin                   | 2567.5                       | 2567                      | 2568                       | -38.28                           | -13            | -25.28      | Complies |
|                            | - 4 MHz bin                   | 2568.5                       | 2568                      | 2569                       | -34.87                           | -13            | -21.87      | Complies |
|                            | - 3 MHz bin                   | 2569.5                       | 2569                      | 2570                       | -32.1                            | -13            | -19.1       | Complies |
| 62                         | - 2 MHz bin                   | 2570.5                       | 2570                      | 2571                       | -15.81                           | -13            | -2.81       | Complies |
|                            | - 2 MHz bin                   | 2570.5                       | 2570                      | 2571                       | -29.85                           | -13            | -16.85      | Complies |
|                            | - 1 MHz bin                   | 2571.5                       | 2571                      | 2572                       | -23.34                           | -13            | -10.34      | Complies |
| 62                         | + 1 MHz bin                   | 2578.5                       | 2578                      | 2579                       | -24.49                           | -13            | -11.49      | Complies |
|                            | + 2 MHz bin                   | 2579.5                       | 2579                      | 2580                       | -31.85                           | -13            | -18.85      | Complies |
|                            | + 2 MHz bin                   | 2579.5                       | 2579                      | 2580                       | -15.6                            | -13            | -2.6        | Complies |
| 1000                       | + 3 MHz bin                   | 2580.5                       | 2580                      | 2581                       | -34.29                           | -13            | -21.29      | Complies |
|                            | + 4 MHz bin                   | 2581.5                       | 2581                      | 2582                       | -37.02                           | -13            | -24.02      | Complies |
|                            | + 5 MHz bin                   | 2582.5                       | 2582                      | 2583                       | -39.74                           | -13            | -26.74      | Complies |
|                            | + 6 MHz bin                   | 2583.5                       | 2583                      | 2584                       | -41.42                           | -13            | -28.42      | Complies |
|                            | + 5.5 MHz bin                 | 2584                         | 2583.5                    | 2584.5                     | -41.77                           | -25            | -16.77      | Complies |
|                            | + 6.5 MHz bin                 | 2585                         | 2584.5                    | 2585.5                     | -42.12                           | -25            | -17.12      | Complies |
|                            | + 7.5 MHz bin                 | 2586                         | 2585.5                    | 2586.5                     | -42.19                           | -25            | -17.19      | Complies |
|                            | + 8.5 MHz bin                 | 2587                         | 2586.5                    | 2587.5                     | -42.23                           | -25            | -17.23      | Complies |
|                            | + 9.5 MHz bin                 | 2588                         | 2587.5                    | 2588.5                     | -42.29                           | -25            | -17.29      | Complies |
|                            | + 10.5 MHz bin                | 2589                         | 2588.5                    | 2589.5                     | -42.27                           | -25            | -17.27      | Complies |
|                            | + 11.5 MHz bin                | 2590                         | 2589.5                    | 2590.5                     | -42.27                           | -25            | -17.27      | Complies |
|                            | + 12.5 MHz bin                | 2591                         | 2590.5                    | 2591.5                     | -42.28                           | -25            | -17.28      | Complies |
|                            | + 13.5 MHz bin                | 2592                         | 2591.5                    | 2592.5                     | -42.28                           | -25            | -17.28      | Complies |
|                            | + 14.5 MHz bin                | 2593                         | 2592.5                    | 2593.5                     | -42.27                           | -25            | -17.27      | Complies |
|                            | + 15.5 MHz bin                | 2594                         | 2593.5                    | 2594.5                     | -42.28                           | -25            | -17.28      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2621                       |                                  | 11/19/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 6                          |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2602                         | 2601.5                    | 2602.5                     | -42.12                           | -25            | -17.12      | Complies |
|                            | - 14.5 MHz bin                | 2603                         | 2602.5                    | 2603.5                     | -42.13                           | -25            | -17.13      | Complies |
|                            | - 13.5 MHz bin                | 2604                         | 2603.5                    | 2604.5                     | -42.11                           | -25            | -17.11      | Complies |
|                            | - 12.5 MHz bin                | 2605                         | 2604.5                    | 2605.5                     | -42.12                           | -25            | -17.12      | Complies |
|                            | - 11.5 MHz bin                | 2606                         | 2605.5                    | 2606.5                     | -42.07                           | -25            | -17.07      | Complies |
|                            | - 10.5 MHz bin                | 2607                         | 2606.5                    | 2607.5                     | -41.93                           | -25            | -16.93      | Complies |
|                            | - 9.5 MHz bin                 | 2608                         | 2607.5                    | 2608.5                     | -41.72                           | -25            | -16.72      | Complies |
|                            | - 8.5 MHz bin                 | 2609                         | 2608.5                    | 2609.5                     | -41.35                           | -25            | -16.35      | Complies |
|                            | - 7.5 MHz bin                 | 2610                         | 2609.5                    | 2610.5                     | -40.95                           | -25            | -15.95      | Complies |
|                            | - 6.5 MHz bin                 | 2611                         | 2610.5                    | 2611.5                     | -40.53                           | -25            | -15.53      | Complies |
|                            | - 5.5 MHz bin                 | 2612                         | 2611.5                    | 2612.5                     | -39.8                            | -25            | -14.8       | Complies |
|                            | - 6 MHz bin                   | 2612.5                       | 2612                      | 2613                       | -39.27                           | -13            | -26.27      | Complies |
|                            | - 5 MHz bin                   | 2613.5                       | 2613                      | 2614                       | -36.81                           | -13            | -23.81      | Complies |
|                            | - 4 MHz bin                   | 2614.5                       | 2614                      | 2615                       | -33.62                           | -13            | -20.62      | Complies |
|                            | - 3 MHz bin                   | 2615.5                       | 2615                      | 2616                       | -31                              | -13            | -18         | Complies |
| 62                         | - 2 MHz bin                   | 2616.5                       | 2616                      | 2617                       | -15.49                           | -13            | -2.49       | Complies |
|                            | - 2 MHz bin                   | 2616.5                       | 2616                      | 2617                       | -28.85                           | -13            | -15.85      | Complies |
|                            | - 1 MHz bin                   | 2617.5                       | 2617                      | 2618                       | -22.78                           | -13            | -9.78       | Complies |
| 62                         | + 1 MHz bin                   | 2624.5                       | 2624                      | 2625                       | -24.3                            | -13            | -11.3       | Complies |
|                            | + 2 MHz bin                   | 2625.5                       | 2625                      | 2626                       | -31.4                            | -13            | -18.4       | Complies |
|                            | + 2 MHz bin                   | 2625.5                       | 2625                      | 2626                       | -14.94                           | -13            | -1.94       | Complies |
| 1000                       | + 3 MHz bin                   | 2626.5                       | 2626                      | 2627                       | -33.61                           | -13            | -20.61      | Complies |
|                            | + 4 MHz bin                   | 2627.5                       | 2627                      | 2628                       | -35.83                           | -13            | -22.83      | Complies |
|                            | + 5 MHz bin                   | 2628.5                       | 2628                      | 2629                       | -37.84                           | -13            | -24.84      | Complies |
|                            | + 6 MHz bin                   | 2629.5                       | 2629                      | 2630                       | -39.26                           | -13            | -26.26      | Complies |
|                            | + 5.5 MHz bin                 | 2630                         | 2629.5                    | 2630.5                     | -39.74                           | -25            | -14.74      | Complies |
|                            | + 6.5 MHz bin                 | 2631                         | 2630.5                    | 2631.5                     | -40.38                           | -25            | -15.38      | Complies |
|                            | + 7.5 MHz bin                 | 2632                         | 2631.5                    | 2632.5                     | -40.89                           | -25            | -15.89      | Complies |
|                            | + 8.5 MHz bin                 | 2633                         | 2632.5                    | 2633.5                     | -41.27                           | -25            | -16.27      | Complies |
|                            | + 9.5 MHz bin                 | 2634                         | 2633.5                    | 2634.5                     | -41.58                           | -25            | -16.58      | Complies |
|                            | + 10.5 MHz bin                | 2635                         | 2634.5                    | 2635.5                     | -41.84                           | -25            | -16.84      | Complies |
|                            | + 11.5 MHz bin                | 2636                         | 2635.5                    | 2636.5                     | -41.97                           | -25            | -16.97      | Complies |
|                            | + 12.5 MHz bin                | 2637                         | 2636.5                    | 2637.5                     | -42.03                           | -25            | -17.03      | Complies |
|                            | + 13.5 MHz bin                | 2638                         | 2637.5                    | 2638.5                     | -42.05                           | -25            | -17.05      | Complies |
|                            | + 14.5 MHz bin                | 2639                         | 2638.5                    | 2639.5                     | -42.03                           | -25            | -17.03      | Complies |
|                            | + 15.5 MHz bin                | 2640                         | 2639.5                    | 2640.5                     | -42.02                           | -25            | -17.02      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2621                       |                                  | 11/19/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 6                          |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2602                         | 2601.5                    | 2602.5                     | -42.14                           | -25            | -17.14      | Complies |
|                            | - 14.5 MHz bin                | 2603                         | 2602.5                    | 2603.5                     | -42.16                           | -25            | -17.16      | Complies |
|                            | - 13.5 MHz bin                | 2604                         | 2603.5                    | 2604.5                     | -42.13                           | -25            | -17.13      | Complies |
|                            | - 12.5 MHz bin                | 2605                         | 2604.5                    | 2605.5                     | -42.13                           | -25            | -17.13      | Complies |
|                            | - 11.5 MHz bin                | 2606                         | 2605.5                    | 2606.5                     | -42.11                           | -25            | -17.11      | Complies |
|                            | - 10.5 MHz bin                | 2607                         | 2606.5                    | 2607.5                     | -42.02                           | -25            | -17.02      | Complies |
|                            | - 9.5 MHz bin                 | 2608                         | 2607.5                    | 2608.5                     | -41.83                           | -25            | -16.83      | Complies |
|                            | - 8.5 MHz bin                 | 2609                         | 2608.5                    | 2609.5                     | -41.57                           | -25            | -16.57      | Complies |
|                            | - 7.5 MHz bin                 | 2610                         | 2609.5                    | 2610.5                     | -41.16                           | -25            | -16.16      | Complies |
|                            | - 6.5 MHz bin                 | 2611                         | 2610.5                    | 2611.5                     | -40.81                           | -25            | -15.81      | Complies |
|                            | - 5.5 MHz bin                 | 2612                         | 2611.5                    | 2612.5                     | -40.2                            | -25            | -15.2       | Complies |
|                            | - 6 MHz bin                   | 2612.5                       | 2612                      | 2613                       | -39.6                            | -13            | -26.6       | Complies |
|                            | - 5 MHz bin                   | 2613.5                       | 2613                      | 2614                       | -37.21                           | -13            | -24.21      | Complies |
|                            | - 4 MHz bin                   | 2614.5                       | 2614                      | 2615                       | -34.06                           | -13            | -21.06      | Complies |
|                            | - 3 MHz bin                   | 2615.5                       | 2615                      | 2616                       | -31.41                           | -13            | -18.41      | Complies |
| 62                         | - 2 MHz bin                   | 2616.5                       | 2616                      | 2617                       | -15.56                           | -13            | -2.56       | Complies |
|                            | - 2 MHz bin                   | 2616.5                       | 2616                      | 2617                       | -29.15                           | -13            | -16.15      | Complies |
|                            | - 1 MHz bin                   | 2617.5                       | 2617                      | 2618                       | -23.2                            | -13            | -10.2       | Complies |
| 62                         | + 1 MHz bin                   | 2624.5                       | 2624                      | 2625                       | -24.24                           | -13            | -11.24      | Complies |
|                            | + 2 MHz bin                   | 2625.5                       | 2625                      | 2626                       | -31.67                           | -13            | -18.67      | Complies |
|                            | + 2 MHz bin                   | 2625.5                       | 2625                      | 2626                       | -15.03                           | -13            | -2.03       | Complies |
| 1000                       | + 3 MHz bin                   | 2626.5                       | 2626                      | 2627                       | -33.78                           | -13            | -20.78      | Complies |
|                            | + 4 MHz bin                   | 2627.5                       | 2627                      | 2628                       | -36.01                           | -13            | -23.01      | Complies |
|                            | + 5 MHz bin                   | 2628.5                       | 2628                      | 2629                       | -38.06                           | -13            | -25.06      | Complies |
|                            | + 6 MHz bin                   | 2629.5                       | 2629                      | 2630                       | -39.46                           | -13            | -26.46      | Complies |
|                            | + 5.5 MHz bin                 | 2630                         | 2629.5                    | 2630.5                     | -39.93                           | -25            | -14.93      | Complies |
|                            | + 6.5 MHz bin                 | 2631                         | 2630.5                    | 2631.5                     | -40.55                           | -25            | -15.55      | Complies |
|                            | + 7.5 MHz bin                 | 2632                         | 2631.5                    | 2632.5                     | -40.98                           | -25            | -15.98      | Complies |
|                            | + 8.5 MHz bin                 | 2633                         | 2632.5                    | 2633.5                     | -41.23                           | -25            | -16.23      | Complies |
|                            | + 9.5 MHz bin                 | 2634                         | 2633.5                    | 2634.5                     | -41.61                           | -25            | -16.61      | Complies |
|                            | + 10.5 MHz bin                | 2635                         | 2634.5                    | 2635.5                     | -41.84                           | -25            | -16.84      | Complies |
|                            | + 11.5 MHz bin                | 2636                         | 2635.5                    | 2636.5                     | -41.96                           | -25            | -16.96      | Complies |
|                            | + 12.5 MHz bin                | 2637                         | 2636.5                    | 2637.5                     | -42.02                           | -25            | -17.02      | Complies |
|                            | + 13.5 MHz bin                | 2638                         | 2637.5                    | 2638.5                     | -42.06                           | -25            | -17.06      | Complies |
|                            | + 14.5 MHz bin                | 2639                         | 2638.5                    | 2639.5                     | -42.01                           | -25            | -17.01      | Complies |
|                            | + 15.5 MHz bin                | 2640                         | 2639.5                    | 2640.5                     | -42.01                           | -25            | -17.01      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2621                       |                                  | 11/19/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 6                          |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2602                         | 2601.5                    | 2602.5                     | -42.13                           | -25            | -17.13      | Complies |
|                            | - 14.5 MHz bin                | 2603                         | 2602.5                    | 2603.5                     | -42.16                           | -25            | -17.16      | Complies |
|                            | - 13.5 MHz bin                | 2604                         | 2603.5                    | 2604.5                     | -42.12                           | -25            | -17.12      | Complies |
|                            | - 12.5 MHz bin                | 2605                         | 2604.5                    | 2605.5                     | -42.14                           | -25            | -17.14      | Complies |
|                            | - 11.5 MHz bin                | 2606                         | 2605.5                    | 2606.5                     | -42.1                            | -25            | -17.1       | Complies |
|                            | - 10.5 MHz bin                | 2607                         | 2606.5                    | 2607.5                     | -42                              | -25            | -17         | Complies |
|                            | - 9.5 MHz bin                 | 2608                         | 2607.5                    | 2608.5                     | -41.85                           | -25            | -16.85      | Complies |
|                            | - 8.5 MHz bin                 | 2609                         | 2608.5                    | 2609.5                     | -41.57                           | -25            | -16.57      | Complies |
|                            | - 7.5 MHz bin                 | 2610                         | 2609.5                    | 2610.5                     | -41.21                           | -25            | -16.21      | Complies |
|                            | - 6.5 MHz bin                 | 2611                         | 2610.5                    | 2611.5                     | -40.8                            | -25            | -15.8       | Complies |
|                            | - 5.5 MHz bin                 | 2612                         | 2611.5                    | 2612.5                     | -40.12                           | -25            | -15.12      | Complies |
|                            | - 6 MHz bin                   | 2612.5                       | 2612                      | 2613                       | -39.57                           | -13            | -26.57      | Complies |
|                            | - 5 MHz bin                   | 2613.5                       | 2613                      | 2614                       | -37.19                           | -13            | -24.19      | Complies |
|                            | - 4 MHz bin                   | 2614.5                       | 2614                      | 2615                       | -33.96                           | -13            | -20.96      | Complies |
|                            | - 3 MHz bin                   | 2615.5                       | 2615                      | 2616                       | -31.38                           | -13            | -18.38      | Complies |
| 62                         | - 2 MHz bin                   | 2616.5                       | 2616                      | 2617                       | -15.56                           | -13            | -2.56       | Complies |
|                            | - 2 MHz bin                   | 2616.5                       | 2616                      | 2617                       | -29.17                           | -13            | -16.17      | Complies |
|                            | - 1 MHz bin                   | 2617.5                       | 2617                      | 2618                       | -23.14                           | -13            | -10.14      | Complies |
| 62                         | + 1 MHz bin                   | 2624.5                       | 2624                      | 2625                       | -24.15                           | -13            | -11.15      | Complies |
|                            | + 2 MHz bin                   | 2625.5                       | 2625                      | 2626                       | -31.74                           | -13            | -18.74      | Complies |
|                            | + 2 MHz bin                   | 2625.5                       | 2625                      | 2626                       | -15.09                           | -13            | -2.09       | Complies |
| 1000                       | + 3 MHz bin                   | 2626.5                       | 2626                      | 2627                       | -33.88                           | -13            | -20.88      | Complies |
|                            | + 4 MHz bin                   | 2627.5                       | 2627                      | 2628                       | -36.04                           | -13            | -23.04      | Complies |
|                            | + 5 MHz bin                   | 2628.5                       | 2628                      | 2629                       | -38.04                           | -13            | -25.04      | Complies |
|                            | + 6 MHz bin                   | 2629.5                       | 2629                      | 2630                       | -39.49                           | -13            | -26.49      | Complies |
|                            | + 5.5 MHz bin                 | 2630                         | 2629.5                    | 2630.5                     | -39.9                            | -25            | -14.9       | Complies |
|                            | + 6.5 MHz bin                 | 2631                         | 2630.5                    | 2631.5                     | -40.6                            | -25            | -15.6       | Complies |
|                            | + 7.5 MHz bin                 | 2632                         | 2631.5                    | 2632.5                     | -40.99                           | -25            | -15.99      | Complies |
|                            | + 8.5 MHz bin                 | 2633                         | 2632.5                    | 2633.5                     | -41.34                           | -25            | -16.34      | Complies |
|                            | + 9.5 MHz bin                 | 2634                         | 2633.5                    | 2634.5                     | -41.65                           | -25            | -16.65      | Complies |
|                            | + 10.5 MHz bin                | 2635                         | 2634.5                    | 2635.5                     | -41.85                           | -25            | -16.85      | Complies |
|                            | + 11.5 MHz bin                | 2636                         | 2635.5                    | 2636.5                     | -41.97                           | -25            | -16.97      | Complies |
|                            | + 12.5 MHz bin                | 2637                         | 2636.5                    | 2637.5                     | -42.06                           | -25            | -17.06      | Complies |
|                            | + 13.5 MHz bin                | 2638                         | 2637.5                    | 2638.5                     | -42.07                           | -25            | -17.07      | Complies |
|                            | + 14.5 MHz bin                | 2639                         | 2638.5                    | 2639.5                     | -42.04                           | -25            | -17.04      | Complies |
|                            | + 15.5 MHz bin                | 2640                         | 2639.5                    | 2640.5                     | -42.02                           | -25            | -17.02      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2626.75                    |                                  | 11/18/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 5.5                        |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2608                         | 2607.5                    | 2608.5                     | -42.17                           | -25            | -17.17      | Complies |
|                            | - 14.5 MHz bin                | 2609                         | 2608.5                    | 2609.5                     | -42.12                           | -25            | -17.12      | Complies |
|                            | - 13.5 MHz bin                | 2610                         | 2609.5                    | 2610.5                     | -42.12                           | -25            | -17.12      | Complies |
|                            | - 12.5 MHz bin                | 2611                         | 2610.5                    | 2611.5                     | -42.16                           | -25            | -17.16      | Complies |
|                            | - 11.5 MHz bin                | 2612                         | 2611.5                    | 2612.5                     | -42.11                           | -25            | -17.11      | Complies |
|                            | - 10.5 MHz bin                | 2613                         | 2612.5                    | 2613.5                     | -42                              | -25            | -17         | Complies |
|                            | - 9.5 MHz bin                 | 2614                         | 2613.5                    | 2614.5                     | -41.78                           | -25            | -16.78      | Complies |
|                            | - 8.5 MHz bin                 | 2615                         | 2614.5                    | 2615.5                     | -41.32                           | -25            | -16.32      | Complies |
|                            | - 7.5 MHz bin                 | 2616                         | 2615.5                    | 2616.5                     | -40.7                            | -25            | -15.7       | Complies |
|                            | - 6.5 MHz bin                 | 2617                         | 2616.5                    | 2617.5                     | -40.1                            | -25            | -15.1       | Complies |
|                            | - 5.5 MHz bin                 | 2618                         | 2617.5                    | 2618.5                     | -39.08                           | -25            | -14.08      | Complies |
|                            | - 6 MHz bin                   | 2618.5                       | 2618                      | 2619                       | -38.62                           | -13            | -25.62      | Complies |
|                            | - 5 MHz bin                   | 2619.5                       | 2619                      | 2620                       | -36.9                            | -13            | -23.9       | Complies |
|                            | - 4 MHz bin                   | 2620.5                       | 2620                      | 2621                       | -33.73                           | -13            | -20.73      | Complies |
|                            | - 3 MHz bin                   | 2621.5                       | 2621                      | 2622                       | -30.72                           | -13            | -17.72      | Complies |
| 56                         | - 2 MHz bin                   | 2622.5                       | 2622                      | 2623                       | -15.53                           | -13            | -2.53       | Complies |
|                            | - 1 MHz bin                   | 2623.5                       | 2623                      | 2624                       | -28                              | -13            | -15         | Complies |
|                            |                               |                              |                           |                            | -23.81                           | -13            | -10.81      | Complies |
| 56                         | + 1 MHz bin                   | 2630                         | 2629.5                    | 2630.5                     | -25.83                           | -13            | -12.83      | Complies |
|                            | + 2 MHz bin                   | 2631                         | 2630.5                    | 2631.5                     | -30.21                           | -13            | -17.21      | Complies |
| 1000                       | + 2 MHz bin                   | 2631                         | 2630.5                    | 2631.5                     | -15.09                           | -13            | -2.09       | Complies |
|                            | + 3 MHz bin                   | 2632                         | 2631.5                    | 2632.5                     | -32.35                           | -13            | -19.35      | Complies |
|                            | + 4 MHz bin                   | 2633                         | 2632.5                    | 2633.5                     | -34.71                           | -13            | -21.71      | Complies |
|                            | + 5 MHz bin                   | 2634                         | 2633.5                    | 2634.5                     | -36.19                           | -13            | -23.19      | Complies |
|                            | + 6 MHz bin                   | 2635                         | 2634.5                    | 2635.5                     | -37.53                           | -13            | -24.53      | Complies |
|                            | + 5.5 MHz bin                 | 2635.5                       | 2635                      | 2636                       | -38.08                           | -25            | -13.08      | Complies |
|                            | + 6.5 MHz bin                 | 2636.5                       | 2636                      | 2637                       | -39.33                           | -25            | -14.33      | Complies |
|                            | + 7.5 MHz bin                 | 2637.5                       | 2637                      | 2638                       | -40.15                           | -25            | -15.15      | Complies |
|                            | + 8.5 MHz bin                 | 2638.5                       | 2638                      | 2639                       | -40.88                           | -25            | -15.88      | Complies |
|                            | + 9.5 MHz bin                 | 2639.5                       | 2639                      | 2640                       | -41.48                           | -25            | -16.48      | Complies |
|                            | + 10.5 MHz bin                | 2640.5                       | 2640                      | 2641                       | -41.76                           | -25            | -16.76      | Complies |
|                            | + 11.5 MHz bin                | 2641.5                       | 2641                      | 2642                       | -41.93                           | -25            | -16.93      | Complies |
|                            | + 12.5 MHz bin                | 2642.5                       | 2642                      | 2643                       | -42.02                           | -25            | -17.02      | Complies |
|                            | + 13.5 MHz bin                | 2643.5                       | 2643                      | 2644                       | -42.05                           | -25            | -17.05      | Complies |
|                            | + 14.5 MHz bin                | 2644.5                       | 2644                      | 2645                       | -42.01                           | -25            | -17.01      | Complies |
|                            | + 15.5 MHz bin                | 2645.5                       | 2645                      | 2646                       | -41.99                           | -25            | -16.99      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2626.75                    |                                  | 11/18/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 5.5                        |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2608                         | 2607.5                    | 2608.5                     | -42.15                           | -25            | -17.15      | Complies |
|                            | - 14.5 MHz bin                | 2609                         | 2608.5                    | 2609.5                     | -42.13                           | -25            | -17.13      | Complies |
|                            | - 13.5 MHz bin                | 2610                         | 2609.5                    | 2610.5                     | -42.13                           | -25            | -17.13      | Complies |
|                            | - 12.5 MHz bin                | 2611                         | 2610.5                    | 2611.5                     | -42.14                           | -25            | -17.14      | Complies |
|                            | - 11.5 MHz bin                | 2612                         | 2611.5                    | 2612.5                     | -42.1                            | -25            | -17.1       | Complies |
|                            | - 10.5 MHz bin                | 2613                         | 2612.5                    | 2613.5                     | -42                              | -25            | -17         | Complies |
|                            | - 9.5 MHz bin                 | 2614                         | 2613.5                    | 2614.5                     | -41.76                           | -25            | -16.76      | Complies |
|                            | - 8.5 MHz bin                 | 2615                         | 2614.5                    | 2615.5                     | -41.27                           | -25            | -16.27      | Complies |
|                            | - 7.5 MHz bin                 | 2616                         | 2615.5                    | 2616.5                     | -40.71                           | -25            | -15.71      | Complies |
|                            | - 6.5 MHz bin                 | 2617                         | 2616.5                    | 2617.5                     | -40.04                           | -25            | -15.04      | Complies |
|                            | - 5.5 MHz bin                 | 2618                         | 2617.5                    | 2618.5                     | -39.14                           | -25            | -14.14      | Complies |
|                            | - 6 MHz bin                   | 2618.5                       | 2618                      | 2619                       | -38.65                           | -13            | -25.65      | Complies |
|                            | - 5 MHz bin                   | 2619.5                       | 2619                      | 2620                       | -36.95                           | -13            | -23.95      | Complies |
|                            | - 4 MHz bin                   | 2620.5                       | 2620                      | 2621                       | -33.76                           | -13            | -20.76      | Complies |
|                            | - 3 MHz bin                   | 2621.5                       | 2621                      | 2622                       | -30.74                           | -13            | -17.74      | Complies |
| 56                         | - 2 MHz bin                   | 2622.5                       | 2622                      | 2623                       | -15.56                           | -13            | -2.56       | Complies |
|                            | - 1 MHz bin                   | 2623.5                       | 2623                      | 2624                       | -28.12                           | -13            | -15.12      | Complies |
|                            |                               |                              |                           |                            | -23.88                           | -13            | -10.88      | Complies |
| 56                         | + 1 MHz bin                   | 2630                         | 2629.5                    | 2630.5                     | -25.82                           | -13            | -12.82      | Complies |
|                            | + 2 MHz bin                   | 2631                         | 2630.5                    | 2631.5                     | -30.32                           | -13            | -17.32      | Complies |
| 1000                       | + 2 MHz bin                   | 2631                         | 2630.5                    | 2631.5                     | -15.08                           | -13            | -2.08       | Complies |
|                            | + 3 MHz bin                   | 2632                         | 2631.5                    | 2632.5                     | -32.48                           | -13            | -19.48      | Complies |
|                            | + 4 MHz bin                   | 2633                         | 2632.5                    | 2633.5                     | -34.6                            | -13            | -21.6       | Complies |
|                            | + 5 MHz bin                   | 2634                         | 2633.5                    | 2634.5                     | -36.4                            | -13            | -23.4       | Complies |
|                            | + 6 MHz bin                   | 2635                         | 2634.5                    | 2635.5                     | -37.66                           | -13            | -24.66      | Complies |
|                            | + 5.5 MHz bin                 | 2635.5                       | 2635                      | 2636                       | -38.21                           | -25            | -13.21      | Complies |
|                            | + 6.5 MHz bin                 | 2636.5                       | 2636                      | 2637                       | -39.27                           | -25            | -14.27      | Complies |
|                            | + 7.5 MHz bin                 | 2637.5                       | 2637                      | 2638                       | -40.08                           | -25            | -15.08      | Complies |
|                            | + 8.5 MHz bin                 | 2638.5                       | 2638                      | 2639                       | -40.92                           | -25            | -15.92      | Complies |
|                            | + 9.5 MHz bin                 | 2639.5                       | 2639                      | 2640                       | -41.44                           | -25            | -16.44      | Complies |
|                            | + 10.5 MHz bin                | 2640.5                       | 2640                      | 2641                       | -41.77                           | -25            | -16.77      | Complies |
|                            | + 11.5 MHz bin                | 2641.5                       | 2641                      | 2642                       | -41.94                           | -25            | -16.94      | Complies |
|                            | + 12.5 MHz bin                | 2642.5                       | 2642                      | 2643                       | -42.01                           | -25            | -17.01      | Complies |
|                            | + 13.5 MHz bin                | 2643.5                       | 2643                      | 2644                       | -42.04                           | -25            | -17.04      | Complies |
|                            | + 14.5 MHz bin                | 2644.5                       | 2644                      | 2645                       | -42.02                           | -25            | -17.02      | Complies |
|                            | + 15.5 MHz bin                | 2645.5                       | 2645                      | 2646                       | -41.99                           | -25            | -16.99      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              |                           | 2626.75                    |                                  | 11/18/2004     |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              |                           | 5.5                        |                                  | 13.8 Vdc       |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2608                         | 2607.5                    | 2608.5                     | -42.17                           | -25            | -17.17      | Complies |
|                            | - 14.5 MHz bin                | 2609                         | 2608.5                    | 2609.5                     | -42.13                           | -25            | -17.13      | Complies |
|                            | - 13.5 MHz bin                | 2610                         | 2609.5                    | 2610.5                     | -42.13                           | -25            | -17.13      | Complies |
|                            | - 12.5 MHz bin                | 2611                         | 2610.5                    | 2611.5                     | -42.14                           | -25            | -17.14      | Complies |
|                            | - 11.5 MHz bin                | 2612                         | 2611.5                    | 2612.5                     | -42.11                           | -25            | -17.11      | Complies |
|                            | - 10.5 MHz bin                | 2613                         | 2612.5                    | 2613.5                     | -42.02                           | -25            | -17.02      | Complies |
|                            | - 9.5 MHz bin                 | 2614                         | 2613.5                    | 2614.5                     | -41.8                            | -25            | -16.8       | Complies |
|                            | - 8.5 MHz bin                 | 2615                         | 2614.5                    | 2615.5                     | -41.36                           | -25            | -16.36      | Complies |
|                            | - 7.5 MHz bin                 | 2616                         | 2615.5                    | 2616.5                     | -40.78                           | -25            | -15.78      | Complies |
|                            | - 6.5 MHz bin                 | 2617                         | 2616.5                    | 2617.5                     | -40.05                           | -25            | -15.05      | Complies |
|                            | - 5.5 MHz bin                 | 2618                         | 2617.5                    | 2618.5                     | -39.14                           | -25            | -14.14      | Complies |
|                            | - 6 MHz bin                   | 2618.5                       | 2618                      | 2619                       | -38.65                           | -13            | -25.65      | Complies |
|                            | - 5 MHz bin                   | 2619.5                       | 2619                      | 2620                       | -37.01                           | -13            | -24.01      | Complies |
|                            | - 4 MHz bin                   | 2620.5                       | 2620                      | 2621                       | -33.89                           | -13            | -20.89      | Complies |
|                            | - 3 MHz bin                   | 2621.5                       | 2621                      | 2622                       | -30.91                           | -13            | -17.91      | Complies |
| 56                         | - 2 MHz bin                   | 2622.5                       | 2622                      | 2623                       | -15.56                           | -13            | -2.56       | Complies |
|                            | - 1 MHz bin                   | 2623.5                       | 2623                      | 2624                       | -27.98                           | -13            | -14.98      | Complies |
|                            |                               |                              |                           |                            | -23.81                           | -13            | -10.81      | Complies |
| 56                         | + 1 MHz bin                   | 2630                         | 2629.5                    | 2630.5                     | -25.76                           | -13            | -12.76      | Complies |
|                            | + 2 MHz bin                   | 2631                         | 2630.5                    | 2631.5                     | -30.14                           | -13            | -17.14      | Complies |
| 1000                       | + 2 MHz bin                   | 2631                         | 2630.5                    | 2631.5                     | -15.09                           | -13            | -2.09       | Complies |
|                            | + 3 MHz bin                   | 2632                         | 2631.5                    | 2632.5                     | -32.34                           | -13            | -19.34      | Complies |
|                            | + 4 MHz bin                   | 2633                         | 2632.5                    | 2633.5                     | -34.53                           | -13            | -21.53      | Complies |
|                            | + 5 MHz bin                   | 2634                         | 2633.5                    | 2634.5                     | -36.28                           | -13            | -23.28      | Complies |
|                            | + 6 MHz bin                   | 2635                         | 2634.5                    | 2635.5                     | -37.55                           | -13            | -24.55      | Complies |
|                            | + 5.5 MHz bin                 | 2635.5                       | 2635                      | 2636                       | -38.19                           | -25            | -13.19      | Complies |
|                            | + 6.5 MHz bin                 | 2636.5                       | 2636                      | 2637                       | -39.21                           | -25            | -14.21      | Complies |
|                            | + 7.5 MHz bin                 | 2637.5                       | 2637                      | 2638                       | -40.11                           | -25            | -15.11      | Complies |
|                            | + 8.5 MHz bin                 | 2638.5                       | 2638                      | 2639                       | -40.84                           | -25            | -15.84      | Complies |
|                            | + 9.5 MHz bin                 | 2639.5                       | 2639                      | 2640                       | -41.43                           | -25            | -16.43      | Complies |
|                            | + 10.5 MHz bin                | 2640.5                       | 2640                      | 2641                       | -41.76                           | -25            | -16.76      | Complies |
|                            | + 11.5 MHz bin                | 2641.5                       | 2641                      | 2642                       | -41.92                           | -25            | -16.92      | Complies |
|                            | + 12.5 MHz bin                | 2642.5                       | 2642                      | 2643                       | -42.01                           | -25            | -17.01      | Complies |
|                            | + 13.5 MHz bin                | 2643.5                       | 2643                      | 2644                       | -42.06                           | -25            | -17.06      | Complies |
|                            | + 14.5 MHz bin                | 2644.5                       | 2644                      | 2645                       | -42.01                           | -25            | -17.01      | Complies |
|                            | + 15.5 MHz bin                | 2645.5                       | 2645                      | 2646                       | -42                              | -25            | -17         | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              | 2687.25                   |                            | 11/18/2004                       |                |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              | 5.5                       |                            | 13.8 Vdc                         |                |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2668.5                       | 2668                      | 2669                       | -41.92                           | -25            | -16.92      | Complies |
|                            | - 14.5 MHz bin                | 2669.5                       | 2669                      | 2670                       | -41.85                           | -25            | -16.85      | Complies |
|                            | - 13.5 MHz bin                | 2670.5                       | 2670                      | 2671                       | -41.76                           | -25            | -16.76      | Complies |
|                            | - 12.5 MHz bin                | 2671.5                       | 2671                      | 2672                       | -41.55                           | -25            | -16.55      | Complies |
|                            | - 11.5 MHz bin                | 2672.5                       | 2672                      | 2673                       | -41.23                           | -25            | -16.23      | Complies |
|                            | - 10.5 MHz bin                | 2673.5                       | 2673                      | 2674                       | -40.69                           | -25            | -15.69      | Complies |
|                            | - 9.5 MHz bin                 | 2674.5                       | 2674                      | 2675                       | -39.91                           | -25            | -14.91      | Complies |
|                            | - 8.5 MHz bin                 | 2675.5                       | 2675                      | 2676                       | -38.71                           | -25            | -13.71      | Complies |
|                            | - 7.5 MHz bin                 | 2676.5                       | 2676                      | 2677                       | -36.53                           | -25            | -11.53      | Complies |
|                            | - 6.5 MHz bin                 | 2677.5                       | 2677                      | 2678                       | -33.34                           | -25            | -8.34       | Complies |
|                            | - 5.5 MHz bin                 | 2678.5                       | 2678                      | 2679                       | -30.03                           | -25            | -5.03       | Complies |
|                            | - 6 MHz bin                   | 2679                         | 2678.5                    | 2679.5                     | -28.55                           | -13            | -15.55      | Complies |
|                            | - 5 MHz bin                   | 2680                         | 2679.5                    | 2680.5                     | -25.51                           | -13            | -12.51      | Complies |
|                            | - 4 MHz bin                   | 2681                         | 2680.5                    | 2681.5                     | -22.11                           | -13            | -9.11       | Complies |
|                            | - 3 MHz bin                   | 2682                         | 2681.5                    | 2682.5                     | -19.38                           | -13            | -6.38       | Complies |
| 56                         | - 2 MHz bin                   | 2683                         | 2682.5                    | 2683.5                     | -13.4                            | -13            | -0.4        | Complies |
|                            | - 2 MHz bin                   | 2683                         | 2682.5                    | 2683.5                     | -16.69                           | -13            | -3.69       | Complies |
|                            | - 1 MHz bin                   | 2684                         | 2683.5                    | 2684.5                     | -15.07                           | -13            | -2.07       | Complies |
| 56                         | + 1 MHz bin                   | 2690.5                       | 2690                      | 2691                       | -14.88                           | -13            | -1.88       | Complies |
|                            | + 2 MHz bin                   | 2691.5                       | 2691                      | 2692                       | -16.6                            | -13            | -3.6        | Complies |
|                            | + 2 MHz bin                   | 2691.5                       | 2691                      | 2692                       | -13.3                            | -13            | -0.3        | Complies |
| 1000                       | + 3 MHz bin                   | 2692.5                       | 2692                      | 2693                       | -19.31                           | -13            | -6.31       | Complies |
|                            | + 4 MHz bin                   | 2693.5                       | 2693                      | 2694                       | -22.06                           | -13            | -9.06       | Complies |
|                            | + 5 MHz bin                   | 2694.5                       | 2694                      | 2695                       | -25.42                           | -13            | -12.42      | Complies |
|                            | + 6 MHz bin                   | 2695.5                       | 2695                      | 2696                       | -28.46                           | -13            | -15.46      | Complies |
|                            | + 5.5 MHz bin                 | 2696                         | 2695.5                    | 2696.5                     | -29.93                           | -25            | -4.93       | Complies |
|                            | + 6.5 MHz bin                 | 2697                         | 2696.5                    | 2697.5                     | -33.22                           | -25            | -8.22       | Complies |
|                            | + 7.5 MHz bin                 | 2698                         | 2697.5                    | 2698.5                     | -36.39                           | -25            | -11.39      | Complies |
|                            | + 8.5 MHz bin                 | 2699                         | 2698.5                    | 2699.5                     | -38.64                           | -25            | -13.64      | Complies |
|                            | + 9.5 MHz bin                 | 2700                         | 2699.5                    | 2700.5                     | -39.91                           | -25            | -14.91      | Complies |
|                            | + 10.5 MHz bin                | 2701                         | 2700.5                    | 2701.5                     | -40.73                           | -25            | -15.73      | Complies |
|                            | + 11.5 MHz bin                | 2702                         | 2701.5                    | 2702.5                     | -41.3                            | -25            | -16.3       | Complies |
|                            | + 12.5 MHz bin                | 2703                         | 2702.5                    | 2703.5                     | -41.67                           | -25            | -16.67      | Complies |
|                            | + 13.5 MHz bin                | 2704                         | 2703.5                    | 2704.5                     | -41.87                           | -25            | -16.87      | Complies |
|                            | + 14.5 MHz bin                | 2705                         | 2704.5                    | 2705.5                     | -41.97                           | -25            | -16.97      | Complies |
|                            | + 15.5 MHz bin                | 2706                         | 2705.5                    | 2706.5                     | -42.05                           | -25            | -17.05      | Complies |

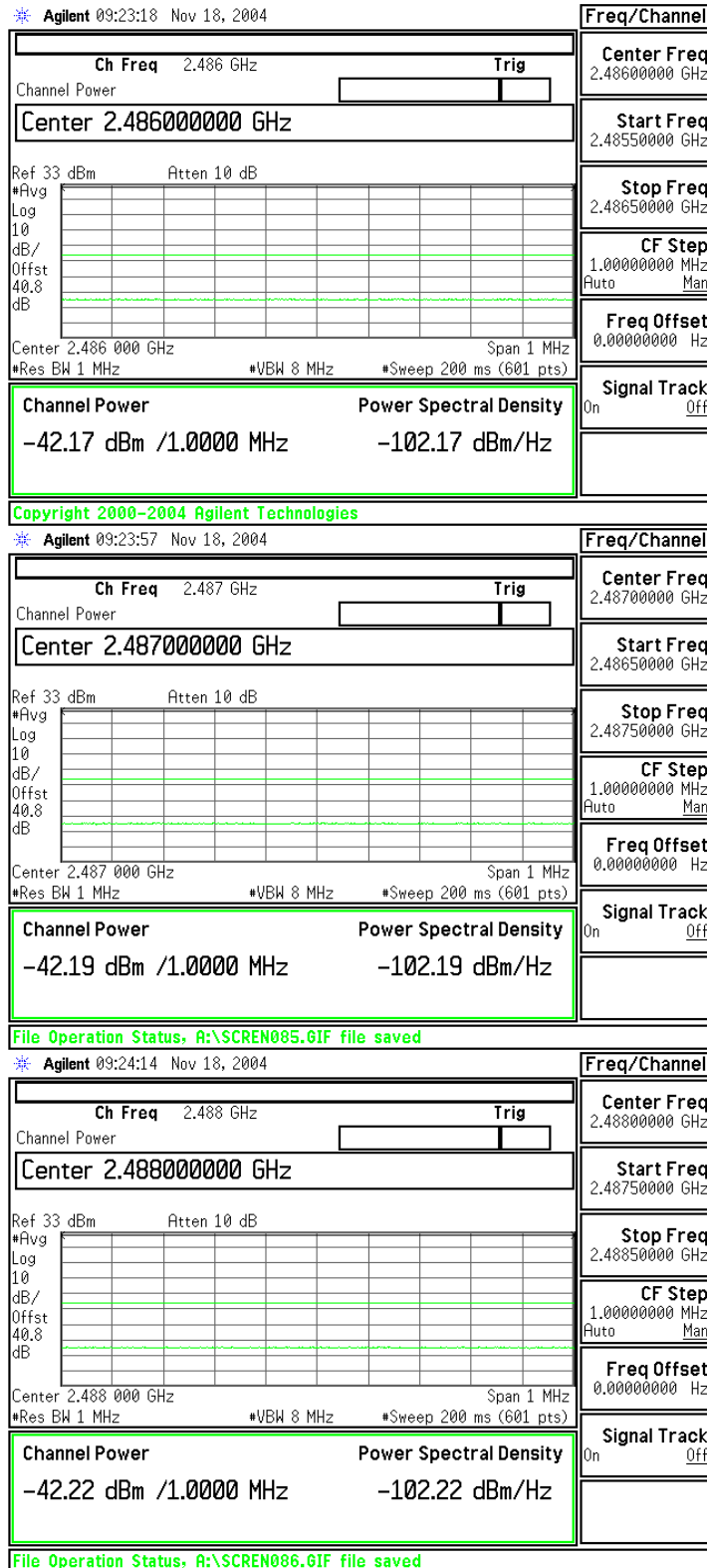
## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              | 2687.25                   |                            | 11/18/2004                       |                |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              | 5.5                       |                            | 13.8 Vdc                         |                |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2668.5                       | 2668                      | 2669                       | -41.7                            | -25            | -16.7       | Complies |
|                            | - 14.5 MHz bin                | 2669.5                       | 2669                      | 2670                       | -41.61                           | -25            | -16.61      | Complies |
|                            | - 13.5 MHz bin                | 2670.5                       | 2670                      | 2671                       | -41.46                           | -25            | -16.46      | Complies |
|                            | - 12.5 MHz bin                | 2671.5                       | 2671                      | 2672                       | -41.12                           | -25            | -16.12      | Complies |
|                            | - 11.5 MHz bin                | 2672.5                       | 2672                      | 2673                       | -40.66                           | -25            | -15.66      | Complies |
|                            | - 10.5 MHz bin                | 2673.5                       | 2673                      | 2674                       | -39.99                           | -25            | -14.99      | Complies |
|                            | - 9.5 MHz bin                 | 2674.5                       | 2674                      | 2675                       | -39.03                           | -25            | -14.03      | Complies |
|                            | - 8.5 MHz bin                 | 2675.5                       | 2675                      | 2676                       | -37.74                           | -25            | -12.74      | Complies |
|                            | - 7.5 MHz bin                 | 2676.5                       | 2676                      | 2677                       | -35.34                           | -25            | -10.34      | Complies |
|                            | - 6.5 MHz bin                 | 2677.5                       | 2677                      | 2678                       | -32.9                            | -25            | -7.9        | Complies |
|                            | - 5.5 MHz bin                 | 2678.5                       | 2678                      | 2679                       | -29.62                           | -25            | -4.62       | Complies |
|                            | - 6 MHz bin                   | 2679                         | 2678.5                    | 2679.5                     | -28.19                           | -13            | -15.19      | Complies |
|                            | - 5 MHz bin                   | 2680                         | 2679.5                    | 2680.5                     | -25.16                           | -13            | -12.16      | Complies |
|                            | - 4 MHz bin                   | 2681                         | 2680.5                    | 2681.5                     | -21.74                           | -13            | -8.74       | Complies |
|                            | - 3 MHz bin                   | 2682                         | 2681.5                    | 2682.5                     | -19.06                           | -13            | -6.06       | Complies |
|                            | - 2 MHz bin                   | 2683                         | 2682.5                    | 2683.5                     | -13.3                            | -13            | -0.3        | Complies |
| 56                         | - 2 MHz bin                   | 2683                         | 2682.5                    | 2683.5                     | -16.38                           | -13            | -3.38       | Complies |
|                            | - 1 MHz bin                   | 2684                         | 2683.5                    | 2684.5                     | -14.67                           | -13            | -1.67       | Complies |
| 56                         | + 1 MHz bin                   | 2690.5                       | 2690                      | 2691                       | -16.63                           | -13            | -3.63       | Complies |
|                            | + 2 MHz bin                   | 2691.5                       | 2691                      | 2692                       | -16.22                           | -13            | -3.22       | Complies |
| 1000                       | + 2 MHz bin                   | 2691.5                       | 2691                      | 2692                       | -13.14                           | -13            | -0.14       | Complies |
|                            | + 3 MHz bin                   | 2692.5                       | 2692                      | 2693                       | -18.99                           | -13            | -5.99       | Complies |
|                            | + 4 MHz bin                   | 2693.5                       | 2693                      | 2694                       | -21.75                           | -13            | -8.75       | Complies |
|                            | + 5 MHz bin                   | 2694.5                       | 2694                      | 2695                       | -25.21                           | -13            | -12.21      | Complies |
|                            | + 6 MHz bin                   | 2695.5                       | 2695                      | 2696                       | -28.31                           | -13            | -15.31      | Complies |
|                            | + 5.5 MHz bin                 | 2696                         | 2695.5                    | 2696.5                     | -29.76                           | -25            | -4.76       | Complies |
|                            | + 6.5 MHz bin                 | 2697                         | 2696.5                    | 2697.5                     | -33.05                           | -25            | -8.05       | Complies |
|                            | + 7.5 MHz bin                 | 2698                         | 2697.5                    | 2698.5                     | -36.29                           | -25            | -11.29      | Complies |
|                            | + 8.5 MHz bin                 | 2699                         | 2698.5                    | 2699.5                     | -38.55                           | -25            | -13.55      | Complies |
|                            | + 9.5 MHz bin                 | 2700                         | 2699.5                    | 2700.5                     | -39.86                           | -25            | -14.86      | Complies |
|                            | + 10.5 MHz bin                | 2701                         | 2700.5                    | 2701.5                     | -40.68                           | -25            | -15.68      | Complies |
|                            | + 11.5 MHz bin                | 2702                         | 2701.5                    | 2702.5                     | -41.27                           | -25            | -16.27      | Complies |
|                            | + 12.5 MHz bin                | 2703                         | 2702.5                    | 2703.5                     | -41.65                           | -25            | -16.65      | Complies |
|                            | + 13.5 MHz bin                | 2704                         | 2703.5                    | 2704.5                     | -41.87                           | -25            | -16.87      | Complies |
|                            | + 14.5 MHz bin                | 2705                         | 2704.5                    | 2705.5                     | -41.98                           | -25            | -16.98      | Complies |
|                            | + 15.5 MHz bin                | 2706                         | 2705.5                    | 2706.5                     | -42.04                           | -25            | -17.04      | Complies |

## Modulation Characteristics

|                            | Channel Center Freq (MHz)     |                              | 2687.25                   |                            | 11/18/2004                       |                |             |          |
|----------------------------|-------------------------------|------------------------------|---------------------------|----------------------------|----------------------------------|----------------|-------------|----------|
|                            | Channel BW (MHz)              |                              | 5.5                       |                            | 13.8 Vdc                         |                |             |          |
|                            | 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                       | - 15.5 MHz bin                | 2668.5                       | 2668                      | 2669                       | -41.89                           | -25            | -16.89      | Complies |
|                            | - 14.5 MHz bin                | 2669.5                       | 2669                      | 2670                       | -41.85                           | -25            | -16.85      | Complies |
|                            | - 13.5 MHz bin                | 2670.5                       | 2670                      | 2671                       | -41.76                           | -25            | -16.76      | Complies |
|                            | - 12.5 MHz bin                | 2671.5                       | 2671                      | 2672                       | -41.56                           | -25            | -16.56      | Complies |
|                            | - 11.5 MHz bin                | 2672.5                       | 2672                      | 2673                       | -41.25                           | -25            | -16.25      | Complies |
|                            | - 10.5 MHz bin                | 2673.5                       | 2673                      | 2674                       | -40.73                           | -25            | -15.73      | Complies |
|                            | - 9.5 MHz bin                 | 2674.5                       | 2674                      | 2675                       | -39.96                           | -25            | -14.96      | Complies |
|                            | - 8.5 MHz bin                 | 2675.5                       | 2675                      | 2676                       | -38.81                           | -25            | -13.81      | Complies |
|                            | - 7.5 MHz bin                 | 2676.5                       | 2676                      | 2677                       | -36.62                           | -25            | -11.62      | Complies |
|                            | - 6.5 MHz bin                 | 2677.5                       | 2677                      | 2678                       | -33.41                           | -25            | -8.41       | Complies |
|                            | - 5.5 MHz bin                 | 2678.5                       | 2678                      | 2679                       | -30.12                           | -25            | -5.12       | Complies |
|                            | - 6 MHz bin                   | 2679                         | 2678.5                    | 2679.5                     | -28.7                            | -13            | -15.7       | Complies |
|                            | - 5 MHz bin                   | 2680                         | 2679.5                    | 2680.5                     | -25.69                           | -13            | -12.69      | Complies |
|                            | - 4 MHz bin                   | 2681                         | 2680.5                    | 2681.5                     | -22.29                           | -13            | -9.29       | Complies |
|                            | - 3 MHz bin                   | 2682                         | 2681.5                    | 2682.5                     | -19.59                           | -13            | -6.59       | Complies |
|                            | - 2 MHz bin                   | 2683                         | 2682.5                    | 2683.5                     | -13.48                           | -13            | -0.48       | Complies |
| 56                         | - 2 MHz bin                   | 2683                         | 2682.5                    | 2683.5                     | -16.71                           | -13            | -3.71       | Complies |
|                            | - 1 MHz bin                   | 2684                         | 2683.5                    | 2684.5                     | -14.99                           | -13            | -1.99       | Complies |
| 56                         | + 1 MHz bin                   | 2690.5                       | 2690                      | 2691                       | -14.88                           | -13            | -1.88       | Complies |
|                            | + 2 MHz bin                   | 2691.5                       | 2691                      | 2692                       | -16.61                           | -13            | -3.61       | Complies |
| 1000                       | + 2 MHz bin                   | 2691.5                       | 2691                      | 2692                       | -13.31                           | -13            | -0.31       | Complies |
|                            | + 3 MHz bin                   | 2692.5                       | 2692                      | 2693                       | -19.37                           | -13            | -6.37       | Complies |
|                            | + 4 MHz bin                   | 2693.5                       | 2693                      | 2694                       | -22.11                           | -13            | -9.11       | Complies |
|                            | + 5 MHz bin                   | 2694.5                       | 2694                      | 2695                       | -25.54                           | -13            | -12.54      | Complies |
|                            | + 6 MHz bin                   | 2695.5                       | 2695                      | 2696                       | -28.57                           | -13            | -15.57      | Complies |
|                            | + 5.5 MHz bin                 | 2696                         | 2695.5                    | 2696.5                     | -30.05                           | -25            | -5.05       | Complies |
|                            | + 6.5 MHz bin                 | 2697                         | 2696.5                    | 2697.5                     | -33.32                           | -25            | -8.32       | Complies |
|                            | + 7.5 MHz bin                 | 2698                         | 2697.5                    | 2698.5                     | -36.47                           | -25            | -11.47      | Complies |
|                            | + 8.5 MHz bin                 | 2699                         | 2698.5                    | 2699.5                     | -38.69                           | -25            | -13.69      | Complies |
|                            | + 9.5 MHz bin                 | 2700                         | 2699.5                    | 2700.5                     | -39.92                           | -25            | -14.92      | Complies |
|                            | + 10.5 MHz bin                | 2701                         | 2700.5                    | 2701.5                     | -40.76                           | -25            | -15.76      | Complies |
|                            | + 11.5 MHz bin                | 2702                         | 2701.5                    | 2702.5                     | -41.32                           | -25            | -16.32      | Complies |
|                            | + 12.5 MHz bin                | 2703                         | 2702.5                    | 2703.5                     | -41.68                           | -25            | -16.68      | Complies |
|                            | + 13.5 MHz bin                | 2704                         | 2703.5                    | 2704.5                     | -41.87                           | -25            | -16.87      | Complies |
|                            | + 14.5 MHz bin                | 2705                         | 2704.5                    | 2705.5                     | -41.97                           | -25            | -16.97      | Complies |
|                            | + 15.5 MHz bin                | 2706                         | 2705.5                    | 2706.5                     | -42.03                           | -25            | -17.03      | Complies |

## Modulation Characteristics



Emissions measurements for F=2504.75 MHz, 5.5 MHz channel, 4-QAM

## Modulation Characteristics

Agilent 09:24:32 Nov 18, 2004

|                                                                                             |  |                                                          |  |
|---------------------------------------------------------------------------------------------|--|----------------------------------------------------------|--|
| <b>Ch Freq</b> 2.489 GHz <b>Trig</b><br>Channel Power <input type="text"/>                  |  | <b>Freq/Channel</b><br><b>Center Freq</b> 2.48900000 GHz |  |
| <b>Center</b> 2.48900000 GHz                                                                |  | <b>Start Freq</b> 2.48850000 GHz                         |  |
| Ref 33 dBm Atten 10 dB<br>#Avg 10<br>Log dB/<br>Offst 40.8 dB                               |  | <b>Stop Freq</b> 2.48950000 GHz                          |  |
| Center 2.489 000 GHz Span 1 MHz<br>#Res BW 1 MHz #VBW 8 MHz #Sweep 200 ms (601 pts)         |  | <b>CF Step</b> 1.00000000 MHz<br>Auto Man                |  |
| <b>Channel Power</b> -42.21 dBm /1.0000 MHz<br><b>Power Spectral Density</b> -102.21 dBm/Hz |  | <b>Freq Offset</b> 0.00000000 Hz                         |  |
| File Operation Status: A:\SCREEN087.GIF file saved                                          |  | <b>Signal Track</b> On Off                               |  |

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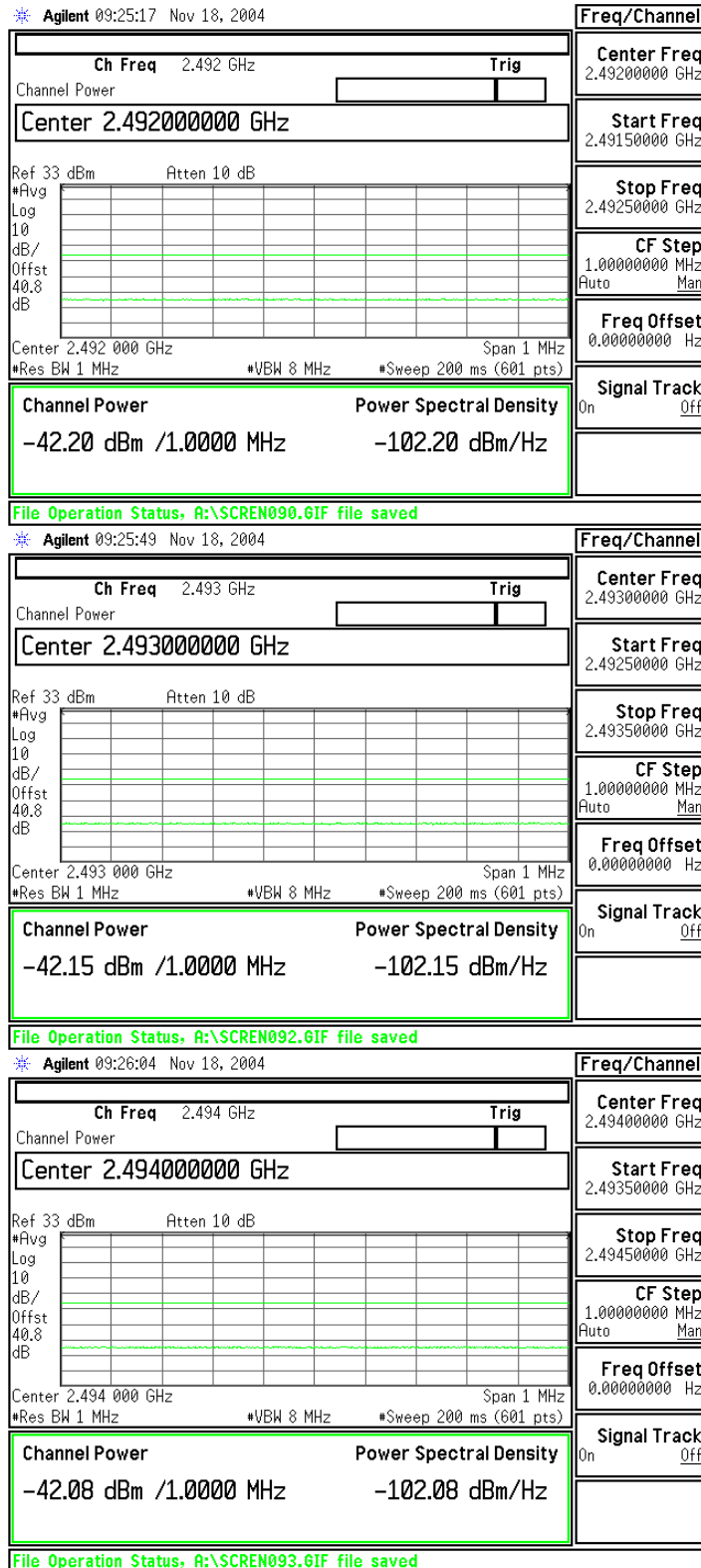
|                                                                                             |  |                                                          |  |
|---------------------------------------------------------------------------------------------|--|----------------------------------------------------------|--|
| <b>Ch Freq</b> 2.49 GHz <b>Trig</b><br>Channel Power <input type="text"/>                   |  | <b>Freq/Channel</b><br><b>Center Freq</b> 2.49000000 GHz |  |
| <b>Center</b> 2.49000000 GHz                                                                |  | <b>Start Freq</b> 2.48950000 GHz                         |  |
| Ref 33 dBm Atten 10 dB<br>#Avg 10<br>Log dB/<br>Offst 40.8 dB                               |  | <b>Stop Freq</b> 2.49050000 GHz                          |  |
| Center 2.490 000 GHz Span 1 MHz<br>#Res BW 1 MHz #VBW 8 MHz #Sweep 200 ms (601 pts)         |  | <b>CF Step</b> 1.00000000 MHz<br>Auto Man                |  |
| <b>Channel Power</b> -42.21 dBm /1.0000 MHz<br><b>Power Spectral Density</b> -102.21 dBm/Hz |  | <b>Freq Offset</b> 0.00000000 Hz                         |  |
| File Operation Status: A:\SCREEN088.GIF file saved                                          |  | <b>Signal Track</b> On Off                               |  |

Agilent 09:25:00 Nov 18, 2004

|                                                                                             |  |                                                          |  |
|---------------------------------------------------------------------------------------------|--|----------------------------------------------------------|--|
| <b>Ch Freq</b> 2.491 GHz <b>Trig</b><br>Channel Power <input type="text"/>                  |  | <b>Freq/Channel</b><br><b>Center Freq</b> 2.49100000 GHz |  |
| <b>Center</b> 2.49100000 GHz                                                                |  | <b>Start Freq</b> 2.49050000 GHz                         |  |
| Ref 33 dBm Atten 10 dB<br>#Avg 10<br>Log dB/<br>Offst 40.8 dB                               |  | <b>Stop Freq</b> 2.49150000 GHz                          |  |
| Center 2.491 000 GHz Span 1 MHz<br>#Res BW 1 MHz #VBW 8 MHz #Sweep 200 ms (601 pts)         |  | <b>CF Step</b> 1.00000000 MHz<br>Auto Man                |  |
| <b>Channel Power</b> -42.20 dBm /1.0000 MHz<br><b>Power Spectral Density</b> -102.20 dBm/Hz |  | <b>Freq Offset</b> 0.00000000 Hz                         |  |
| File Operation Status: A:\SCREEN089.GIF file saved                                          |  | <b>Signal Track</b> On Off                               |  |

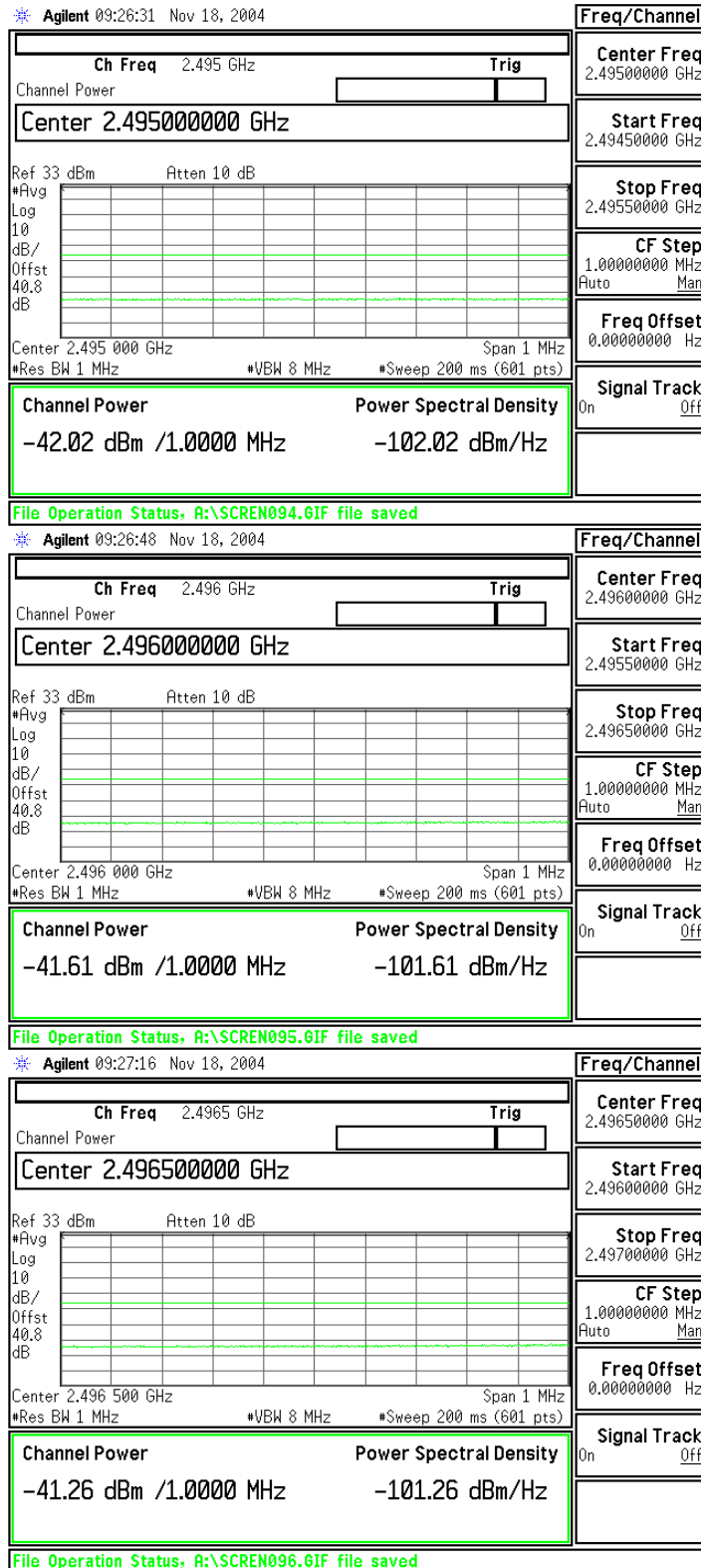
Emissions measurements for F=2504.75 MHz, 5.5 MHz channel, 4-QAM

## Modulation Characteristics



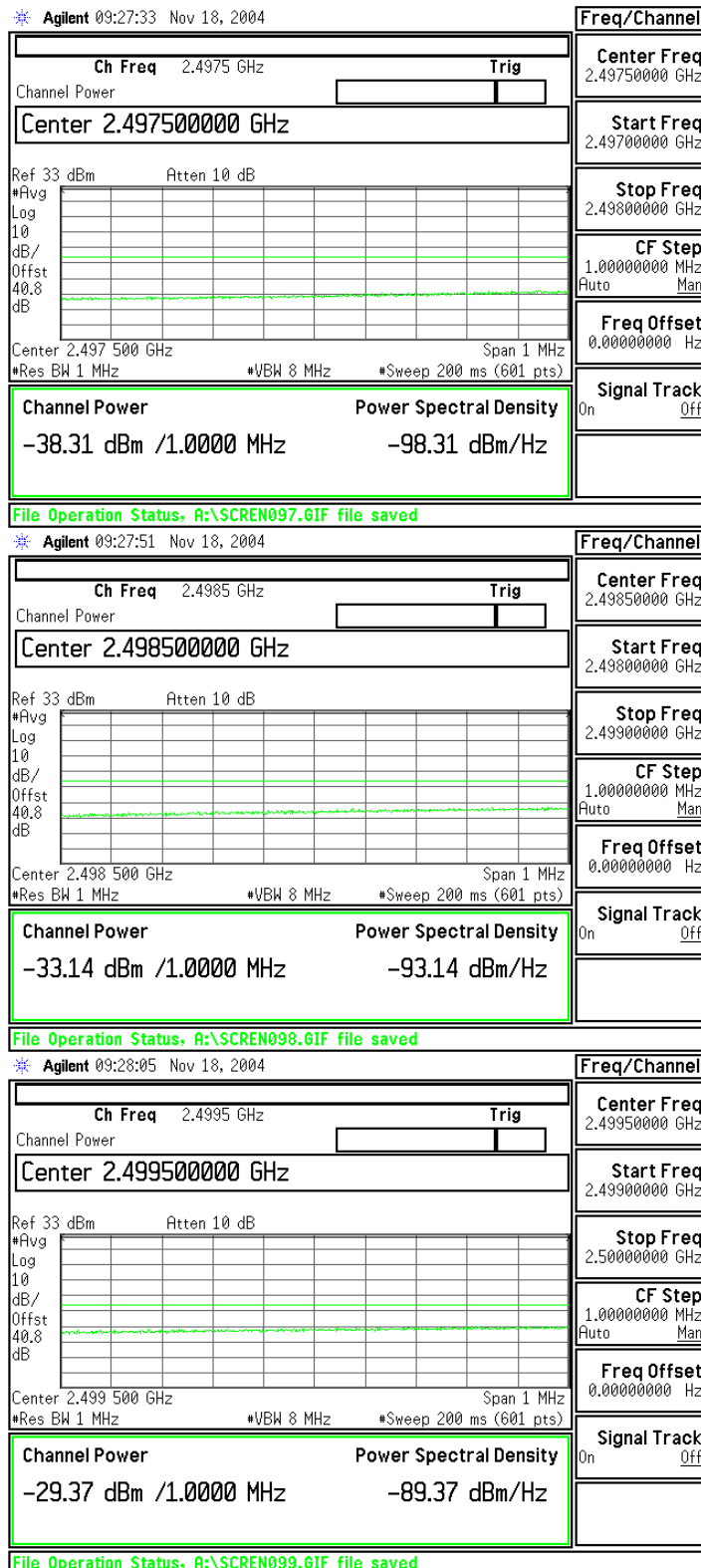
Emissions measurements for F=2504.75 MHz, 5.5 MHz channel, 4-QAM

## Modulation Characteristics



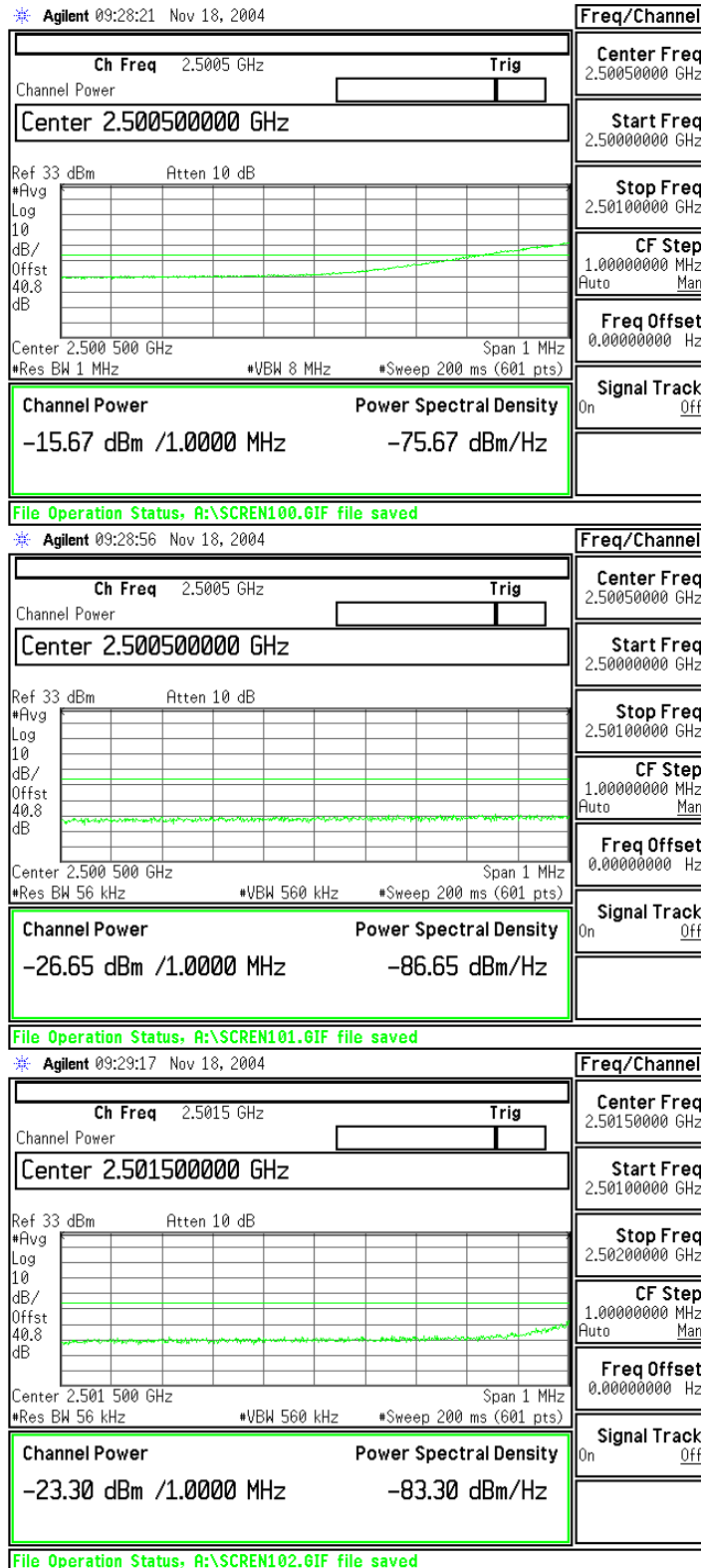
Emissions measurements for F=2504.75 MHz, 5.5 MHz channel, 4-QAM

## Modulation Characteristics



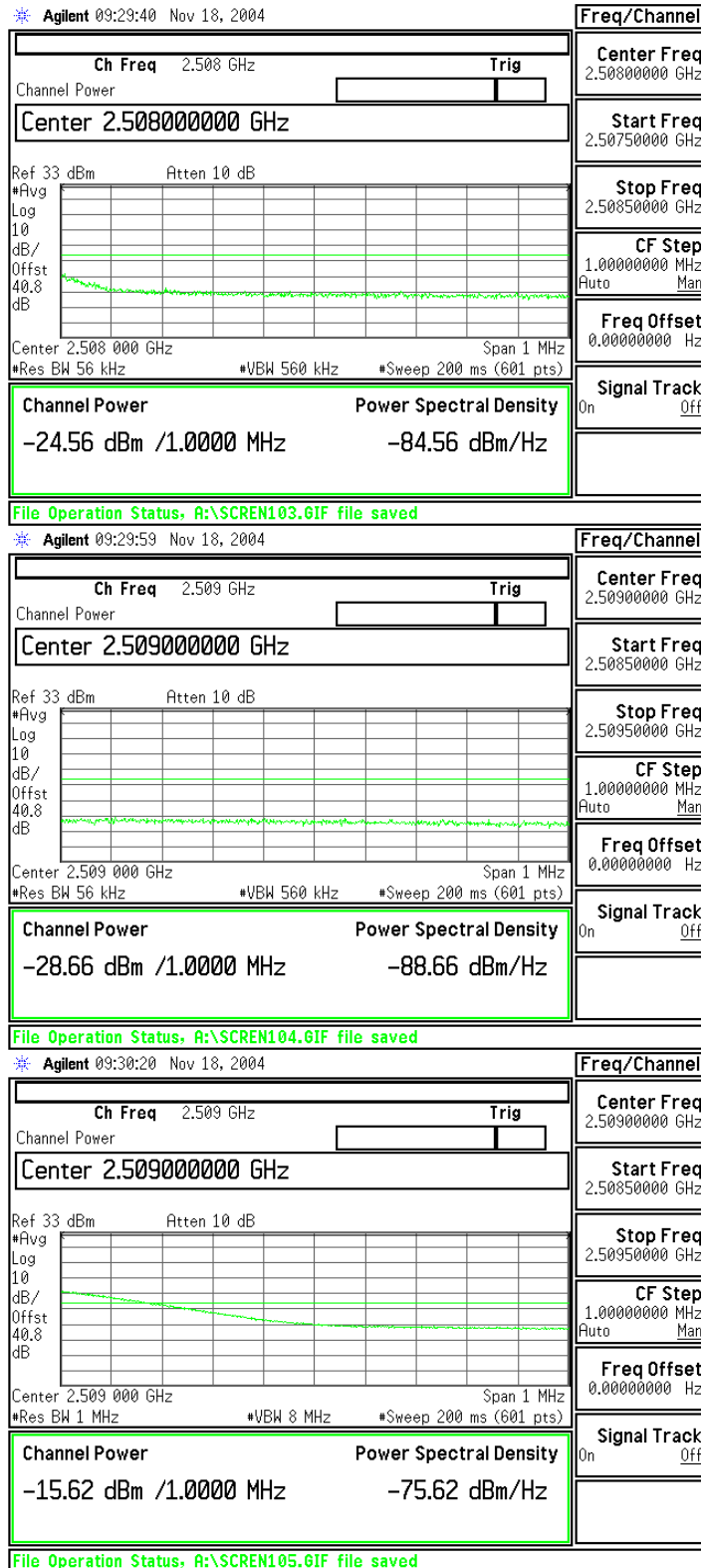
Emissions measurements for F=2504.75 MHz, 5.5 MHz channel, 4-QAM

## Modulation Characteristics



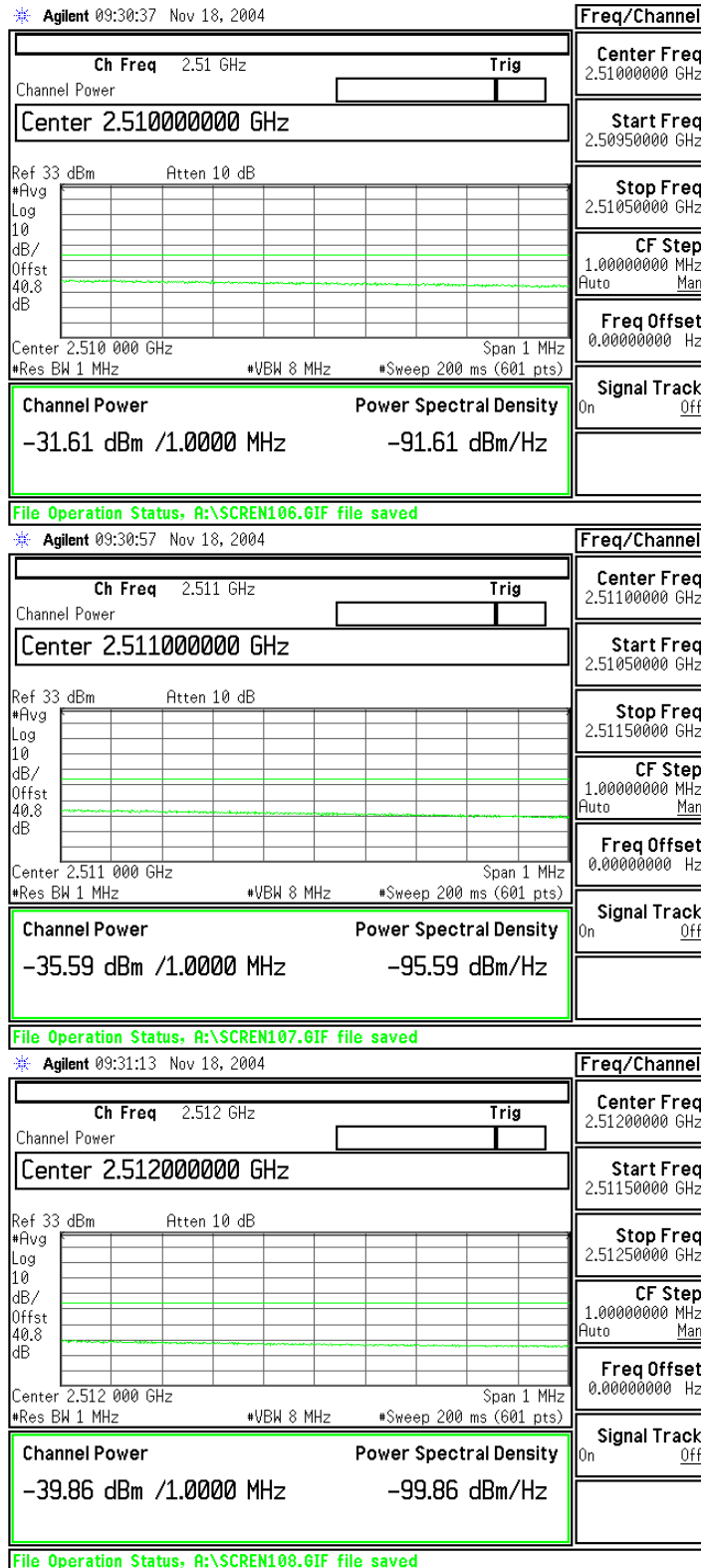
Emissions measurements for F=2504.75 MHz, 5.5 MHz channel, 4-QAM

## Modulation Characteristics



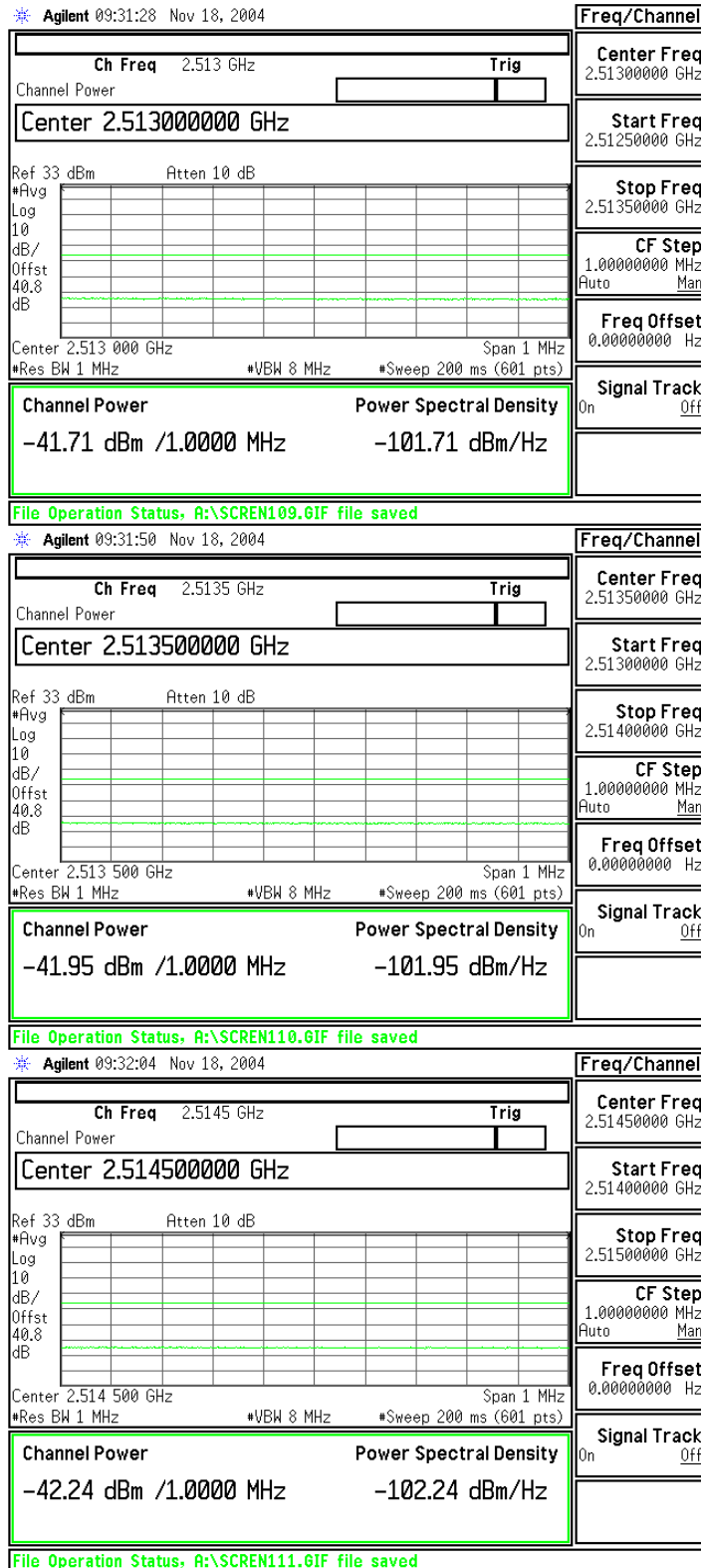
Emissions measurements for F=2504.75 MHz, 5.5 MHz channel, 4-QAM

## Modulation Characteristics



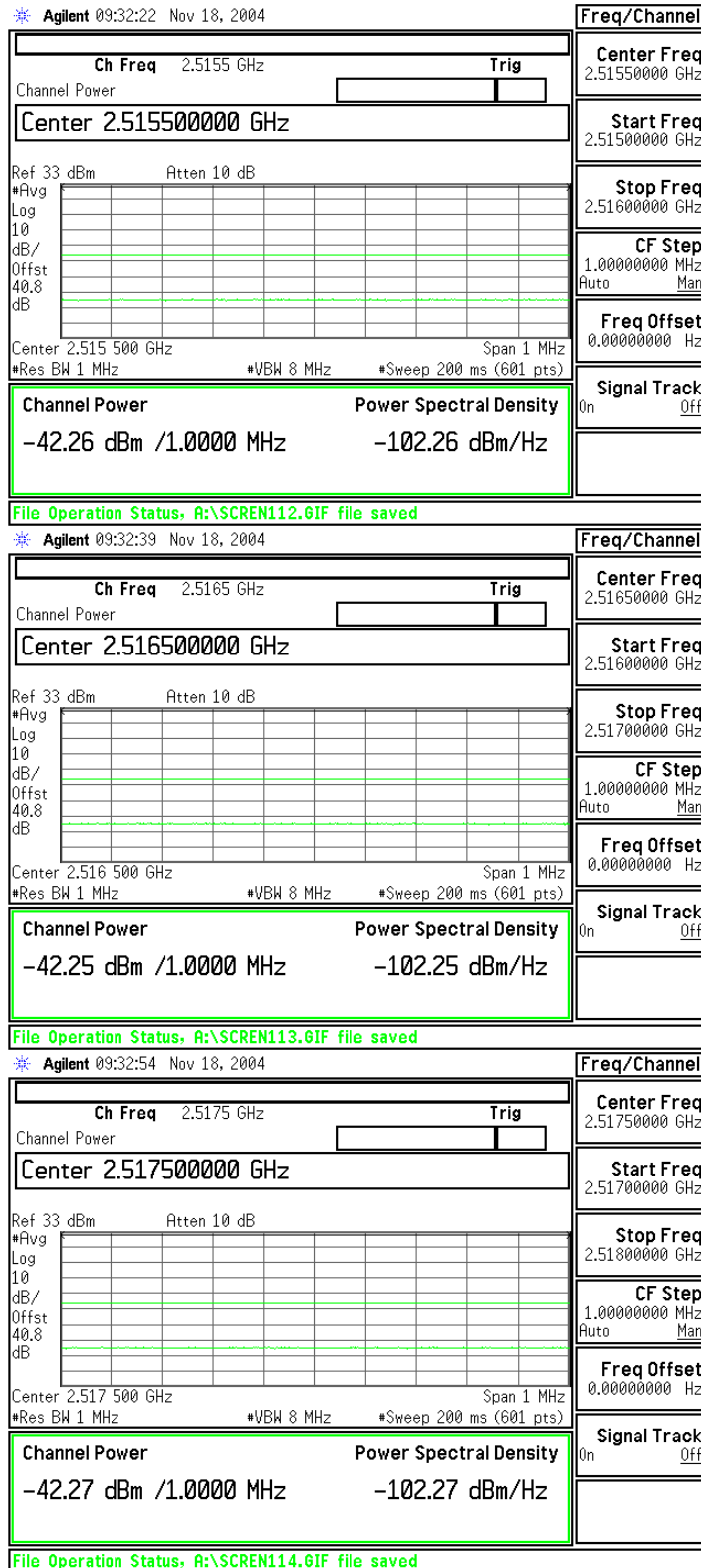
Emissions measurements for F=2504.75 MHz, 5.5 MHz channel, 4-QAM

## Modulation Characteristics



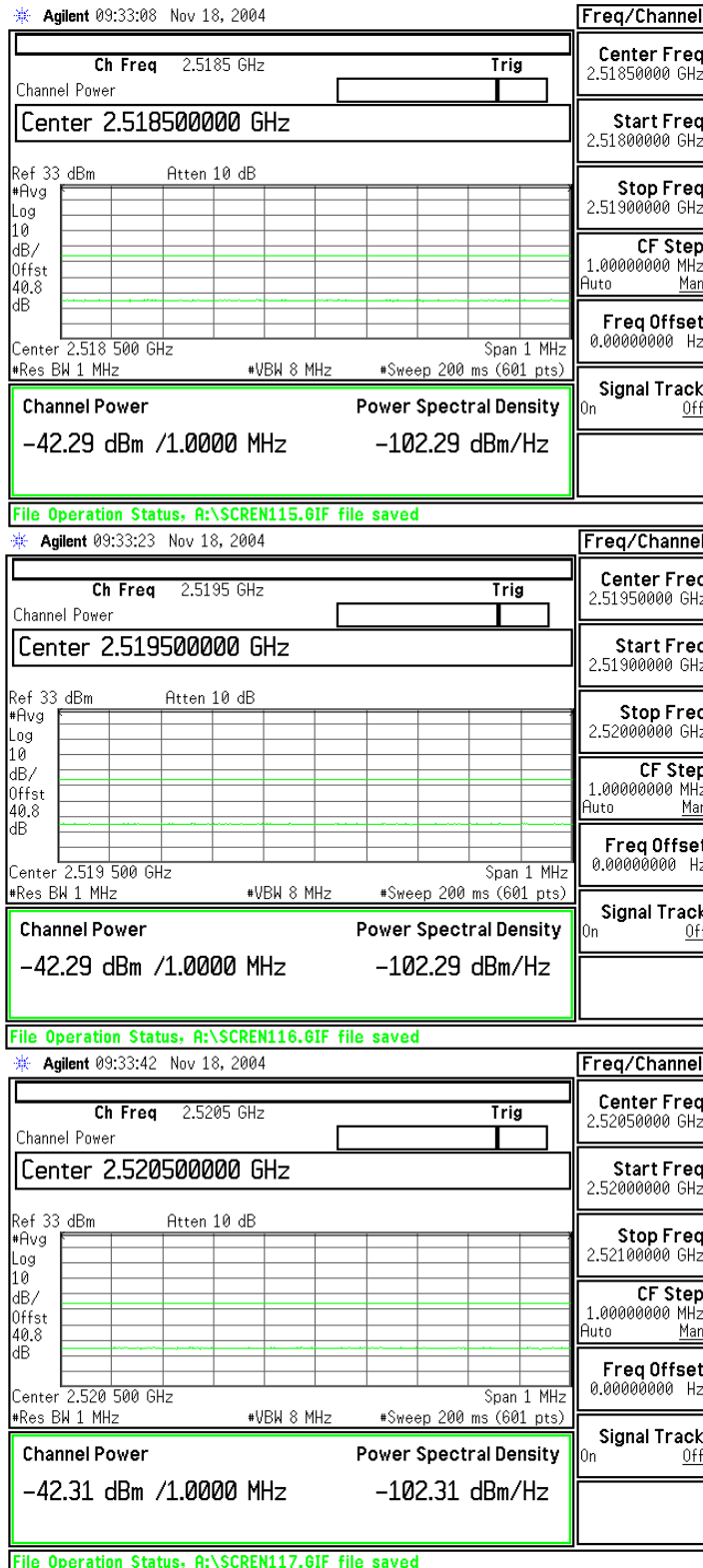
Emissions measurements for F=2504.75 MHz, 5.5 MHz channel, 4-QAM

## Modulation Characteristics



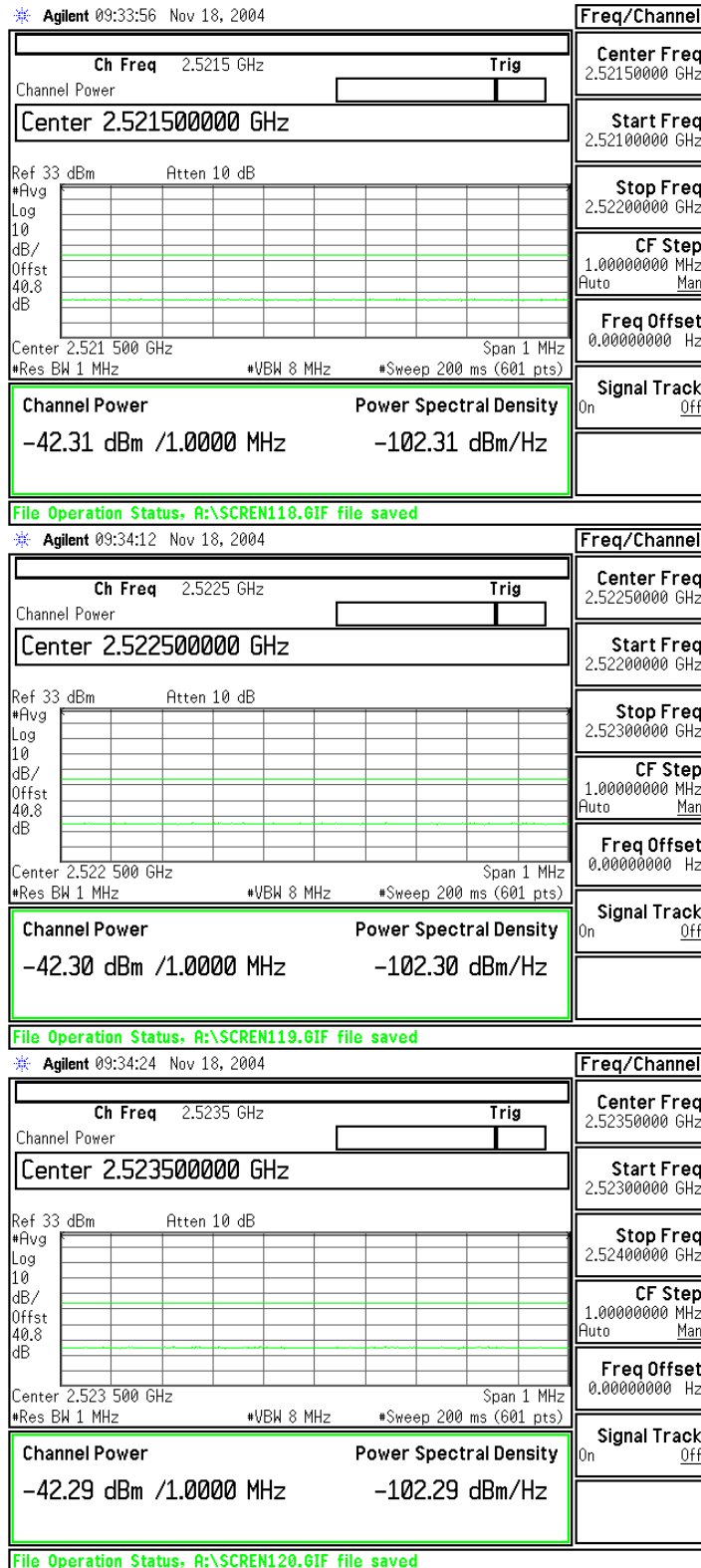
Emissions measurements for F=2504.75 MHz, 5.5 MHz channel, 4-QAM

## Modulation Characteristics



Emissions measurements for F=2504.75 MHz, 5.5 MHz channel, 4-QAM

## Modulation Characteristics



Emissions measurements for F=2504.75 MHz, 5.5 MHz channel, 4-QAM

## **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<br>American National Standard for Methods of Measurement of<br>Radio- Noise Emissions from Low-Voltage Electrical and<br>Electronic Equipment in the Range of 9 kHz to 40 GHz                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Test Procedure:  | The Orthogonal Frequency Division Multiplexing (OFDM)<br>modulated Time Division Duplex (TDD) RF signal from the test<br>unit is applied to a spectrum analyzer. The Spectrum Analyzer is<br>time gated, to capture the transmission during the burst. The<br>occupied bandwidth of the test unit is recorded by measuring the<br>modulation bandwidth with the built in measurement function in<br>the spectrum analyzer. The transmitter is enabled in test mode with<br>the attached computer. The RF loss of the attenuators and coax has<br>been measured and is included in the spectrum analyzer offset<br>level. Measurements are performed at frequencies across the band,<br>for each of the modulation formats available (4, 16, and 64-QAM)<br>and channel bandwidths (5.5 MHz and 6 MHz). |
| Test Conditions: | Frequencies =<br>5.5 MHz channel: 2504.75, 2565.25, 2626.75, and 2687.25 MHz<br>6.0 MHz channel: 2499, 2575, and 2621 MHz<br>Temperature = 25 °C<br>Supply Voltage = 13.8 Vdc to MSU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Occupied Bandwidth / Emission Bandwidth

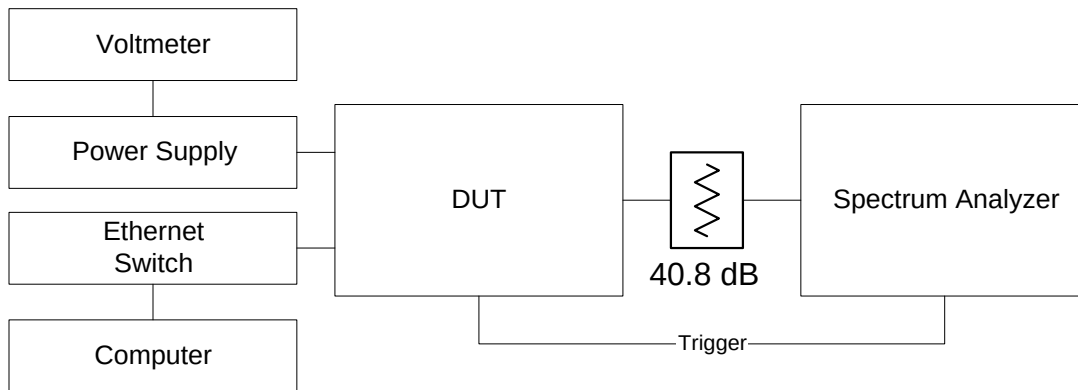
### Test Results Summary:

| Occupied Bandwidth (MHz) for 99.5 % (23 dB BW) |       |        |        |                  |
|------------------------------------------------|-------|--------|--------|------------------|
| Freq (MHz)                                     | 4-QAM | 16-QAM | 64-QAM | Channel BW (MHz) |
| 2504.75                                        | 5.133 | 5.130  | 5.133  | 5.5              |
| 2565.25                                        | 5.136 | 5.127  | 5.127  | 5.5              |
| 2626.75                                        | 5.130 | 5.133  | 5.134  | 5.5              |
| 2687.25                                        | 5.135 | 5.132  | 5.132  | 5.5              |
| 2499                                           | 5.672 | 5.669  | 5.675  | 6.0              |
| 2575                                           | 5.672 | 5.672  | 5.672  | 6.0              |
| 2621                                           | 5.669 | 5.672  | 5.671  | 6.0              |

| Emission Bandwidth (MHz) for 26 dB BW (99.75 %) |       |        |        |                  |
|-------------------------------------------------|-------|--------|--------|------------------|
| Freq (MHz)                                      | 4-QAM | 16-QAM | 64-QAM | Channel BW (MHz) |
| 2504.75                                         | 5.141 | 5.143  | 5.148  | 5.5              |
| 2565.25                                         | 5.148 | 5.144  | 5.145  | 5.5              |
| 2626.75                                         | 5.149 | 5.143  | 5.144  | 5.5              |
| 2687.25                                         | 5.145 | 5.147  | 5.148  | 5.5              |
| 2499                                            | 5.686 | 5.687  | 5.687  | 6.0              |
| 2575                                            | 5.684 | 5.684  | 5.686  | 6.0              |
| 2621                                            | 5.685 | 5.683  | 5.688  | 6.0              |

## Occupied Bandwidth / Emission Bandwidth

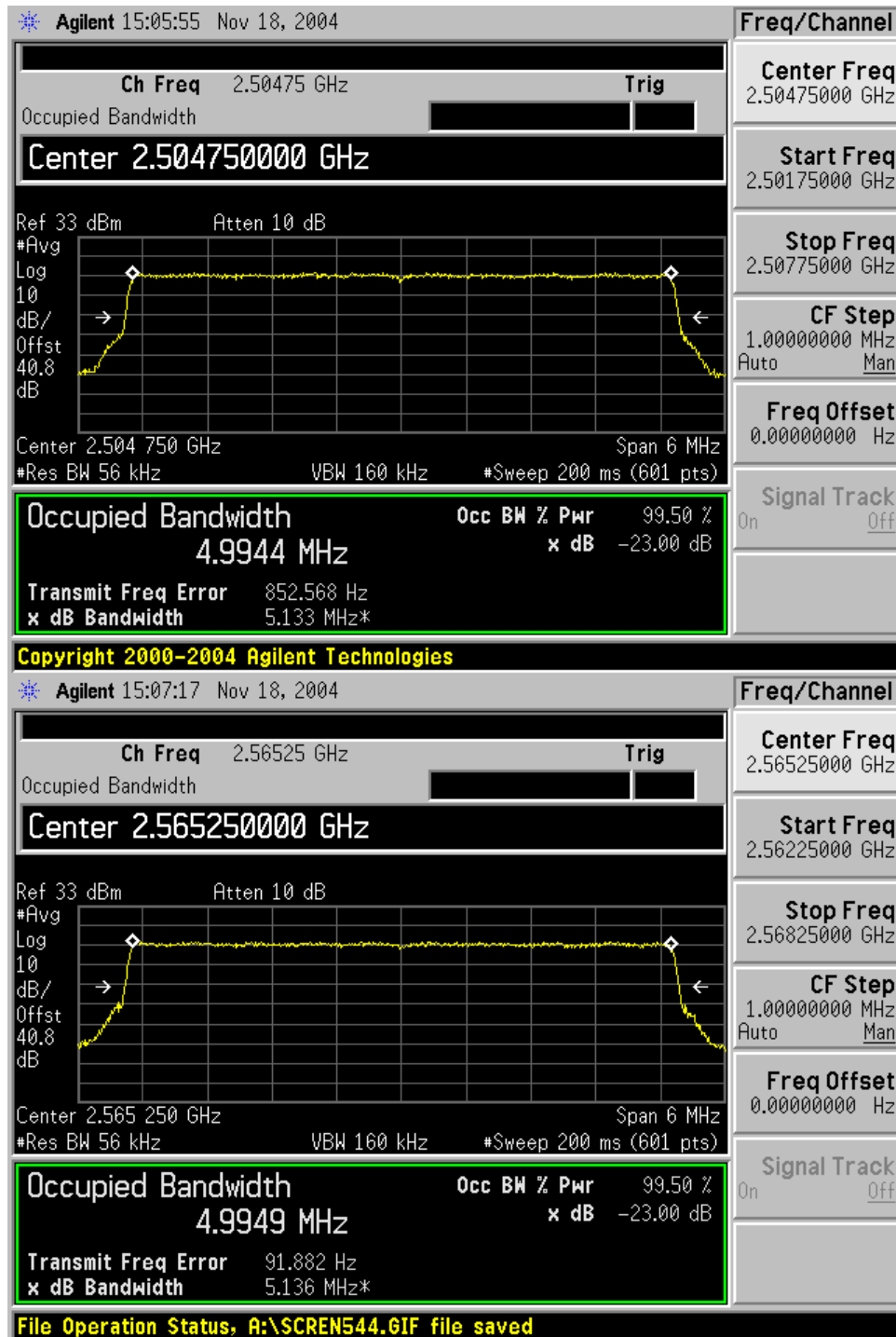
### Test Set-Up:



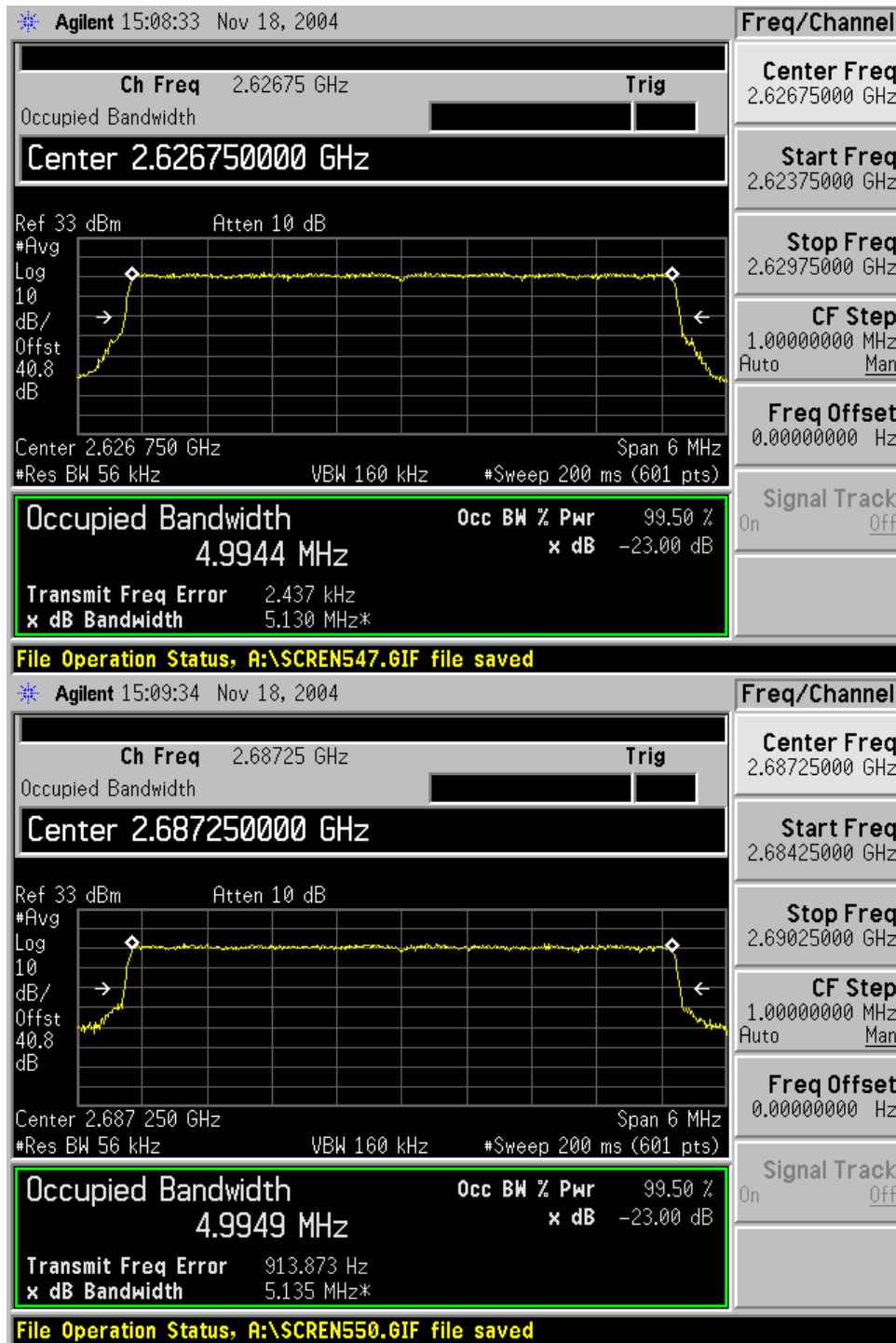
### Test Equipment:

|                                 |                                                                                                        |
|---------------------------------|--------------------------------------------------------------------------------------------------------|
| DUT                             | NextNet Wireless CPE (MSU-2510-A)<br># 0050-0300-4300924                                               |
| Spectrum Analyzer               | Agilent E4440A<br>S/N: MY44022791<br>Calibrated on: 05/30/2004<br>Cal due: 05/30/2006                  |
| Attenuator(s)<br>10 dB<br>20 dB | Pasternak Corporation<br>Model: PE7005-20 (20 dB)<br>Model: PE7005-10 (10 dB) x2<br>Calibrated by user |
| 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: B205335003175                                     |
| Power Supply                    | Agilent E3615A<br>S/N: KR01508898<br>Calibrated with voltmeter listed below.                           |
| Voltmeter                       | HP 34401A<br>S/N: 3146A23291<br>Calibrated on: 11-17-2004<br>Cal due: 11-17-2006                       |

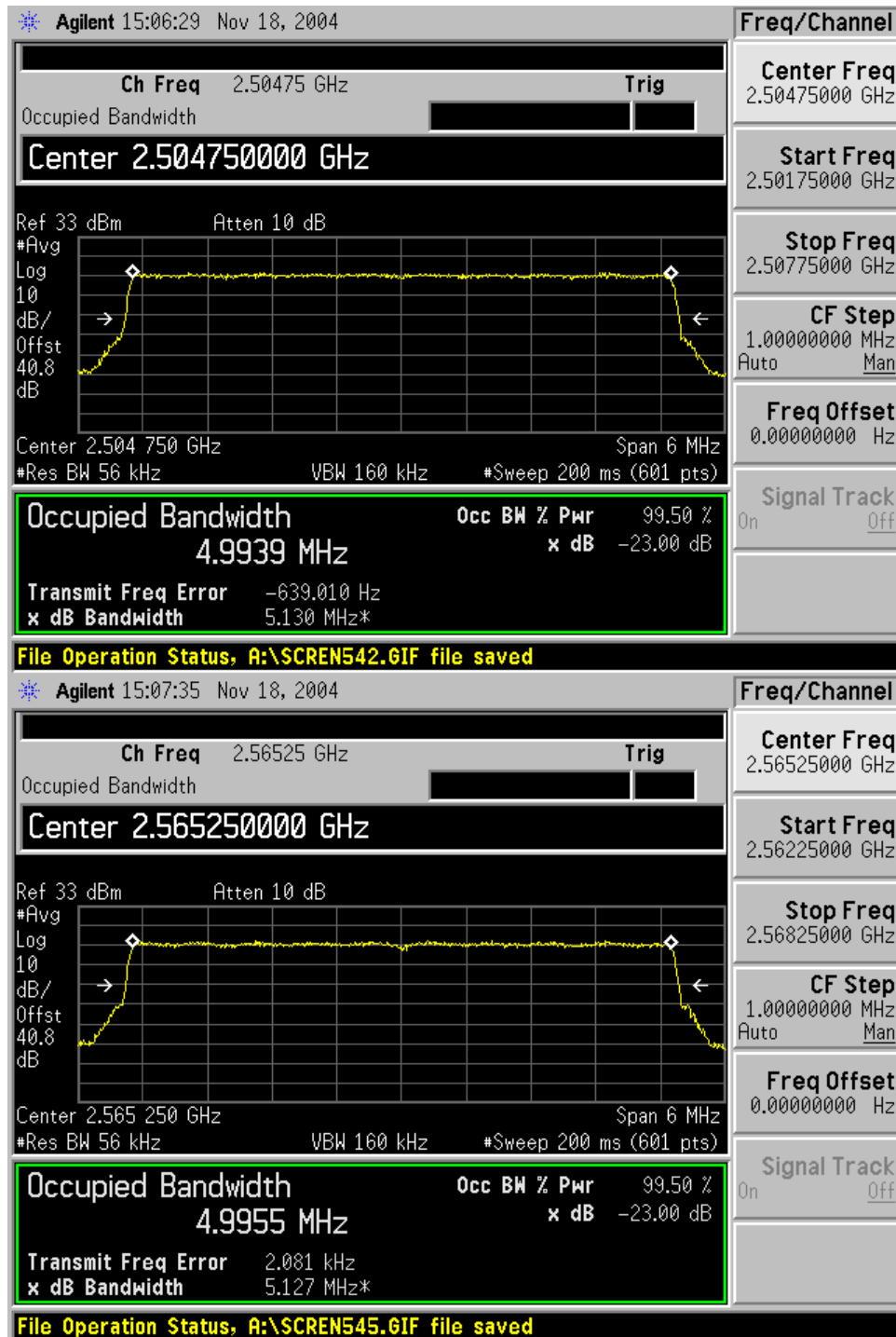
## Occupied Bandwidth 5.5 MHz Channels / 4-QAM



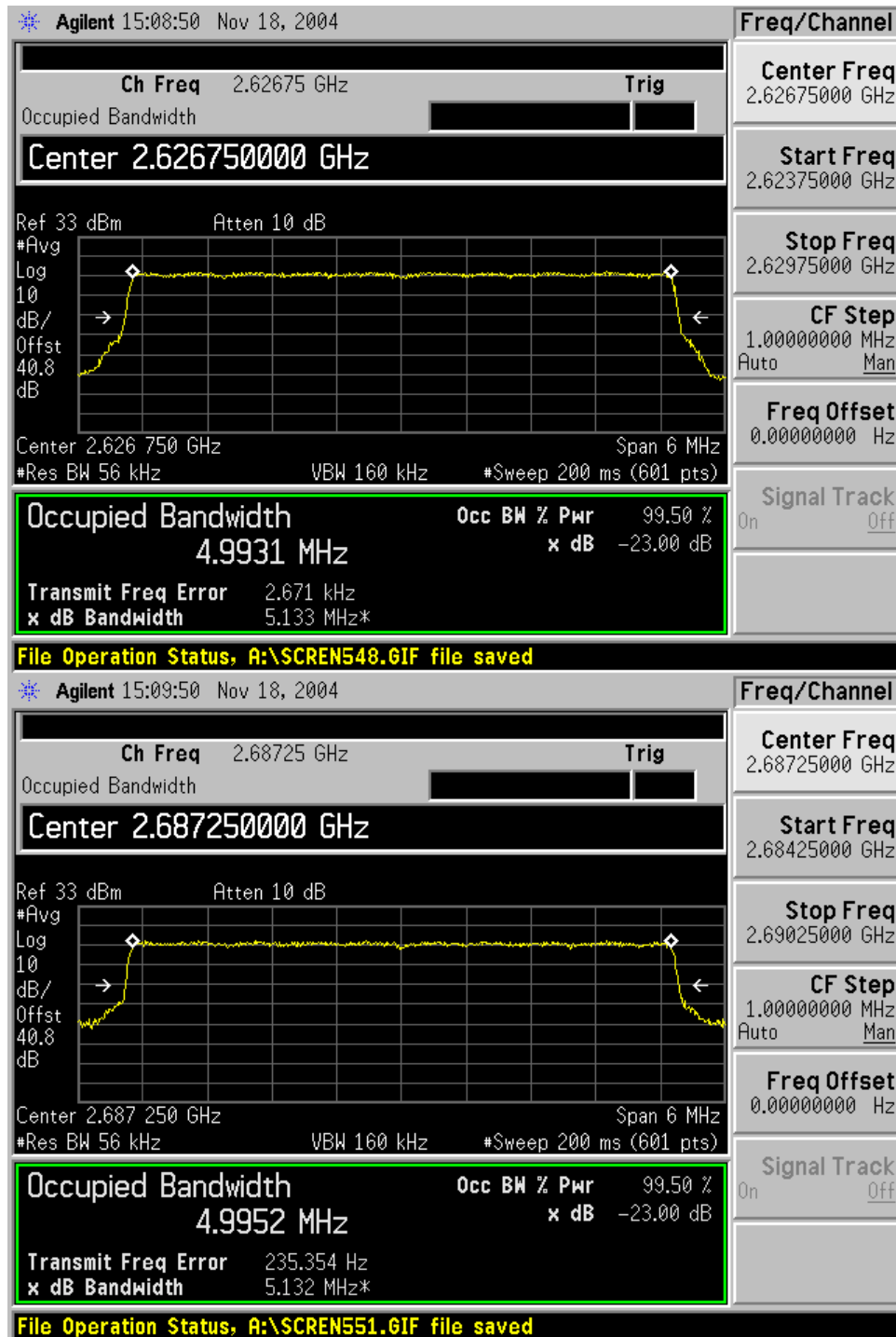
## Occupied Bandwidth 5.5 MHz Channels / 4-QAM



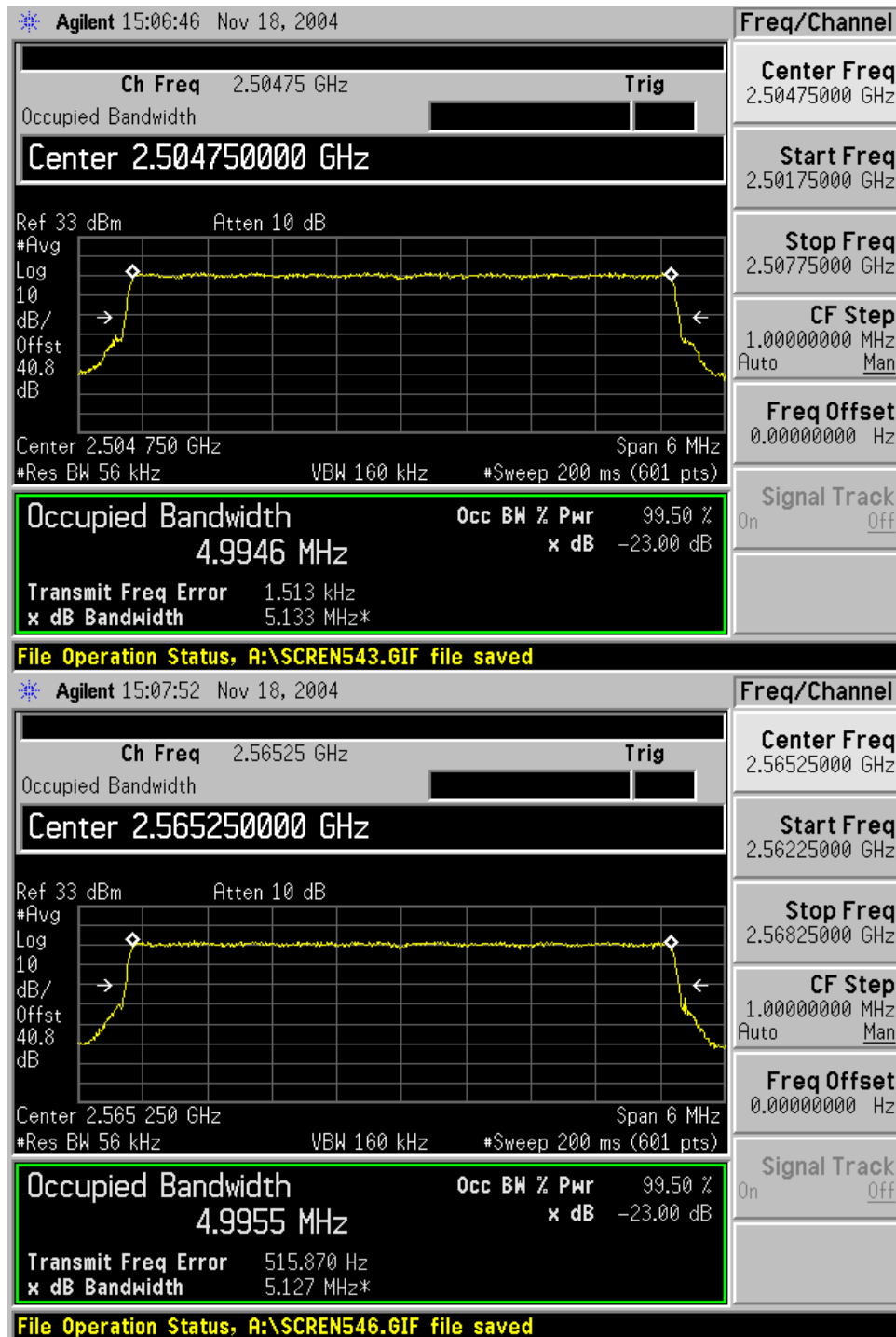
## Occupied Bandwidth 5.5 MHz Channels / 16-QAM



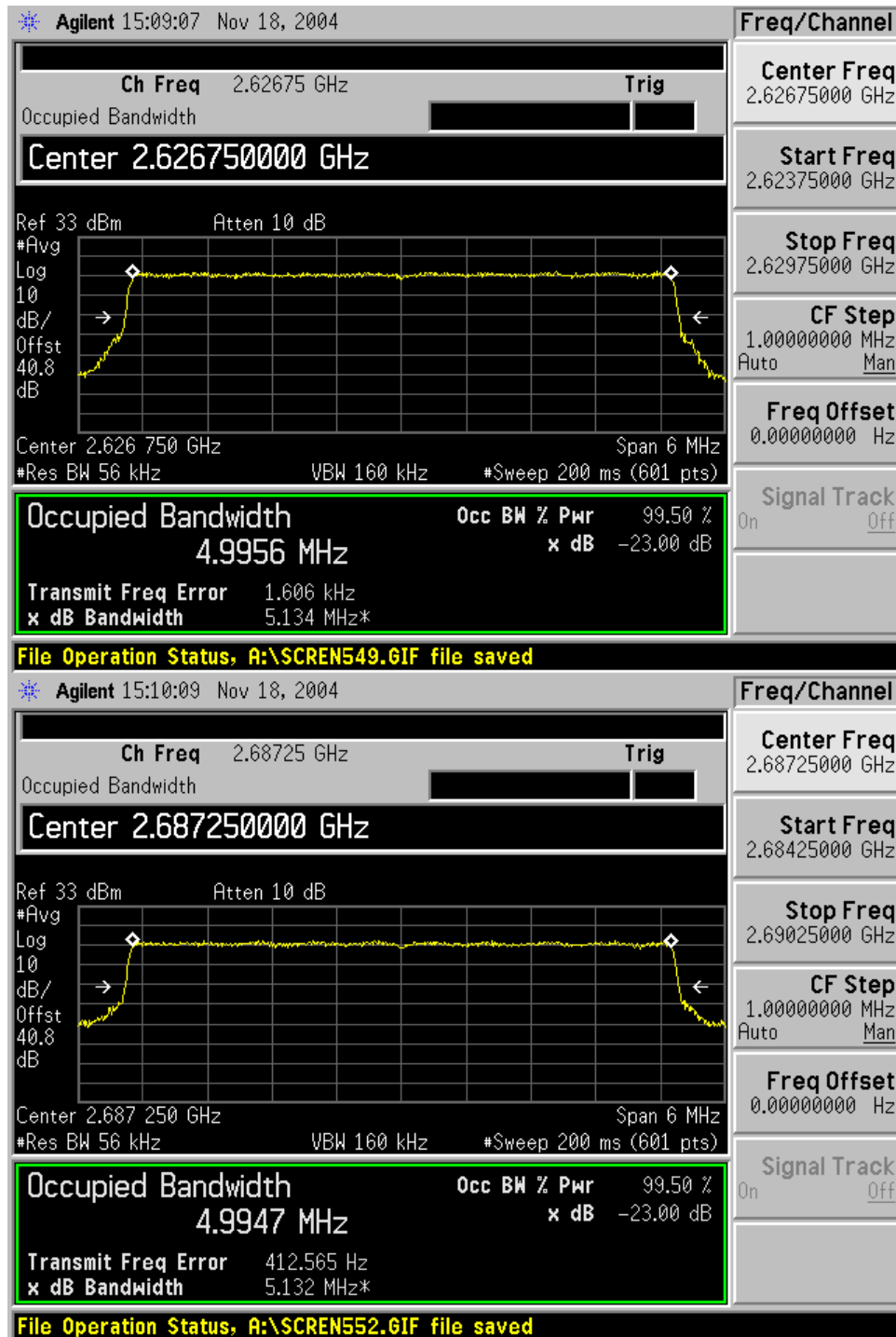
## Occupied Bandwidth 5.5 MHz Channels / 16-QAM



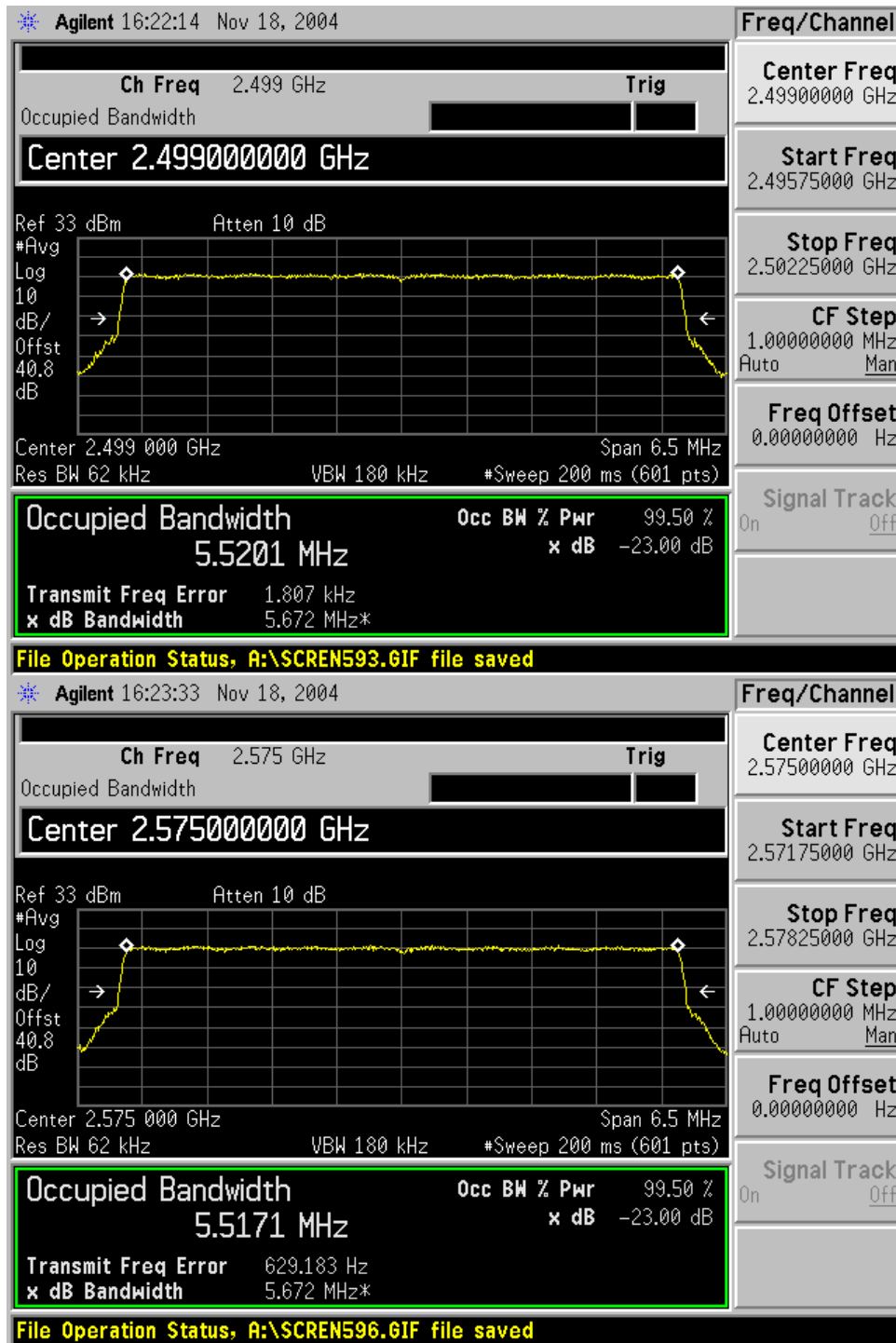
## Occupied Bandwidth 5.5 MHz Channels / 64-QAM



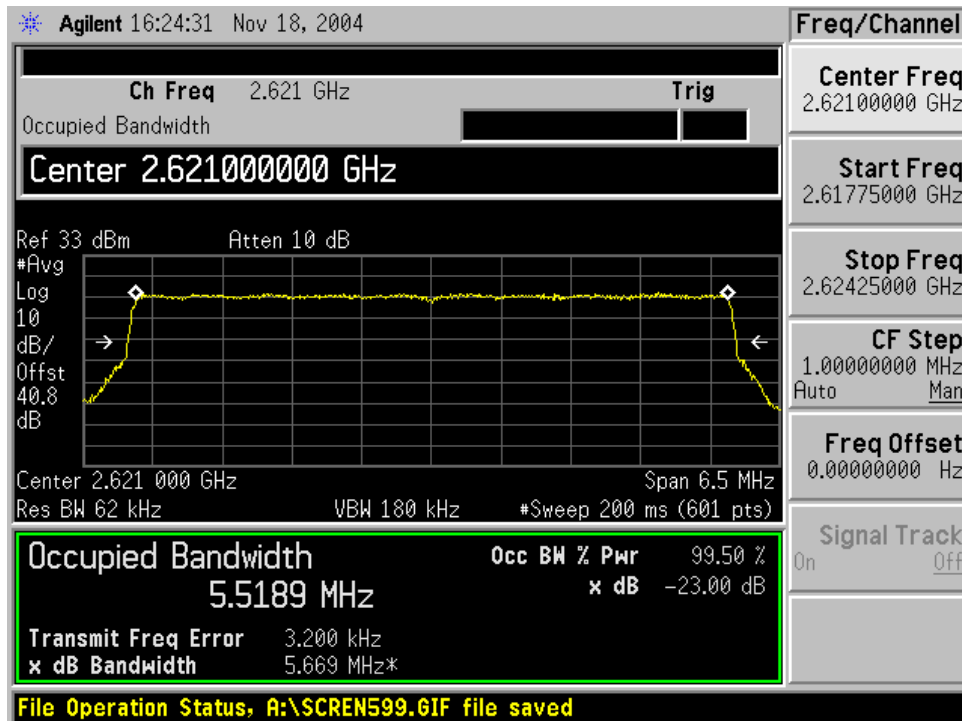
## Occupied Bandwidth 5.5 MHz Channels / 64-QAM



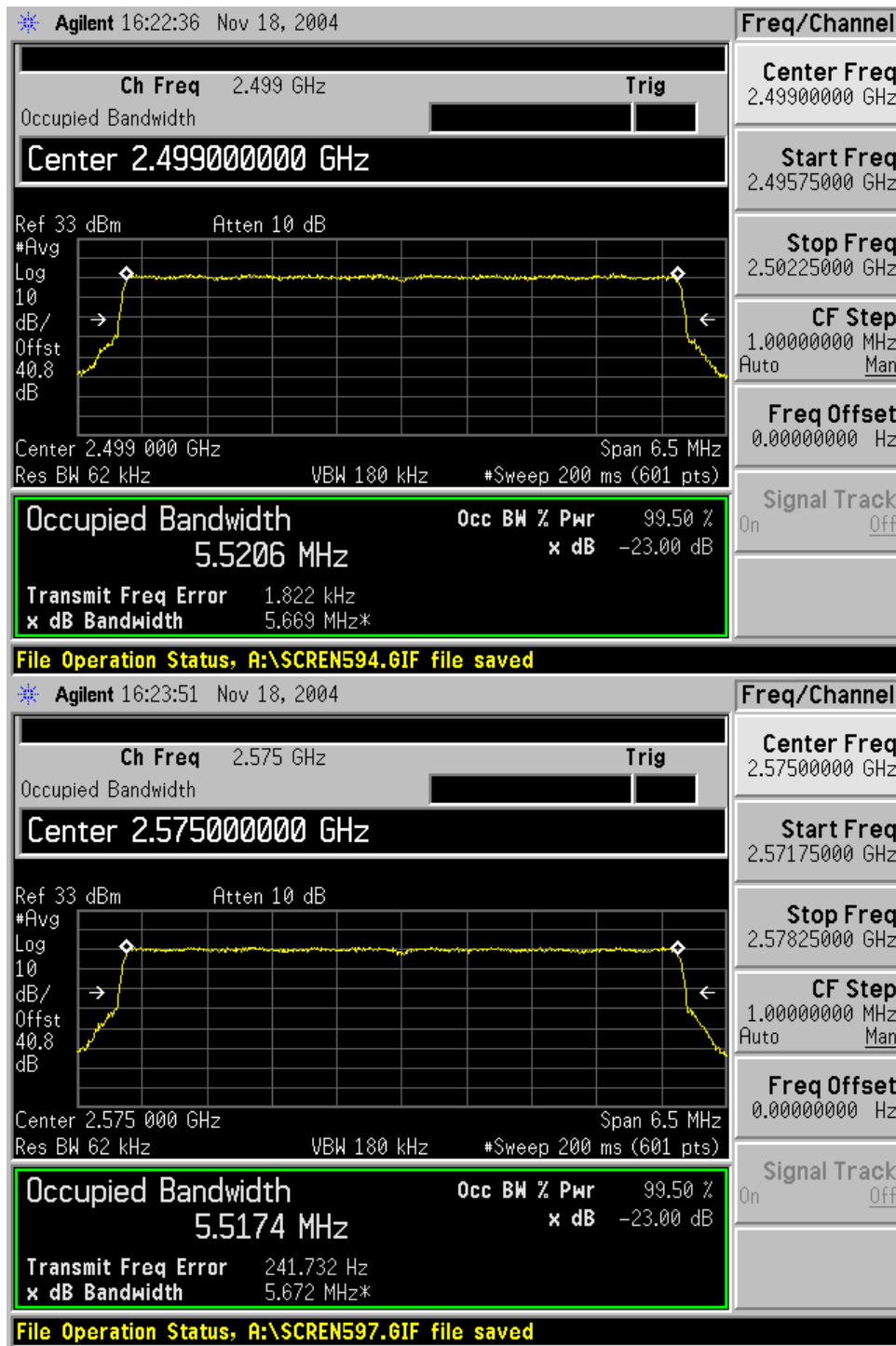
## Occupied Bandwidth 6 MHz Channel / 4-QAM



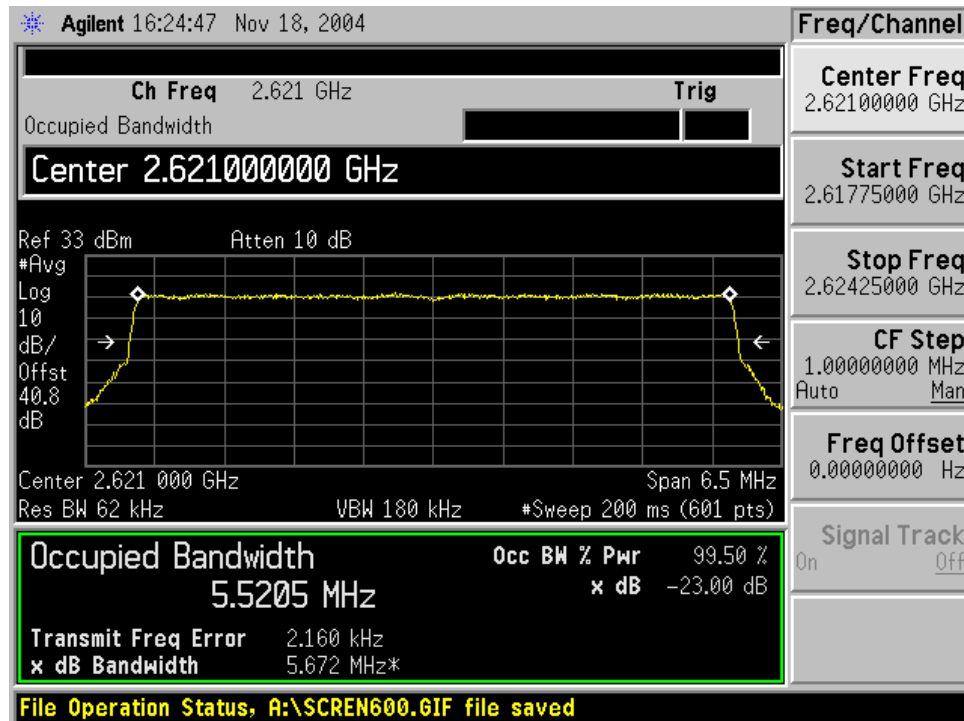
## Occupied Bandwidth 6 MHz Channel / 4-QAM



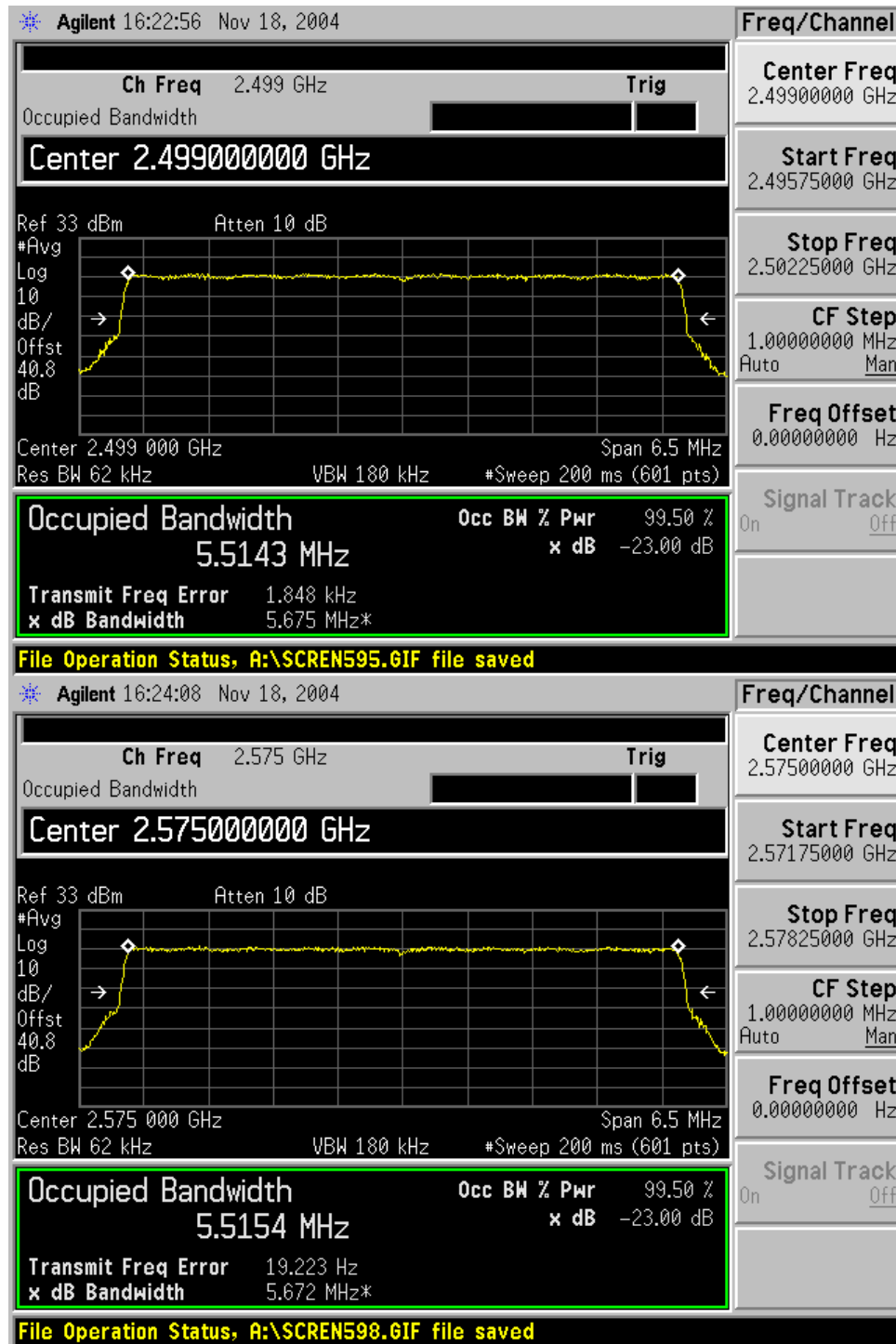
## Occupied Bandwidth 6 MHz Channel / 16-QAM



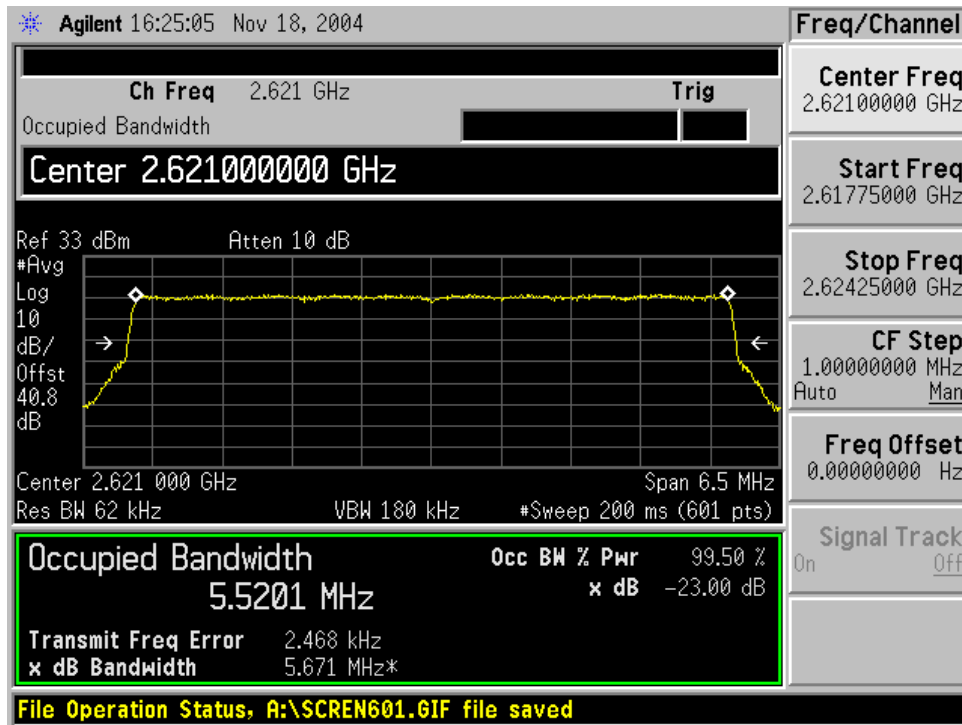
## Occupied Bandwidth 6 MHz Channel / 16-QAM



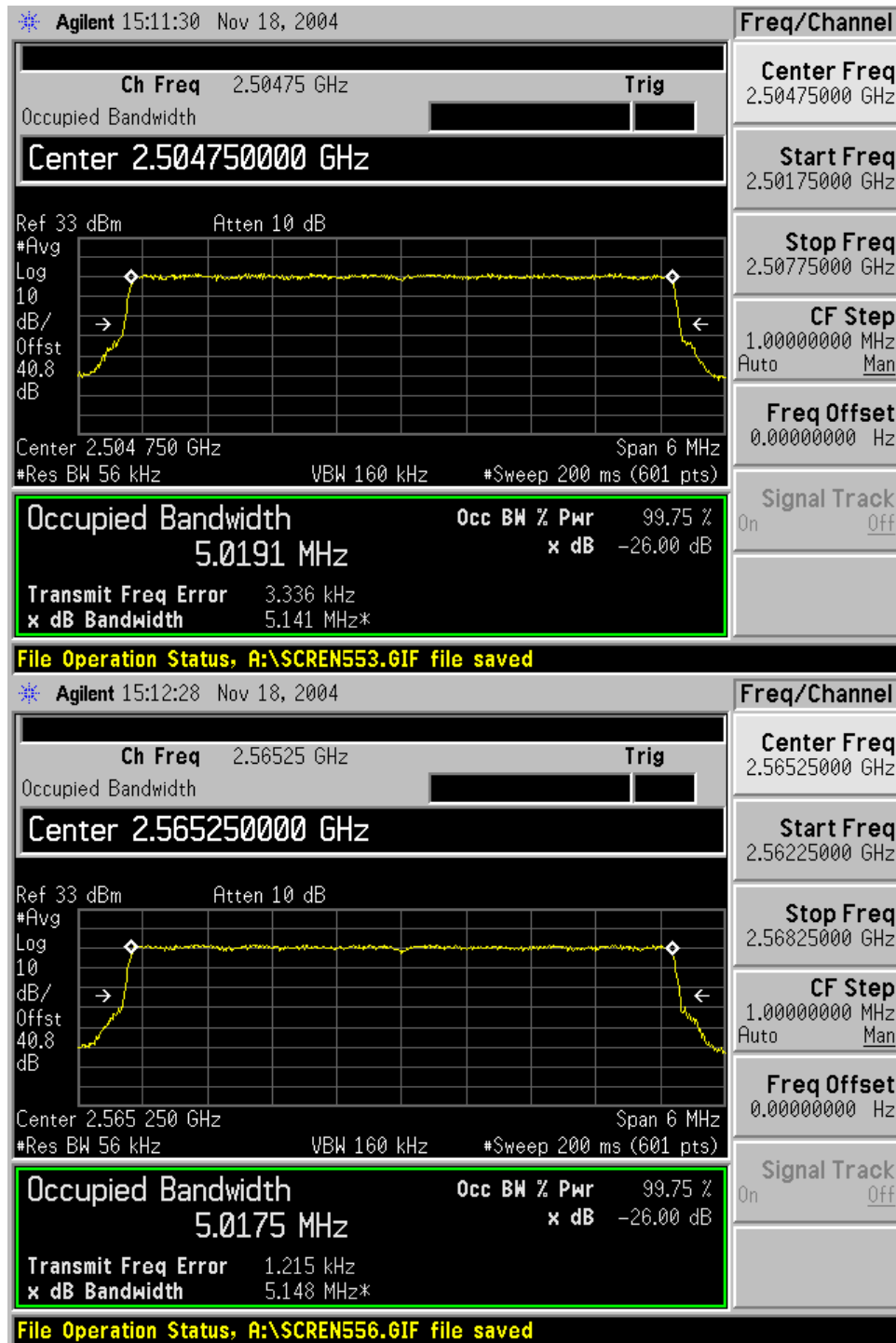
## Occupied Bandwidth 6 MHz Channel / 64-QAM



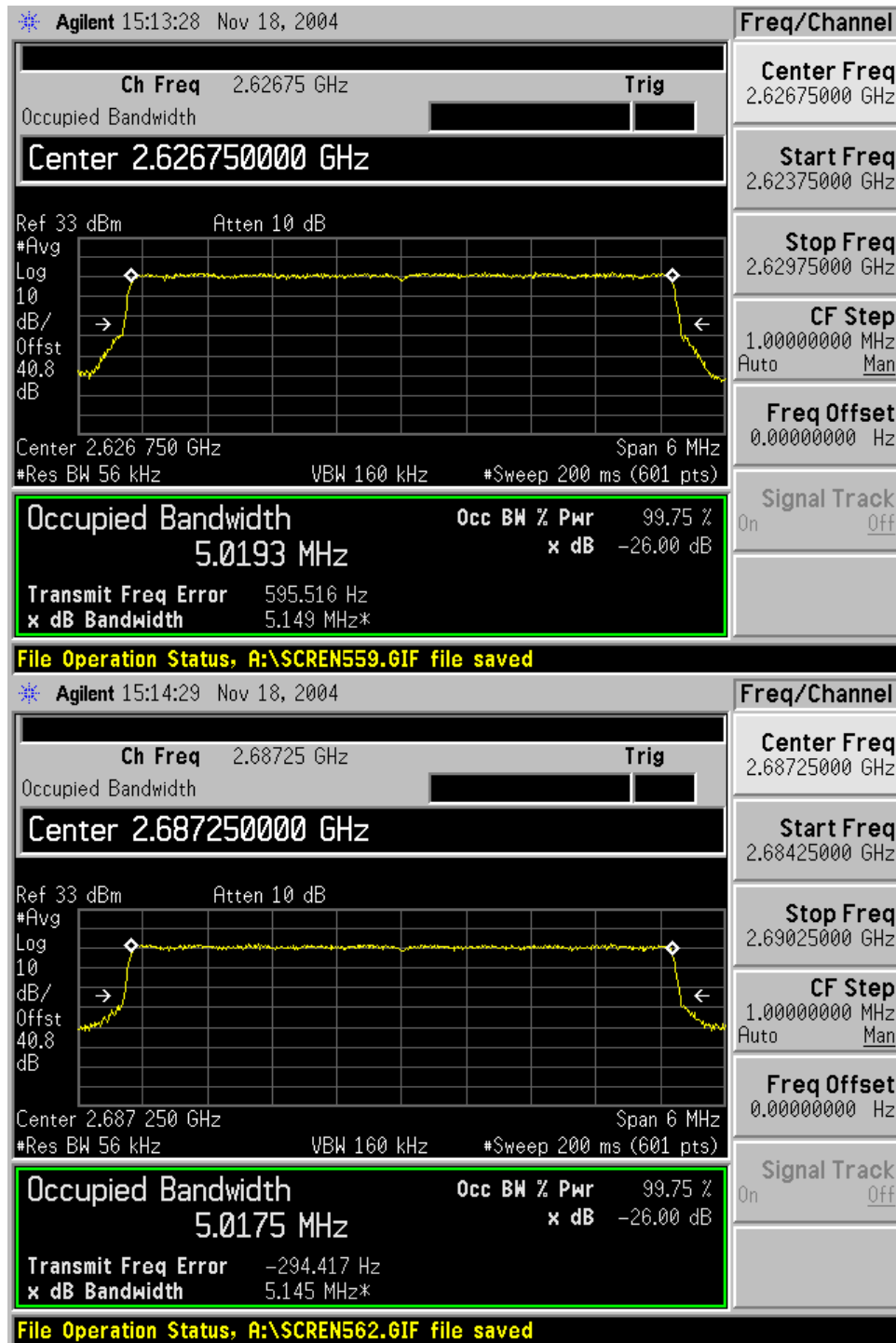
## Occupied Bandwidth 6 MHz Channel / 64-QAM



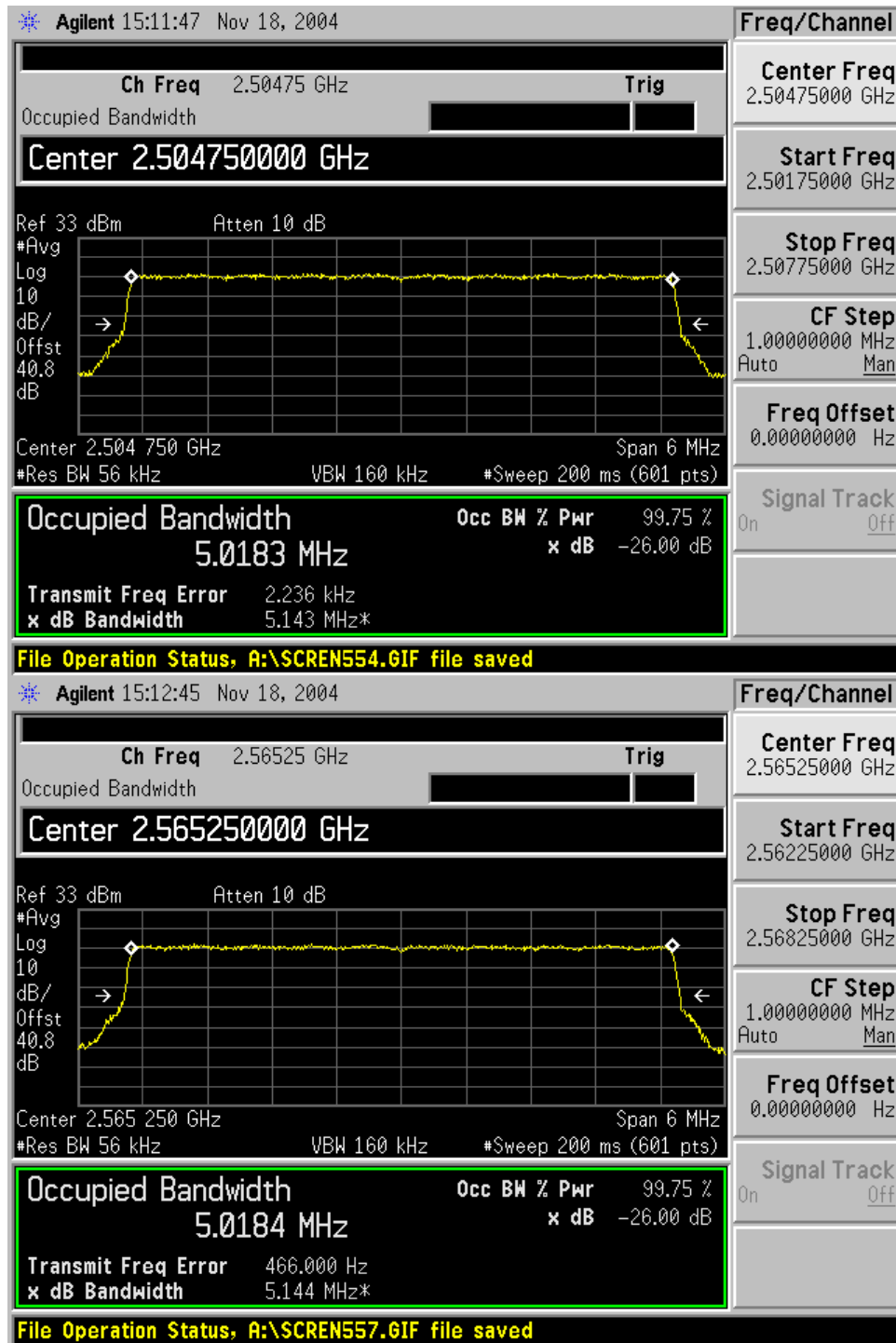
## Emission Bandwidth 5.5 MHz Channel / 4-QAM



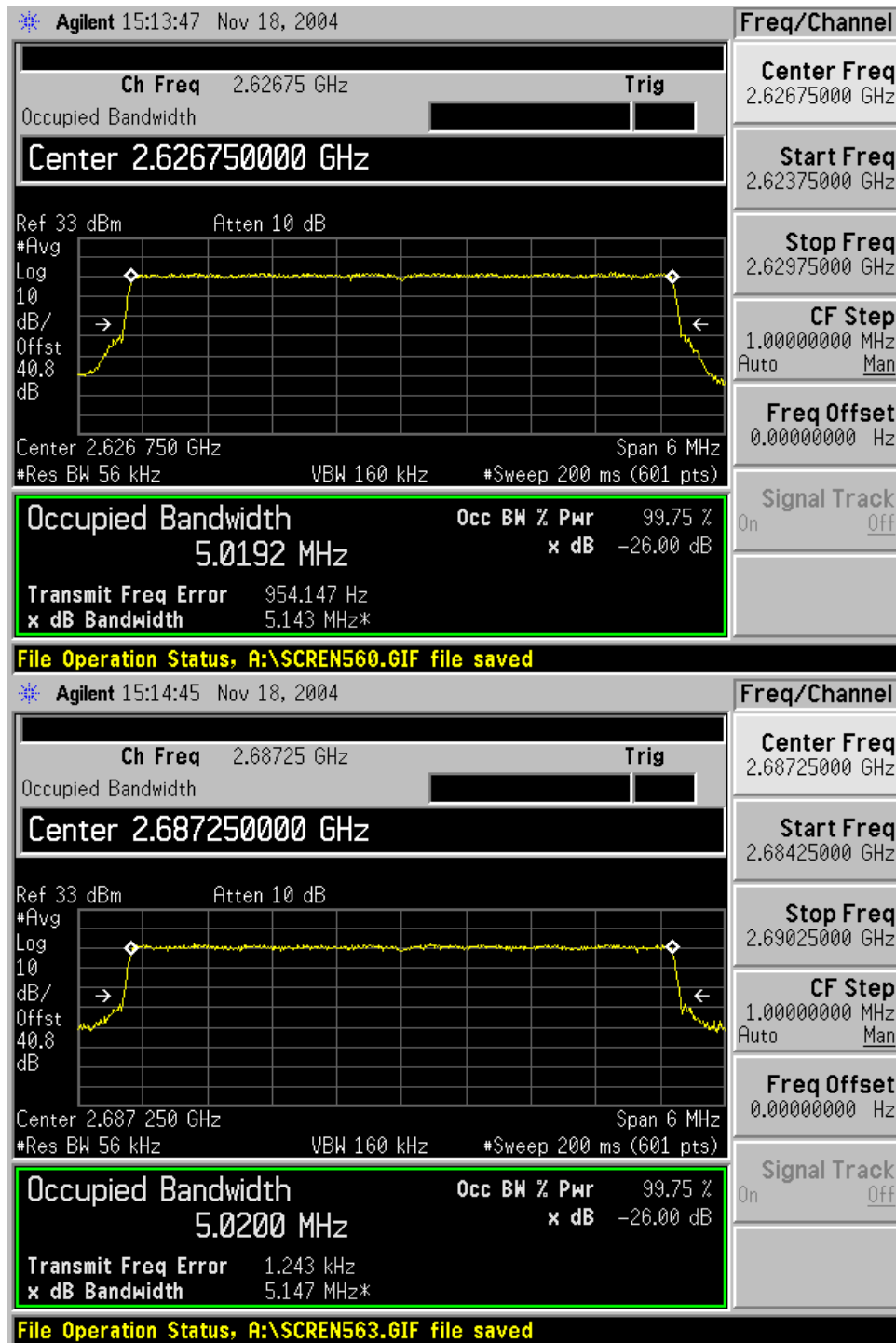
## Emission Bandwidth 5.5 MHz Channel / 4-QAM



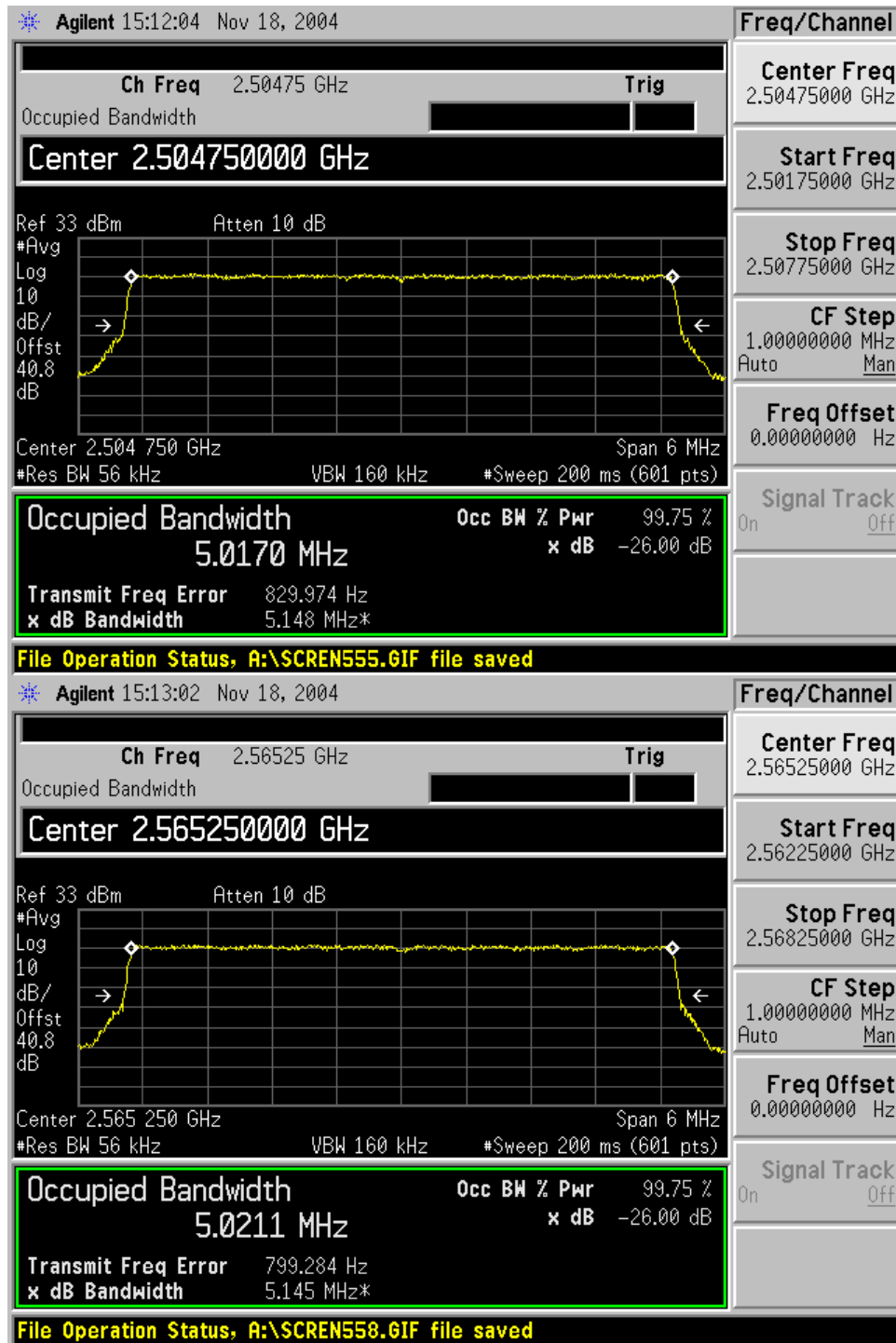
## Emission Bandwidth 5.5 MHz Channel / 16-QAM



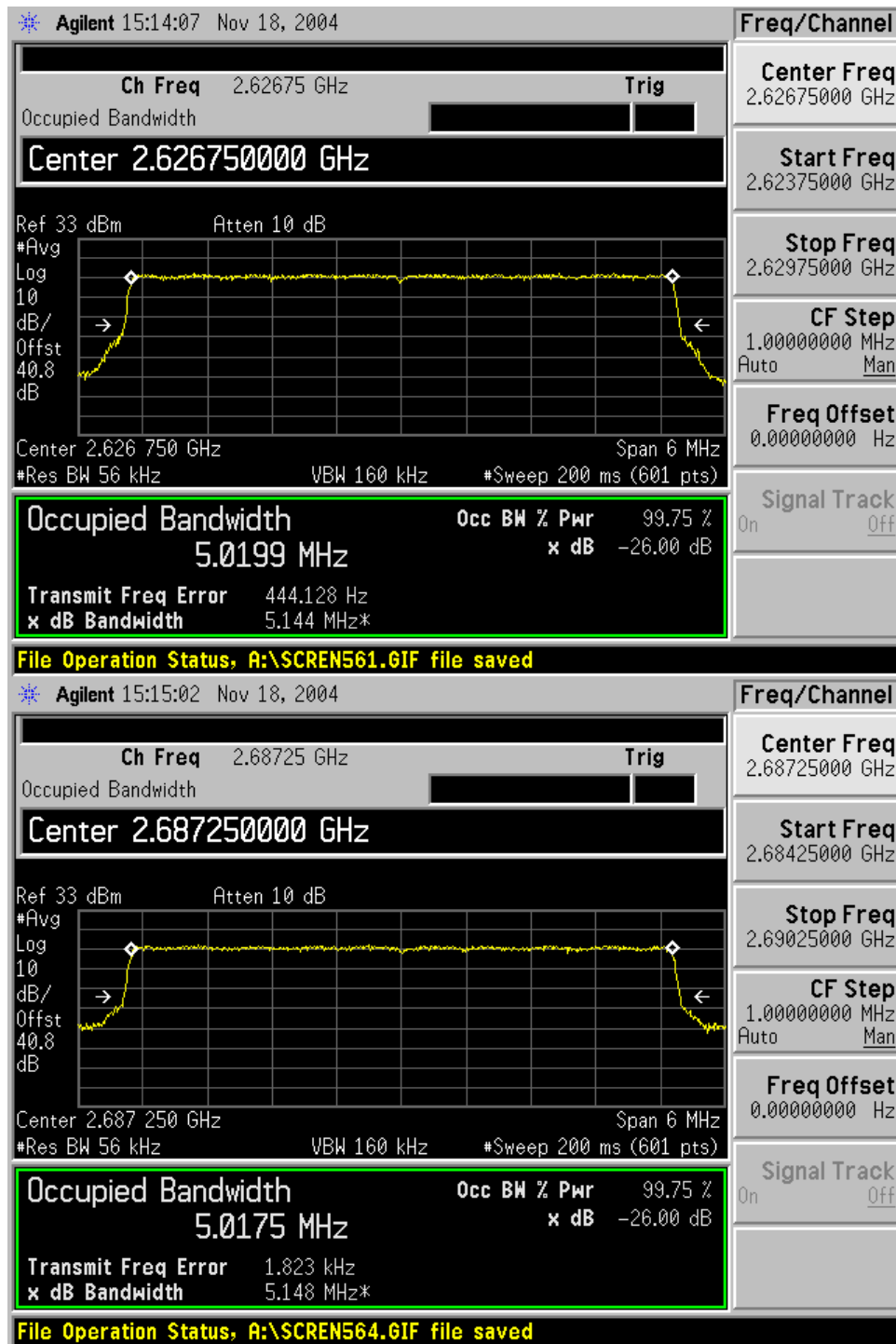
## Emission Bandwidth 5.5 MHz Channel / 16-QAM



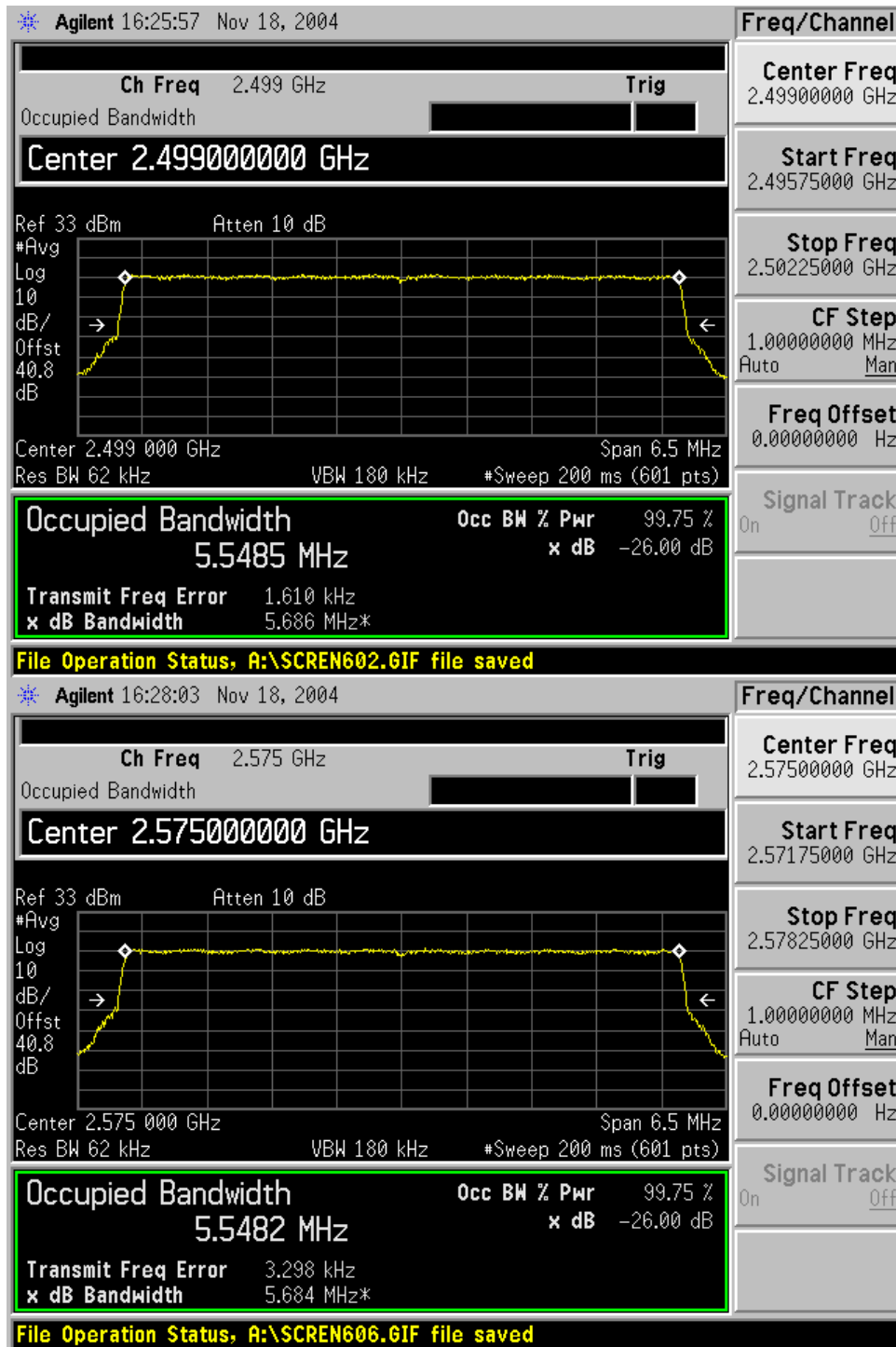
## Emission Bandwidth 5.5 MHz Channel / 64-QAM



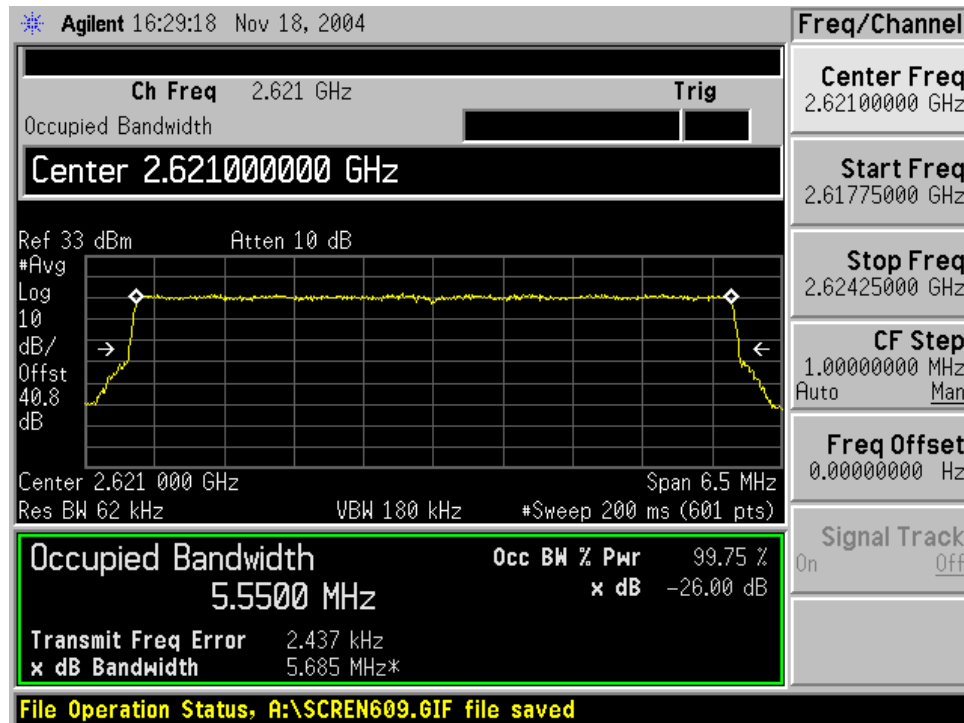
## Emission Bandwidth 5.5 MHz Channel / 64-QAM



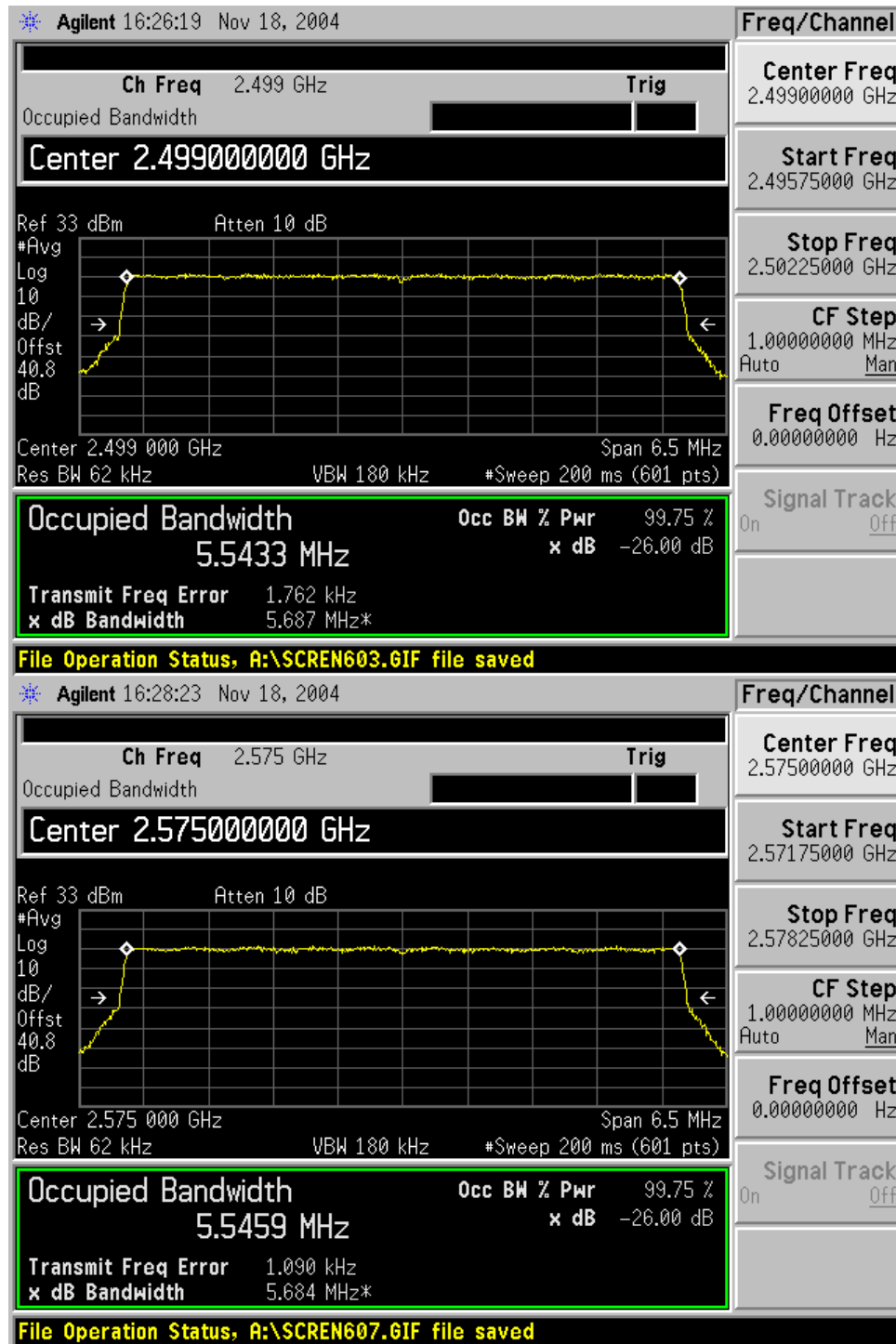
## Emission Bandwidth 6 MHz Channel / 4-QAM



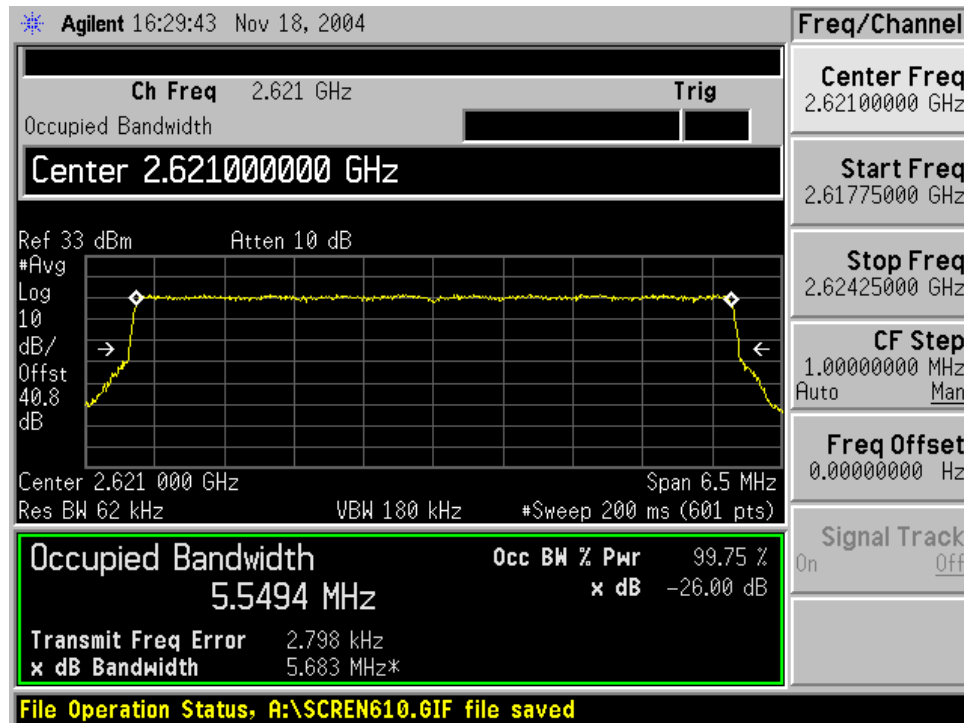
## Emission Bandwidth 6 MHz Channel / 4-QAM



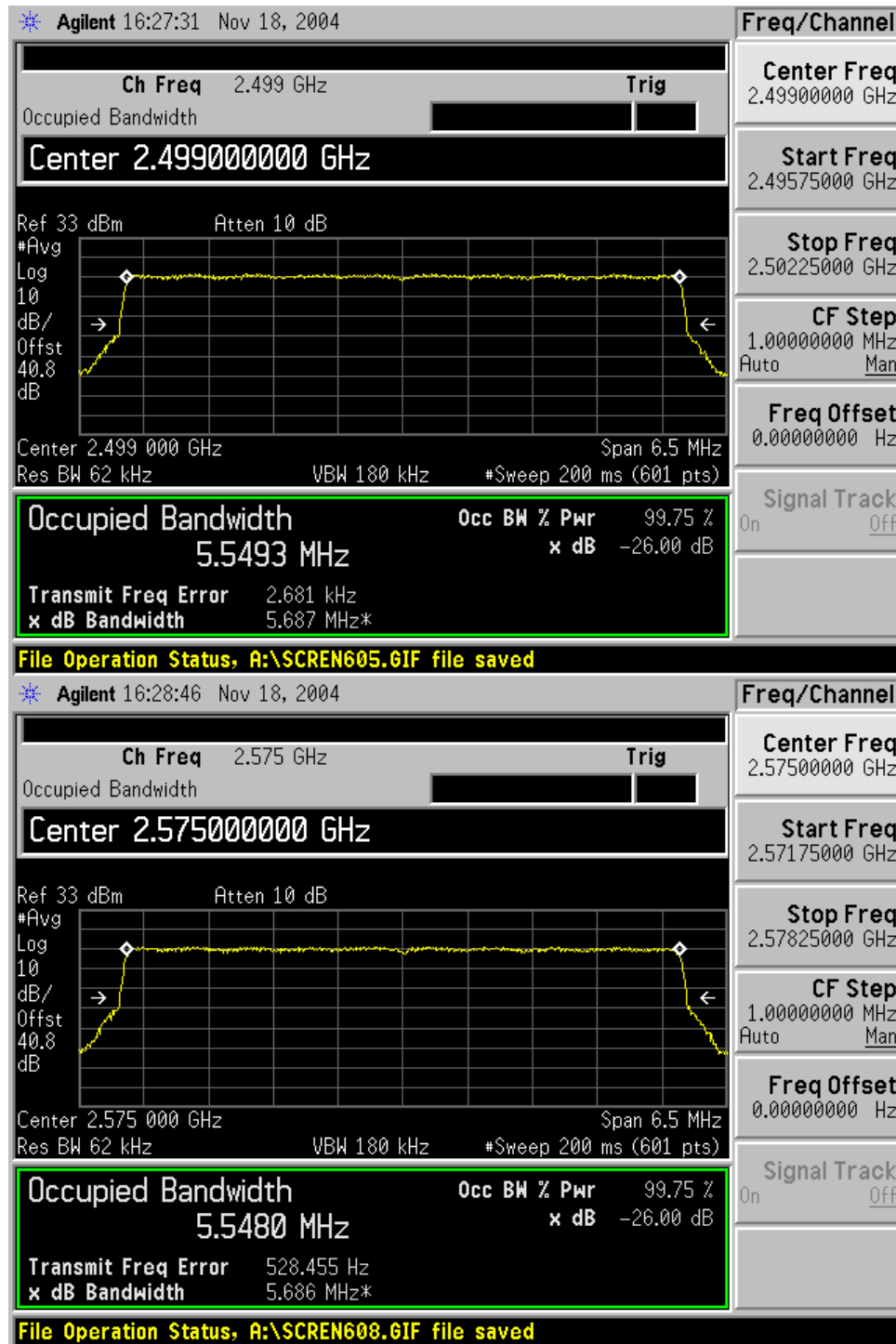
## Emission Bandwidth 6 MHz Channel / 16-QAM



## Emission Bandwidth 6 MHz Channel / 16-QAM



## Emission Bandwidth 6 MHz Channel / 64-QAM



## Emission Bandwidth 6 MHz Channel / 64-QAM

