



# DIGITAL EMC CO., LTD.

683-3, Yubang-Dong, Yongin-Si, Kyunggi-Do, Korea. 449-080

Tel: +82-31-321-2664 Fax: +82-31-321-1664

<http://www.digitalemc.com>

## CERTIFICATION OF COMPLIANCE

### SEOWON INTECH CO., LTD.

689-47, Kumjung-Dong, Kunpo-City, Kyunggi-Do,  
435-862, Korea

Dates of Tests: March 9 ~ 18, 2009

Test Report S/N: DR50110903R

Test Site : DIGITAL EMC CO., LTD.

FCC ID.

**V7MSWC-3100**

APPLICANT

**SEOWON INTECH CO., LTD.**

|                              |  |
|------------------------------|--|
| <b>Classification</b>        | : Licensed Non-Broadcast Transmitter(TNB)                                    |
| <b>FCC Rule Part(s)</b>      | : §27(M), §2   |
| <b>EUT Type</b>              | : WIMAX Simple CPE   |
| <b>Model name</b>            | : SWC-3100   |
| <b>Serial number</b>         | : Identical prototype  |
| <b>TX Frequency Range</b>    | : 2498.5 ~ 2687.5MHz (5MHz OBW)<br>2501.0 ~ 2685.0MHz (10MHz OBW)            |
| <b>RX Frequency Range</b>    | : 2498.5 ~ 2687.5MHz (5MHz OBW)<br>2501.0 ~ 2685.0MHz (10MHz OBW)            |
| <b>Max. RF Output Power</b>  | : OBW: 5MHz – 1.426W EIRP (31.54 dBm)<br>OBW: 10MHz – 1.795W EIRP(32.54 dBm) |
| <b>Emission Designators:</b> | : 4M73G7D(QPSK)<br>4M71W7D(16QAM)<br>9M37G7D(QPSK)<br>9M37W7D(16QAM)         |
| <b>Date of Issue</b>         | : March 20, 2009   |

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# MEASUREMENT REPORT

## 1.1 Scope

Measurement and determination of electromagnetic emissions (EME) of radio frequency devices including intentional and/or unintentional radiators for compliance with the technical rules and regulations of the Federal Communications Commission.

## §2.1033 General Information

Applicant: **SEOWON INTECH CO., LTD.**

Address: 689-47, Kumjung-Dong, Kunpo-City, Kyunggi-Do, 435-862, Korea

Attention: CHOUN-SUP, KIM

- FCC ID: V7MSWC-3100
- Quantity: Quantity production is planned
- Emission Designators: 4M73G7D(QPSK), 4M71W7D(16QAM)  
9M37G7D(QPSK), 9M37W7D(16QAM)
- Tx Freq. Range: 2498.5 ~2687.5 MHz (5MHz OBW)  
2501.0 ~2685.0 MHz (10MHz OBW)
- Rx Freq. Range: 2498.5 ~2687.5 MHz (5MHz OBW)  
2501.0 ~2685.0 MHz (10MHz OBW)
- Max. Power Rating: OBW: 5MHz – 1.426W EIRP (31.54 dBm)  
OBW: 10MHz – 1.795W EIRP (32.54 dBm)
- FCC Classification(s): Licensed Non-Broadcast Transmitter(TNB)
- Equipment (EUT) Type: Simple CPE WIMAX
- Modulation(s): QPSK, 16QAM
- Data rates: QPSK1/2, QPSK3/4, 16QAM1/2, 16QAM3/4
- Antenna Type: Dipole Antenna
- FCC Rule Part(s): §27(M), §2
- Dates of Tests: March 9 ~ 18, 2009
- Place of Tests: DIGITAL EMC
- Test Report S/N: DR50110903R

## 2.1. GENERAL INFORMATION

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This report contains the result of tests performed by:

**DIGITAL EMC CO., LTD.**

Address: 683-3, Yubang-Dong, Yongin-Si, Kyunggi-Do, Korea. 449-080

<http://www.digitalemc.com> E-mail : harveysung@digitalemc.com

Tel: +82-31-321-2664 Fax: +82-31-321-1664

Quality control in the testing laboratory is implemented as per ISO/IEC 17025 which is the “General requirements for the competent of calibration and testing laboratory”.

**Test operator: Engineer**

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March 20, 2009

Won-Jung LEE

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Data

Name

Signature

**Report Reviewed By: Director**

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March 20, 2009

Harvey Sung

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Data

Name

Signature

**Ordering party:**

|               |   |                         |
|---------------|---|-------------------------|
| Company name  | : | SEOWON INTECH CO., LTD. |
| Address       | : | 689-47, Kumjung-Dong    |
| Zipcode       | : | 435-862                 |
| City/town     | : | Kunpo-City, Kyunggi-Do  |
| Country       | : | Korea                   |
| Date of order | : | October 22, 2008        |

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### **3.1 DESCRIPTION OF TESTS**

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#### **3.1.1 Occupied Bandwidth Emission Limits**

**- Part §2.1049, §27.53.(l)(2), (6)**

- (a) For fixed and temporary fixed digital stations, the attenuation shall be not less than  $43 + 10 \log (P)$  dB, unless a documented interference complaint is received from an adjacent channel licensee.
- (b) Compliance with these provisions 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. 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 emission are attenuated at least 26 dB below the transmitter power.

#### **3.1.2 Spurious and Harmonic Emissions at Antenna Terminal**

**- Part §2.1051, §27.53.(l) (2), (6)**

The level of the carrier and the various conducted spurious and harmonic frequencies is measured by means of a calibrated spectrum analyzer. The spectrum is scanned from the lowest frequency generated in the equipment up to a frequency including its 10th harmonic.

#### **3.1.3 Radiation Spurious and Harmonic Emissions**

**- Part §2.1053, §27.53.(l) (2), (6)**

Spurious and harmonic emissions between the lowest frequency generated in this device and up to 10<sup>th</sup> harmonic of the highest generated in this device are measured at 3-meter OATS. The equipment under test is placed on a wooden turntable located at 3-meters from the receive antenna. The receive antenna height and turntable rotations are adjusted for the highest reading on the receive spectrum analyzer. A half-wave dipole is substituted in place of the EUT. This dipole antenna is driven by a vector signal generator with the level of the signal generator being adjusted to obtain the same receive spectrum analyzer reading. This level is recorded. For readings above 1GHz, the above procedure is repeated using the horn antennas and the difference between the gain of the horn and an isotropic or dipole antenna are taken into consideration.

### **3.1 DESCRIPTION OF TESTS**

**(Continued...)**

#### **3.1.4 Frequency Stability/Temperature Variation.**

**- Part §2.1055, §27.54**

The frequency stability of the transmitter is measured by:

- a) **Temperature** : The temperature is varied from -30°C to + 50°C using an environmental chamber with 10°C increments.
- b) **Primary Supply Voltage** : The primary supply voltage is varied from 85% to 115% of the nominal voltage at the input to the device or at the power supply terminals if cables are not normally supplied.

**Specification – The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.**

#### **Time Period and Procedure:**

1. The carrier frequency of the transmitter is measured at room temperature. (20°C to provide a reference).
2. The equipment is turned on in a “standby” condition for one minute before applying power to the transmitter. Measurement of the carrier frequency of the transmitter is made within one minute after applying power to the transmitter.
3. Frequency measurements are made at 10°C intervals ranging from -30°C to +50°C. A period of at least one half-hour is provided to allow stabilization of the equipment at each temperature level.

## 3.2 SUMMARY OF TESTS

| FCC Part Section(s)              | Parameter                           | Limit  | Test Condition | Status (note 1) |
|----------------------------------|-------------------------------------|--|----------------|-----------------|
| <b>I. Transmitter Test Items</b> |                                     |  |                |                 |
| 2.1049<br>27.53(l)(6)            | Occupied Bandwidth                  | N/A  | Conducted      | C               |
| 2.1051<br>27.53(l)(2)(6)         | Band Edge                           | $< 43 + 10\log_{10}(P)$                                  |                | C               |
| 2.1051<br>27.53(l)(2)(6)         | Conducted Spurious Emissions        | $< 43 + 10\log_{10}(P)$                                  |                | C               |
| 2.1046                           | Conducted Output Power              | N/A  |                | C               |
| 2.1055<br>27.54                  | Frequency Stability                 | Fundamental emissions must stay within the allotted band |                | C               |
| 27.50(h)(2)                      | Equivalent Isotropic Radiated Power | $< 2$ Watts max. EIRP                                    | Radiated       | C               |
| 2.1053<br>27.53(l)(2)            | Radiated Spurious Emissions         | $< 43 + 10\log_{10}(P)$ for all out-of-band emissions    |                | C               |

## II. Additional Test Results for JBP portion

|        |                               |                       |                |                     |
|--------|-------------------------------|-----------------------|----------------|---------------------|
| 15.107 | AC Conducted Emissions        | $<$ FCC 15.107 limits | Radiated       | C <sup>note 2</sup> |
| 15.109 | General Field Strength Limits | $<$ FCC 15.109 limits | Line Conducted | C <sup>note 2</sup> |

**Note 1:** C=Comply NC=Not Comply NT=Not Tested NA=Not Applicable

**Note 2:** The JBP (Computing device peripheral) portion of this device was tested and approved by FCC DOC Procedure.

## 4.1 TEST DATA

### 4.1.1 Conducted Output Power

A vector signal generator was used to supply the WiMAX signal sources to a EUT and an external trigger source to a spectrum analyzer. The trigger was set in such a way that the analyzer recorded power measurements only during the times in which the EUT was transmitting. The WiMAX conducted powers are reported below as well as a test setup diagram.

A PC(or Notebook) controlled EUT to transmit rated output power under appropriate transmission mode and specific frequency.

- Measurement data

| Bandwidth | Zone Format | Frequency (MHz) | QPSK 1/2 (dBm) | QPSK 3/4 (dBm) | 16QAM 1/2 (dBm) | 16QAM 3/4 (dBm) |
|-----------|-------------|-----------------|----------------|----------------|-----------------|-----------------|
| 5MHz      | PUSC        | 2498.5          | 26.94          | 27.13          | 27.26           | 26.81           |
|           |             | 2593.0          | 26.74          | 26.86          | 26.91           | 26.64           |
|           |             | 2687.5          | 26.40          | 26.47          | 26.53           | 26.25           |
|           | AMC         | 2498.5          | 27.40          | <b>27.43</b>   | <b>27.58</b>    | 27.34           |
|           |             | 2593.0          | 27.31          | <b>27.46</b>   | <b>27.53</b>    | 27.24           |
|           |             | 2687.5          | 27.00          | <b>27.06</b>   | <b>27.10</b>    | 26.95           |
| 10MHz     | PUSC        | 2501.0          | 26.17          | 26.37          | 26.46           | 26.05           |
|           |             | 2593.0          | 26.65          | 26.94          | 26.91           | 26.60           |
|           |             | 2685.0          | 26.65          | 26.88          | 27.01           | 26.66           |
|           | AMC         | 2501.0          | 26.62          | <b>26.89</b>   | <b>27.06</b>    | 26.61           |
|           |             | 2593.0          | 27.03          | <b>27.31</b>   | <b>27.49</b>    | 26.99           |
|           |             | 2685.0          | 27.10          | <b>27.33</b>   | <b>27.50</b>    | 27.02           |

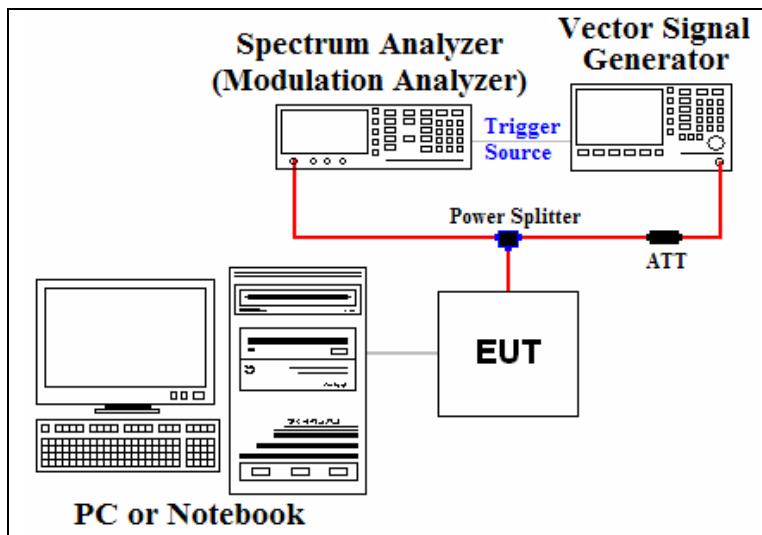


Figure1. Test Setup Diagram of WiMAX Conducted Power

**4.1 TEST DATA****(Continued...)****4.1.2 Equivalent Isotropic Radiated Power Output****A. POWER: Maximum (BW 5MHz)**

| Frequency (MHz) | Zone Format & Modulation Type | POL (H/V) | Reading Level (dBm) | Level @Ant. Terminal (dBm) | Antenna Gain (dBi) | EIRP (dBm)   | EIRP (W)     | Supplied Power |
|-----------------|-------------------------------|-----------|---------------------|----------------------------|--------------------|--------------|--------------|----------------|
| 2498.5          | AMC & QPSK 3/4                | V         | -17.06              | 21.75                      | 9.44               | 31.19        | 1.315        | Adaptor        |
| <b>2593.0</b>   | <b>AMC &amp; QPSK 3/4</b>     | <b>V</b>  | <b>-16.72</b>       | <b>22.07</b>               | <b>9.47</b>        | <b>31.54</b> | <b>1.426</b> | <b>Adaptor</b> |
| 2687.5          | AMC & QPSK 3/4                | V         | -18.63              | 20.24                      | 9.49               | 29.73        | 0.940        | Adaptor        |
| 2593.0          | AMC & QPSK 1/2                | V         | -17.07              | 21.72                      | 9.47               | 31.19        | 1.315        | Adaptor        |
| 2593.0          | PUSC & QPSK 1/2               | V         | -17.50              | 21.29                      | 9.47               | 30.76        | 1.191        | Adaptor        |
| 2593.0          | PUSC & QPSK 3/4               | V         | -17.41              | 21.38                      | 9.47               | 30.85        | 1.216        | Adaptor        |
| 2498.5          | AMC & 16QAM 1/2               | V         | -17.19              | 21.62                      | 9.44               | 31.06        | 1.276        | Adaptor        |
| <b>2593.0</b>   | <b>AMC &amp; 16QAM 1/2</b>    | <b>V</b>  | <b>-16.81</b>       | <b>21.98</b>               | <b>9.47</b>        | <b>31.45</b> | <b>1.396</b> | <b>Adaptor</b> |
| 2687.5          | AMC & 16QAM 1/2               | V         | -18.84              | 20.03                      | 9.49               | 29.52        | 0.895        | Adaptor        |
| 2593.0          | AMC & 16QAM 3/4               | V         | -16.90              | 21.89                      | 9.47               | 31.36        | 1.368        | Adaptor        |
| 2593.0          | PUSC & 16QAM 1/2              | V         | -17.26              | 21.53                      | 9.47               | 31.00        | 1.259        | Adaptor        |
| 2593.0          | PUSC & 16QAM 3/4              | V         | -17.37              | 21.42                      | 9.47               | 30.89        | 1.227        | Adaptor        |

-Note: Basically these tests were performed at low, middle, high channel with the zone format and modulation type of maximum conducted output power. And these tests repeated at the worst case channel with other zone format and modulation type.

**NOTES:**

Effective Radiated Power Output Measurements by Substitution Method  
according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table located at 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the spectrum analyzer. A horn antenna was substituted in place of the EUT. This horn antenna was driven by a vector signal generator with WiMAX signal source and the level of the signal generator was adjusted to obtain the same spectrum analyzer's reading level when EUT existed. After that conducted power at the input terminal of the horn antenna is measured and this conducted power was corrected with antenna gain in dBi for EIRP .

**4.1 TEST DATA**

(Continued...)

**4.1.2 Equivalent Isotropic Radiated Power Output**

(Continued...)

**A. POWER: Maximum (BW 10MHz)**

| Frequency (MHz) | Zone & Mod. Type           | POL (H/V) | Reading Level (dBm) | Level @Ant. Terminal (dBm) | Antenna Gain (dBi) | EIRP (dBm)   | EIRP (W)     | Supplied Power |
|-----------------|----------------------------|-----------|---------------------|----------------------------|--------------------|--------------|--------------|----------------|
| 2501.0          | AMC & QPSK 3/4             | V         | -20.75              | 21.76                      | 9.44               | 31.20        | 1.318        | Adaptor        |
| <b>2593.0</b>   | <b>AMC &amp; QPSK 3/4</b>  | <b>V</b>  | <b>-19.32</b>       | <b>22.74</b>               | <b>9.47</b>        | <b>32.21</b> | <b>1.663</b> | <b>Adaptor</b> |
| 2685.0          | AMC & QPSK 3/4             | V         | -21.50              | 21.39                      | 9.49               | 30.88        | 1.225        | Adaptor        |
| 2593.0          | AMC & QPSK 1/2             | V         | -19.50              | 22.56                      | 9.47               | 32.03        | 1.596        | Adaptor        |
| 2593.0          | PUSC & QPSK 1/2            | V         | -19.84              | 22.22                      | 9.47               | 31.69        | 1.476        | Adaptor        |
| 2593.0          | PUSC & QPSK 3/4            | V         | -20.36              | 21.70                      | 9.47               | 31.17        | 1.309        | Adaptor        |
| 2501.0          | AMC & 16QAM 1/2            | V         | -20.12              | 22.82                      | 9.44               | 32.26        | 1.683        | Adaptor        |
| <b>2593.0</b>   | <b>AMC &amp; 16QAM 1/2</b> | <b>V</b>  | <b>-19.30</b>       | <b>23.07</b>               | <b>9.47</b>        | <b>32.54</b> | <b>1.795</b> | <b>Adaptor</b> |
| 2685.0          | AMC & 16QAM 1/2            | V         | -20.40              | 22.43                      | 9.49               | 31.92        | 1.556        | Adaptor        |
| 2593.0          | AMC & 16QAM 3/4            | V         | -19.53              | 22.84                      | 9.47               | 32.31        | 1.702        | Adaptor        |
| 2593.0          | PUSC & 16QAM 1/2           | V         | -19.79              | 22.58                      | 9.47               | 32.05        | 1.603        | Adaptor        |
| 2593.0          | PUSC & 16QAM 3/4           | V         | -20.10              | 22.27                      | 9.47               | 31.74        | 1.493        | Adaptor        |

-Note: Basically these tests were performed at low, middle, high channel with the zone format and modulation type of maximum conducted output power. And these tests repeated at the worst case channel with other zone format and modulation type.

**NOTES:**

Effective Radiated Power Output Measurements by Substitution Method  
according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table located at 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the spectrum analyzer. A horn antenna was substituted in place of the EUT. This horn antenna was driven by a vector signal generator with WiMAX signal source and the level of the signal generator was adjusted to obtain the same spectrum analyzer's reading level when EUT existed. After that conducted power at the input terminal of the horn antenna is measured and this conducted power was corrected with antenna gain in dBi for EIRP .

**4.1 TEST DATA****(Continued...)****4.1.3 Radiated Measurements**Field Strength of SPURIOUS Radiation

MODULATION SIGNAL : WiMAX  
 ZONE MODE : AMC  
 MODULATION TYPE : QPSK 3/4  
 BANDWIDTH : 5 MHz  
 OPERATING FREQUENCY : 2498.5 MHz  
 MEASURED OUTPUT POWER : 31.19 dBm = 1.315 W  
 DISTANCE 3 meters  
 LIMIT  $43 + 10 \log_{10} (W)$  = 44.19 dBc

| Freq.<br>(MHz) | POL<br>(H/V) | LEVEL@<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA<br>GAIN<br>(dBi) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) |       |
|----------------|--------------|---|--|--|-------|
| 4997.00        | H            | -52.17                                  | 10.56                                  | -41.61                                 | 72.80 |
| 4997.00        | V            | -52.07                                  | 10.56                                  | -41.51                                 | 72.70 |
| -              | -            | -                                       | -                                      | -                                      | -     |

**NOTE**

Radiated Spurious Emission Measurements by Substitution Method  
according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table located at 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the spectrum analyzer. A antenna was substituted in place of the EUT. This antenna was driven by a vector signal generator with WiMAX signal source for harmonics and with CW signal for narrow band spurious emissions. The level of the signal generator was adjusted to obtain the same spectrum analyzer's reading level when EUT existed. After that conducted power at the input terminal of the transmit antenna was measured and this conducted power was corrected with antenna gain in dBi.

This spurious level was recorded.

**4.1 TEST DATA**

(Continued...)

**4.1.3 Radiated Measurements**

(Continued...)

Field Strength of SPURIOUS Radiation

MODULATION SIGNAL : WiMAX  
 ZONE MODE : AMC  
 MODULATION TYPE : QPSK 3/4  
 BANDWIDTH : 5 MHz  
 OPERATING FREQUENCY : 2593.0 MHz  
 MEASURED OUTPUT POWER : 31.54 dBm = 1.426 W  
 DISTANCE 3 meters  
 LIMIT  $43 + 10 \log_{10} (W) =$  44.54 dBc

| Freq.<br>(MHz) | POL<br>(H/V) | LEVEL@<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA<br>GAIN<br>(dBi) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | (dBc) |
|----------------|--------------|---|--|--|-------|
| 5186.00        | H            | -54.36                                  | 10.72                                  | -43.64                                 | 75.18 |
| 5186.00        | V            | -54.50                                  | 10.72                                  | -43.78                                 | 75.32 |
| -              | -            | -                                       | -                                      | -                                      | -     |

**NOTE**

Radiated Spurious Emission Measurements by Substitution Method  
according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table located at 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the spectrum analyzer. A antenna was substituted in place of the EUT. This antenna was driven by a vector signal generator with WiMAX signal source for harmonics and with CW signal for narrow band spurious emissions. The level of the signal generator was adjusted to obtain the same spectrum analyzer's reading level when EUT existed. After that conducted power at the input terminal of the transmit antenna was measured and this conducted power was corrected with antenna gain in dBi.

This spurious level was recorded.

**4.1 TEST DATA**

(Continued...)

**4.1.3 Radiated Measurements**

(Continued...)

Field Strength of SPURIOUS Radiation

MODULATION SIGNAL : WiMAX  
 ZONE MODE : AMC  
 MODULATION TYPE : QPSK 3/4  
 BANDWIDTH : 5 MHz  
 OPERATING FREQUENCY : 2687.5 MHz  
 MEASURED OUTPUT POWER : 29.73 dBm = 0.940 W  
 DISTANCE 3 meters  
 LIMIT  $43 + 10 \log_{10} (W) =$  42.73 dBc

| Freq.<br>(MHz) | POL<br>(H/V) | LEVEL@<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA<br>GAIN<br>(dBi) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | (dBc) |
|----------------|--------------|---|--|--|-------|
| 5375.00        | H            | -51.04                                  | 10.88                                  | -40.16                                 | 69.89 |
| 5375.00        | V            | -52.01                                  | 10.88                                  | -41.13                                 | 70.86 |
| -              | -            | -                                       | -                                      | -                                      | -     |

**NOTE**

Radiated Spurious Emission Measurements by Substitution Method  
according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table located at 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the spectrum analyzer. A antenna was substituted in place of the EUT. This antenna was driven by a vector signal generator with WiMAX signal source for harmonics and with CW signal for narrow band spurious emissions. The level of the signal generator was adjusted to obtain the same spectrum analyzer's reading level when EUT existed. After that conducted power at the input terminal of the transmit antenna was measured and this conducted power was corrected with antenna gain in dBi.

This spurious level was recorded.

**4.1 TEST DATA****(Continued...)****4.1.3 Radiated Measurements**

(Continued...)

Field Strength of SPURIOUS Radiation

MODULATION SIGNAL : WiMAX  
 ZONE MODE : AMC  
 MODULATION TYPE : 16QAM 1/2  
 BANDWIDTH : 5 MHz  
 OPERATING FREQUENCY : 2498.5 MHz  
 MEASURED OUTPUT POWER : 31.06 dBm = 1.276 W  
 DISTANCE 3 meters  
 LIMIT  $43 + 10 \log_{10}(W) =$  44.06 dBc

| Freq.<br>(MHz) | POL<br>(H/V) | LEVEL@<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA<br>GAIN<br>(dBi) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) |       |
|----------------|--------------|---|--|--|-------|
| 4997.00        | H            | -52.31                                  | 10.56                                  | -41.75                                 | 72.81 |
| 4997.00        | V            | -52.43                                  | 10.56                                  | -41.87                                 | 72.93 |
| -              | -            | -                                       | -                                      | -                                      | -     |

**NOTE**

Radiated Spurious Emission Measurements by Substitution Method  
according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table located at 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the spectrum analyzer. A antenna was substituted in place of the EUT. This antenna was driven by a vector signal generator with WiMAX signal source for harmonics and with CW signal for narrow band spurious emissions. The level of the signal generator was adjusted to obtain the same spectrum analyzer's reading level when EUT existed. After that conducted power at the input terminal of the transmit antenna was measured and this conducted power was corrected with antenna gain in dBi.

This spurious level was recorded.

**4.1 TEST DATA**

(Continued...)

**4.1.3 Radiated Measurements**

(Continued...)

Field Strength of SPURIOUS Radiation

MODULATION SIGNAL : WiMAX  
 ZONE MODE : AMC  
 MODULATION TYPE : 16QAM 1/2  
 BANDWIDTH : 5 MHz  
 OPERATING FREQUENCY : 2593.0 MHz  
 MEASURED OUTPUT POWER : 31.45 dBm = 1.396 W  
 DISTANCE 3 meters  
 LIMIT  $43 + 10 \log_{10}(W) =$  44.45 dBc

| Freq.<br>(MHz) | POL<br>(H/V) | LEVEL@<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA<br>GAIN<br>(dBi) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) | (dBc) |
|----------------|--------------|---|--|--|-------|
| 5186.00        | H            | -52.96                                  | 10.72                                  | -42.24                                 | 73.69 |
| 5186.00        | V            | -52.50                                  | 10.72                                  | -41.78                                 | 73.23 |
| -              | -            | -                                       | -                                      | -                                      | -     |

**NOTE**

Radiated Spurious Emission Measurements by Substitution Method  
according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table located at 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the spectrum analyzer. A antenna was substituted in place of the EUT. This antenna was driven by a vector signal generator with WiMAX signal source for harmonics and with CW signal for narrow band spurious emissions. The level of the signal generator was adjusted to obtain the same spectrum analyzer's reading level when EUT existed. After that conducted power at the input terminal of the transmit antenna was measured and this conducted power was corrected with antenna gain in dBi.

This spurious level was recorded.

**4.1 TEST DATA**

(Continued...)

**4.1.3 Radiated Measurements**

(Continued...)

Field Strength of SPURIOUS Radiation

MODULATION SIGNAL : WiMAX  
 ZONE MODE : AMC  
 MODULATION TYPE : 16QAM 1/2  
 BANDWIDTH : 5 MHz  
 OPERATING FREQUENCY : 2687.5 MHz  
 MEASURED OUTPUT POWER : 29.52 dBm = 0.895 W  
 DISTANCE 3 meters  
 LIMIT  $43 + 10 \log_{10} (W) =$  42.52 dBc

| Freq.<br>(MHz) | POL<br>(H/V) | LEVEL@<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA<br>GAIN<br>(dBi) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) |       |
|----------------|--------------|---|--|--|-------|
| 5375.00        | H            | -52.03                                  | 10.88                                  | -41.15                                 | 70.67 |
| 5375.00        | V            | -52.28                                  | 10.88                                  | -41.40                                 | 70.92 |
| -              | -            | -                                       | -                                      | -                                      | -     |

**NOTE**

Radiated Spurious Emission Measurements by Substitution Method  
according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table located at 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the spectrum analyzer. A antenna was substituted in place of the EUT. This antenna was driven by a vector signal generator with WiMAX signal source for harmonics and with CW signal for narrow band spurious emissions. The level of the signal generator was adjusted to obtain the same spectrum analyzer's reading level when EUT existed. After that conducted power at the input terminal of the transmit antenna was measured and this conducted power was corrected with antenna gain in dBi.

This spurious level was recorded.

**4.1 TEST DATA****(Continued...)****4.1.3 Radiated Measurements**

(Continued...)

Field Strength of SPURIOUS Radiation

MODULATION SIGNAL : WiMAX  
 ZONE MODE : AMC  
 MODULATION TYPE : QPSK 1/2  
 BANDWIDTH : 10 MHz  
 OPERATING FREQUENCY : 2501.0 MHz  
 MEASURED OUTPUT POWER : 31.20 dBm = 1.318 W  
 DISTANCE 3 meters  
 LIMIT  $43 + 10 \log_{10} (W) =$  44.20 dBc

| Freq.<br>(MHz) | POL<br>(H/V) | LEVEL@<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA<br>GAIN<br>(dBi) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) |       |
|----------------|--------------|---|--|--|-------|
| 5002.00        | H            | -51.95                                  | 10.56                                  | -41.39                                 | 72.59 |
| 5002.00        | V            | -51.21                                  | 10.56                                  | -40.65                                 | 71.85 |
| -              | -            | -                                       | -                                      | -                                      | -     |

**NOTE**

Radiated Spurious Emission Measurements by Substitution Method  
according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table located at 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the spectrum analyzer. A antenna was substituted in place of the EUT. This antenna was driven by a vector signal generator with WiMAX signal source for harmonics and with CW signal for narrow band spurious emissions. The level of the signal generator was adjusted to obtain the same spectrum analyzer's reading level when EUT existed. After that conducted power at the input terminal of the transmit antenna was measured and this conducted power was corrected with antenna gain in dBi.

This spurious level was recorded.

**4.1 TEST DATA**

(Continued...)

**4.1.3 Radiated Measurements**

(Continued...)

Field Strength of SPURIOUS Radiation

MODULATION SIGNAL : WiMAX  
 ZONE MODE : AMC  
 MODULATION TYPE : QPSK 1/2  
 BANDWIDTH : 10 MHz  
 OPERATING FREQUENCY : 2593.0 MHz  
 MEASURED OUTPUT POWER : 32.21 dBm = 1.663 W  
 DISTANCE 3 meters  
 LIMIT  $43 + 10 \log_{10} (W) =$  45.21 dBc

| Freq.<br>(MHz) | POL<br>(H/V) | LEVEL@<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA<br>GAIN<br>(dBi) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) |       |
|----------------|--------------|---|--|--|-------|
| 5186.00        | H            | -52.62                                  | 10.72                                  | -41.90                                 | 74.11 |
| 5186.00        | V            | -52.58                                  | 10.72                                  | -41.86                                 | 74.07 |
| -              | -            | -                                       | -                                      | -                                      | -     |

**NOTE**

Radiated Spurious Emission Measurements by Substitution Method  
according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table located at 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the spectrum analyzer. A antenna was substituted in place of the EUT. This antenna was driven by a vector signal generator with WiMAX signal source for harmonics and with CW signal for narrow band spurious emissions. The level of the signal generator was adjusted to obtain the same spectrum analyzer's reading level when EUT existed. After that conducted power at the input terminal of the transmit antenna was measured and this conducted power was corrected with antenna gain in dBi.

This spurious level was recorded.

**4.1 TEST DATA**

(Continued...)

**4.1.3 Radiated Measurements**

(Continued...)

Field Strength of SPURIOUS Radiation

MODULATION SIGNAL : WiMAX  
 ZONE MODE : AMC  
 MODULATION TYPE : QPSK 1/2  
 BANDWIDTH : 10 MHz  
 OPERATING FREQUENCY : 2685.0 MHz  
 MEASURED OUTPUT POWER : 30.88 dBm = 1.225 W  
 DISTANCE 3 meters  
 LIMIT  $43 + 10 \log_{10}(W) =$  43.88 dBc

| Freq.<br>(MHz) | POL<br>(H/V) | LEVEL@<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA<br>GAIN<br>(dBi) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) |       |
|----------------|--------------|---|--|--|-------|
| 5370.00        | H            | -52.33                                  | 10.88                                  | -41.45                                 | 72.33 |
| 5370.00        | V            | -50.53                                  | 10.88                                  | -39.65                                 | 70.53 |
| -              | -            | -                                       | -                                      | -                                      | -     |

**NOTE**

Radiated Spurious Emission Measurements by Substitution Method  
according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table located at 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the spectrum analyzer. A antenna was substituted in place of the EUT. This antenna was driven by a vector signal generator with WiMAX signal source for harmonics and with CW signal for narrow band spurious emissions. The level of the signal generator was adjusted to obtain the same spectrum analyzer's reading level when EUT existed. After that conducted power at the input terminal of the transmit antenna was measured and this conducted power was corrected with antenna gain in dBi.

This spurious level was recorded.

**4.1 TEST DATA**

(Continued...)

**4.1.3 Radiated Measurements**

(Continued...)

Field Strength of SPURIOUS Radiation

MODULATION SIGNAL : WiMAX  
 ZONE MODE : AMC  
 MODULATION TYPE : 16QAM 1/2  
 BANDWIDTH : 10 MHz  
 OPERATING FREQUENCY : 2501.0 MHz  
 MEASURED OUTPUT POWER : 32.26 dBm = 1.683 W  
 DISTANCE 3 meters  
 LIMIT  $43 + 10 \log_{10}(W) =$  45.26 dBc

| Freq.<br>(MHz) | POL<br>(H/V) | LEVEL@<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA<br>GAIN<br>(dBi) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) |       |
|----------------|--------------|---|--|--|-------|
| 5002.00        | H            | -50.34                                  | 10.56                                  | -39.78                                 | 72.04 |
| 5002.00        | V            | -51.28                                  | 10.56                                  | -40.72                                 | 72.98 |
| -              | -            | -                                       | -                                      | -                                      | -     |

**NOTE**

Radiated Spurious Emission Measurements by Substitution Method  
according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table located at 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the spectrum analyzer. A antenna was substituted in place of the EUT. This antenna was driven by a vector signal generator with WiMAX signal source for harmonics and with CW signal for narrow band spurious emissions. The level of the signal generator was adjusted to obtain the same spectrum analyzer's reading level when EUT existed. After that conducted power at the input terminal of the transmit antenna was measured and this conducted power was corrected with antenna gain in dBi.

This spurious level was recorded.

**4.1 TEST DATA**

(Continued...)

**4.1.3 Radiated Measurements**

(Continued...)

Field Strength of SPURIOUS Radiation

MODULATION SIGNAL : WiMAX  
 ZONE MODE : AMC  
 MODULATION TYPE : 16QAM 1/2  
 BANDWIDTH : 10 MHz  
 OPERATING FREQUENCY : 2593.0 MHz  
 MEASURED OUTPUT POWER : 32.54 dBm = 1.795 W  
 DISTANCE 3 meters  
 LIMIT  $43 + 10 \log_{10}(W) =$  45.54 dBc

| Freq.<br>(MHz) | POL<br>(H/V) | LEVEL@<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA<br>GAIN<br>(dBi) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) |       |
|----------------|--------------|---|--|--|-------|
| 5186.00        | H            | -53.86                                  | 10.72                                  | -43.14                                 | 75.68 |
| 5186.00        | V            | -52.02                                  | 10.72                                  | -41.30                                 | 73.84 |
| -              | -            | -                                       | -                                      | -                                      | -     |

**NOTE**

Radiated Spurious Emission Measurements by Substitution Method  
according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table located at 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the spectrum analyzer. A antenna was substituted in place of the EUT. This antenna was driven by a vector signal generator with WiMAX signal source for harmonics and with CW signal for narrow band spurious emissions. The level of the signal generator was adjusted to obtain the same spectrum analyzer's reading level when EUT existed. After that conducted power at the input terminal of the transmit antenna was measured and this conducted power was corrected with antenna gain in dBi.

This spurious level was recorded.

**4.1 TEST DATA**

(Continued...)

**4.1.3 Radiated Measurements**

(Continued...)

Field Strength of SPURIOUS Radiation

MODULATION SIGNAL : WiMAX  
 ZONE MODE : AMC  
 MODULATION TYPE : 16QAM 1/2  
 BANDWIDTH : 10 MHz  
 OPERATING FREQUENCY : 2685.0 MHz  
 MEASURED OUTPUT POWER : 31.92 dBm = 1.556 W  
 DISTANCE 3 meters  
 LIMIT  $43 + 10 \log_{10}(W) =$  44.92 dBc

| Freq.<br>(MHz) | POL<br>(H/V) | LEVEL@<br>ANTENNA<br>TERMINALS<br>(dBm) | SUBSTITUTE<br>ANTENNA<br>GAIN<br>(dBi) | CORRECT<br>GENERATOR<br>LEVEL<br>(dBm) |       |
|----------------|--------------|---|--|--|-------|
| 5370.00        | H            | -52.48                                  | 10.88                                  | -41.60                                 | 73.52 |
| 5370.00        | V            | -51.52                                  | 10.88                                  | -40.64                                 | 72.56 |
| -              | -            | -                                       | -                                      | -                                      | -     |

**NOTE**

Radiated Spurious Emission Measurements by Substitution Method  
according to ANSI/TIA/EIA-603-C-2004, Aug. 17, 2004:

The EUT was placed on a wooden table located at 3-meters from the receive antenna. The receive antenna height and turntable rotation was adjusted for the highest reading on the spectrum analyzer. A antenna was substituted in place of the EUT. This antenna was driven by a vector signal generator with WiMAX signal source for harmonics and with CW signal for narrow band spurious emissions. The level of the signal generator was adjusted to obtain the same spectrum analyzer's reading level when EUT existed. After that conducted power at the input terminal of the transmit antenna was measured and this conducted power was corrected with antenna gain in dBi.

This spurious level was recorded.

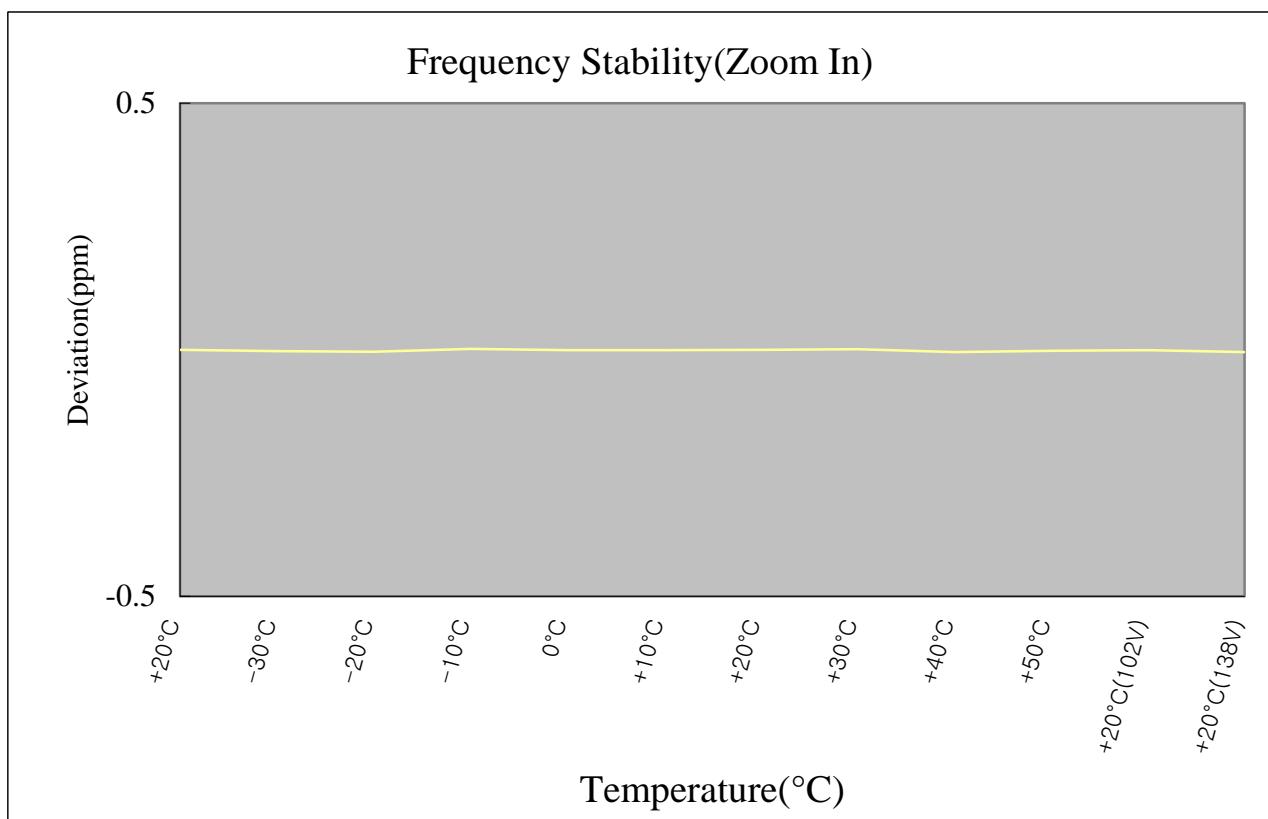
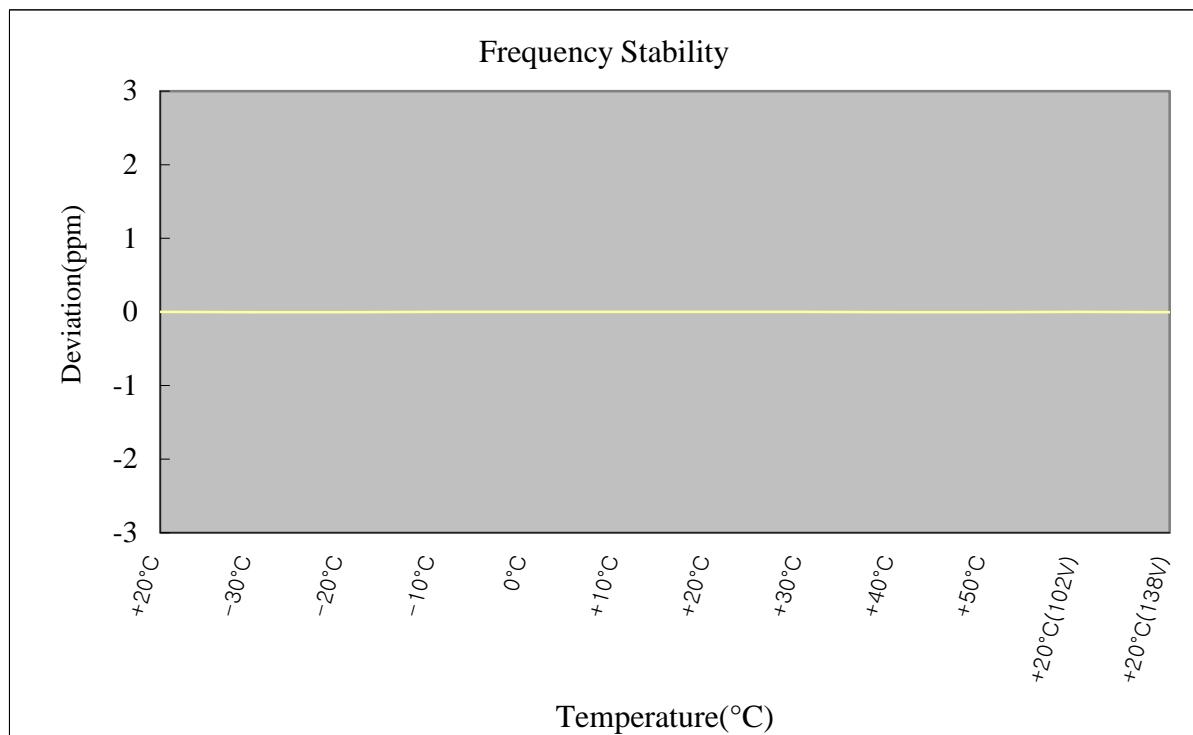
**4.1 TEST DATA****(Continued...)****4.1.4 Frequency Stability**

BANDWIDTH : 5 MHz  
 ZONE MODE : AMC  
 MODULATION TYPE : QPSK 3/4  
 OPERATING FREQUENCY : 2,592,999,969 Hz  
 REFERENCE VOLTAGE : 120 VAC

| VOLTAGE (%)   | POWER (VAC) | TEMP (dB) | FREQ (Hz)     | Deviation (ppm) |
|---------------|-------------|-----------|---------------|-----------------|
| 100%          | 120         | +20(Ref)  | 2,592,999,969 | 0.0000          |
| 100%          |             | -30       | 2,592,999,961 | -0.0031         |
| 100%          |             | -20       | 2,592,999,958 | -0.0042         |
| 100%          |             | -10       | 2,592,999,973 | 0.0015          |
| 100%          |             | 0         | 2,592,999,967 | -0.0008         |
| 100%          |             | +10       | 2,592,999,966 | -0.0012         |
| 100%          |             | +20       | 2,592,999,969 | 0.0000          |
| 100%          |             | +30       | 2,592,999,971 | 0.0008          |
| 100%          |             | +40       | 2,592,999,956 | -0.0050         |
| 100%          |             | +50       | 2,592,999,963 | -0.0023         |
| 85%           | 102         | +20       | 2,592,999,967 | -0.0008         |
| 115%          | 138         | +20       | 2,592,999,956 | -0.0050         |
| BATT.ENDPOINT | -           | -         | -             | -               |

**4.1 TEST DATA****(Continued...)****4.1.4 Frequency Stability**

(Continued...)



**4.1 TEST DATA****(Continued...)****4.1.4 Frequency Stability**

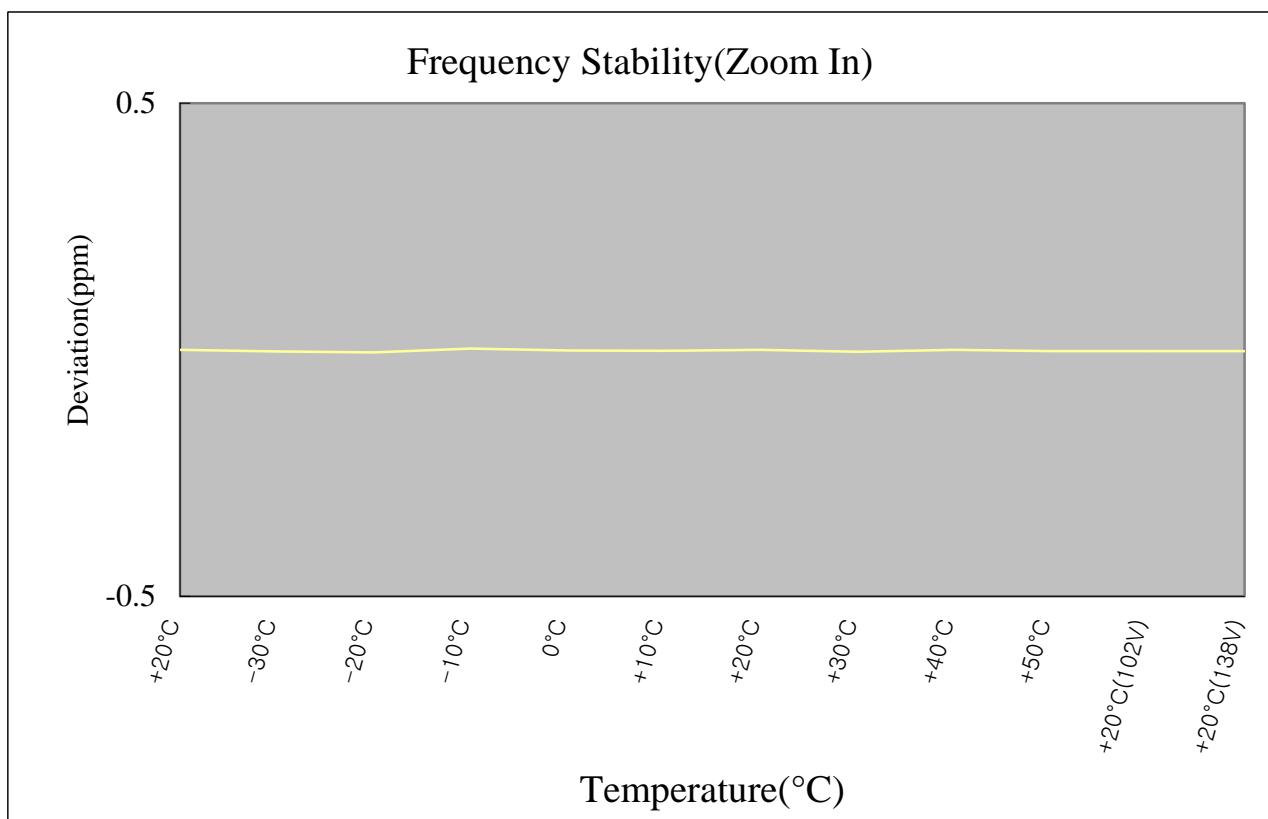
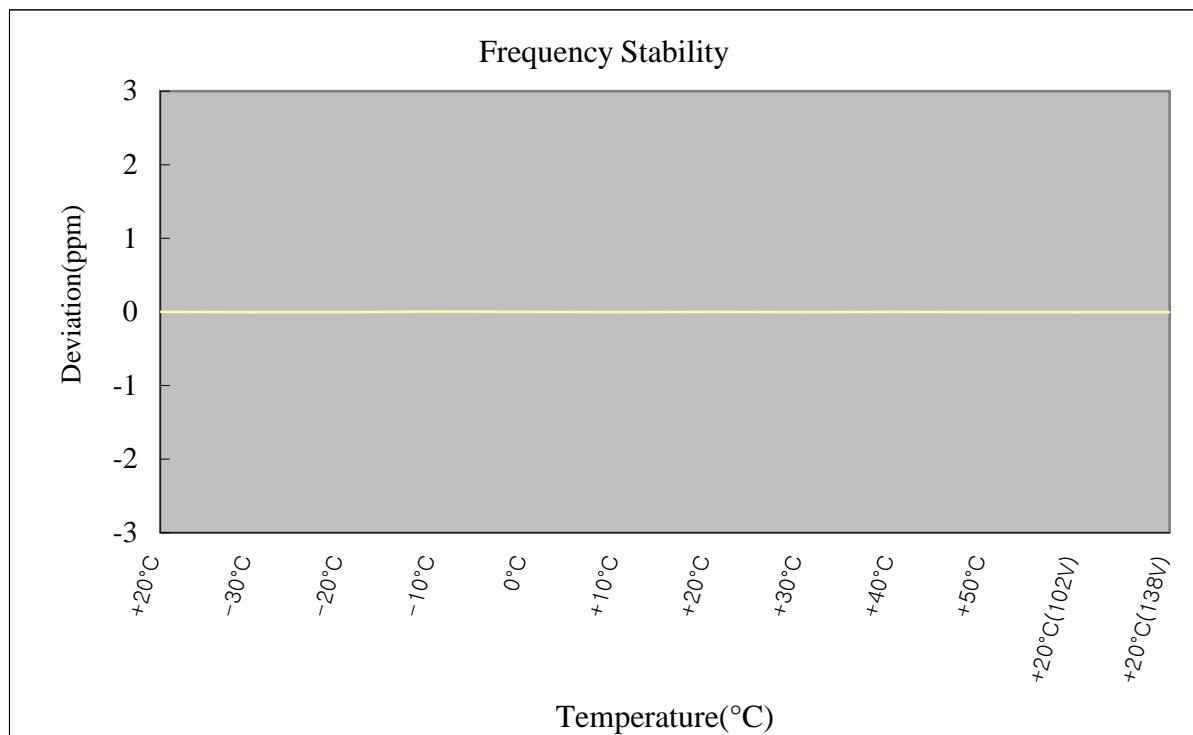
(Continued...)

BANDWIDTH : 5 MHz  
 ZONE MODE : AMC  
 MODULATION TYPE : 16QAM 1/2  
 OPERATING FREQUENCY : 2,592,999,974 Hz  
 REFERENCE VOLTAGE : 120 VAC

| VOLTAGE (%)   | POWER (VAC) | TEMP (dB) | FREQ (Hz)     | Deviation (ppm) |
|---------------|-------------|-----------|---------------|-----------------|
| 100%          | 120         | +20(Ref)  | 2,592,999,974 | 0.0000          |
| 100%          |             | -30       | 2,592,999,964 | -0.0039         |
| 100%          |             | -20       | 2,592,999,960 | -0.0054         |
| 100%          |             | -10       | 2,592,999,980 | 0.0023          |
| 100%          |             | 0         | 2,592,999,969 | -0.0019         |
| 100%          |             | +10       | 2,592,999,968 | -0.0023         |
| 100%          |             | +20       | 2,592,999,974 | 0.0000          |
| 100%          |             | +30       | 2,592,999,963 | -0.0042         |
| 100%          |             | +40       | 2,592,999,973 | -0.0004         |
| 100%          |             | +50       | 2,592,999,967 | -0.0027         |
| 85%           | 102         | +20       | 2,592,999,966 | -0.0031         |
| 115%          | 138         | +20       | 2,592,999,966 | -0.0031         |
| BATT.ENDPOINT | -           | -         | -             | -               |

**4.1 TEST DATA****(Continued...)****4.1.4 Frequency Stability**

(Continued...)



**4.1 TEST DATA****(Continued...)****4.1.4 Frequency Stability**

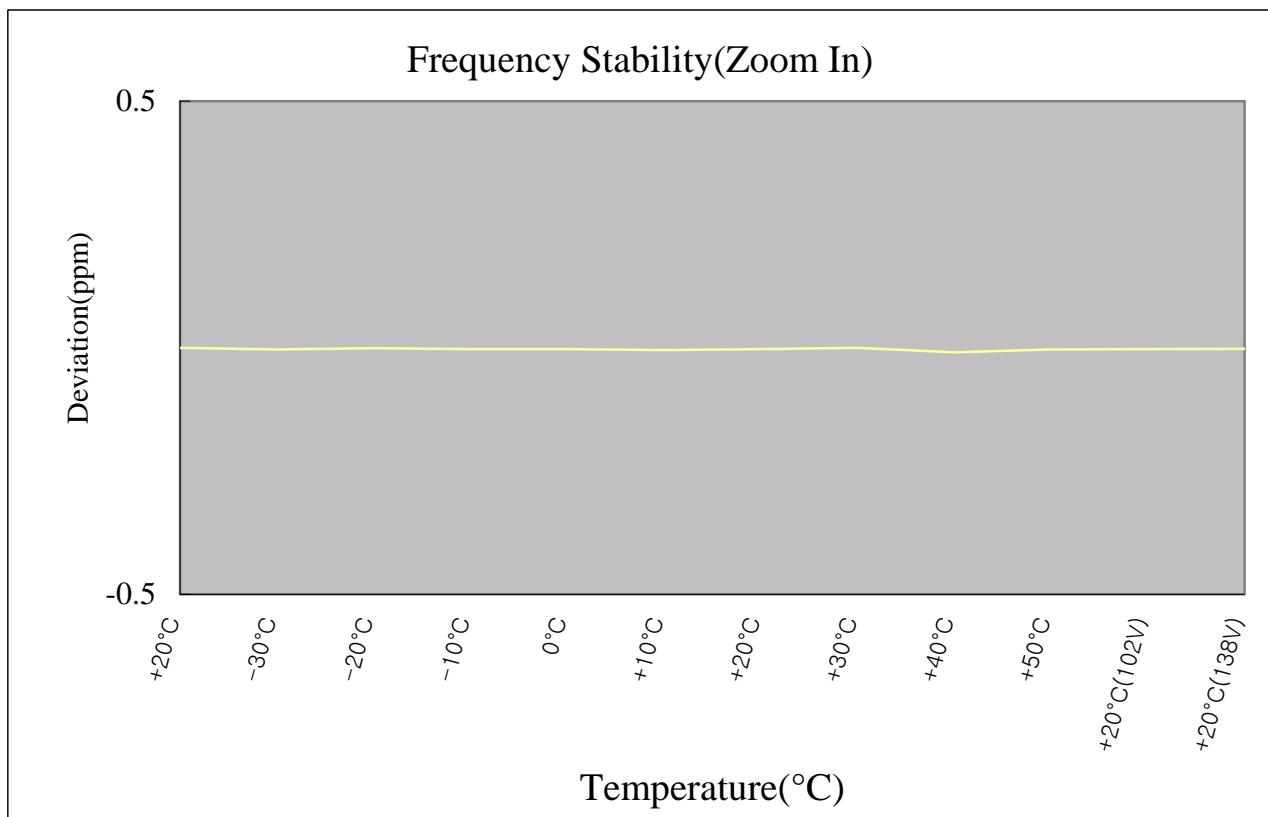
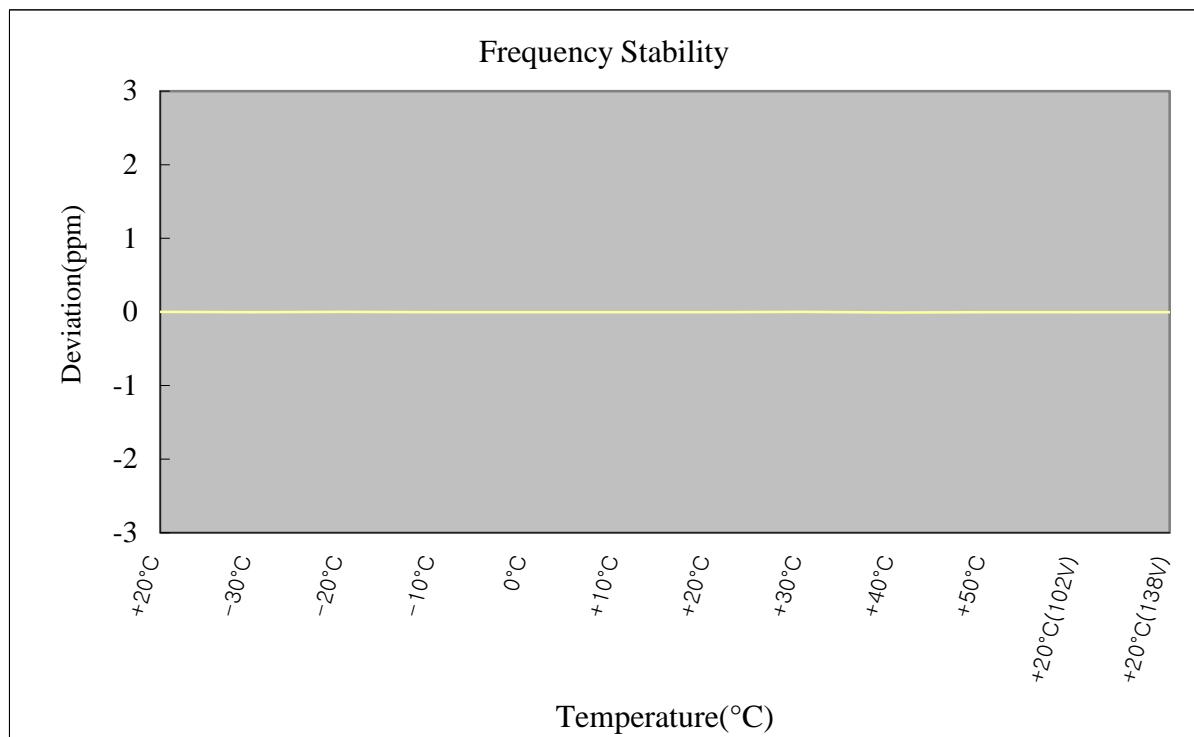
(Continued...)

BANDWIDTH : 10 MHz  
 ZONE MODE : AMC  
 MODULATION TYPE : QPSK 1/2  
 OPERATING FREQUENCY : 2,592,999,968 Hz  
 REFERENCE VOLTAGE : 120 VAC

| VOLTAGE (%)   | POWER (VAC) | TEMP (dB) | FREQ (Hz)     | Deviation (ppm) |
|---------------|-------------|-----------|---------------|-----------------|
| 100%          | 120         | +20(Ref)  | 2,592,999,968 | 0.0000          |
| 100%          |             | -30       | 2,592,999,959 | -0.0035         |
| 100%          |             | -20       | 2,592,999,966 | -0.0008         |
| 100%          |             | -10       | 2,592,999,960 | -0.0031         |
| 100%          |             | 0         | 2,592,999,961 | -0.0027         |
| 100%          |             | +10       | 2,592,999,955 | -0.0050         |
| 100%          |             | +20       | 2,592,999,960 | -0.0031         |
| 100%          |             | +30       | 2,592,999,968 | 0.0000          |
| 100%          |             | +40       | 2,592,999,943 | -0.0096         |
| 100%          |             | +50       | 2,592,999,958 | -0.0039         |
| 85%           | 102         | +20       | 2,592,999,961 | -0.0027         |
| 115%          | 138         | +20       | 2,592,999,962 | -0.0023         |
| BATT.ENDPOINT | -           | -         | -             | -               |

**4.1 TEST DATA****(Continued...)****4.1.4 Frequency Stability**

(Continued...)



**4.1 TEST DATA****(Continued...)****4.1.4 Frequency Stability**

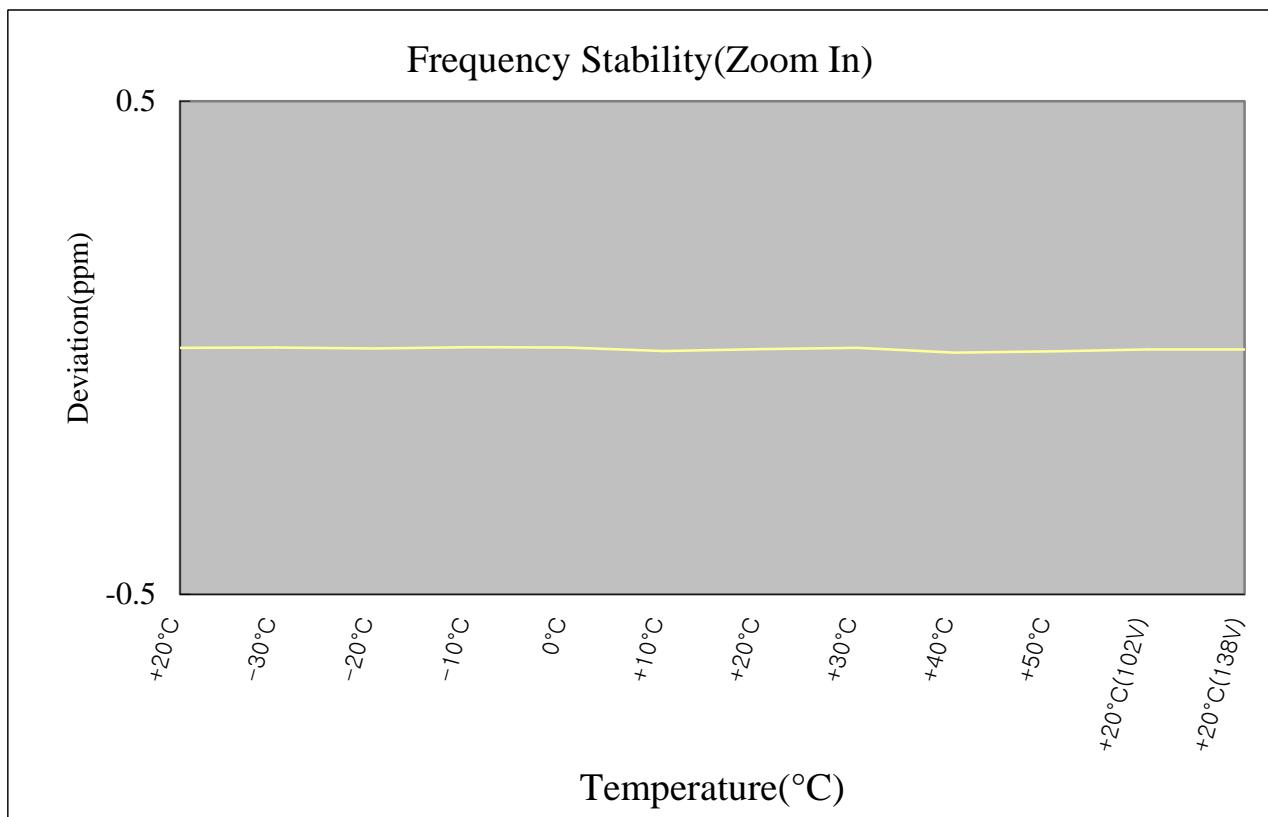
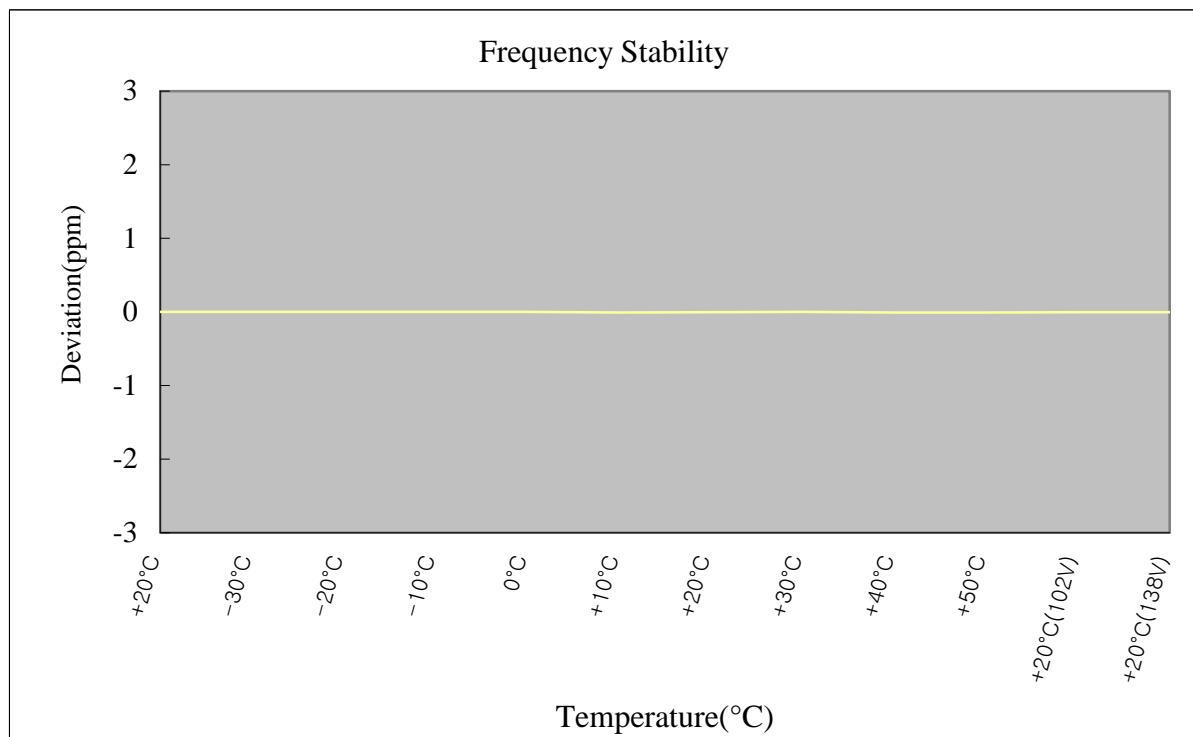
(Continued...)

BANDWIDTH : 10 MHz  
 ZONE MODE : AMC  
 MODULATION TYPE : 16QAM 1/2  
 OPERATING FREQUENCY : 2,592,999,965 Hz  
 REFERENCE VOLTAGE : 120 VAC

| VOLTAGE (%)   | POWER (VAC) | TEMP (dB) | FREQ (Hz)     | Deviation (ppm) |
|---------------|-------------|-----------|---------------|-----------------|
| 100%          | 120         | +20(Ref)  | 2,592,999,965 | 0.0000          |
| 100%          |             | -30       | 2,592,999,966 | 0.0004          |
| 100%          |             | -20       | 2,592,999,961 | -0.0015         |
| 100%          |             | -10       | 2,592,999,967 | 0.0008          |
| 100%          |             | 0         | 2,592,999,966 | 0.0004          |
| 100%          |             | +10       | 2,592,999,948 | -0.0066         |
| 100%          |             | +20       | 2,592,999,957 | -0.0031         |
| 100%          |             | +30       | 2,592,999,964 | -0.0004         |
| 100%          |             | +40       | 2,592,999,939 | -0.0100         |
| 100%          |             | +50       | 2,592,999,946 | -0.0073         |
| 85%           | 102         | +20       | 2,592,999,955 | -0.0039         |
| 115%          | 138         | +20       | 2,592,999,956 | -0.0035         |
| BATT.ENDPOINT | -           | -         | -             | -               |

**4.1 TEST DATA****(Continued...)****4.1.4 Frequency Stability**

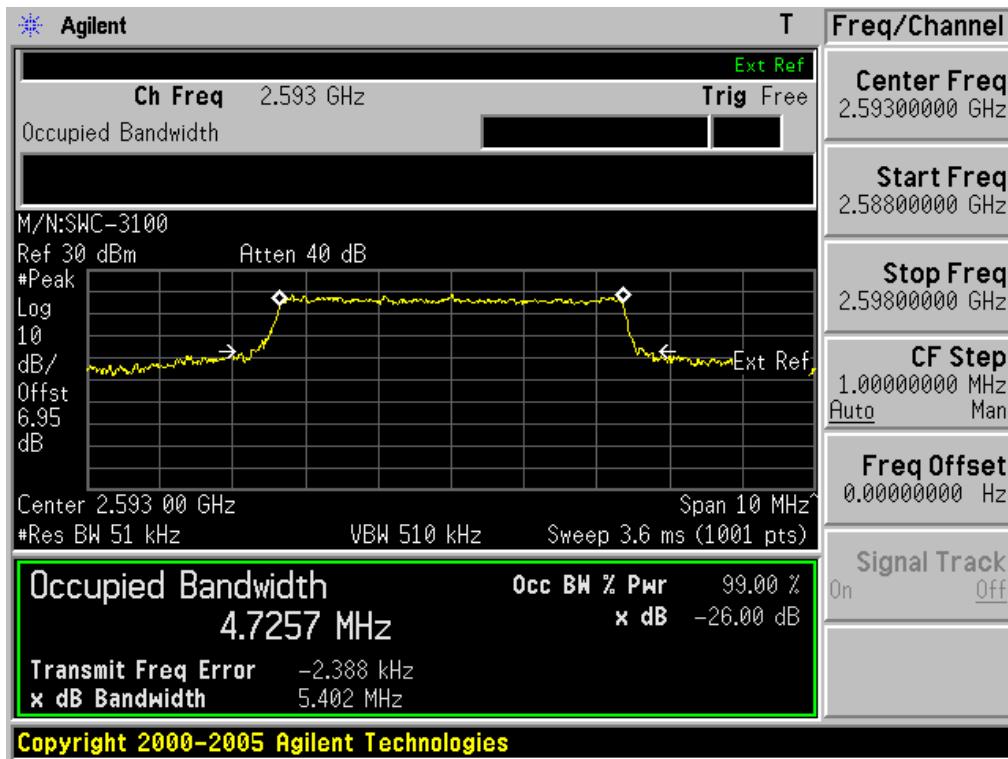
(Continued...)



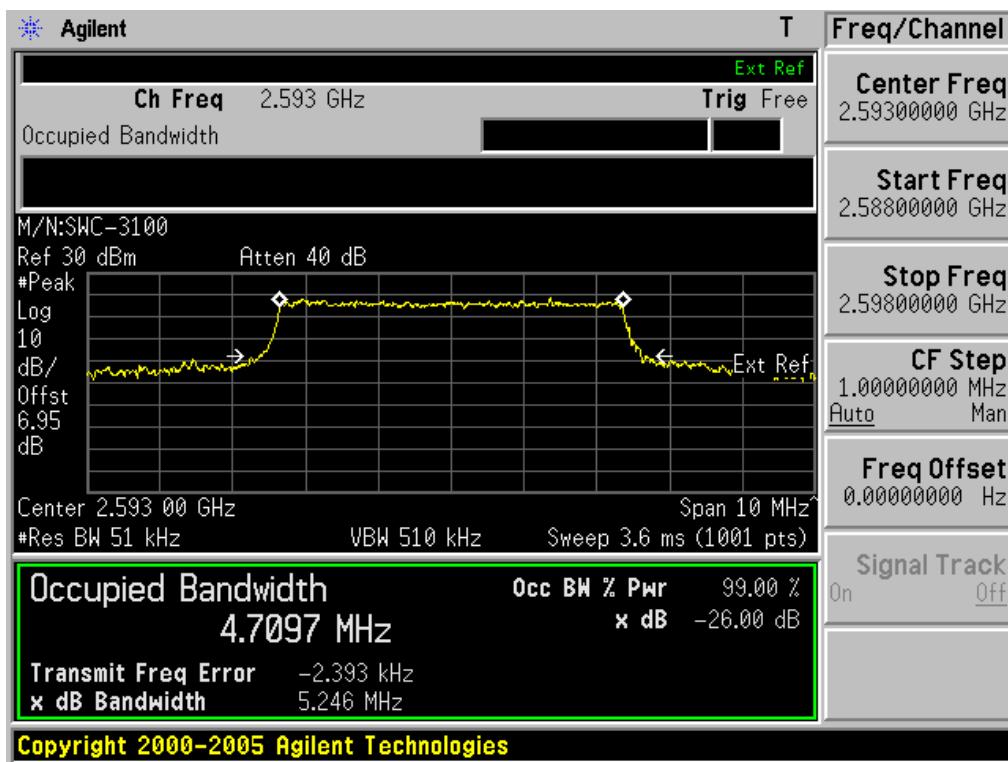
## 5.1 PLOTS OF EMISSIONS

### 5.1.1 Occupied Bandwidth(BW: 5MHz)

- Middle Channel(2593MHz) & AMC Mode & QPSK 1/2



- Middle Channel(2593MHz) & AMC Mode & QPSK 3/4



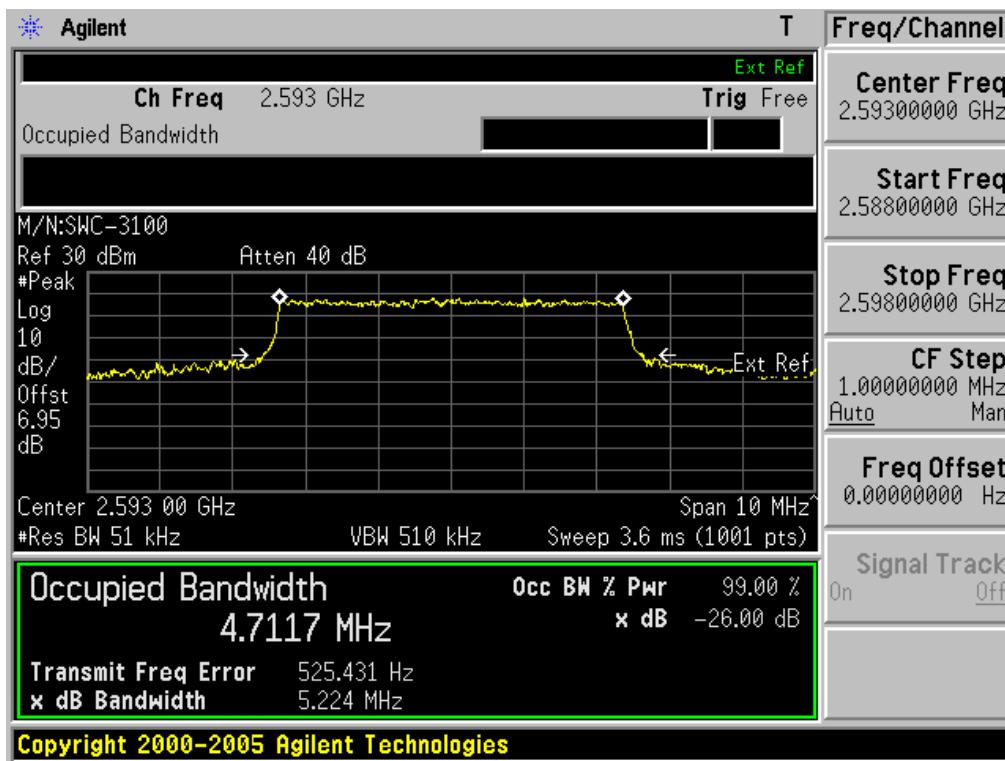
## 5.1 PLOTS OF EMISSIONS

(Continued...)

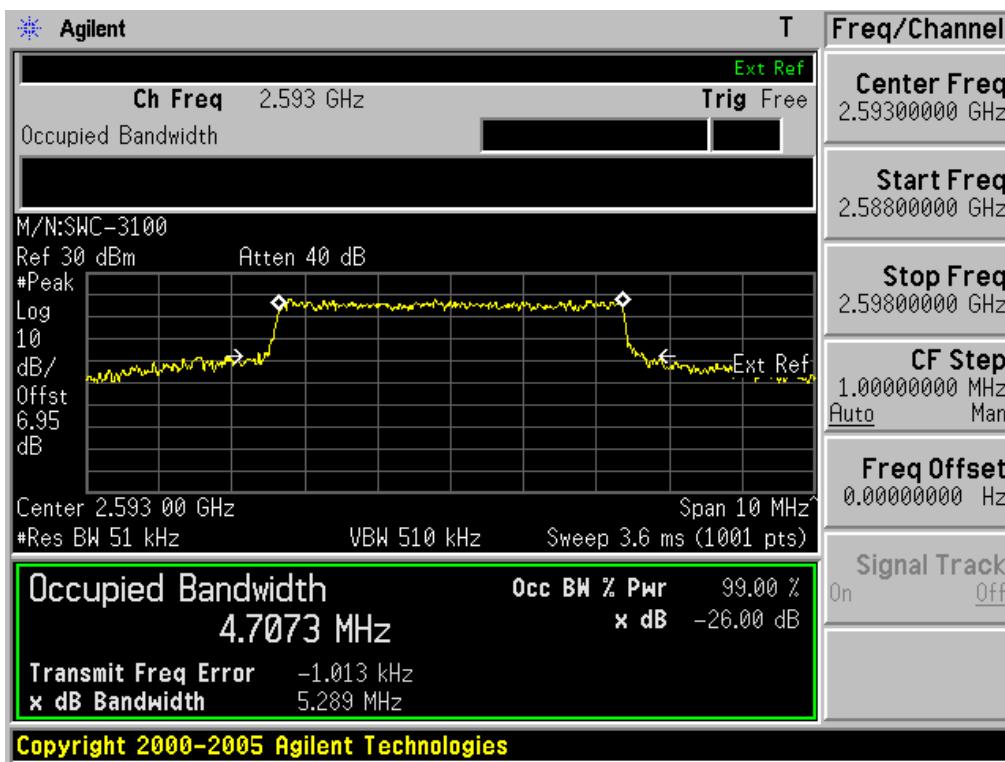
### 5.1.1 Occupied Bandwidth(BW: 5MHz)

(Continued...)

- Middle Channel(2593MHz) & AMC Mode & 16QAM 1/2



- Middle Channel(2593MHz) & AMC Mode & 16QAM 3/4



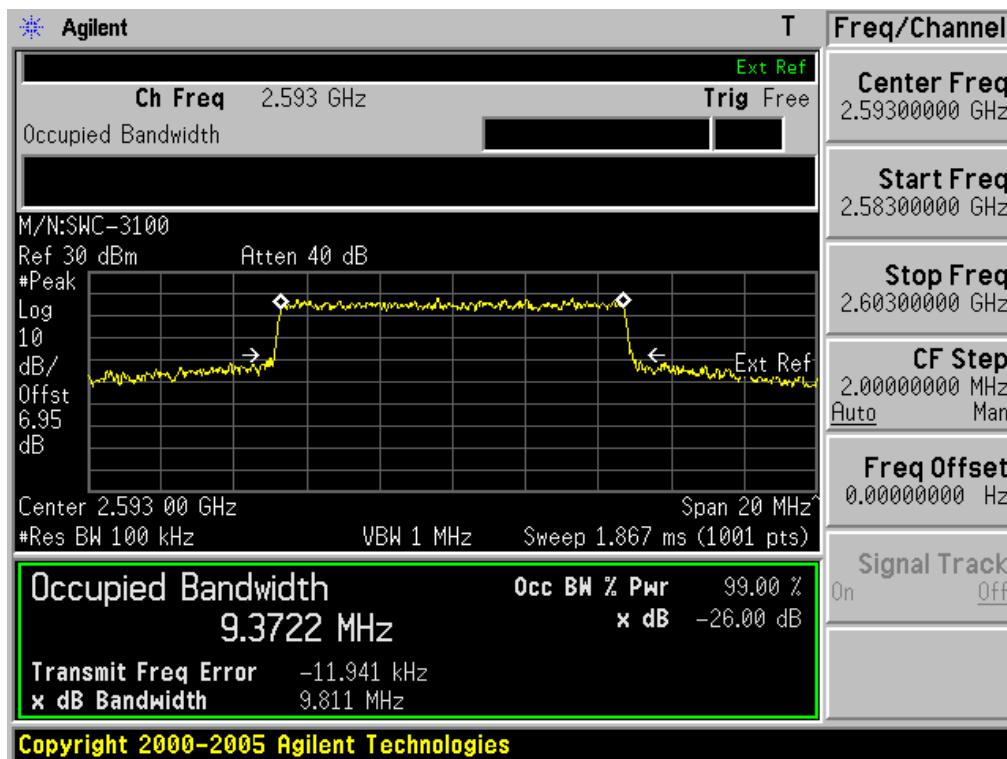
## 5.1 PLOTS OF EMISSIONS

(Continued...)

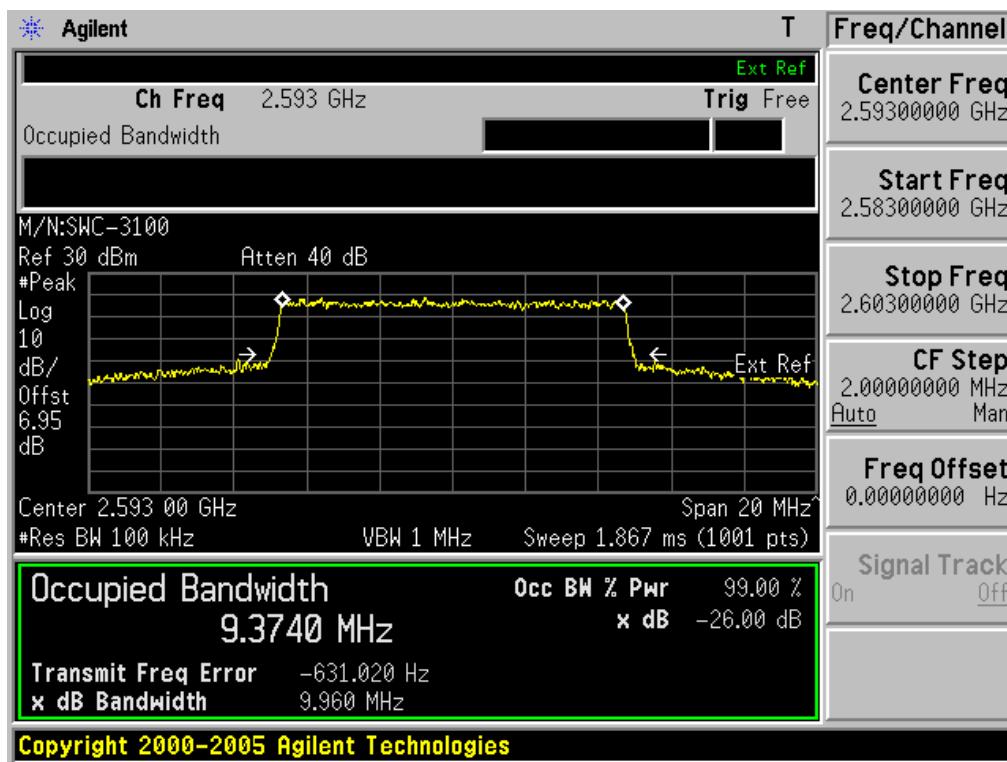
### 5.1.1 Occupied Bandwidth(BW: 10MHz)

(Continued...)

- Middle Channel(2593MHz) & AMC Mode & QPSK 1/2



- Middle Channel(2593MHz) & AMC Mode & QPSK 3/4



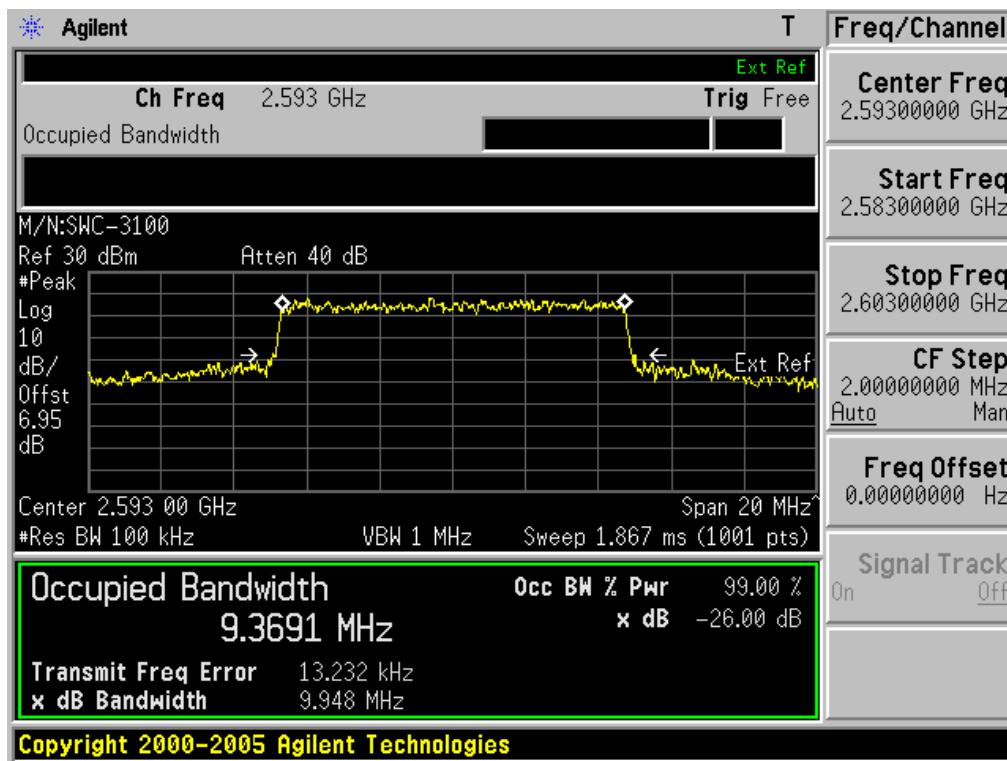
## 5.1 PLOTS OF EMISSIONS

(Continued...)

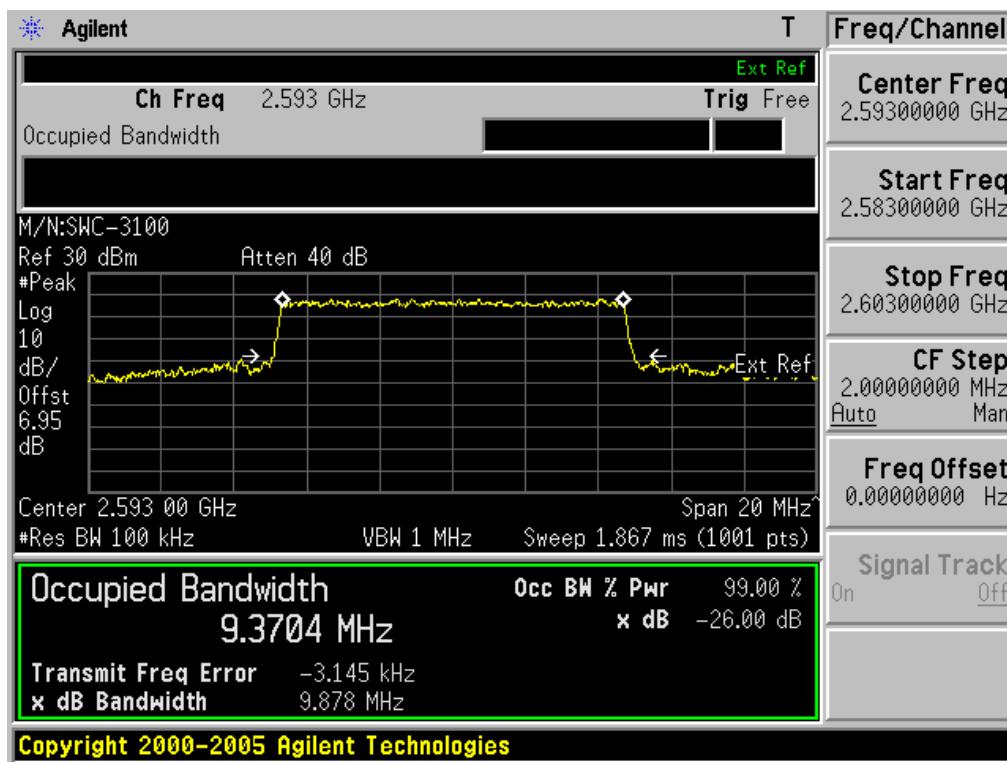
### 5.1.1 Occupied Bandwidth(BW: 10MHz)

(Continued...)

- Middle Channel(2593MHz) & AMC Mode & 16QAM 1/2



- Middle Channel(2593MHz) & AMC Mode & 16QAM 3/4

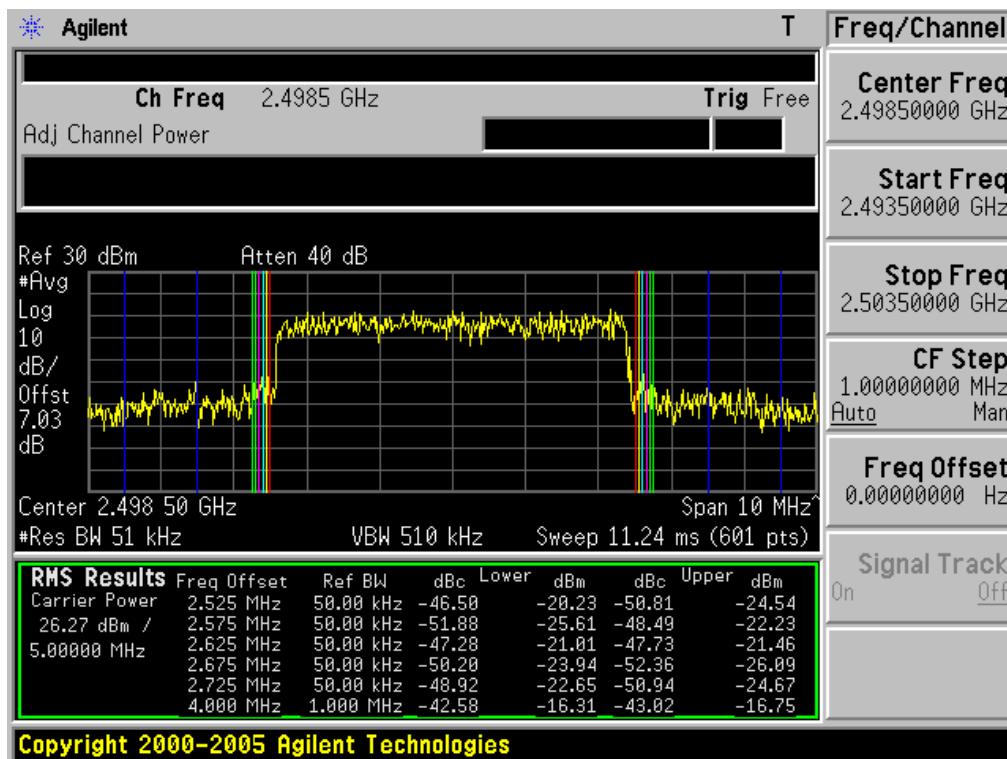


## 5.1 PLOTS OF EMISSIONS

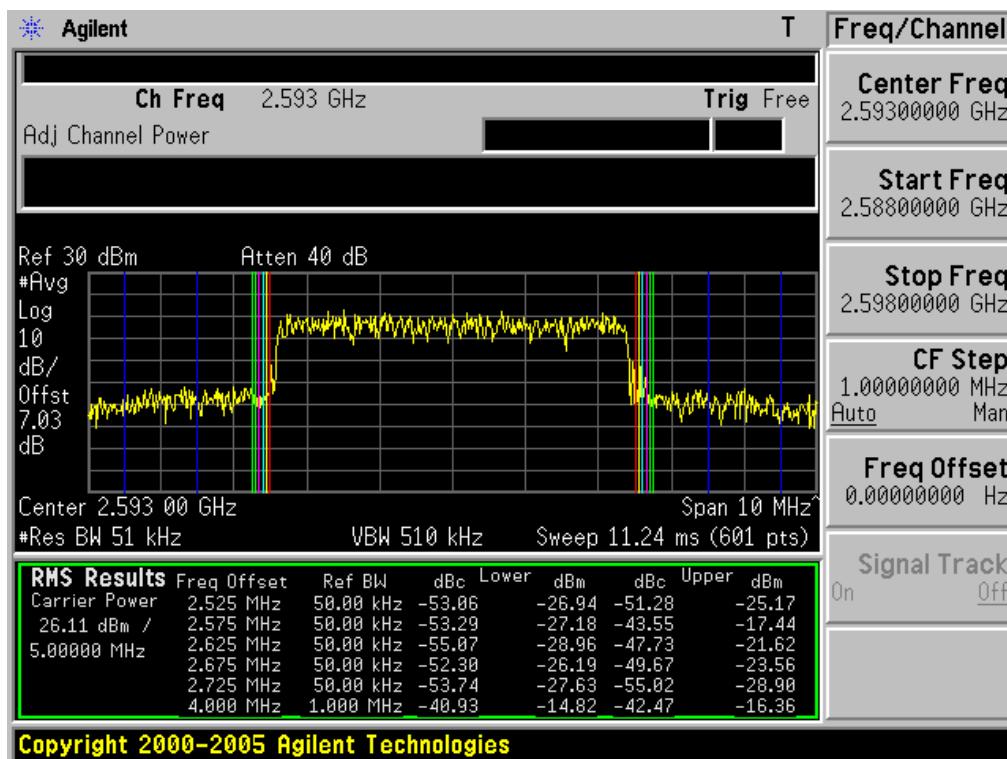
(Continued...)

### 5.1.2 Band Edge(BW: 5MHz)

- Low Channel(2498.5MHz) & AMC Mode & QPSK 3/4



- Middle Channel(2593MHz) & AMC Mode & QPSK 3/4



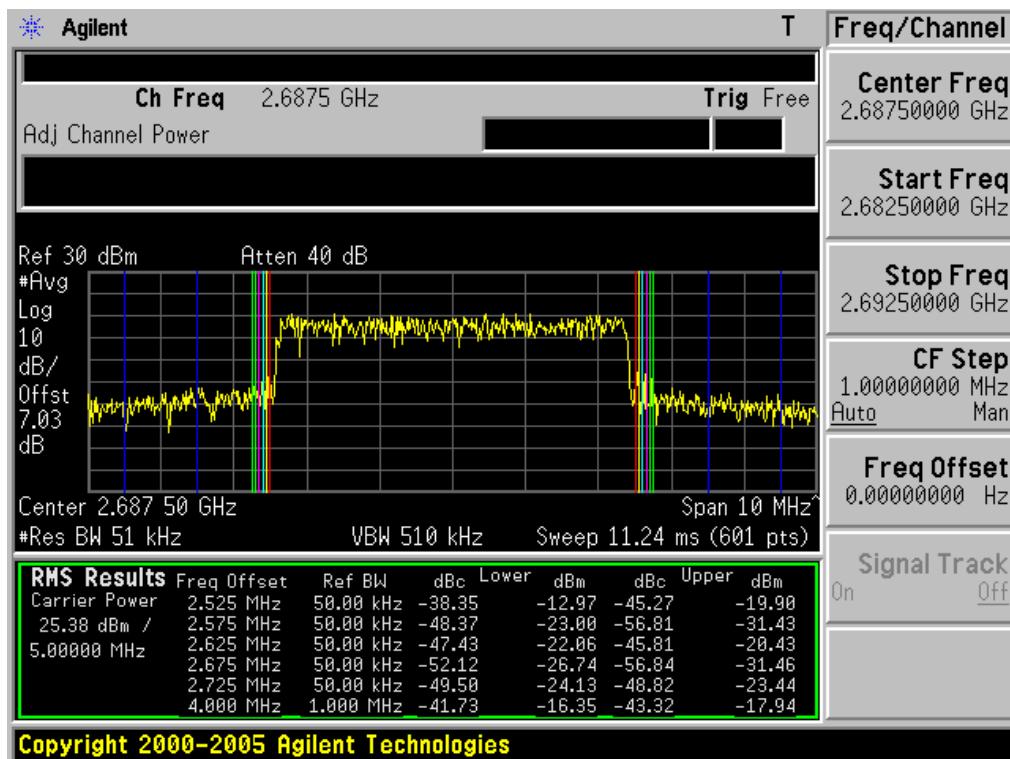
## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.2 Band Edge(BW: 5MHz)

(Continued...)

- High Channel(2687.5MHz) & AMC Mode & QPSK 3/4



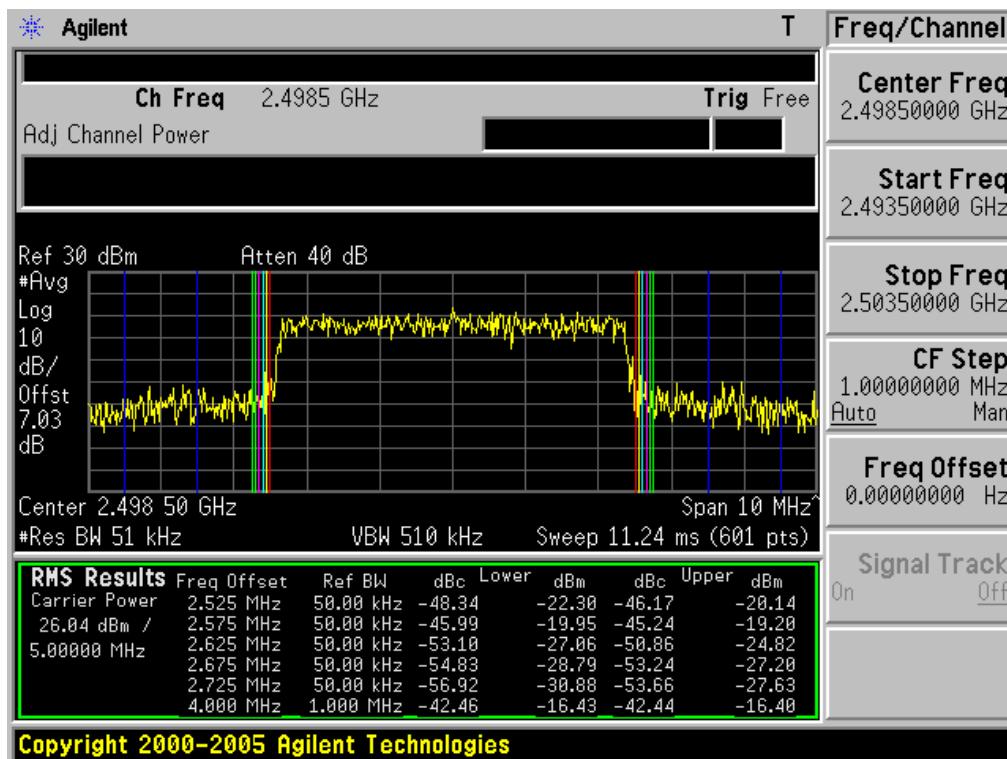
## 5.1 PLOTS OF EMISSIONS

(Continued...)

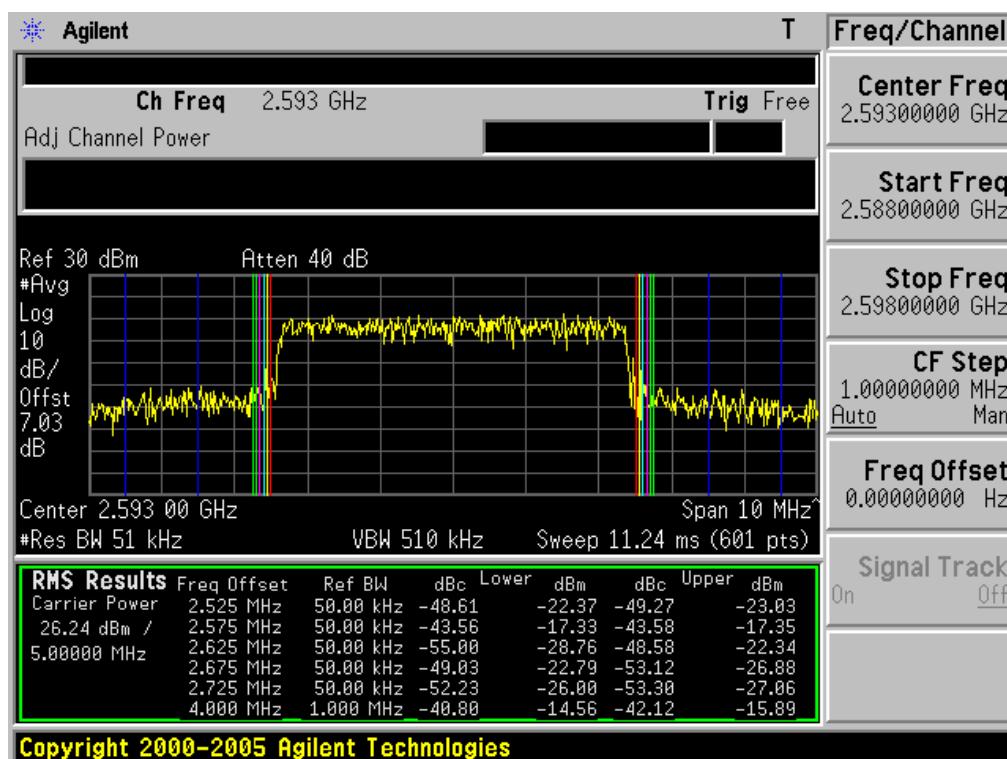
### 5.1.2 Band Edge(BW: 5MHz)

(Continued...)

- Low Channel(2498.5MHz) & AMC Mode & 16QAM 1/2



- Middle Channel(2593MHz) & AMC Mode & 16QAM 1/2



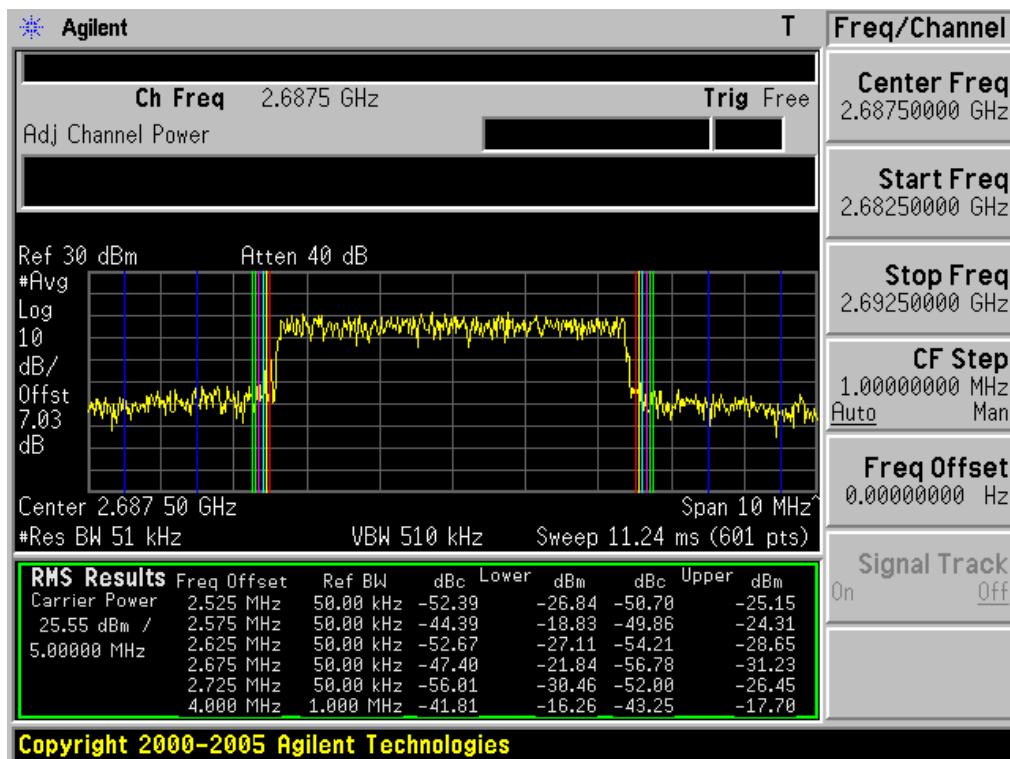
## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.2 Band Edge(BW: 5MHz)

(Continued...)

- High Channel(2687.5MHz) & AMC Mode & 16QAM 1/2



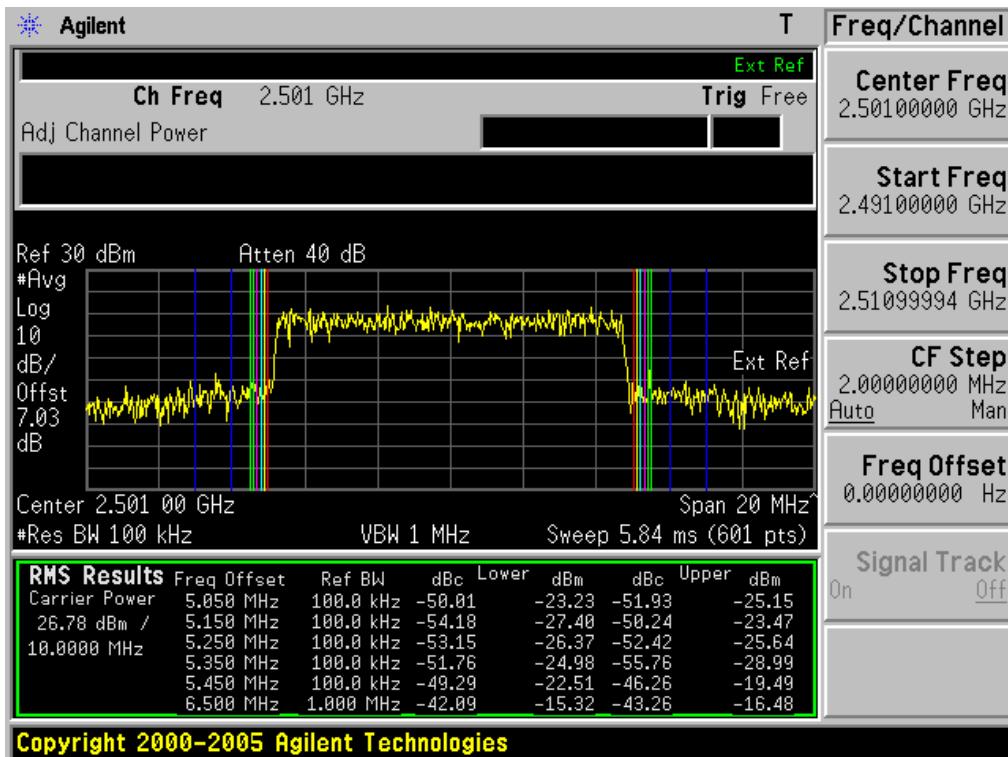
## 5.1 PLOTS OF EMISSIONS

(Continued...)

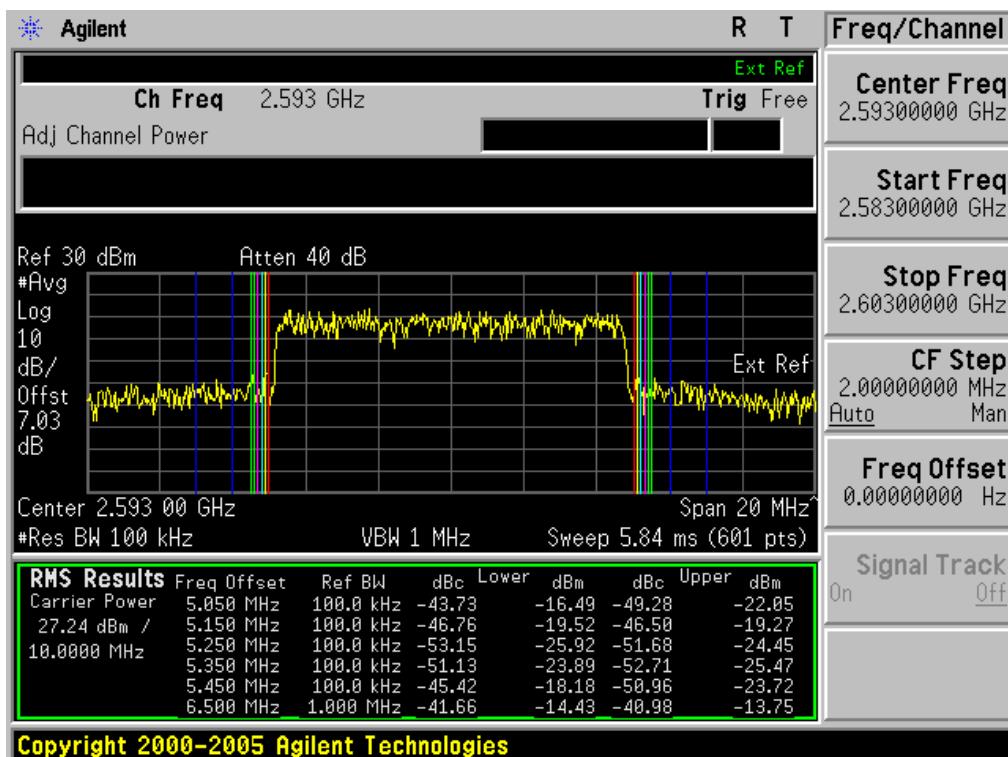
### 5.1.2 Band Edge(BW: 10MHz)

(Continued...)

- Low Channel(2501MHz) & AMC Mode & QPSK 1/2



- Middle Channel(2593MHz) & AMC Mode & QPSK 1/2



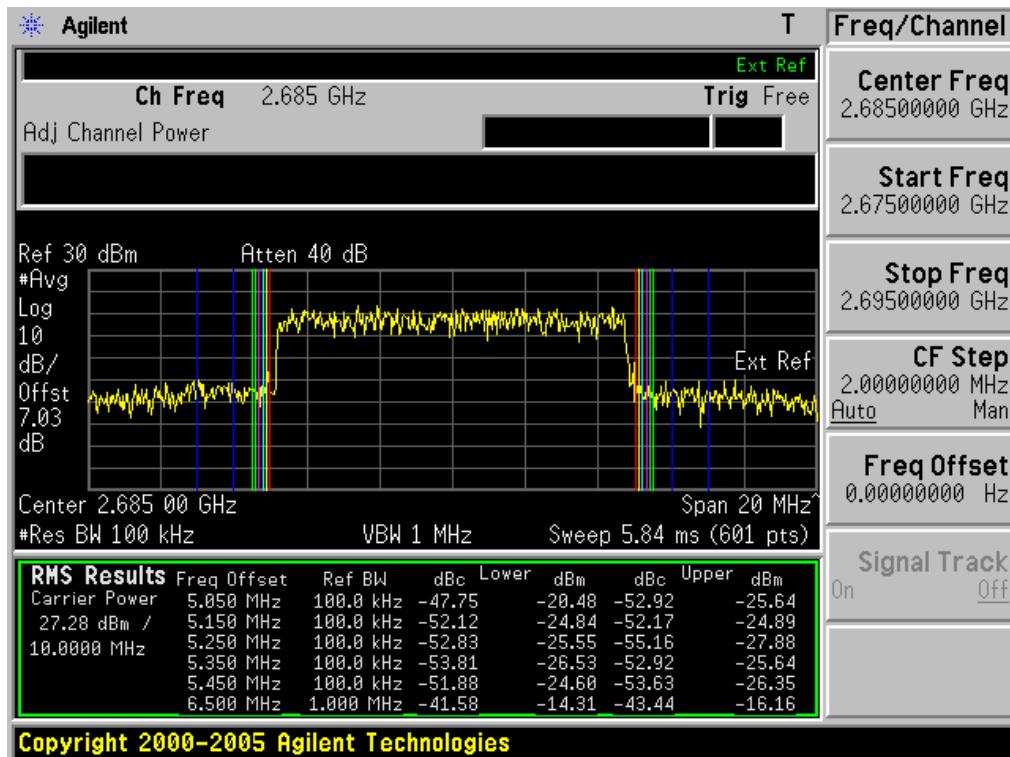
## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.2 Band Edge(BW: 10MHz)

(Continued...)

- High Channel(2685MHz) & AMC Mode & QPSK 1/2



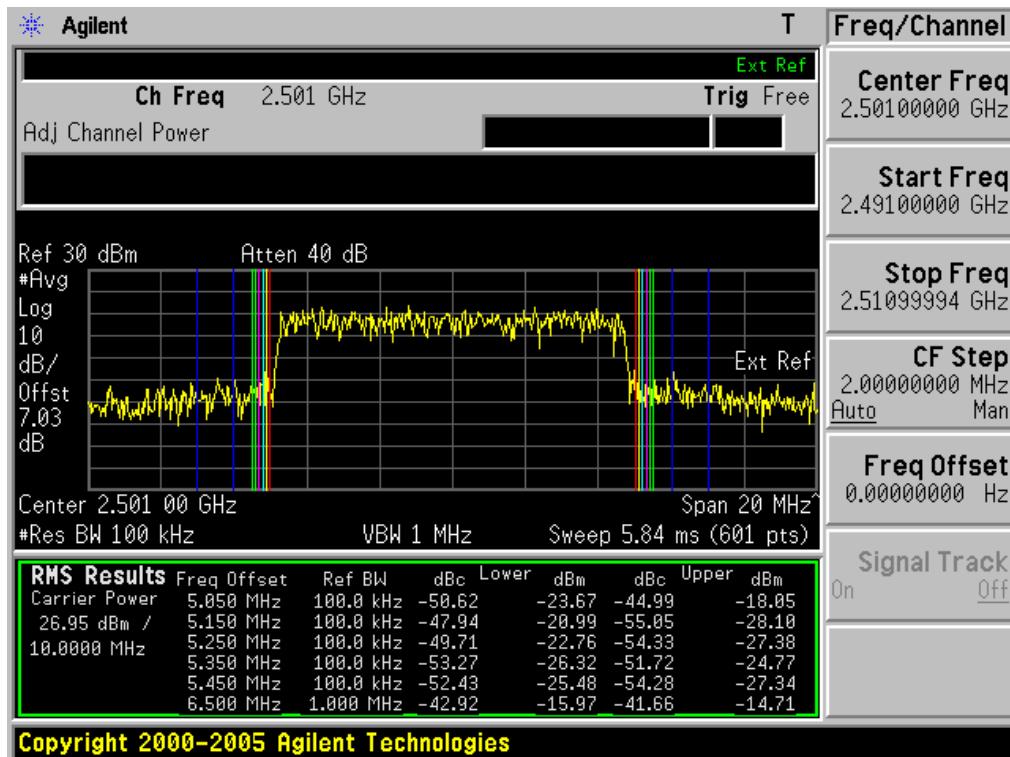
## 5.1 PLOTS OF EMISSIONS

(Continued...)

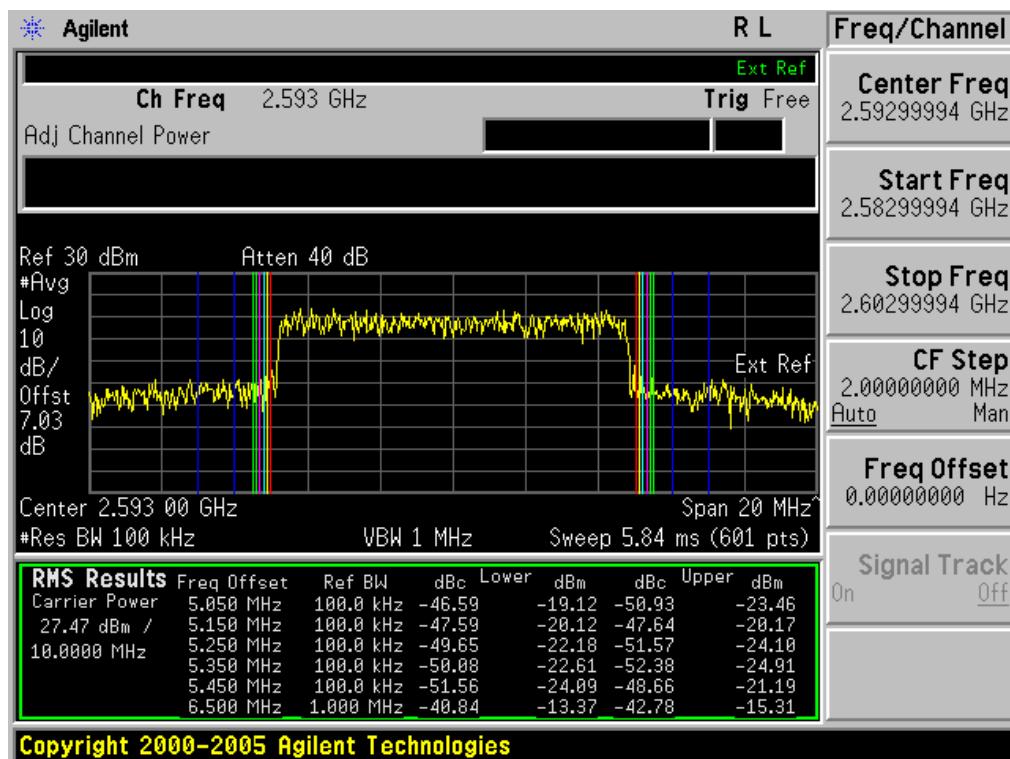
### 5.1.2 Band Edge(BW: 10MHz)

(Continued...)

- Low Channel(2501MHz) & AMC Mode & 16QAM 1/2



- Middle Channel(2593MHz) & AMC Mode & 16QAM 1/2



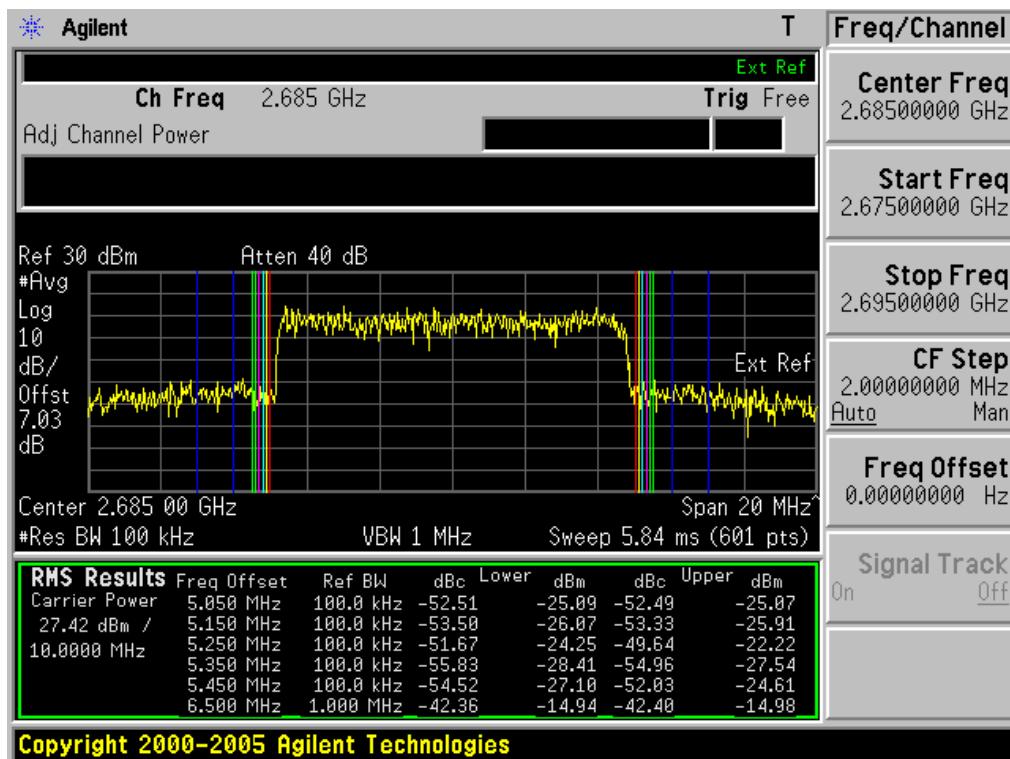
## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.2 Band Edge(BW: 10MHz)

(Continued...)

- High Channel(2685MHz) & AMC Mode & 16QAM 1/2

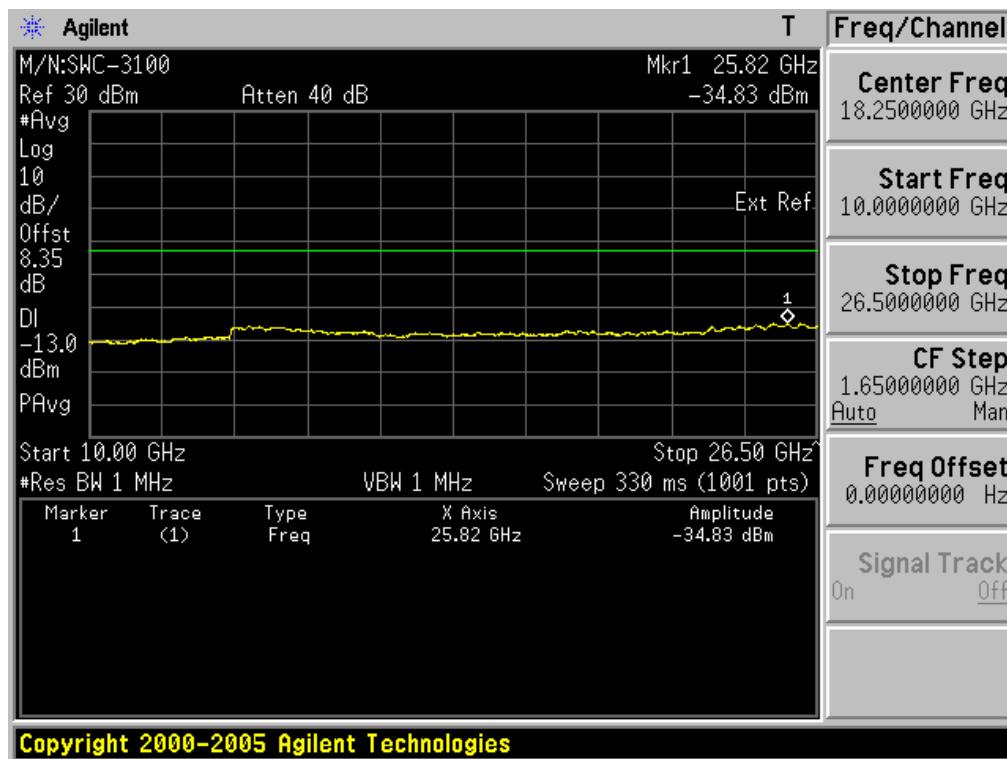
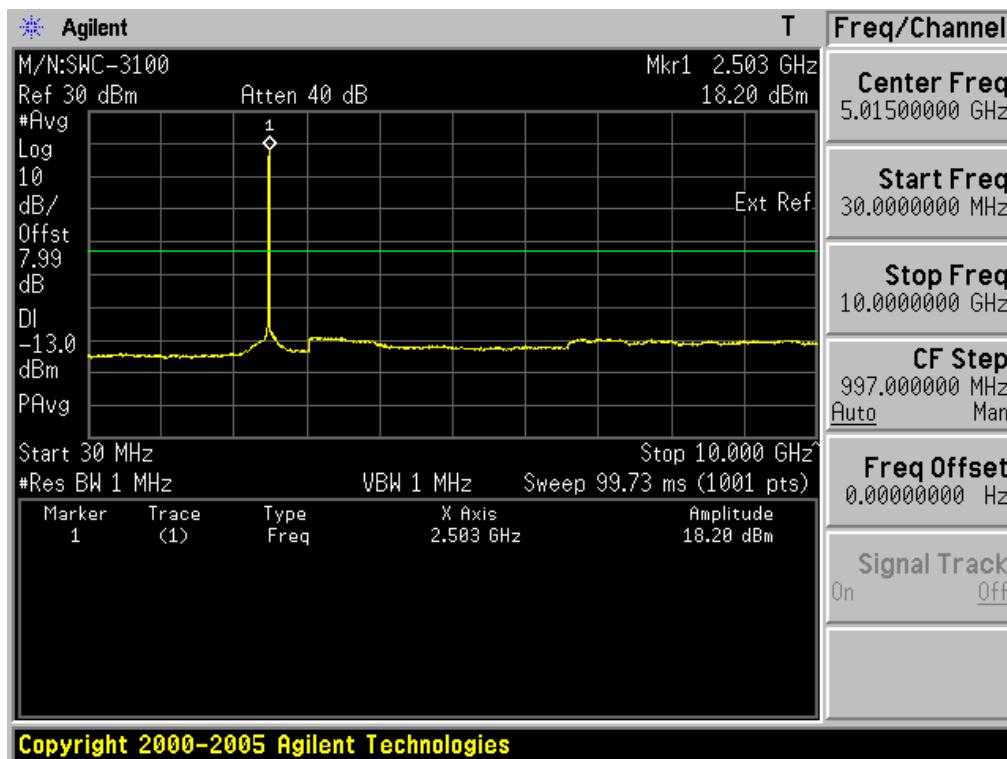


## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.3 Conducted Spurious Emissions(BW: 5MHz)

- Low Channel(2498.5MHz) & AMC Mode & QPSK 3/4



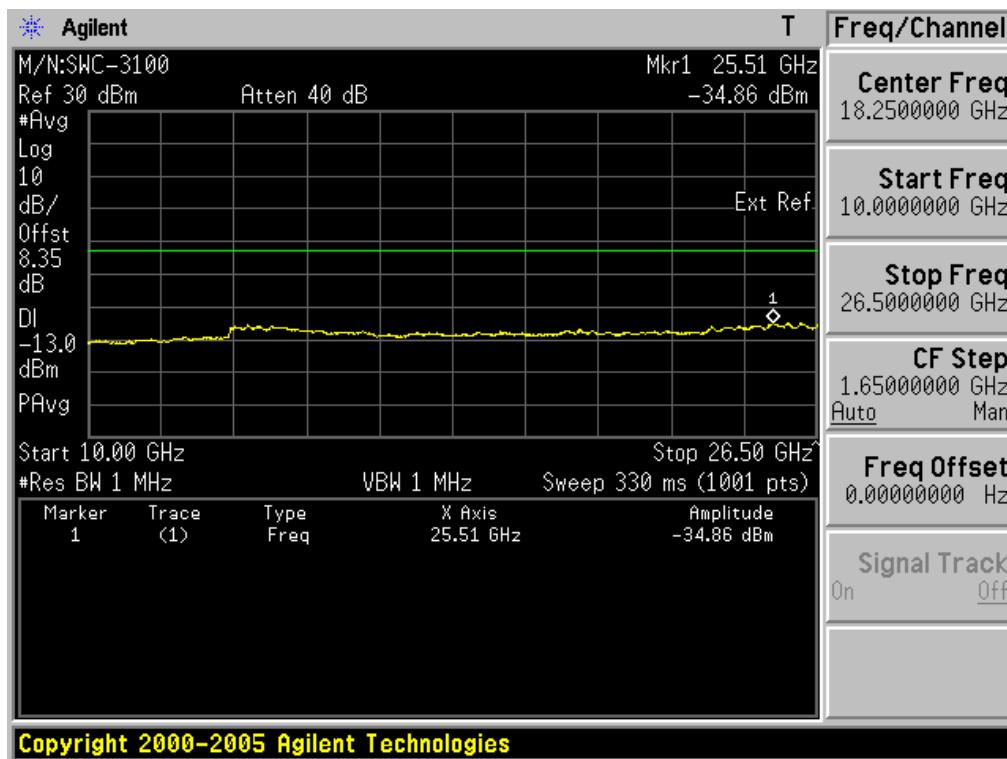
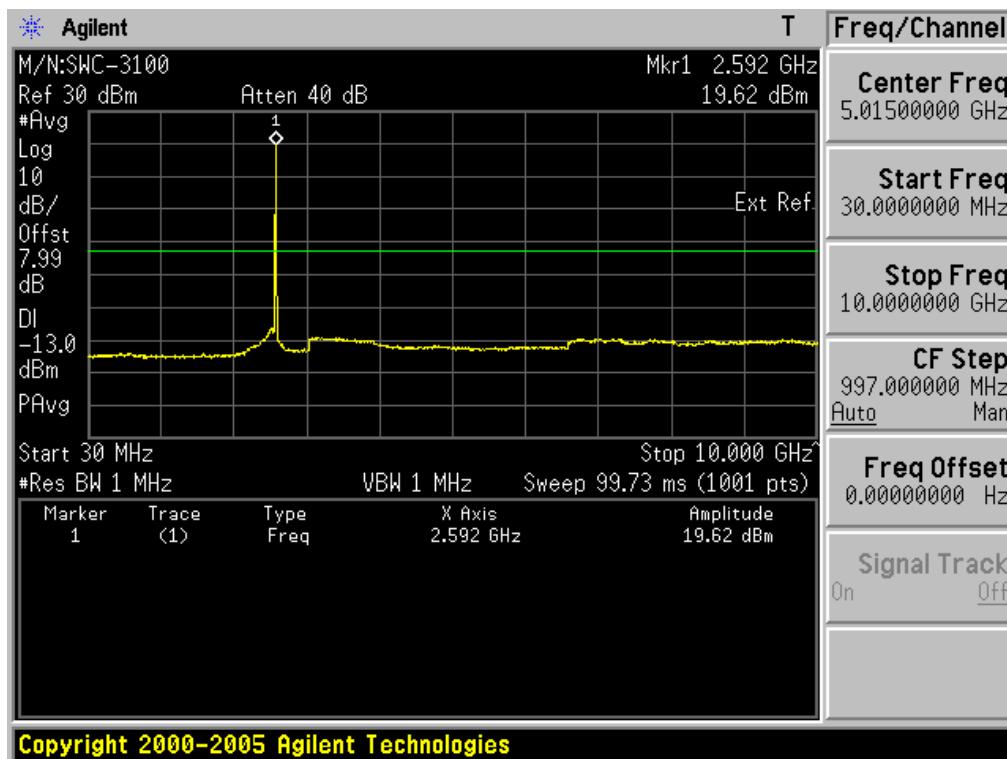
## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.3 Conducted Spurious Emissions(BW: 5MHz)

(Continued...)

- Middle Channel(2593MHz) & AMC Mode & QPSK 3/4



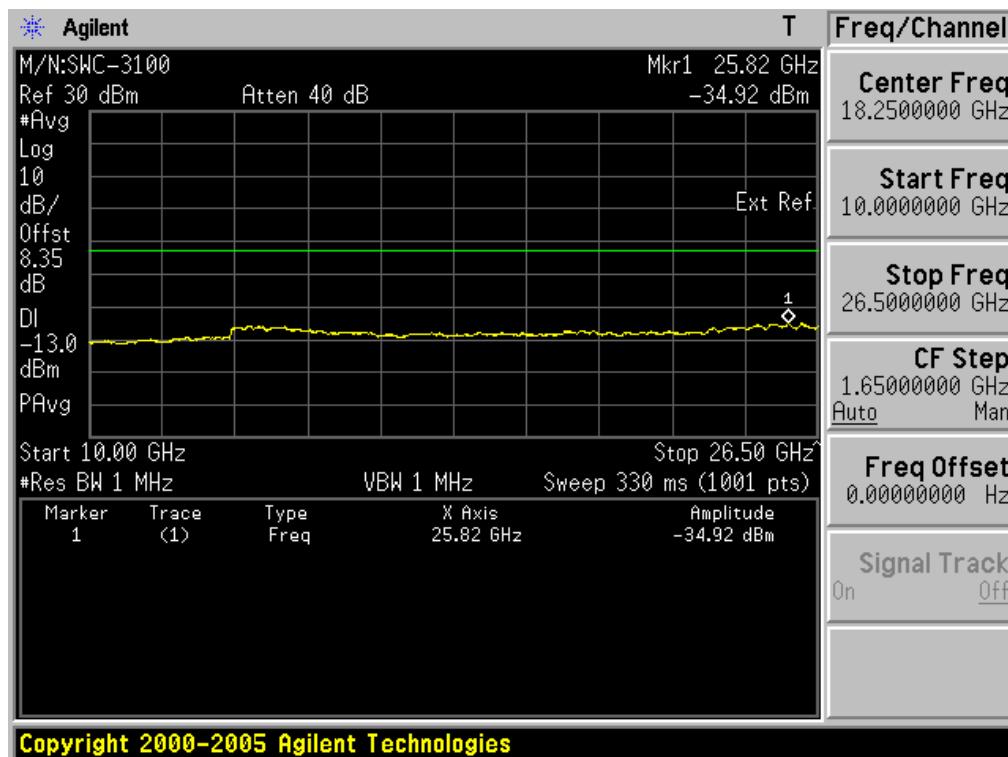
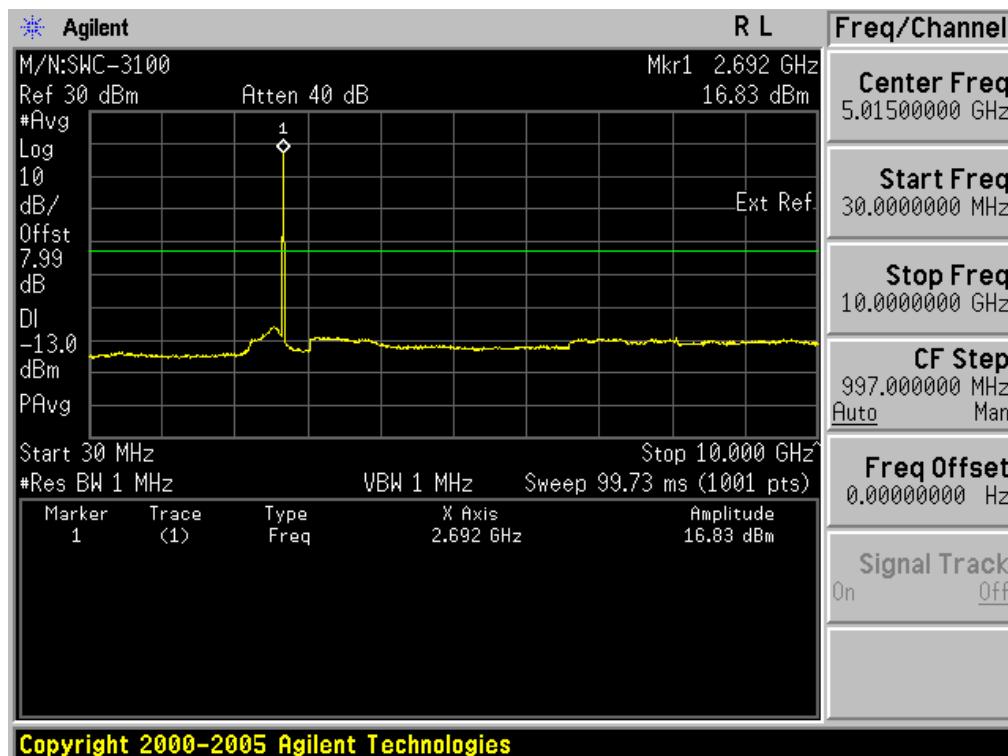
## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.3 Conducted Spurious Emissions(BW: 5MHz)

(Continued...)

- High Channel(2687.5MHz) & AMC Mode & QPSK 3/4

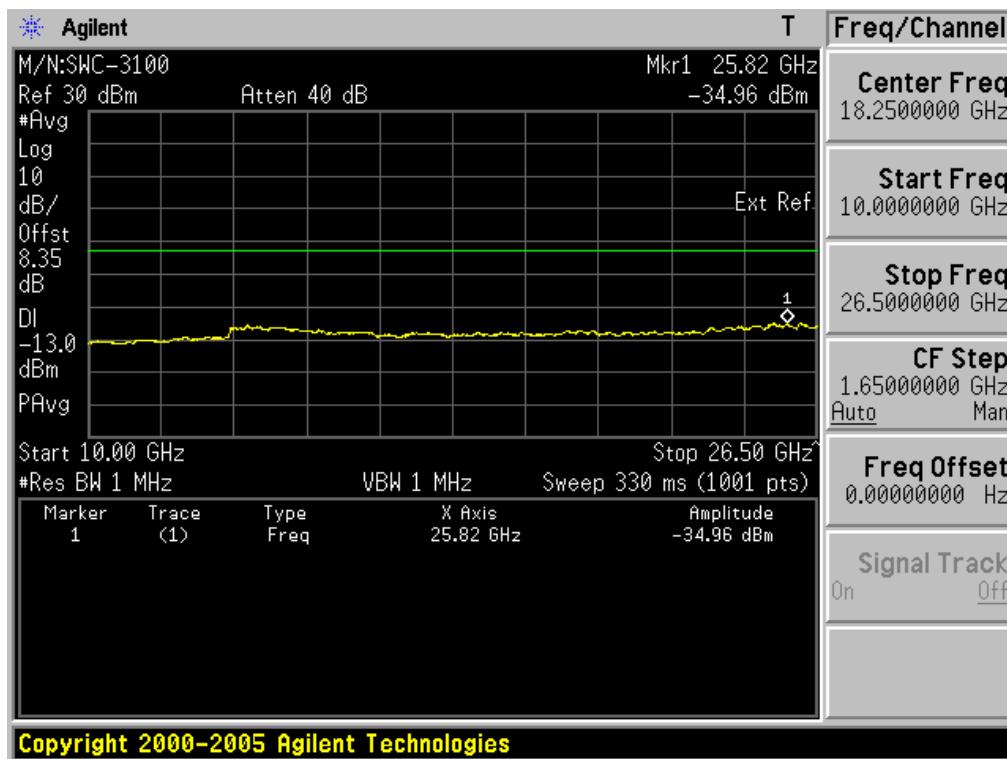
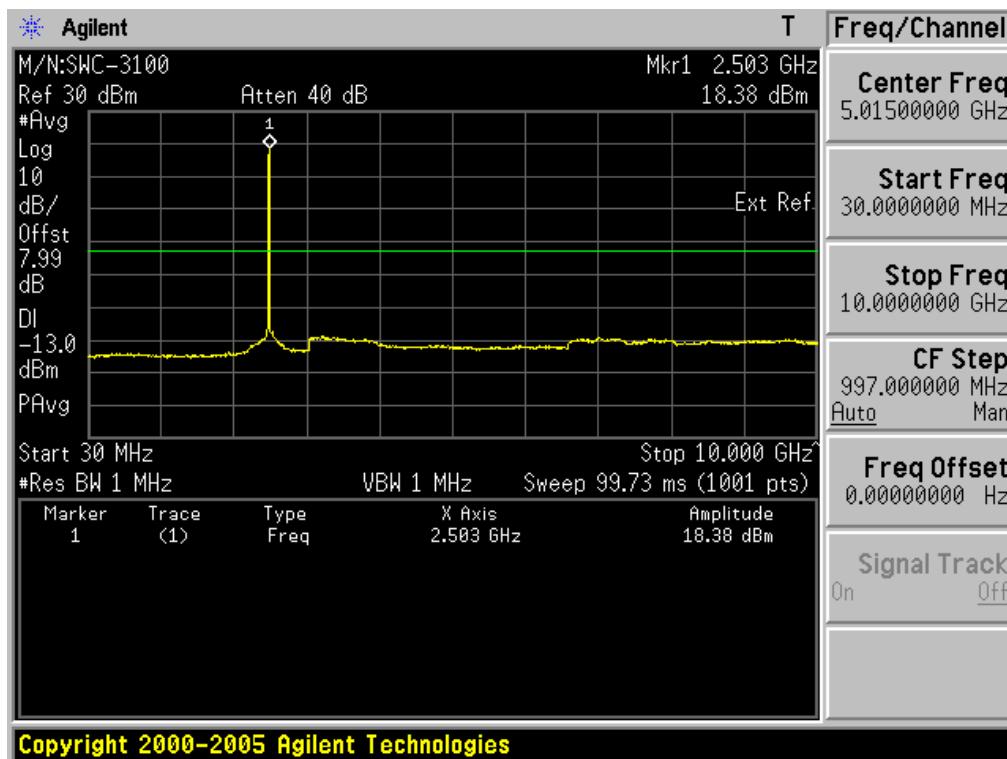


## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.3 Conducted Spurious Emissions(BW: 5MHz)

- Low Channel(2498.5MHz) & AMC Mode & 16QAM 1/2



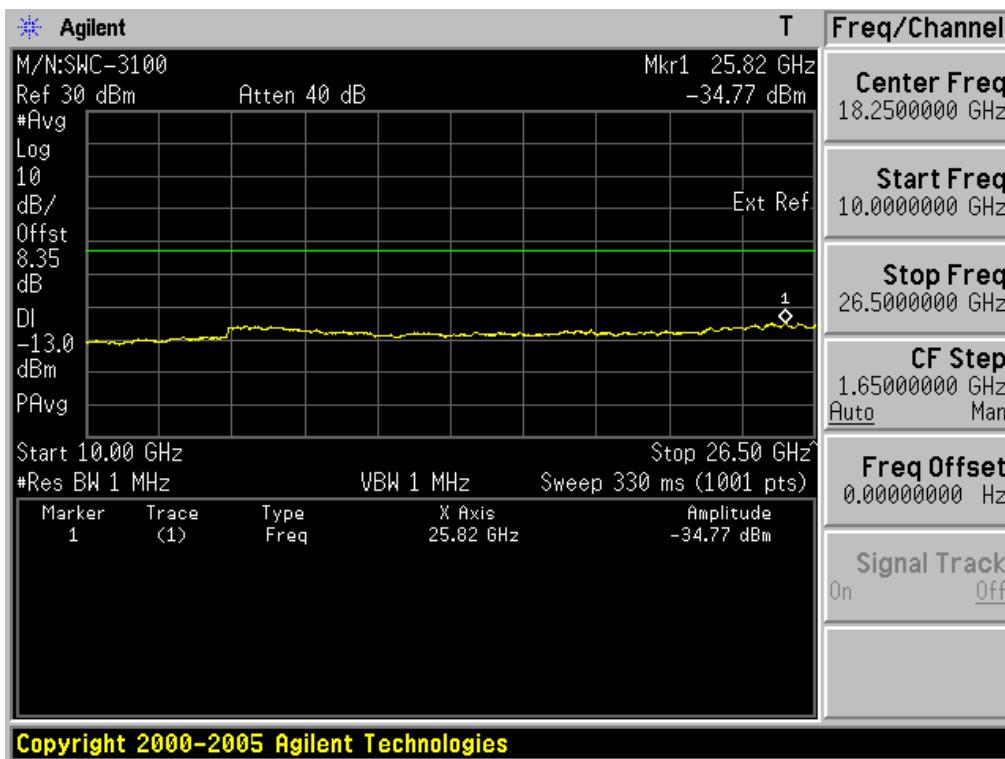
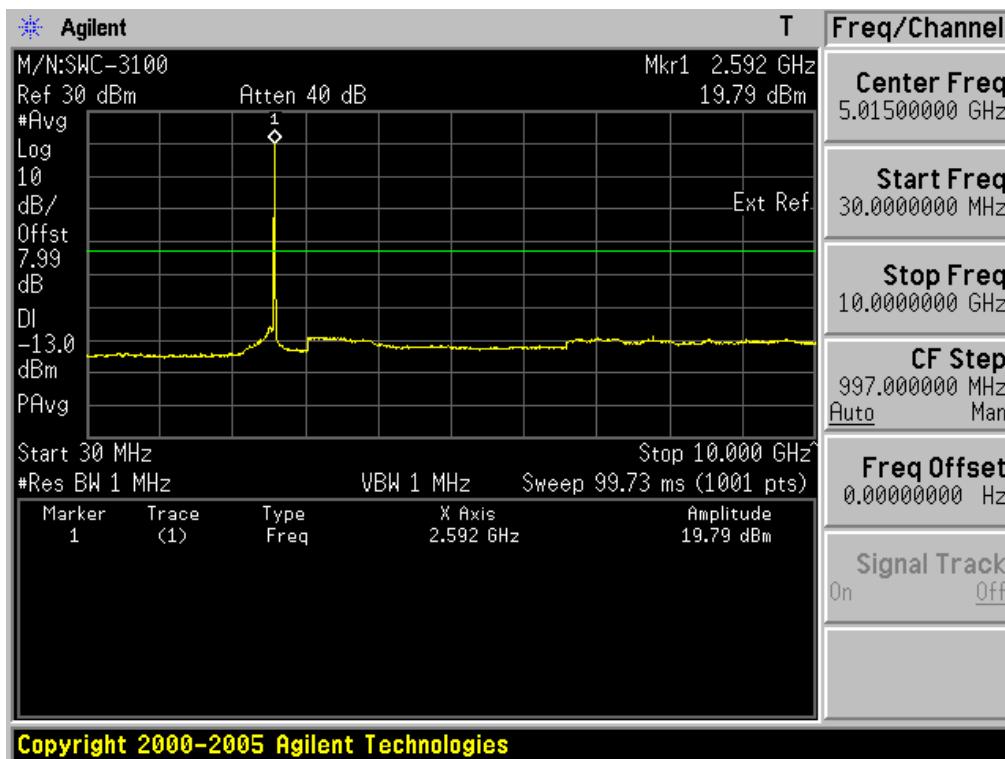
## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.3 Conducted Spurious Emissions(BW: 5MHz)

(Continued...)

- Middle Channel(2593MHz) & AMC Mode & 16QAM 1/2



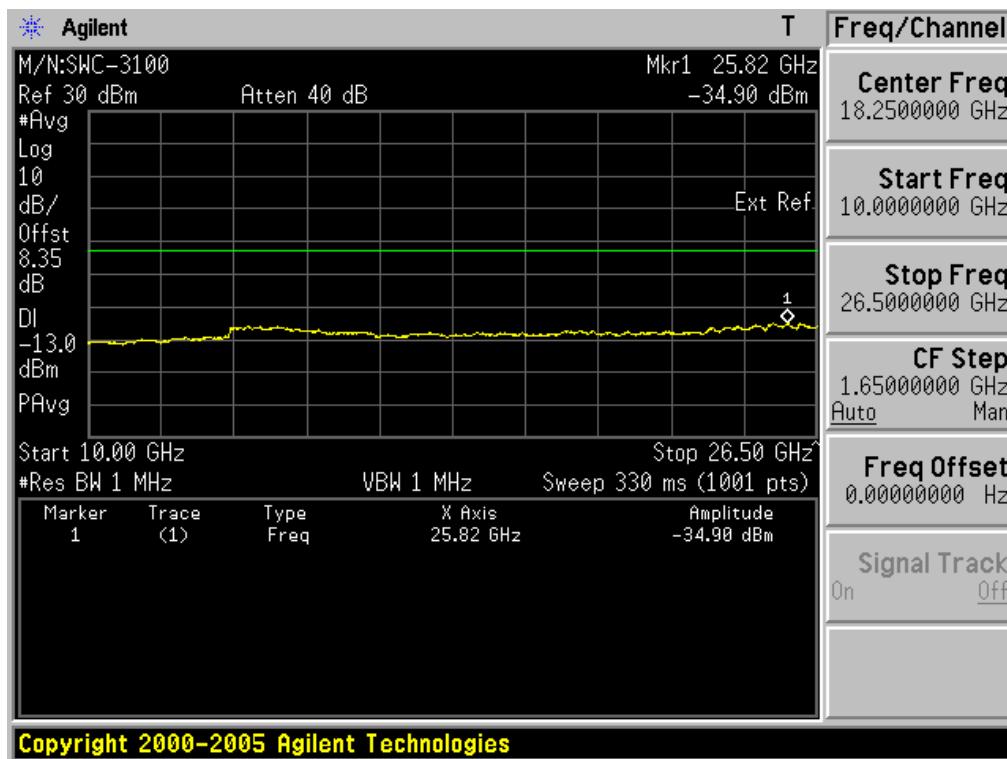
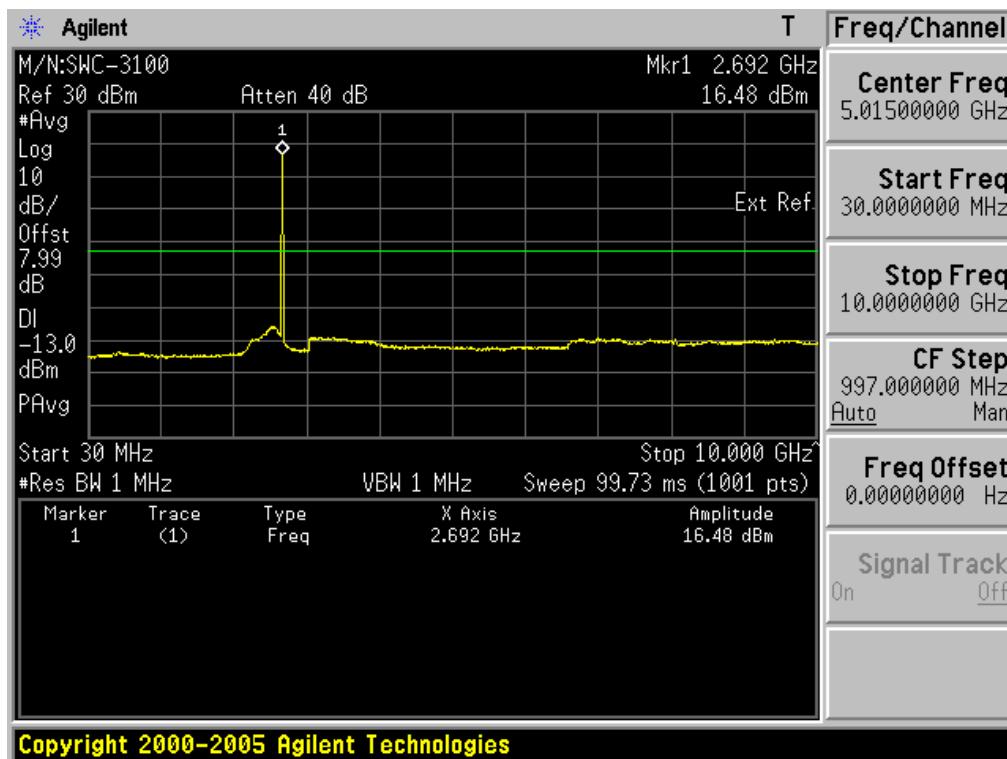
## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.3 Conducted Spurious Emissions(BW: 5MHz)

(Continued...)

- High Channel(2687.5MHz) & AMC Mode & 16QAM 1/2



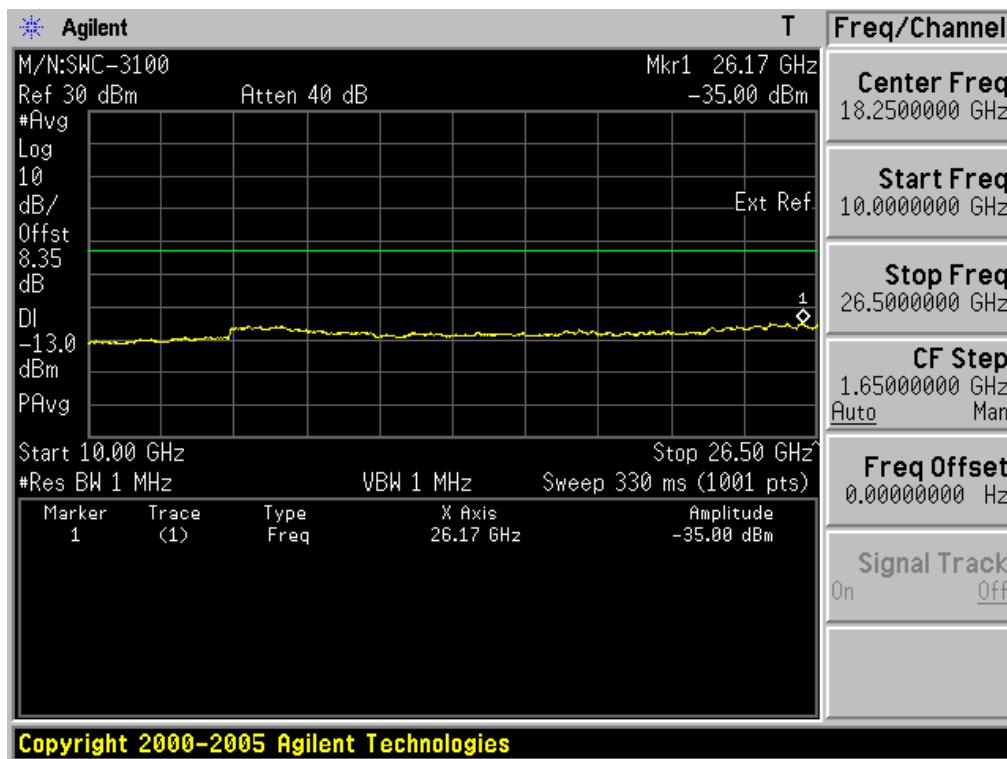
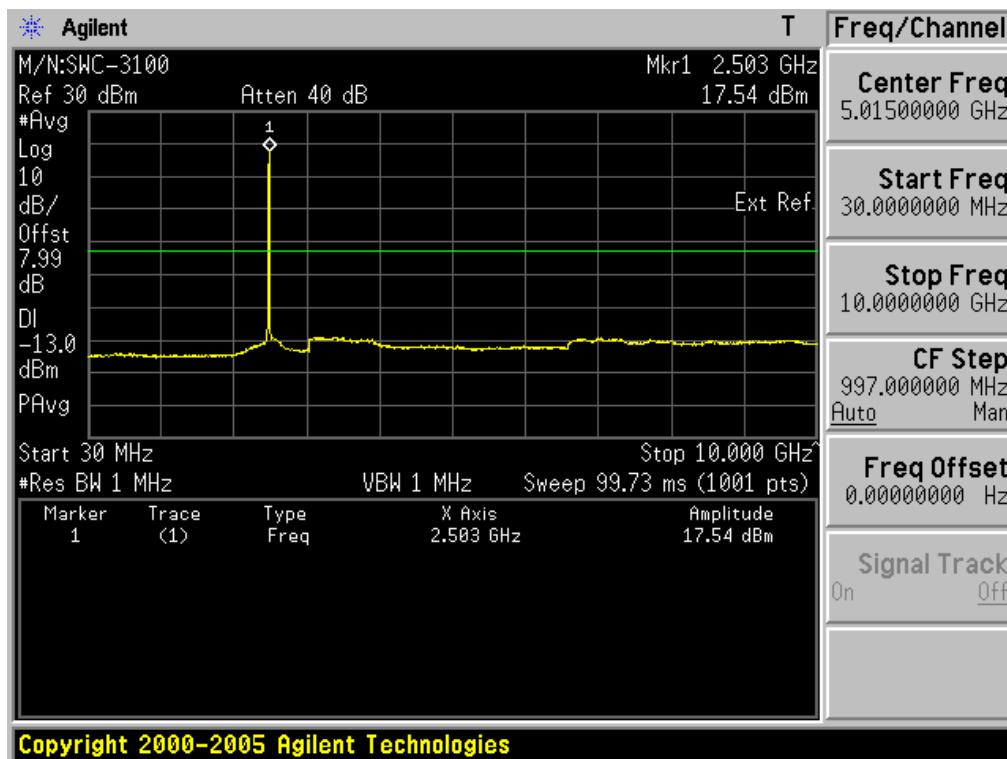
## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.3 Conducted Spurious Emissions(BW: 10MHz)

(Continued...)

- Low Channel(2501MHz) & AMC Mode & QPSK 1/2



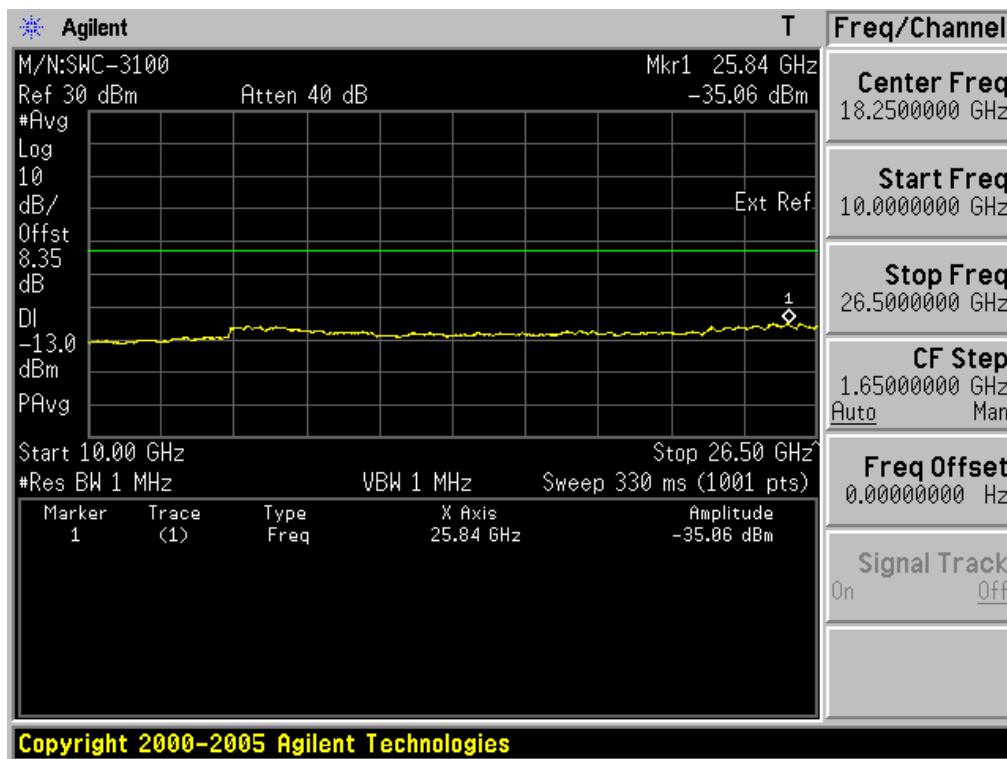
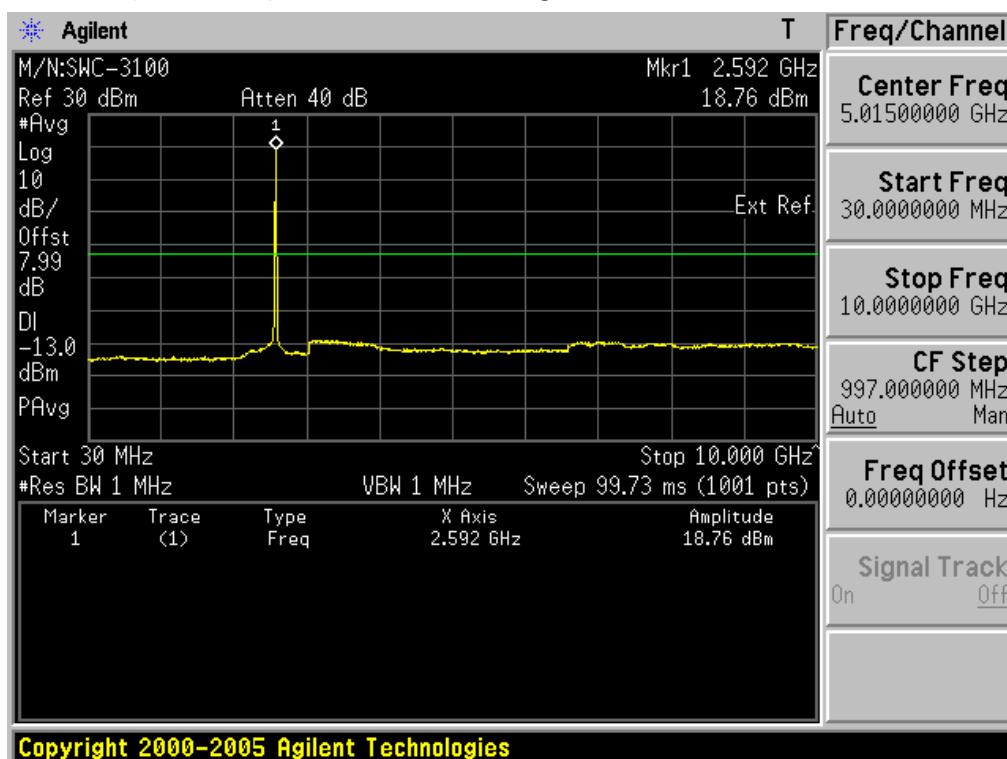
## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.3 Conducted Spurious Emissions(BW: 10MHz)

(Continued...)

- Middle Channel(2593MHz) & AMC Mode & QPSK 1/2



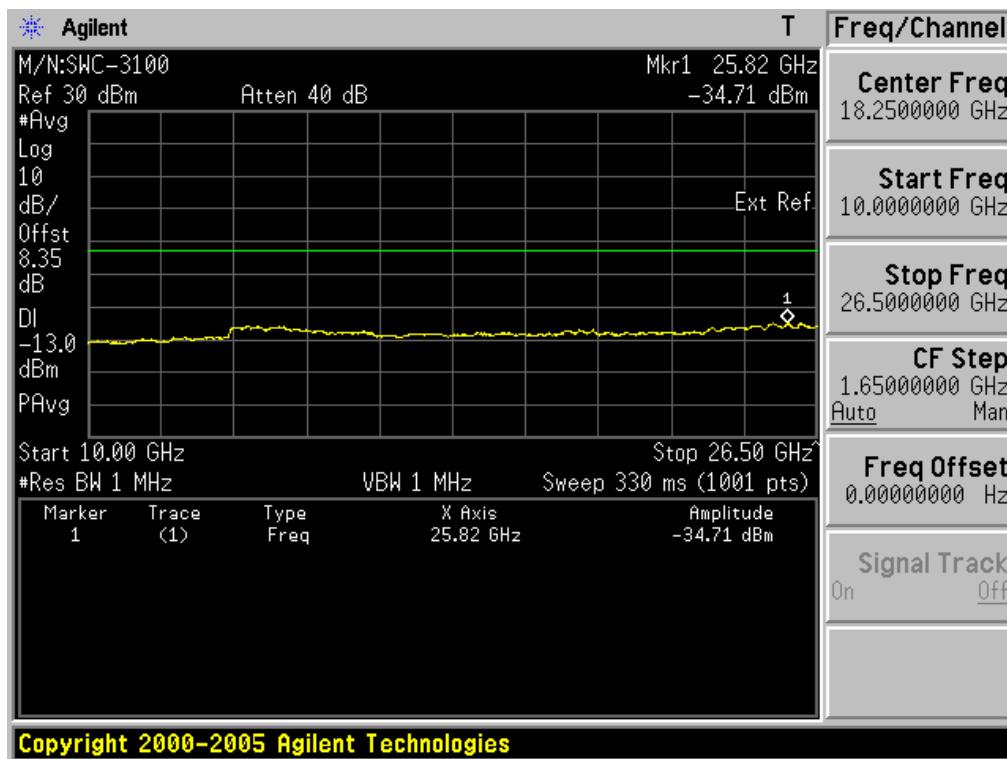
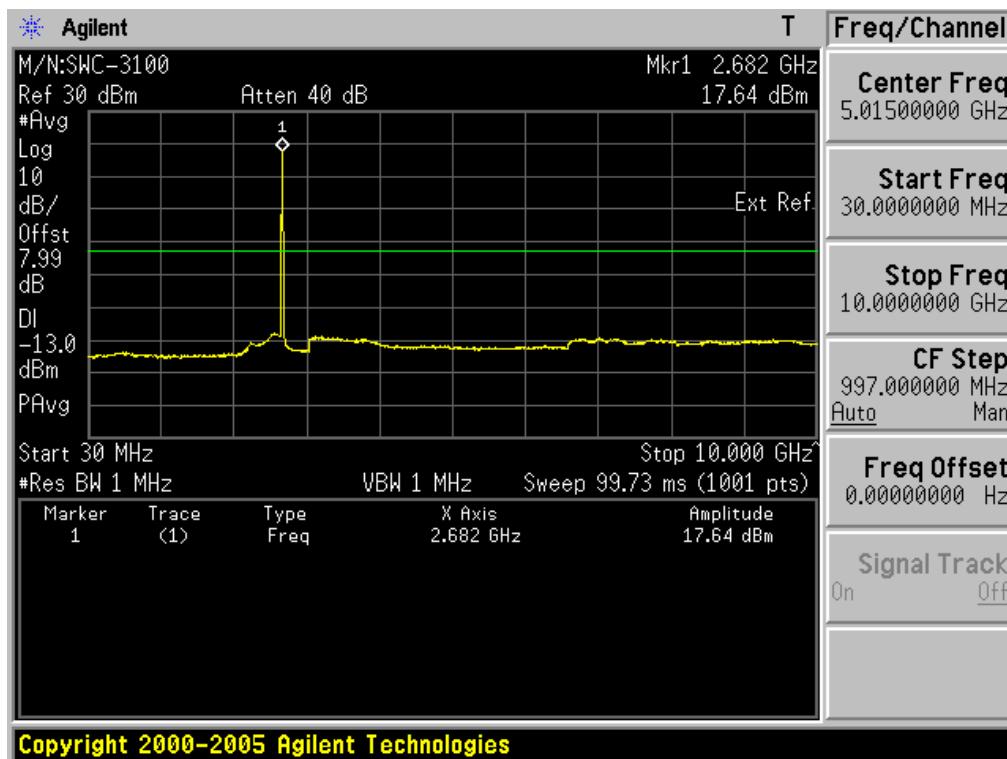
## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.3 Conducted Spurious Emissions(BW: 10MHz)

(Continued...)

- High Channel(2685MHz) & AMC Mode & QPSK 1/2



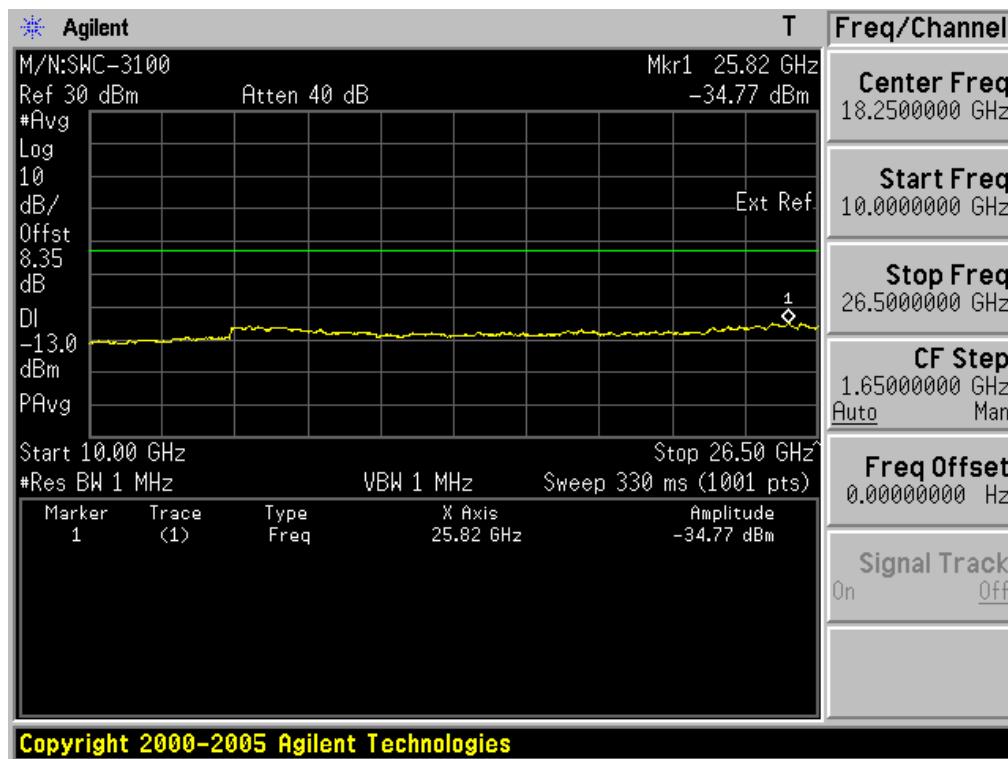
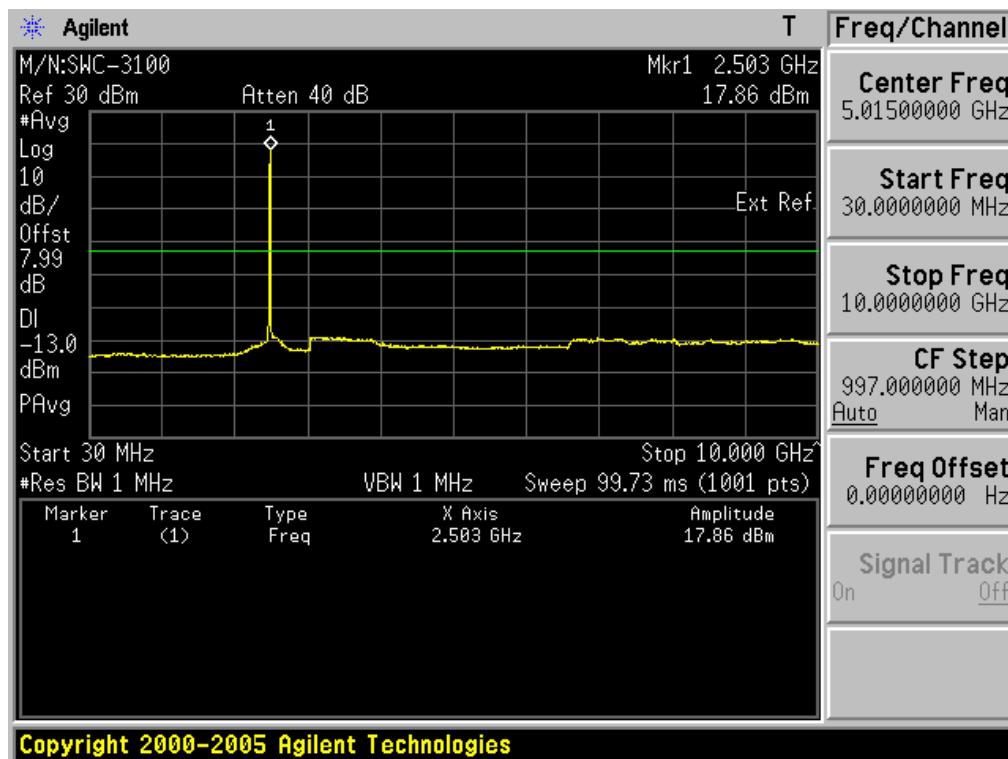
## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.3 Conducted Spurious Emissions(BW: 10MHz)

(Continued...)

- Low Channel(2501MHz) & AMC Mode & 16QAM 1/2



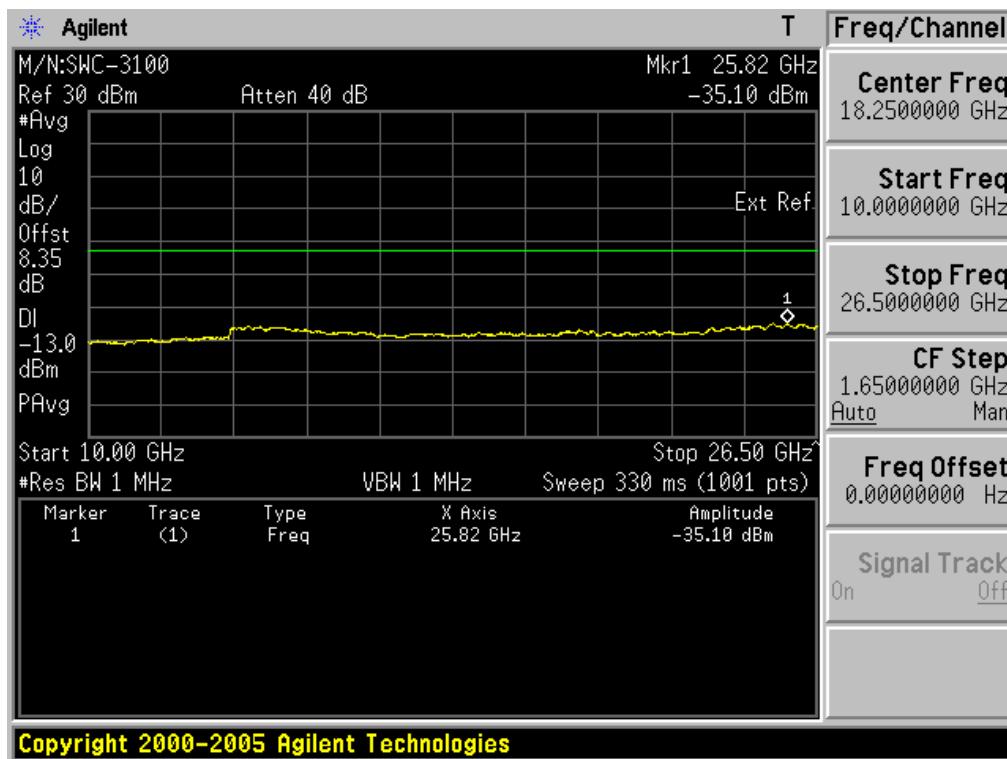
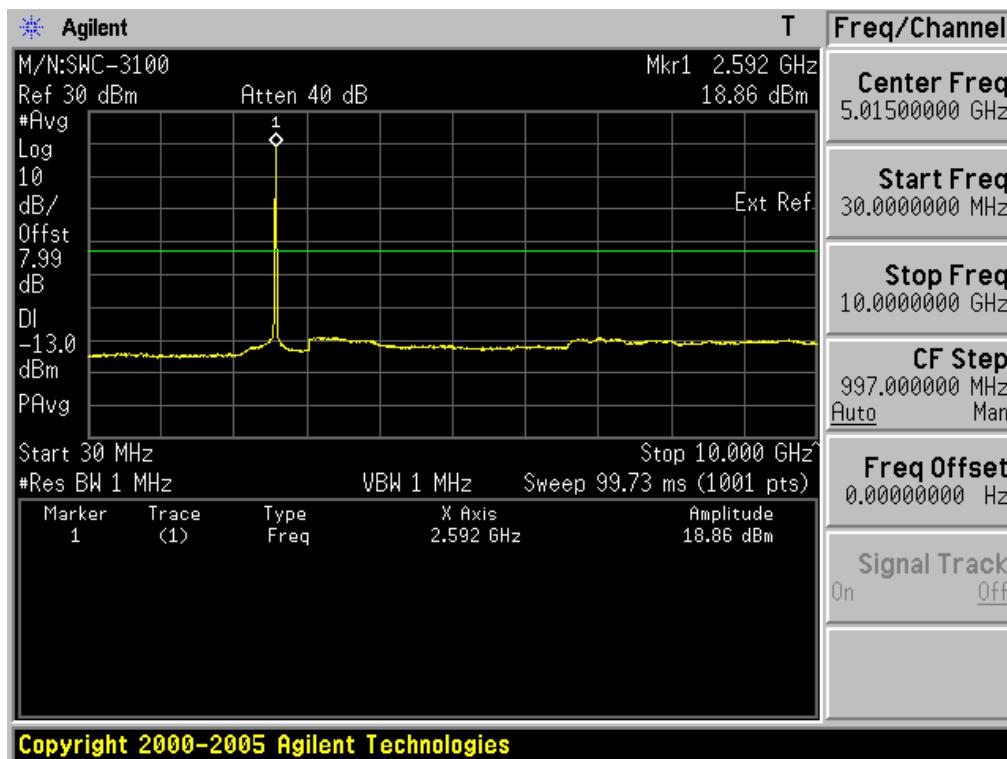
## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.3 Conducted Spurious Emissions(BW: 10MHz)

(Continued...)

- Middle Channel(2593MHz) & AMC Mode & 16QAM 1/2



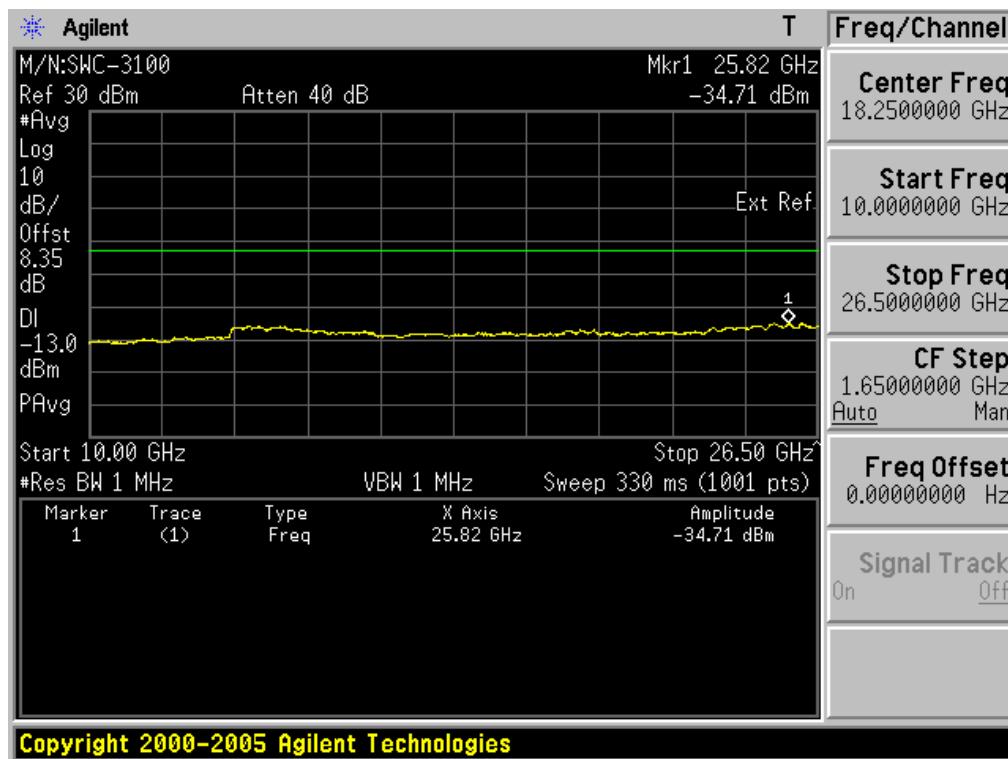
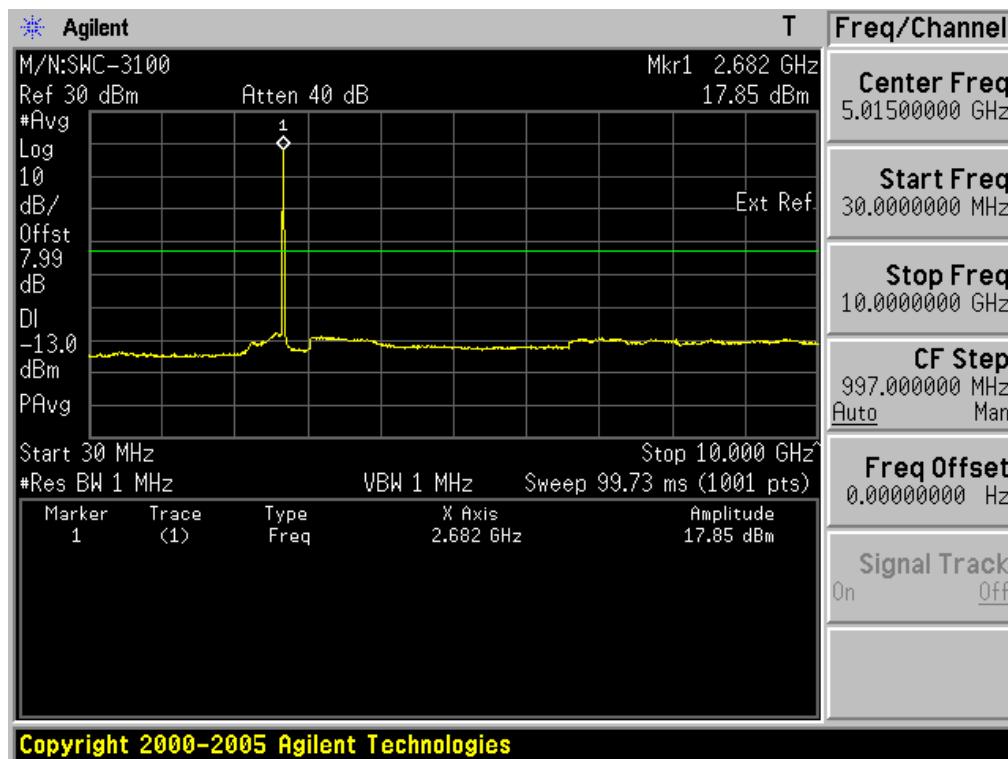
## 5.1 PLOTS OF EMISSIONS

(Continued...)

### 5.1.3 Conducted Spurious Emissions(BW: 10MHz)

(Continued...)

- High Channel(2685MHz) & AMC Mode & 16QAM 1/2

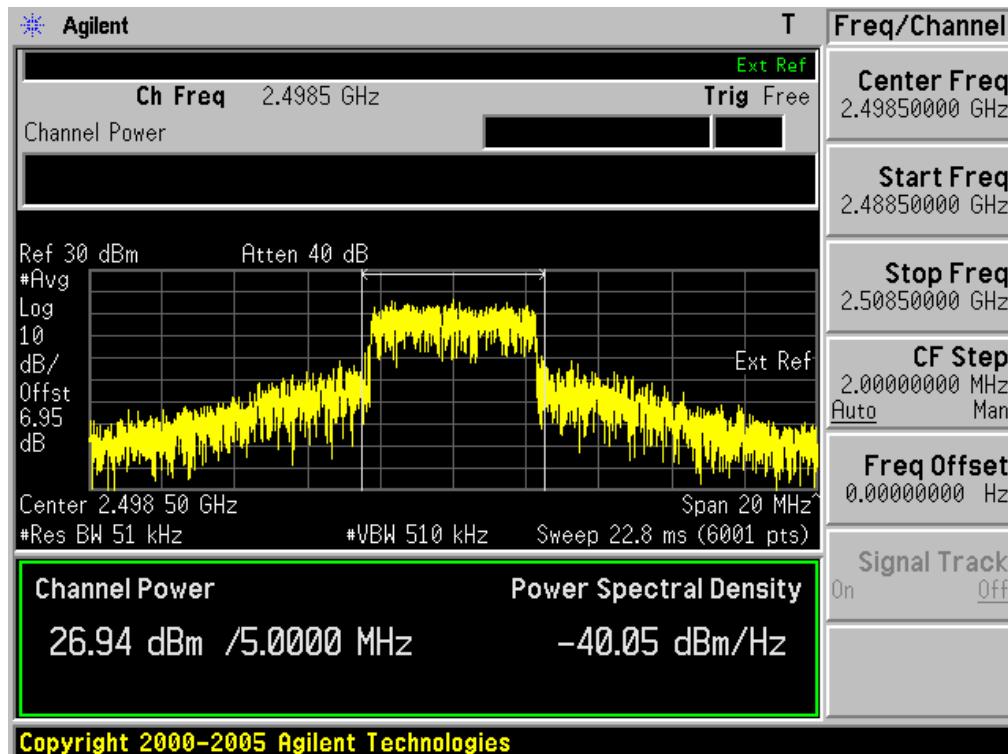


## 5.1 PLOTS OF EMISSIONS

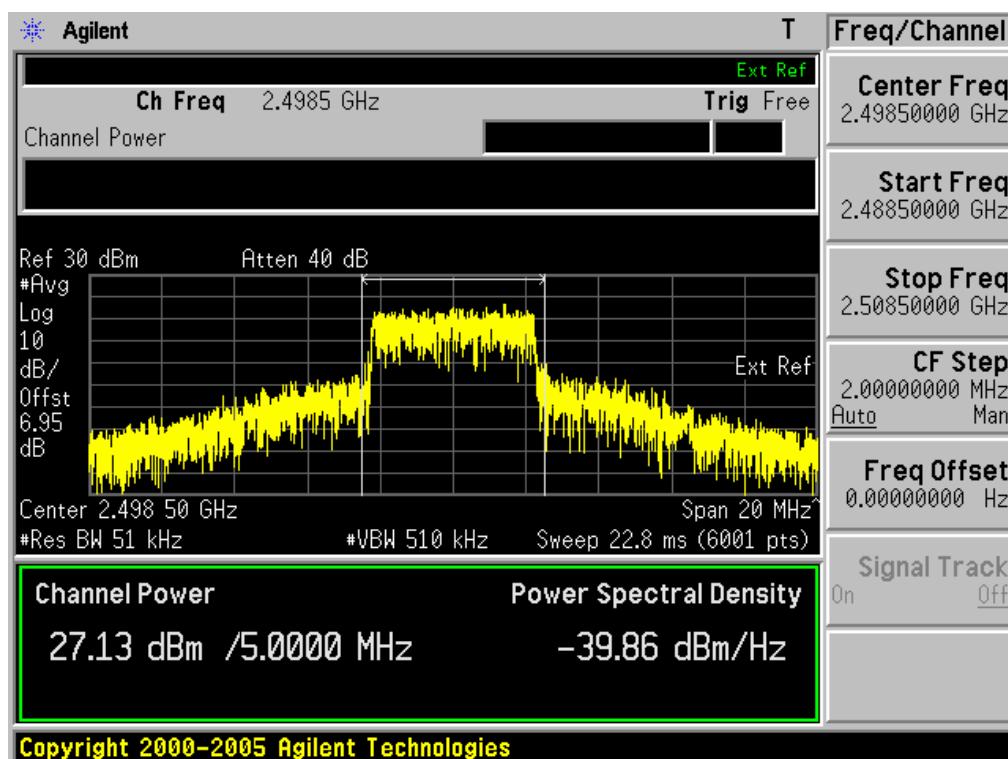
(Continued...)

### 5.1.4 Conducted Output Power(BW: 5MHz)

- Low Channel(2498.5MHz) & PUSC Mode & QPSK 1/2



- Low Channel(2498.5MHz) & PUSC Mode & QPSK 3/4



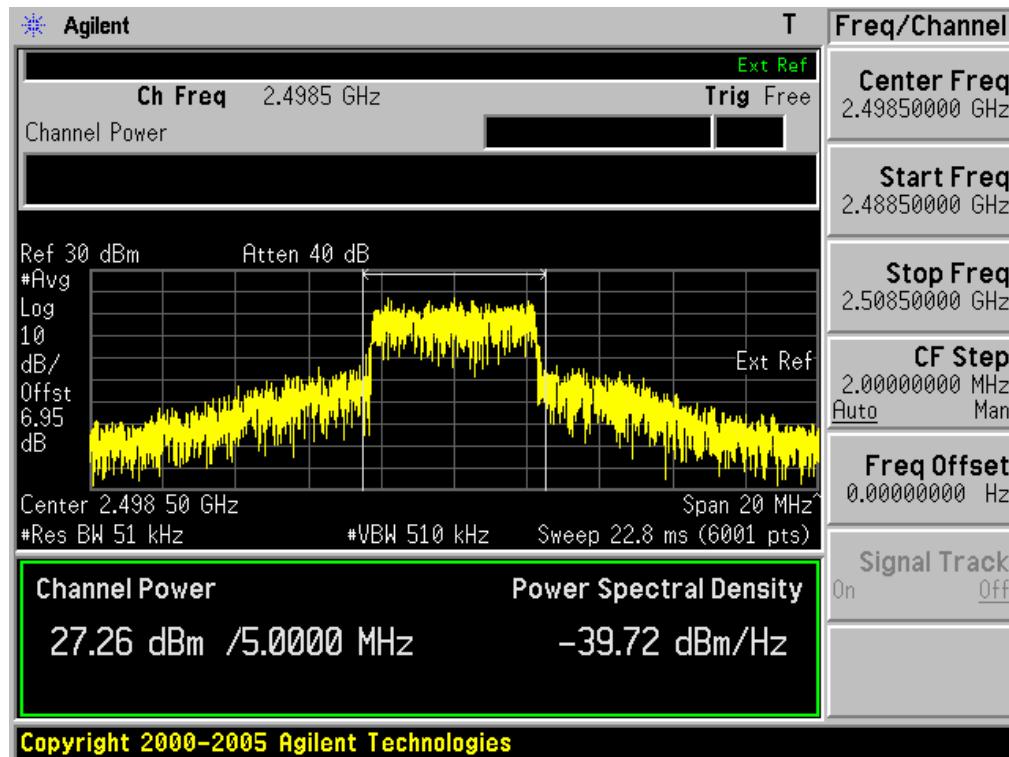
## 5.1 PLOTS OF EMISSIONS

(Continued...)

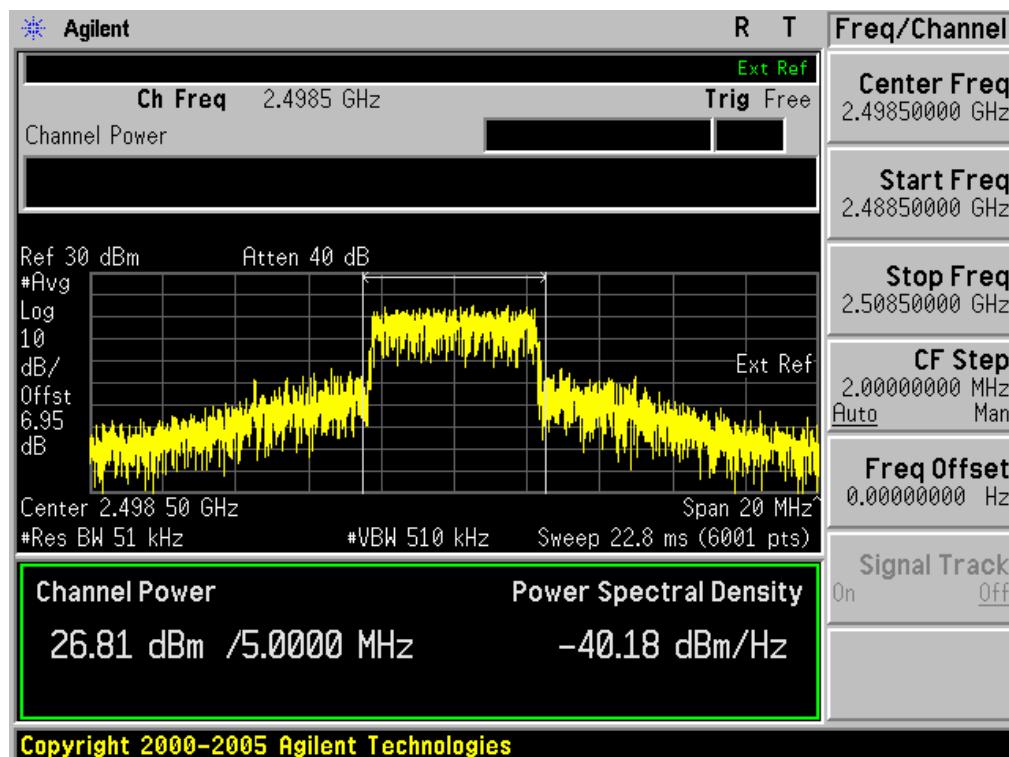
### 5.1.4 Conducted Output Power(BW: 5MHz)

(Continued...)

- Low Channel(2498.5MHz) & PUSC Mode & 16QAM 1/2



- Low Channel(2498.5MHz) & PUSC Mode & 16QAM 3/4

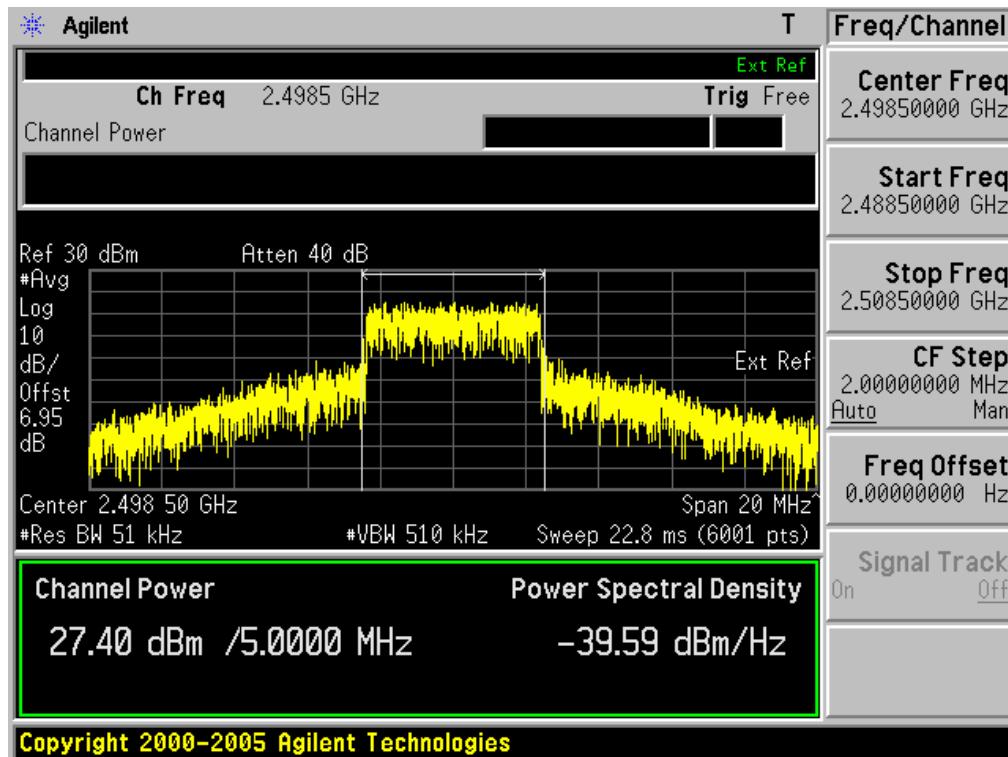


## 5.1 PLOTS OF EMISSIONS

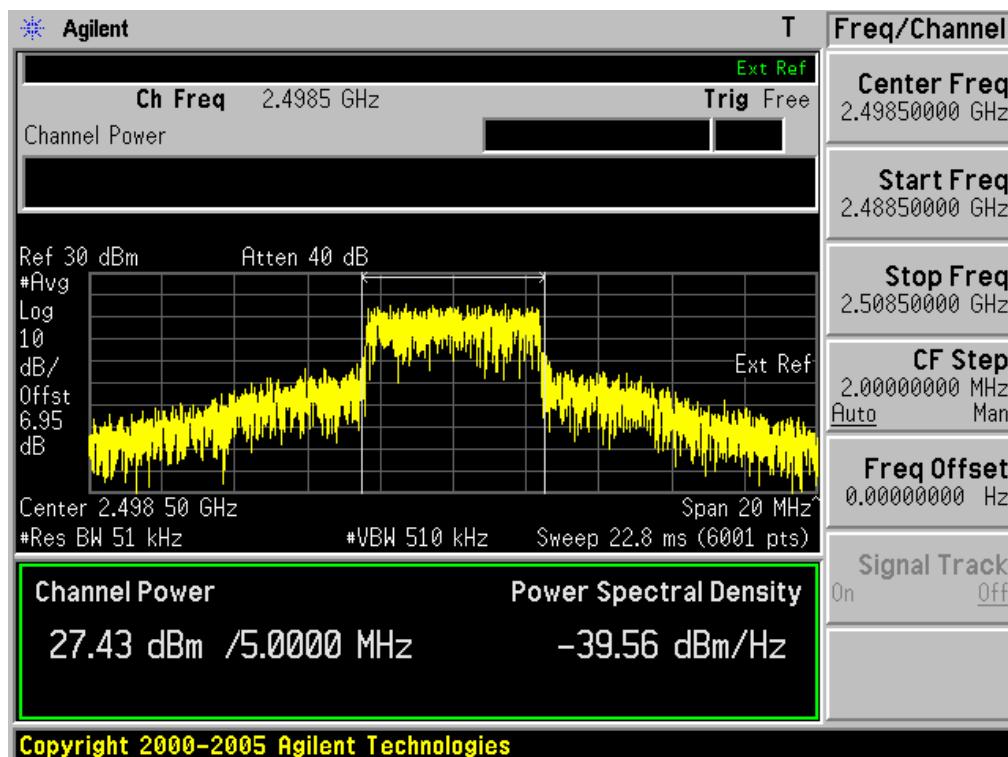
(Continued...)

### 5.1.4 Conducted Output Power(BW: 5MHz)

- Low Channel(2498.5MHz) & AMC Mode & QPSK 1/2



- Low Channel(2498.5MHz) & AMC Mode & QPSK 3/4



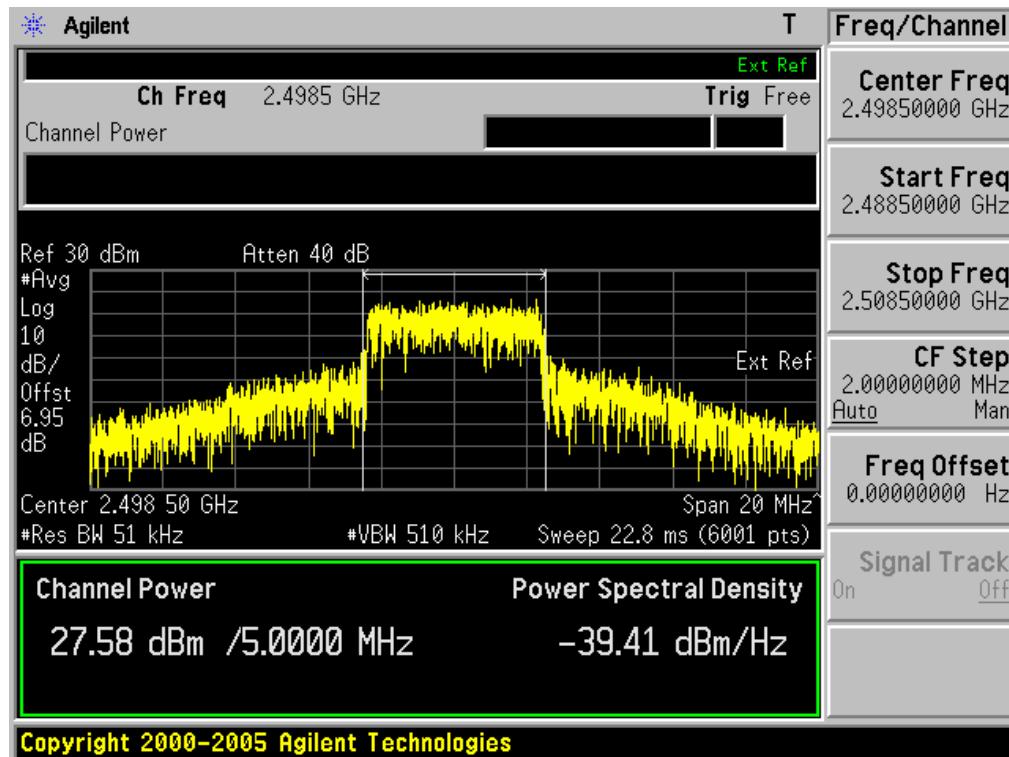
## 5.1 PLOTS OF EMISSIONS

(Continued...)

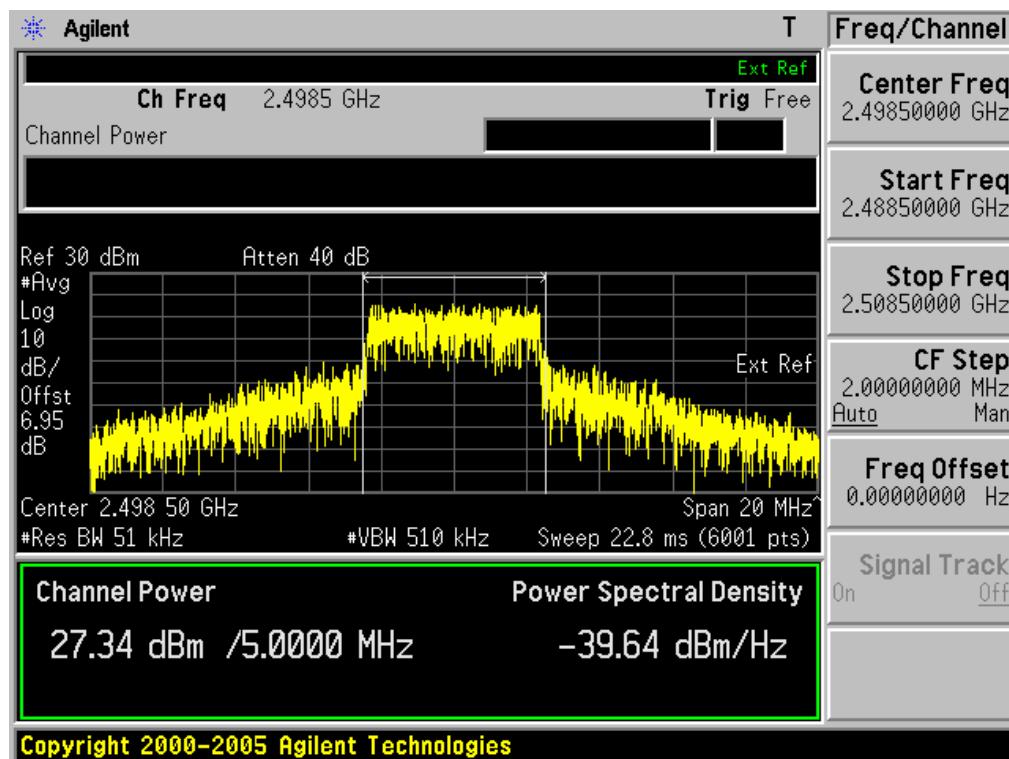
### 5.1.4 Conducted Output Power(BW: 5MHz)

(Continued...)

- Low Channel(2498.5MHz) & AMC Mode & 16QAM 1/2



- Low Channel(2498.5MHz) & AMC Mode & 16QAM 3/4



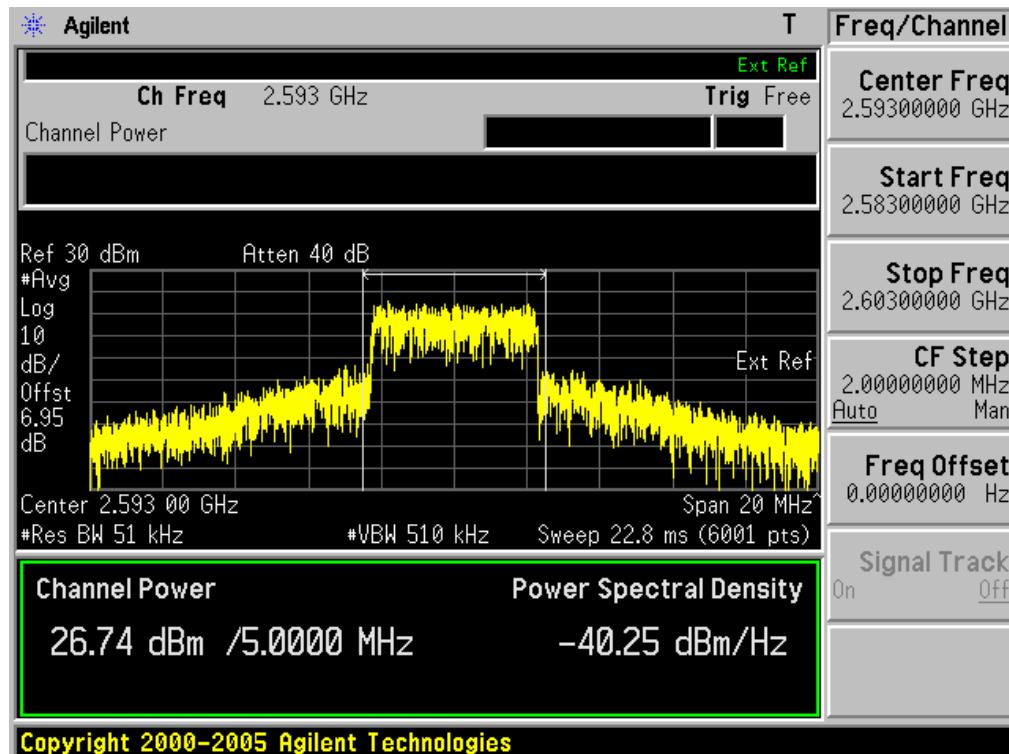
## 5.1 PLOTS OF EMISSIONS

(Continued...)

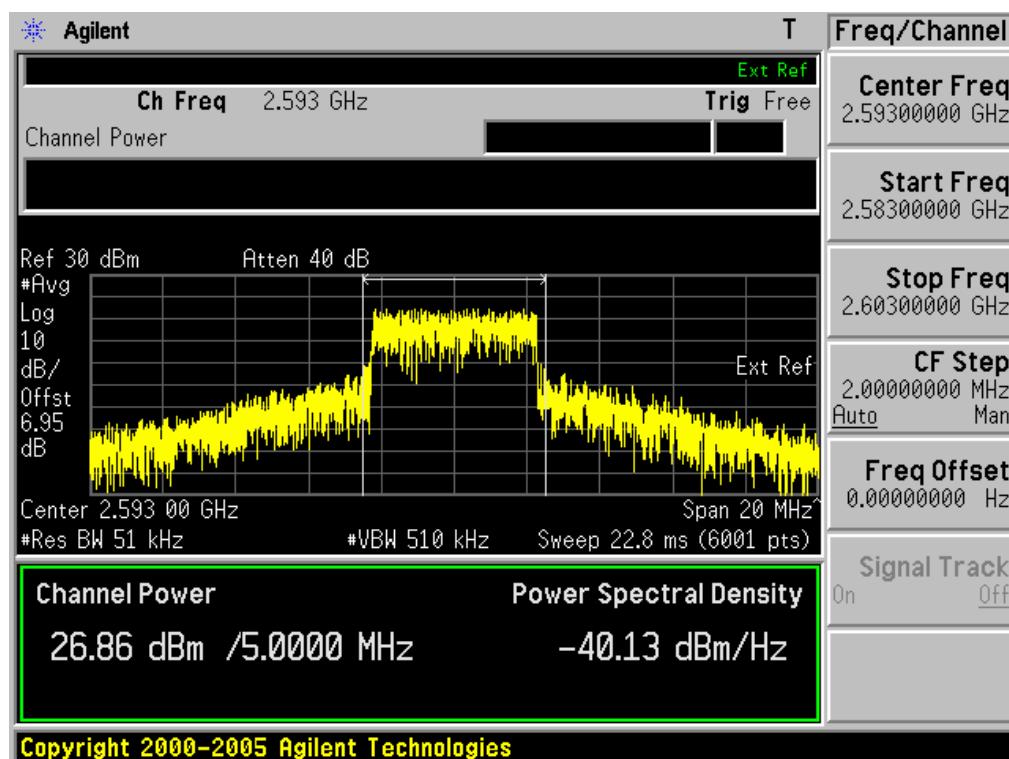
### 5.1.4 Conducted Output Power(BW: 5MHz)

(Continued...)

- Middle Channel(2593MHz) & PUSC Mode & QPSK 1/2



- Middle Channel(2593MHz) & PUSC Mode & QPSK 3/4



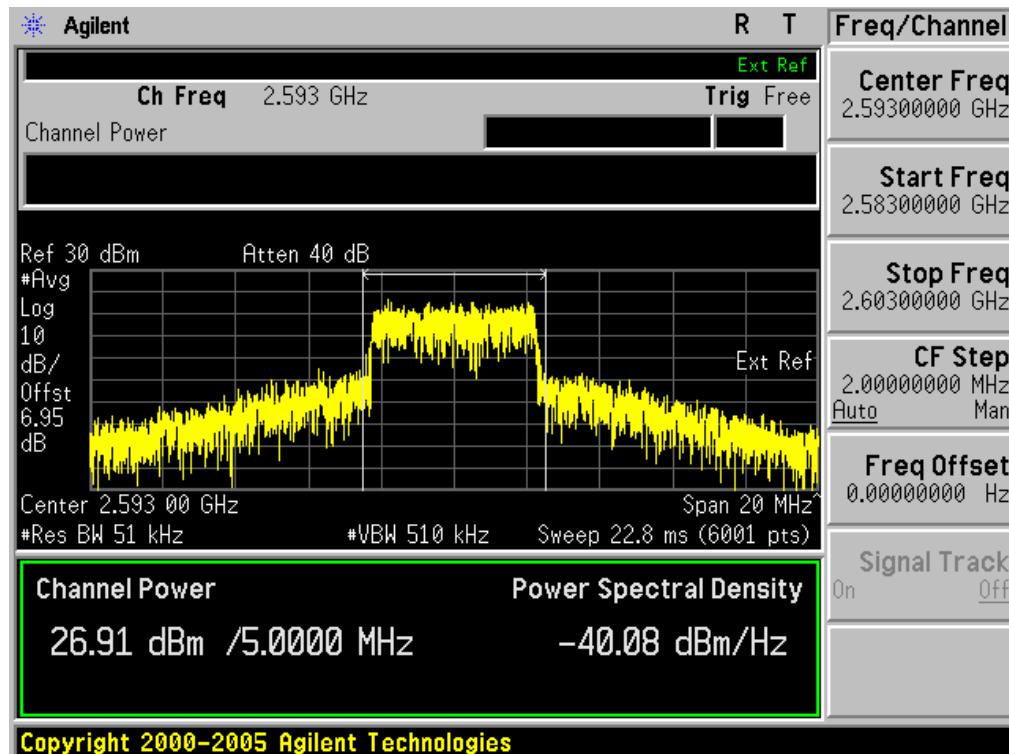
## 5.1 PLOTS OF EMISSIONS

(Continued...)

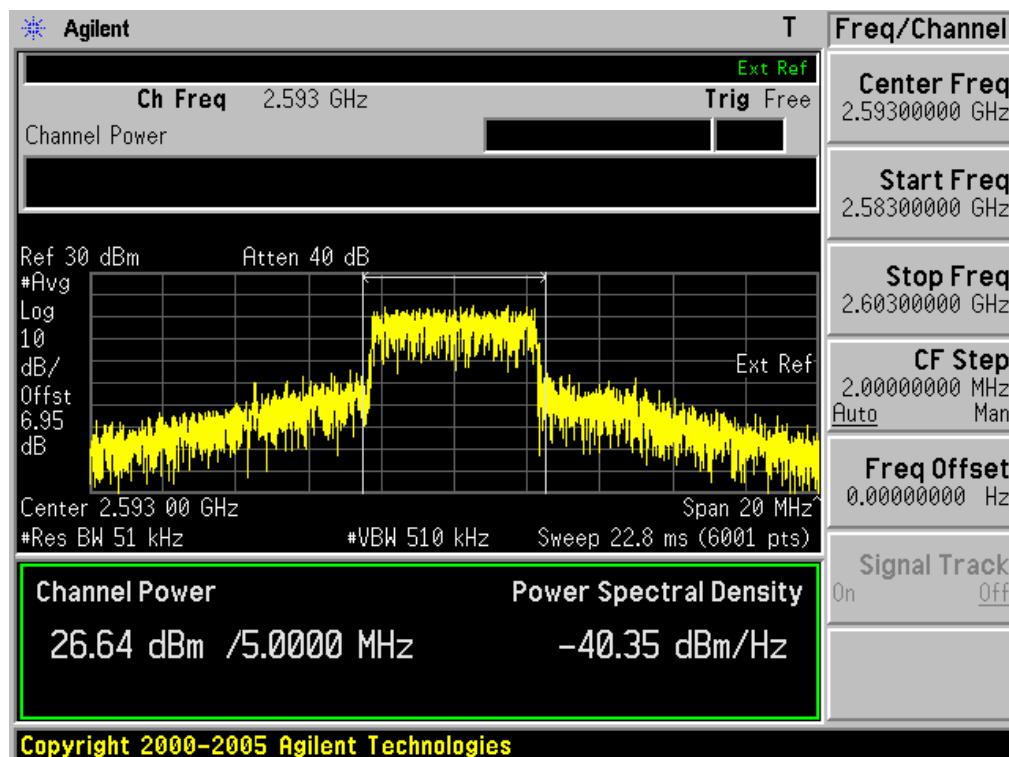
### 5.1.4 Conducted Output Power(BW: 5MHz)

(Continued...)

- Middle Channel(2593MHz) & PUSC Mode & 16QAM 1/2



- Middle Channel(2593MHz) & PUSC Mode & 16QAM 3/4



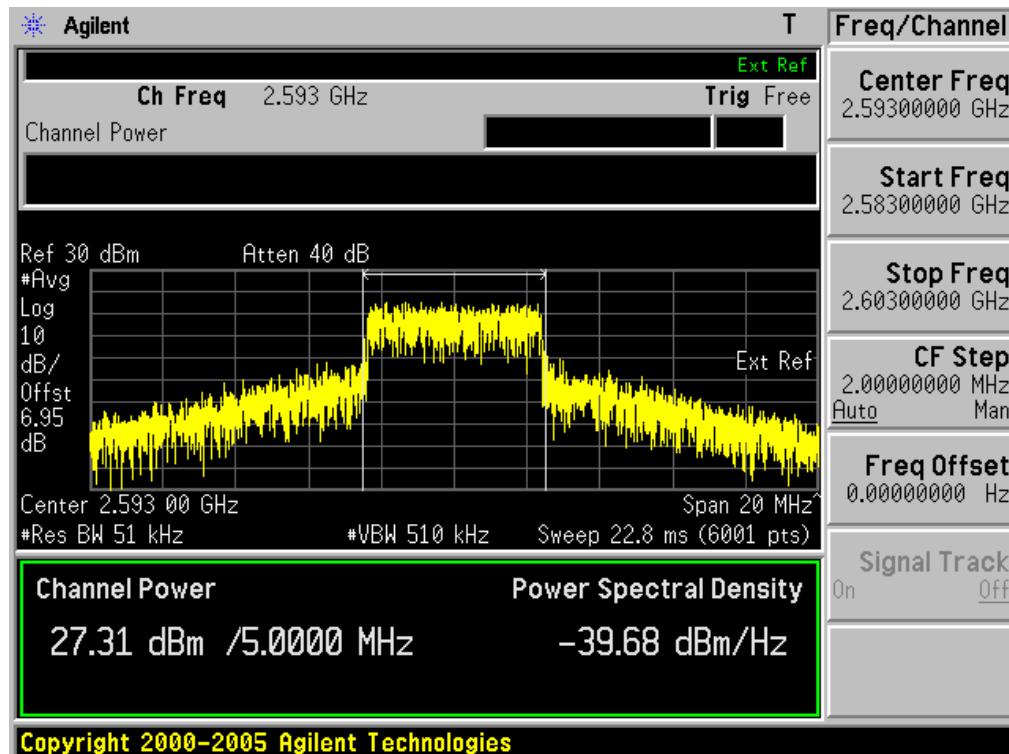
## 5.1 PLOTS OF EMISSIONS

(Continued...)

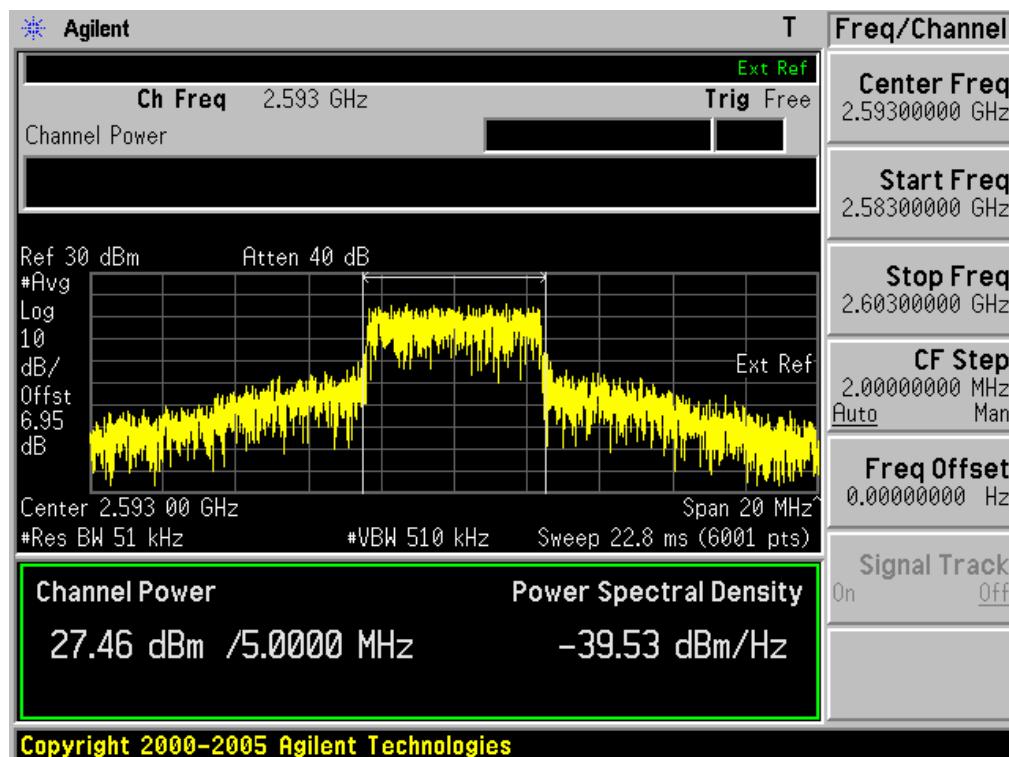
### 5.1.4 Conducted Output Power(BW: 5MHz)

(Continued...)

- Middle Channel(2593MHz) & AMC Mode & QPSK 1/2



- Middle Channel(2593MHz) & AMC Mode & QPSK 3/4



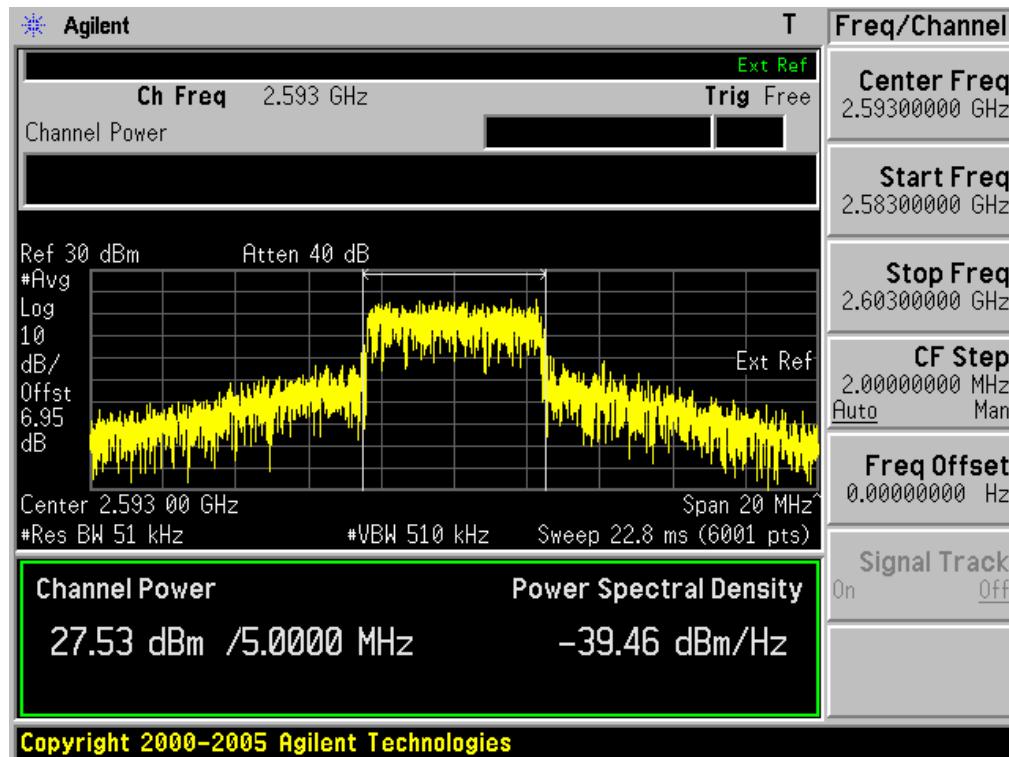
## 5.1 PLOTS OF EMISSIONS

(Continued...)

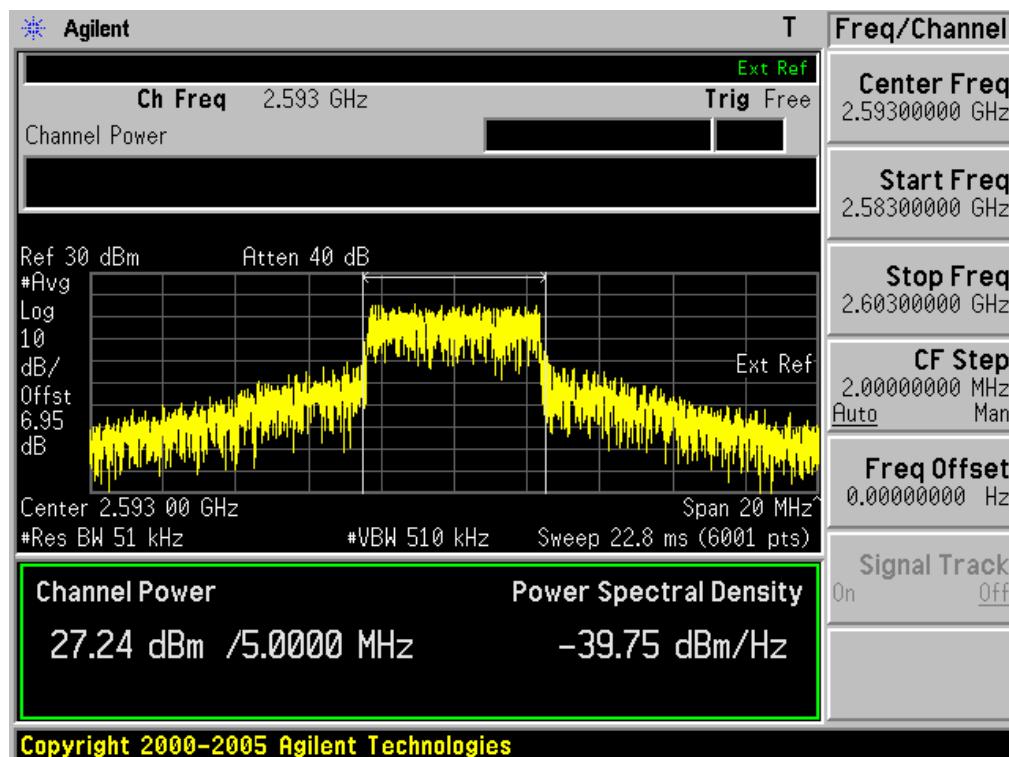
### 5.1.4 Conducted Output Power(BW: 5MHz)

(Continued...)

- Middle Channel(2593MHz) & AMC Mode & 16QAM 1/2



- Middle Channel(2593MHz) & AMC Mode & 16QAM 3/4



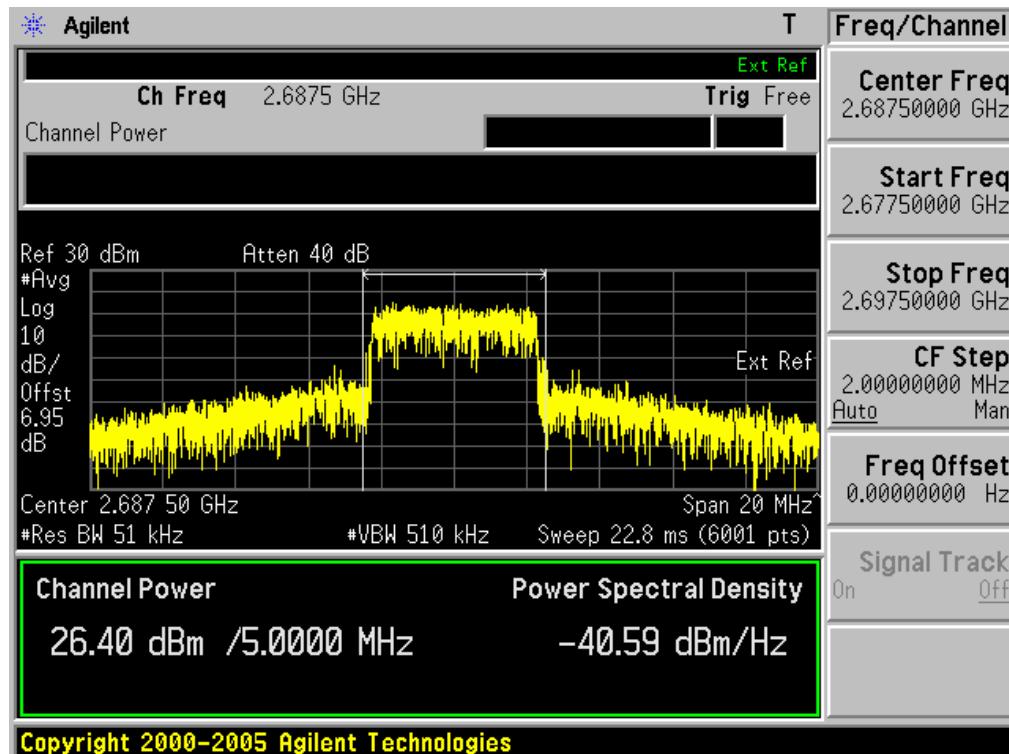
## 5.1 PLOTS OF EMISSIONS

(Continued...)

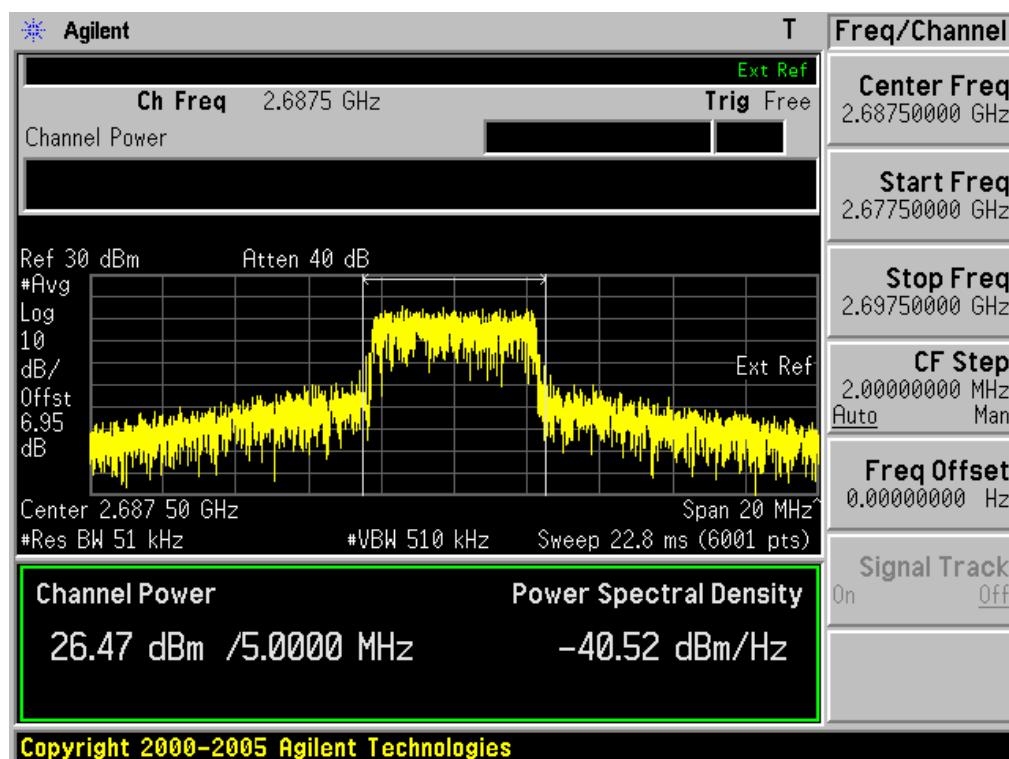
### 5.1.4 Conducted Output Power(BW: 5MHz)

(Continued...)

- High Channel(2687.5MHz) & PUSC Mode & QPSK 1/2



- High Channel(2687.55MHz) & PUSC Mode & QPSK 3/4



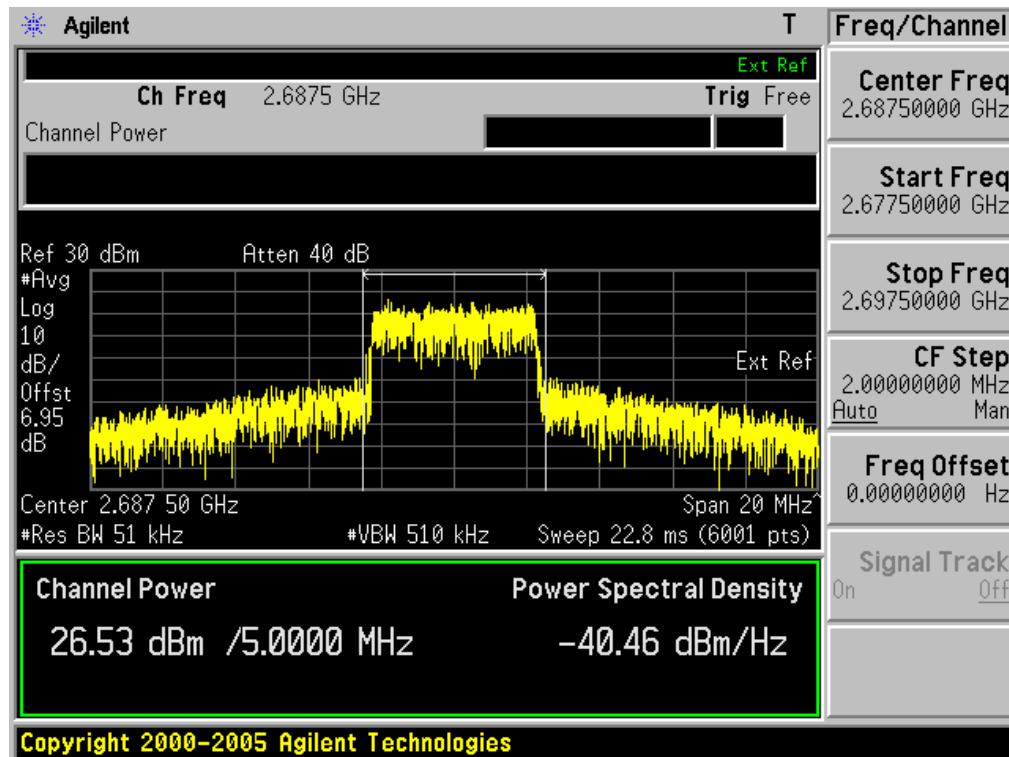
## 5.1 PLOTS OF EMISSIONS

(Continued...)

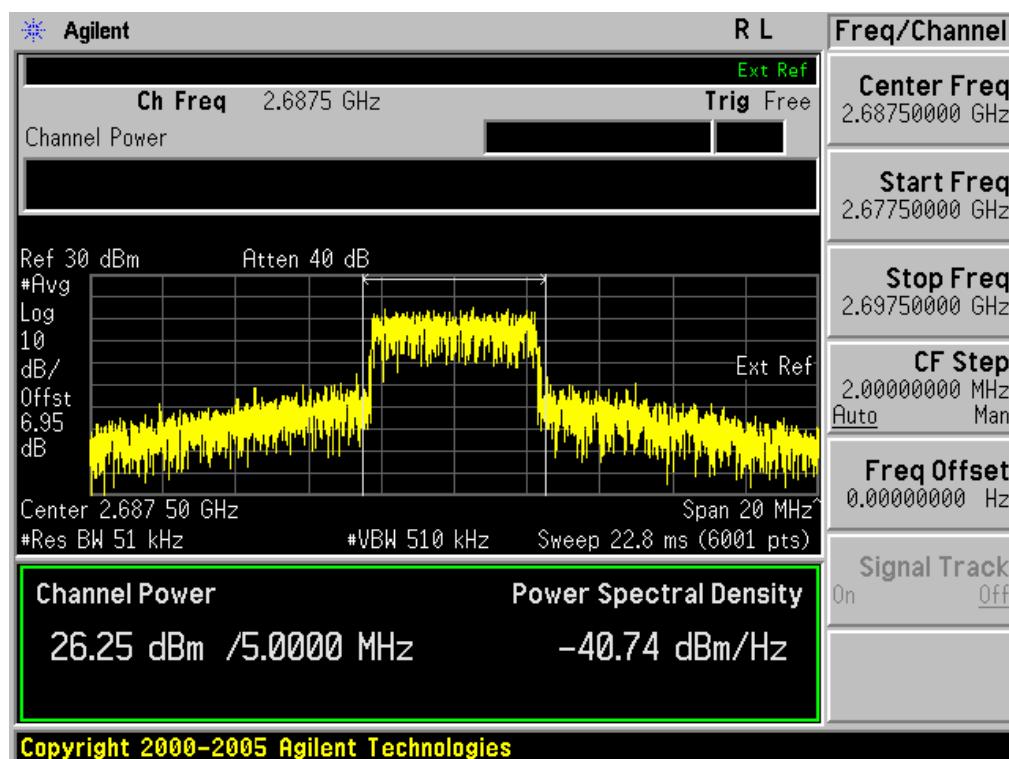
### 5.1.4 Conducted Output Power(BW: 5MHz)

(Continued...)

- High Channel(2687.5MHz) & PUSC Mode & 16QAM 1/2



- High Channel(2687.5MHz) & PUSC Mode & 16QAM 3/4



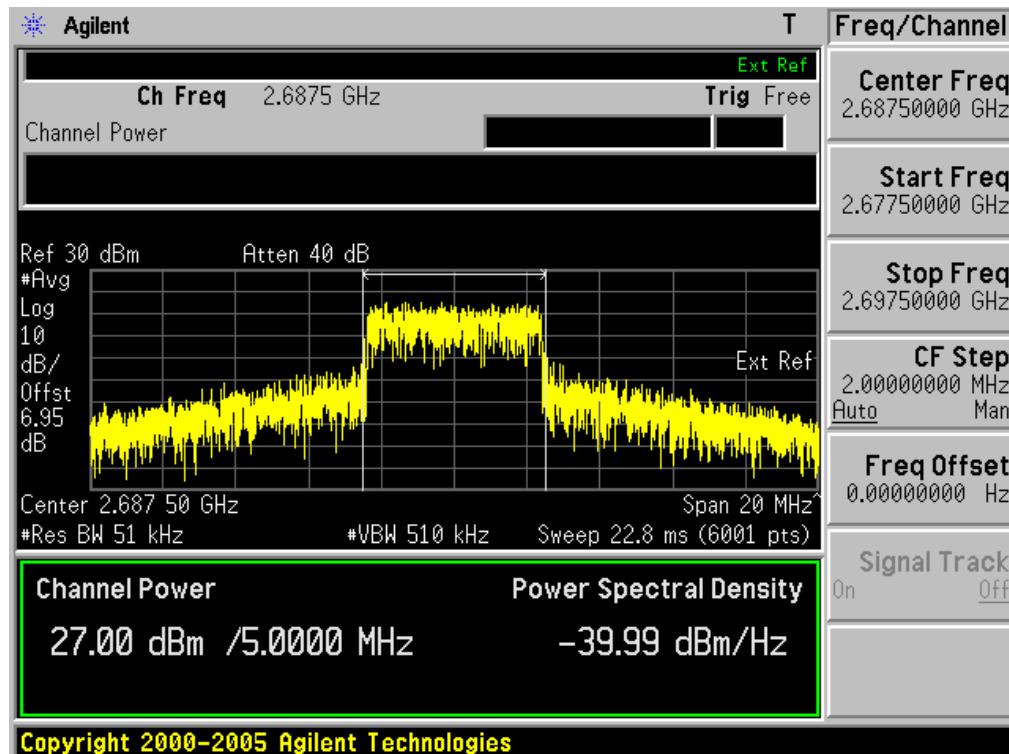
## 5.1 PLOTS OF EMISSIONS

(Continued...)

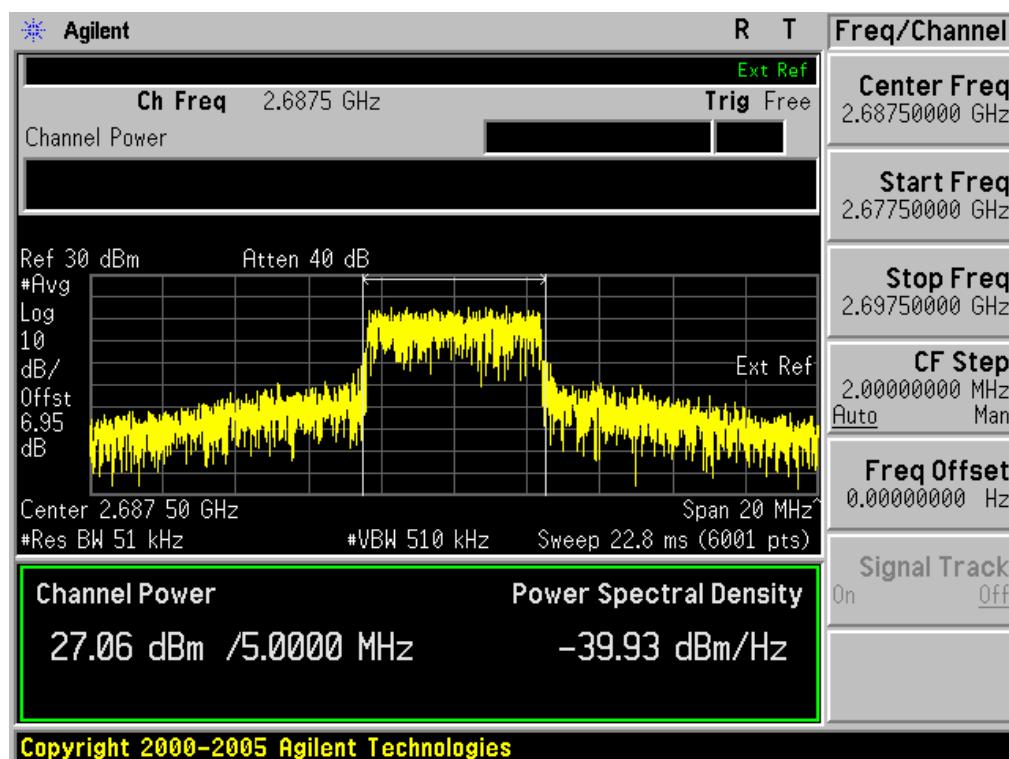
### 5.1.4 Conducted Output Power(BW: 5MHz)

(Continued...)

- High Channel(2687.5MHz) & AMC Mode & QPSK 1/2



- High Channel(2687.55MHz) & AMC Mode & QPSK 3/4



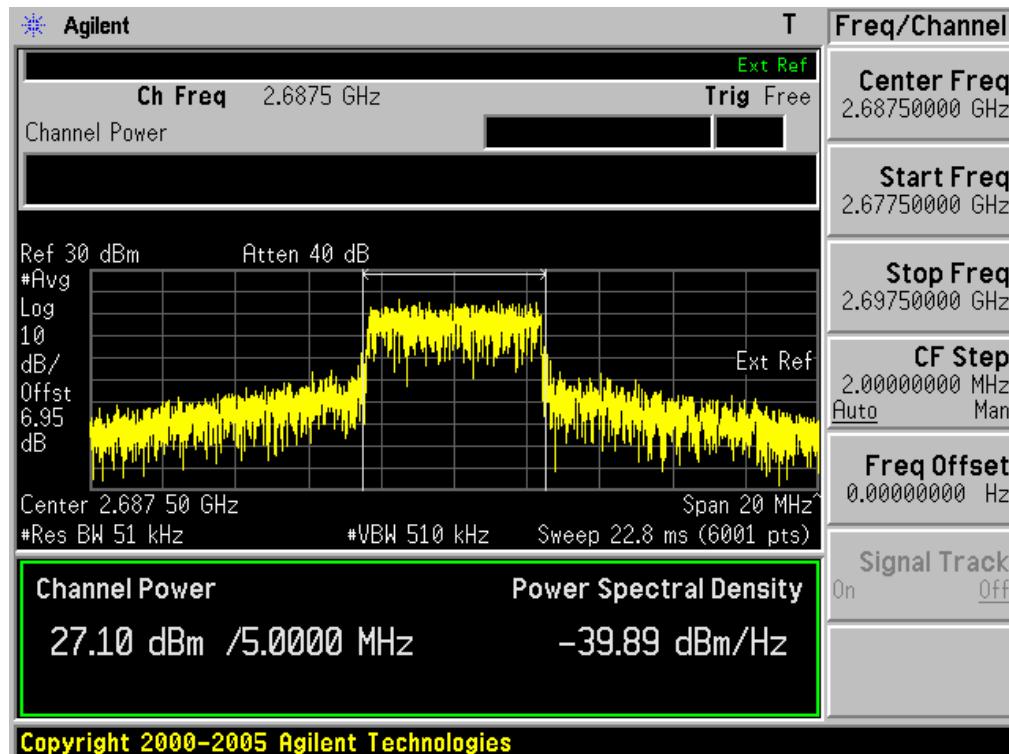
## 5.1 PLOTS OF EMISSIONS

(Continued...)

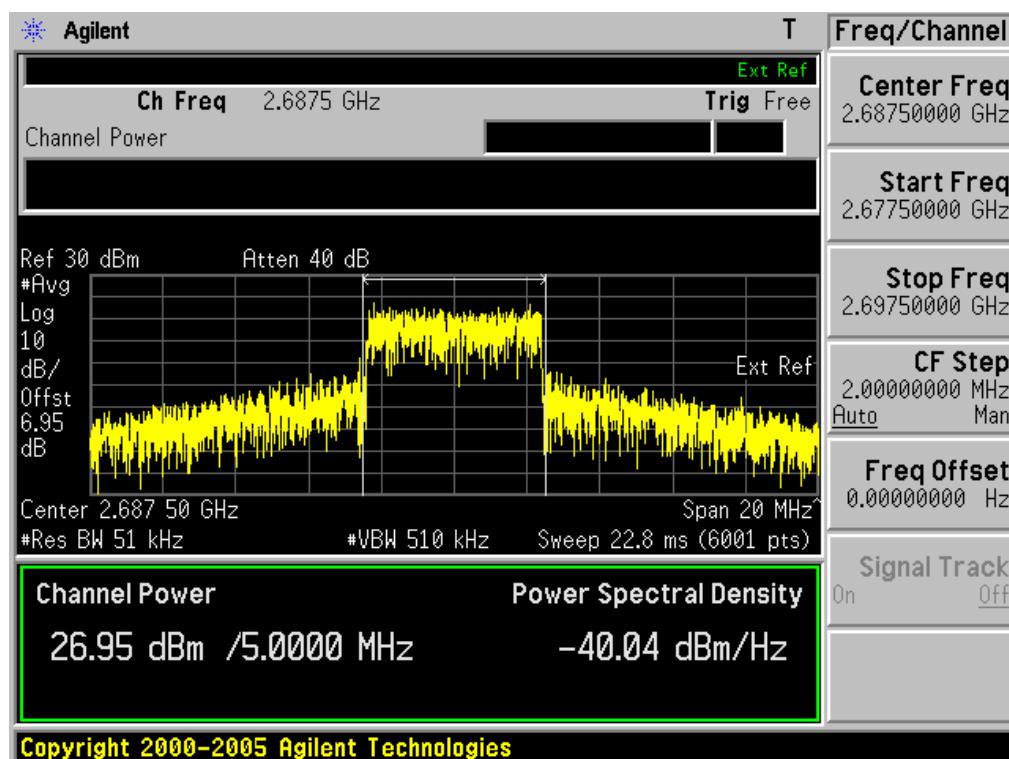
### 5.1.4 Conducted Output Power(BW: 5MHz)

(Continued...)

- High Channel(2687.5MHz) & AMC Mode & 16QAM 1/2



- High Channel(2687.5MHz) & AMC Mode & 16QAM 3/4



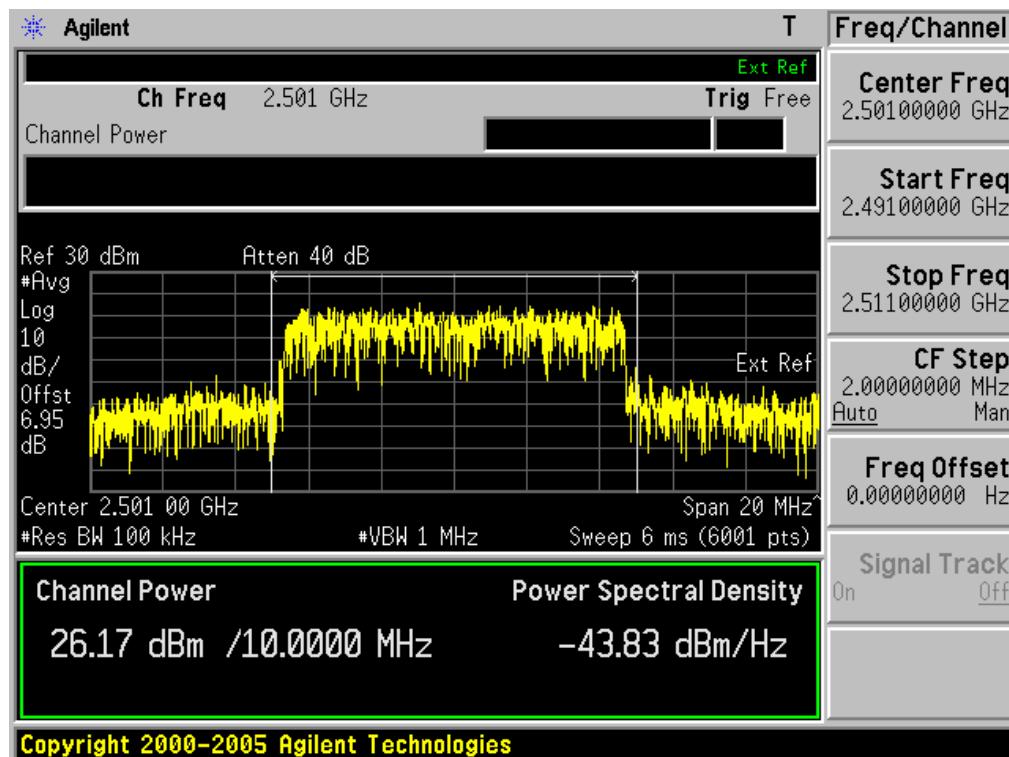
## 5.1 PLOTS OF EMISSIONS

(Continued...)

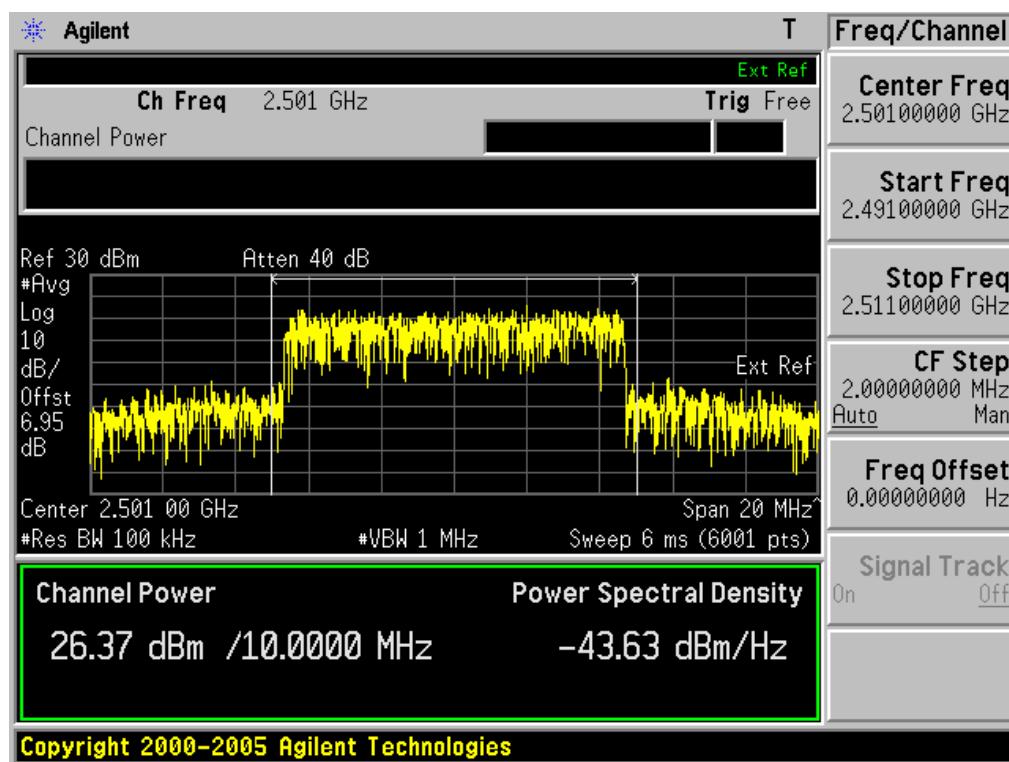
### 5.1.4 Conducted Output Power(BW: 10MHz)

(Continued...)

- Low Channel(2501MHz) & PUSC Mode & QPSK 1/2



- Low Channel(2501MHz) & PUSC Mode & QPSK 3/4



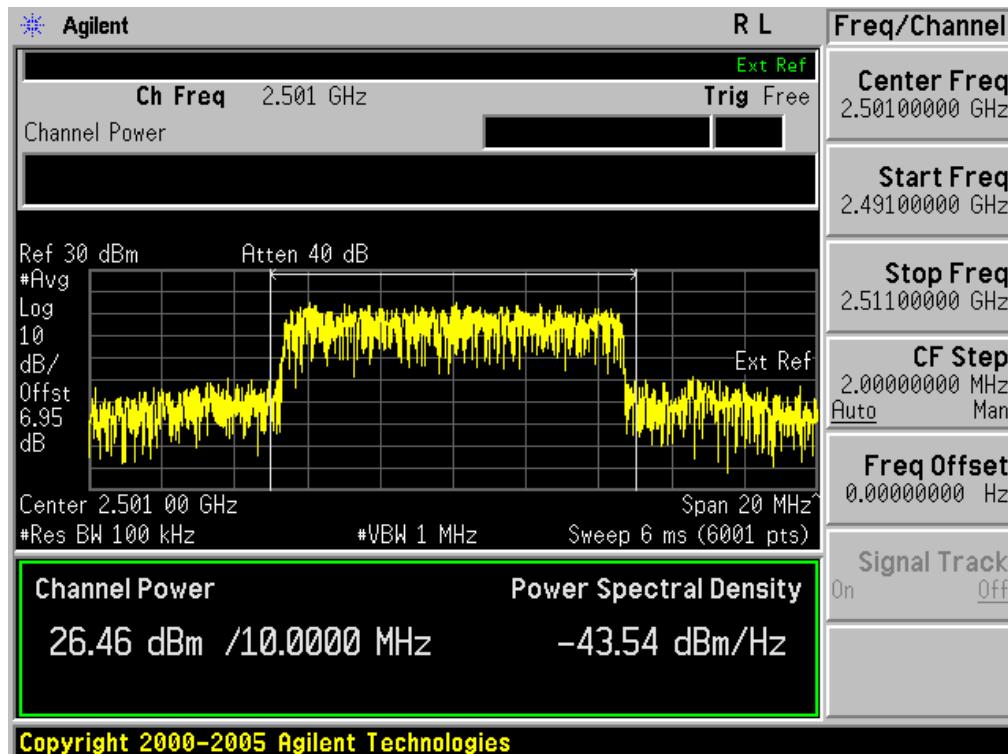
## 5.1 PLOTS OF EMISSIONS

(Continued...)

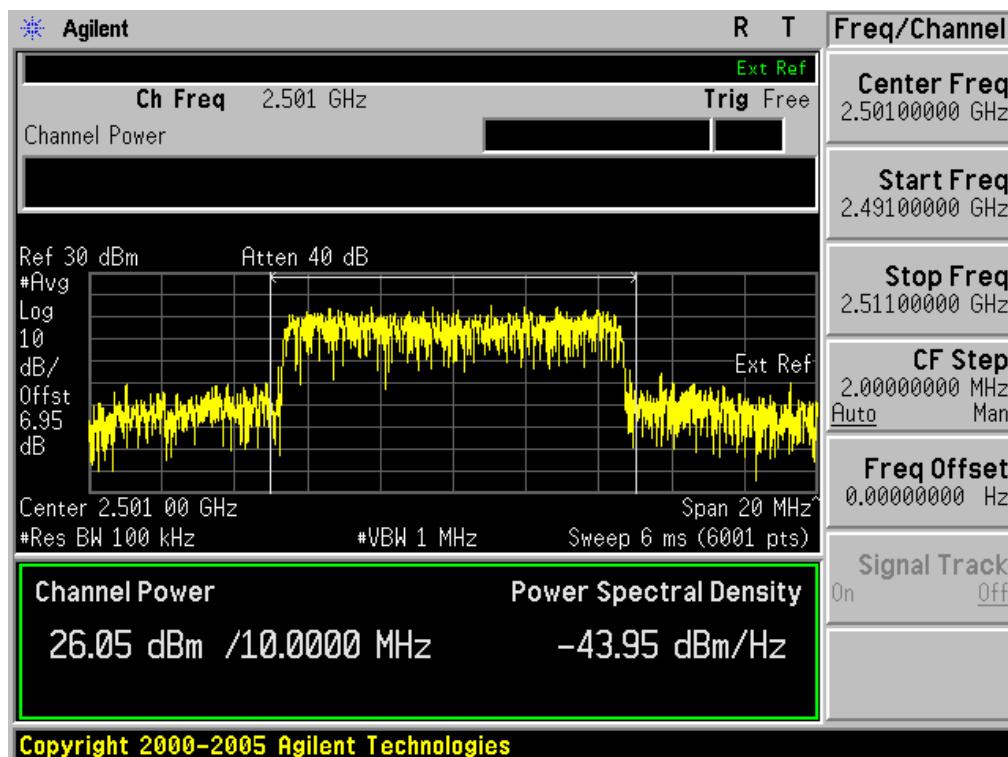
### 5.1.4 Conducted Output Power(BW: 10MHz)

(Continued...)

- Low Channel(2501MHz) & PUSC Mode & 16QAM 1/2



- Low Channel(2501MHz) & PUSC Mode & 16QAM 3/4



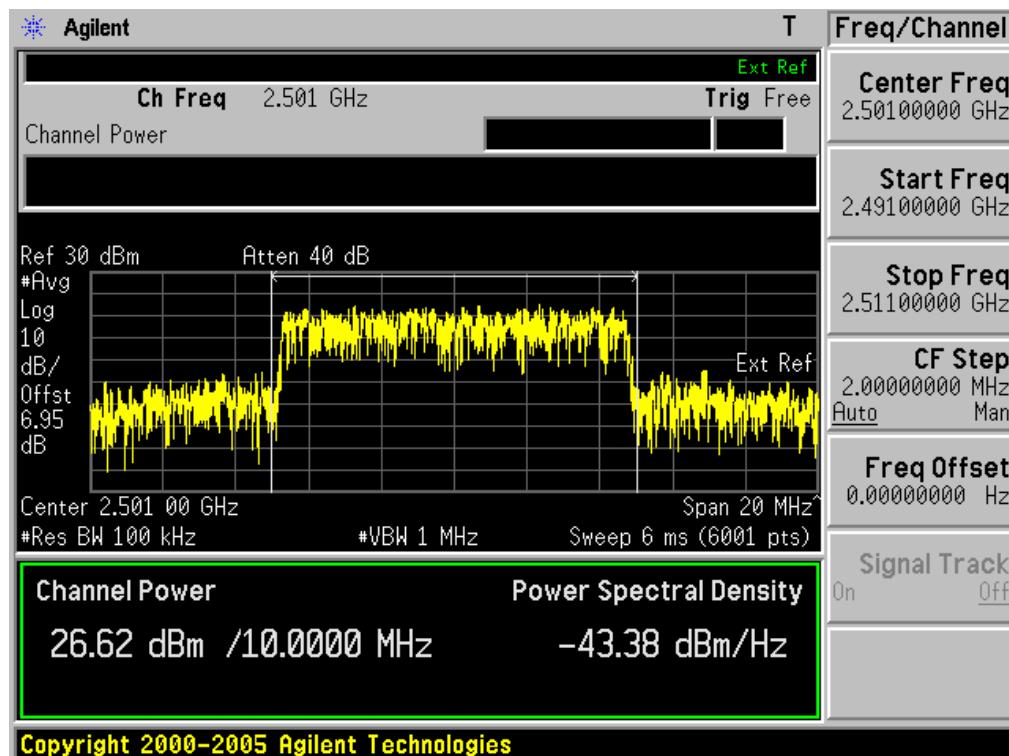
## 5.1 PLOTS OF EMISSIONS

(Continued...)

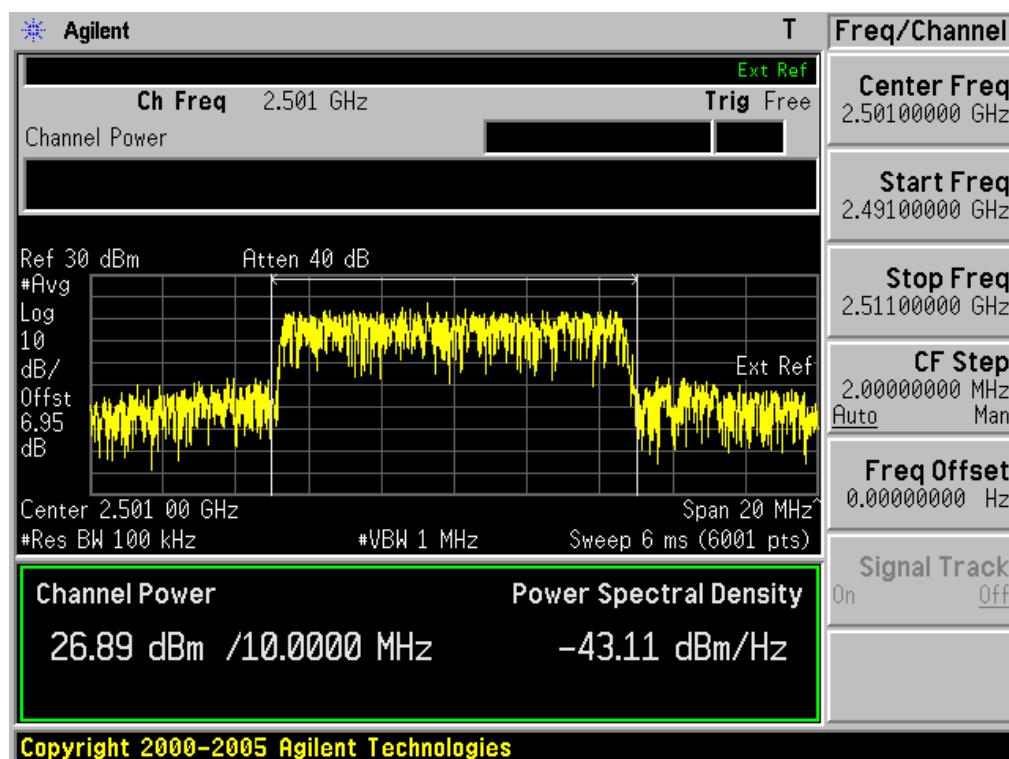
### 5.1.4 Conducted Output Power(BW: 10MHz)

(Continued...)

- Low Channel(2501MHz) & AMC Mode & QPSK 1/2



- Low Channel(2501MHz) & AMC Mode & QPSK 3/4



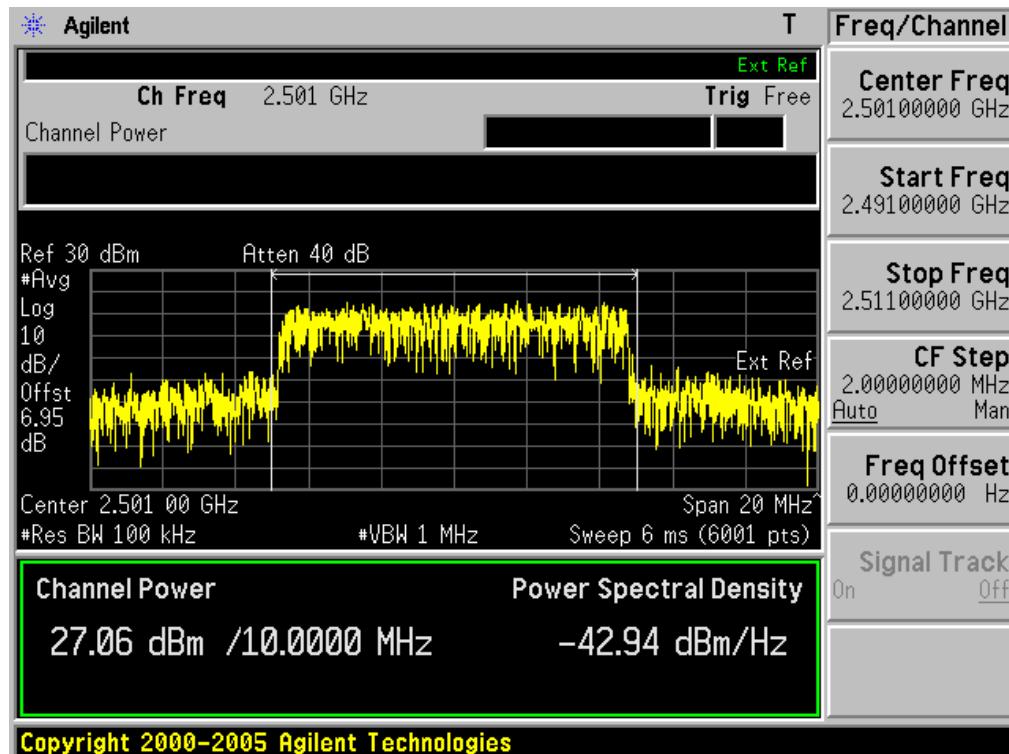
## 5.1 PLOTS OF EMISSIONS

(Continued...)

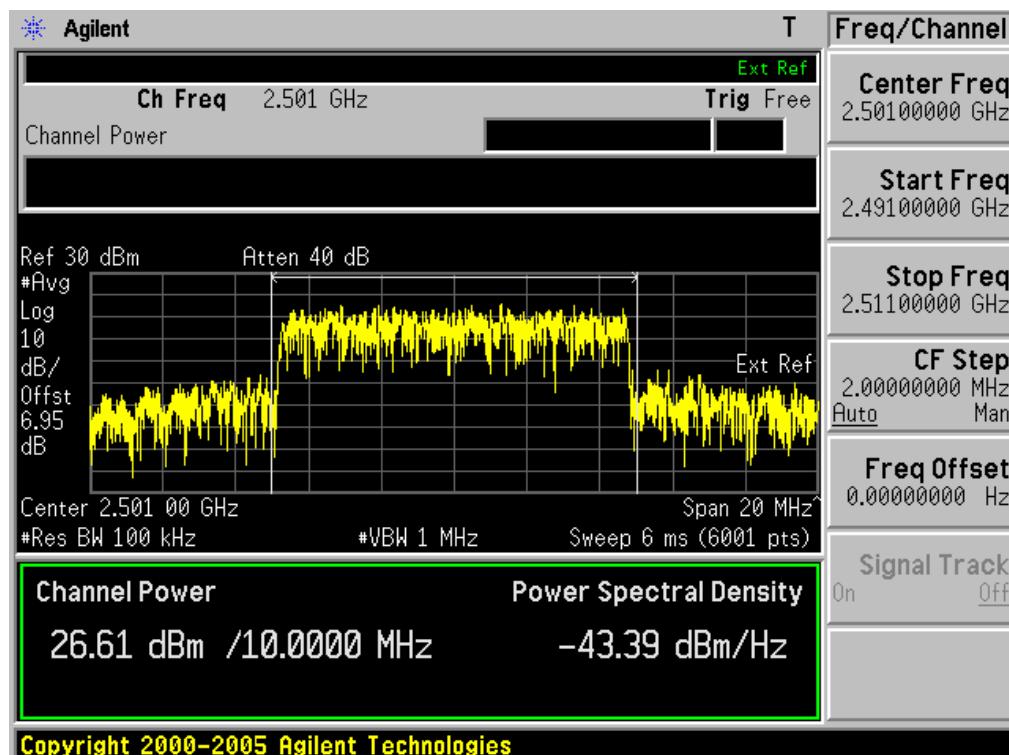
### 5.1.4 Conducted Output Power(BW: 10MHz)

(Continued...)

- Low Channel(2501MHz) & AMC Mode & 16QAM 1/2



- Low Channel(2501MHz) & AMC Mode & 16QAM 3/4



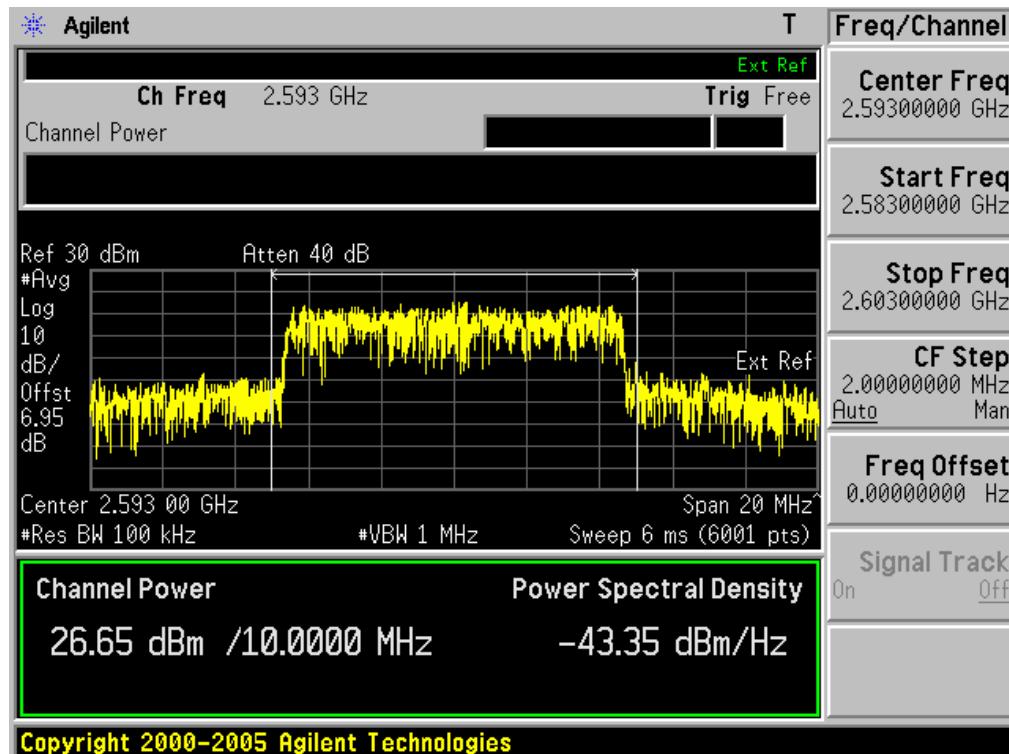
## 5.1 PLOTS OF EMISSIONS

(Continued...)

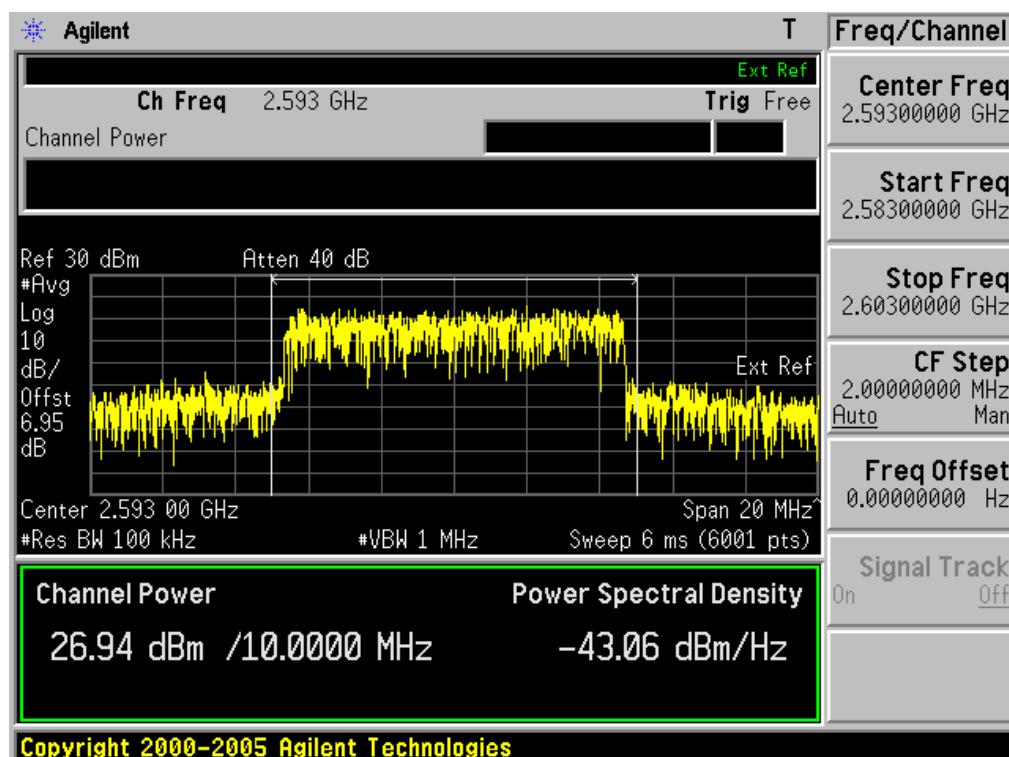
### 5.1.4 Conducted Output Power(BW: 10MHz)

(Continued...)

- Middle Channel(2593MHz) & PUSC Mode & QPSK 1/2



- Middle Channel(2593MHz) & PUSC Mode & QPSK 3/4



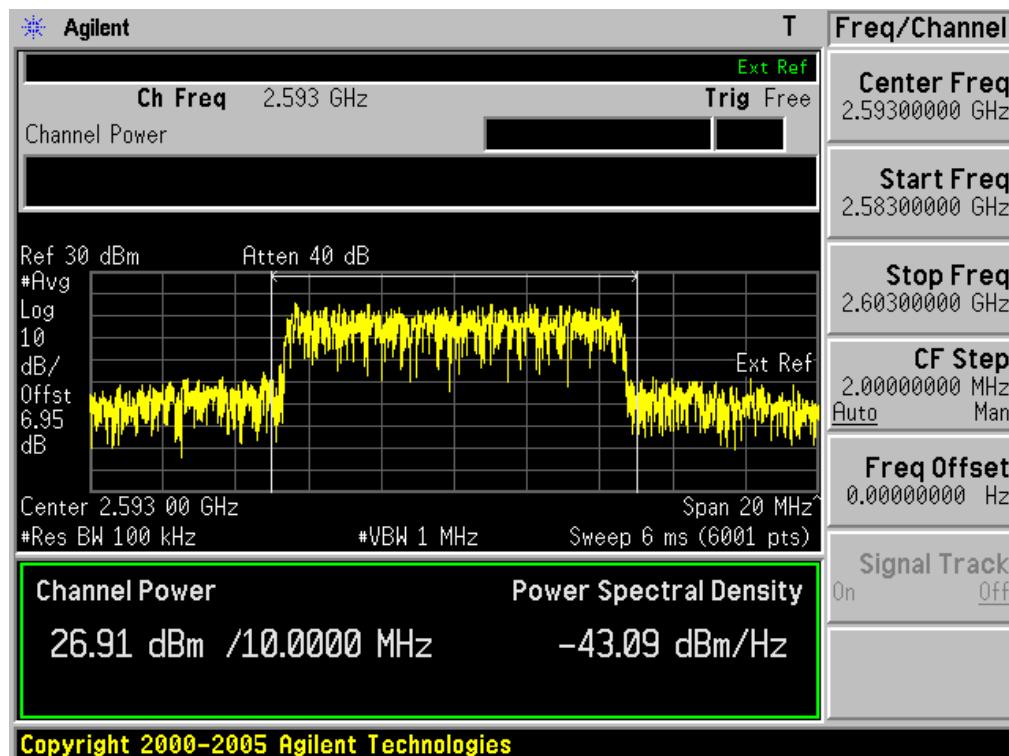
## 5.1 PLOTS OF EMISSIONS

(Continued...)

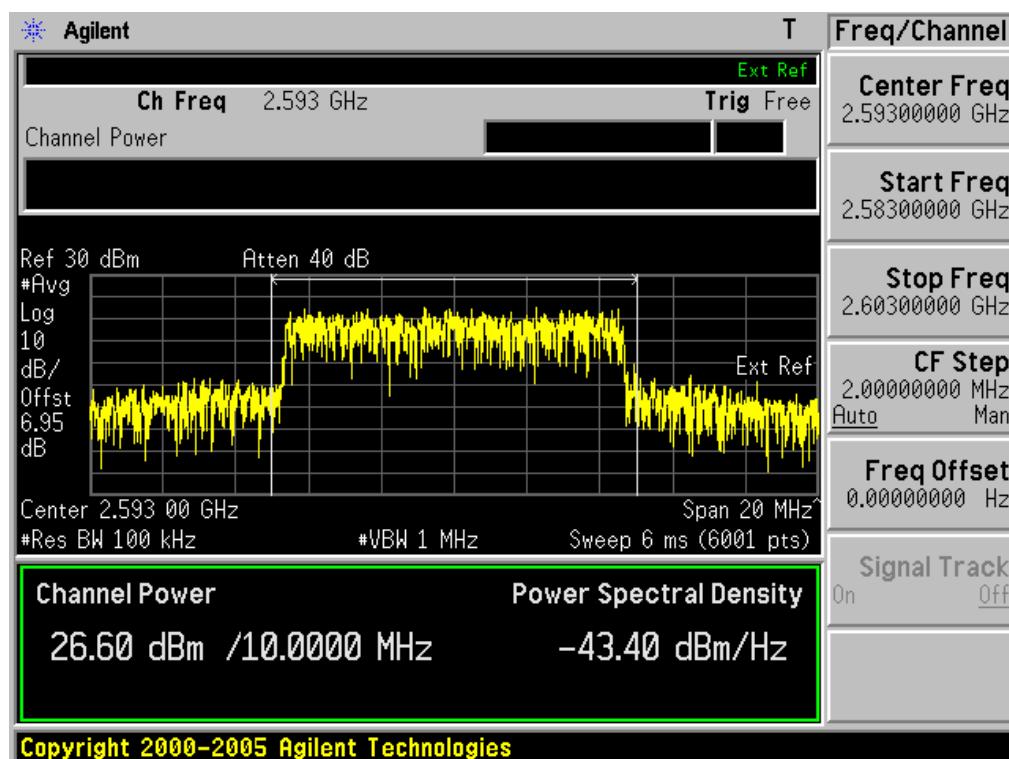
### 5.1.4 Conducted Output Power(BW: 10MHz)

(Continued...)

- Middle Channel(2593MHz) & PUSC Mode & 16QAM 1/2



- Middle Channel(2593MHz) & PUSC Mode & 16QAM 3/4



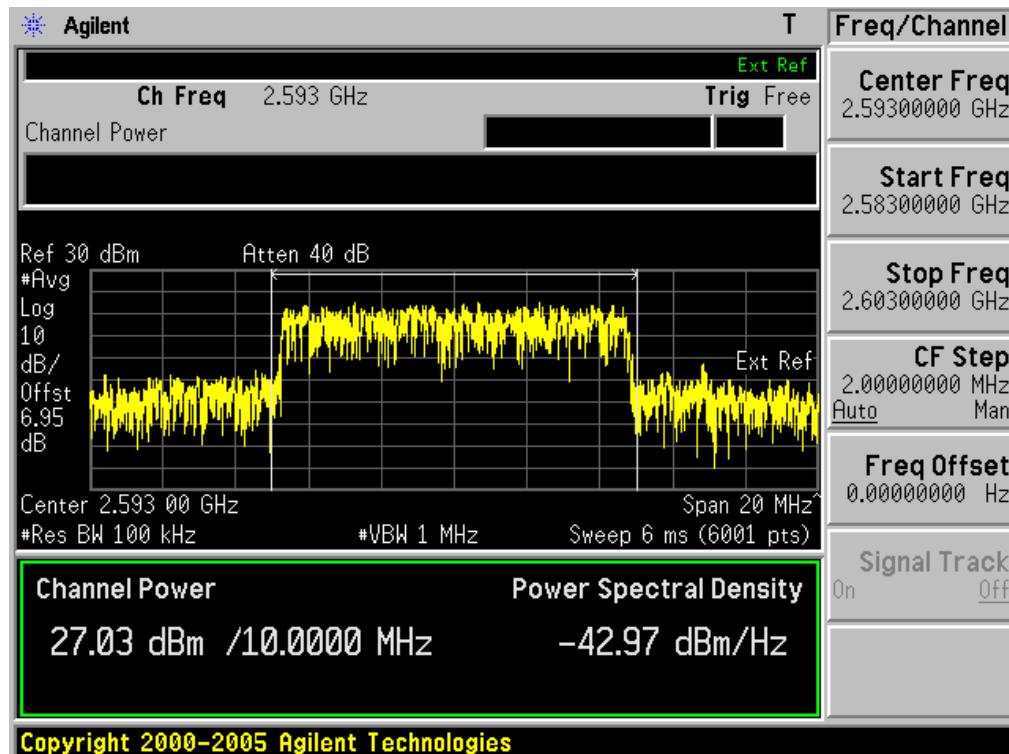
## 5.1 PLOTS OF EMISSIONS

(Continued...)

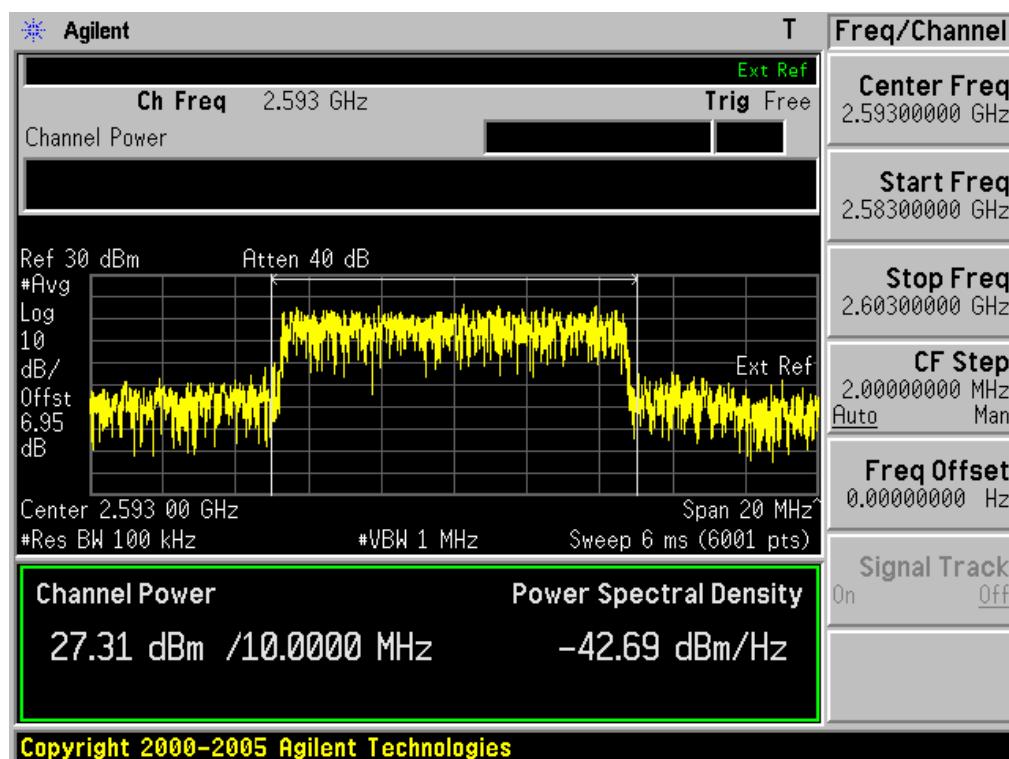
### 5.1.4 Conducted Output Power(BW: 10MHz)

(Continued...)

- Middle Channel(2593MHz) & AMC Mode & QPSK 1/2



- Middle Channel(2593MHz) & AMC Mode & QPSK 3/4



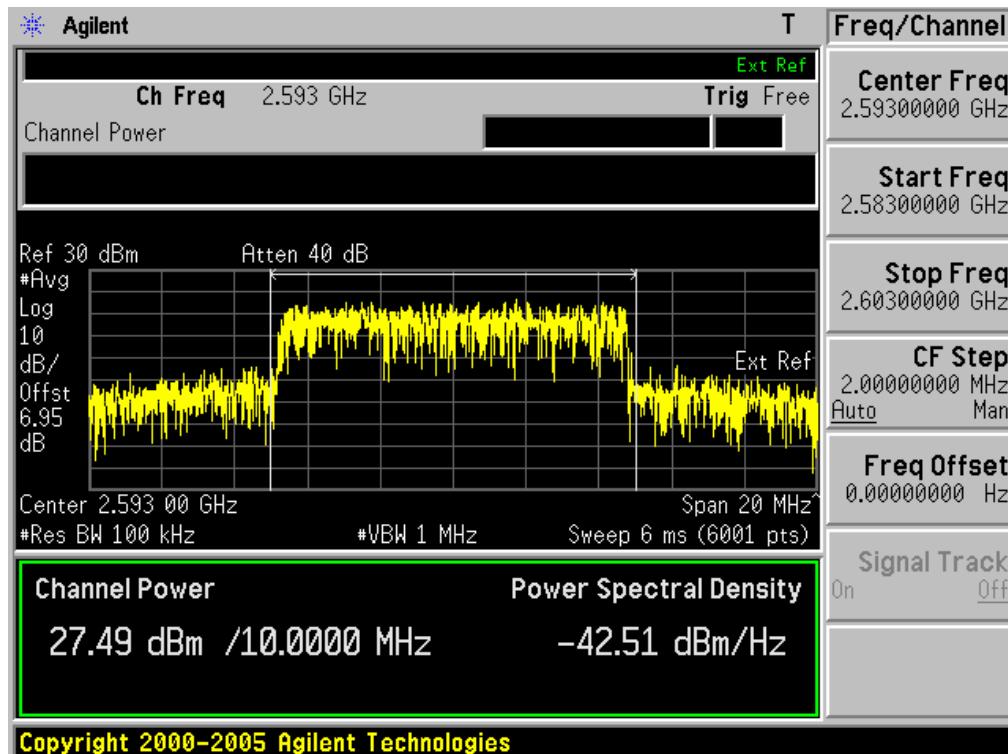
## 5.1 PLOTS OF EMISSIONS

(Continued...)

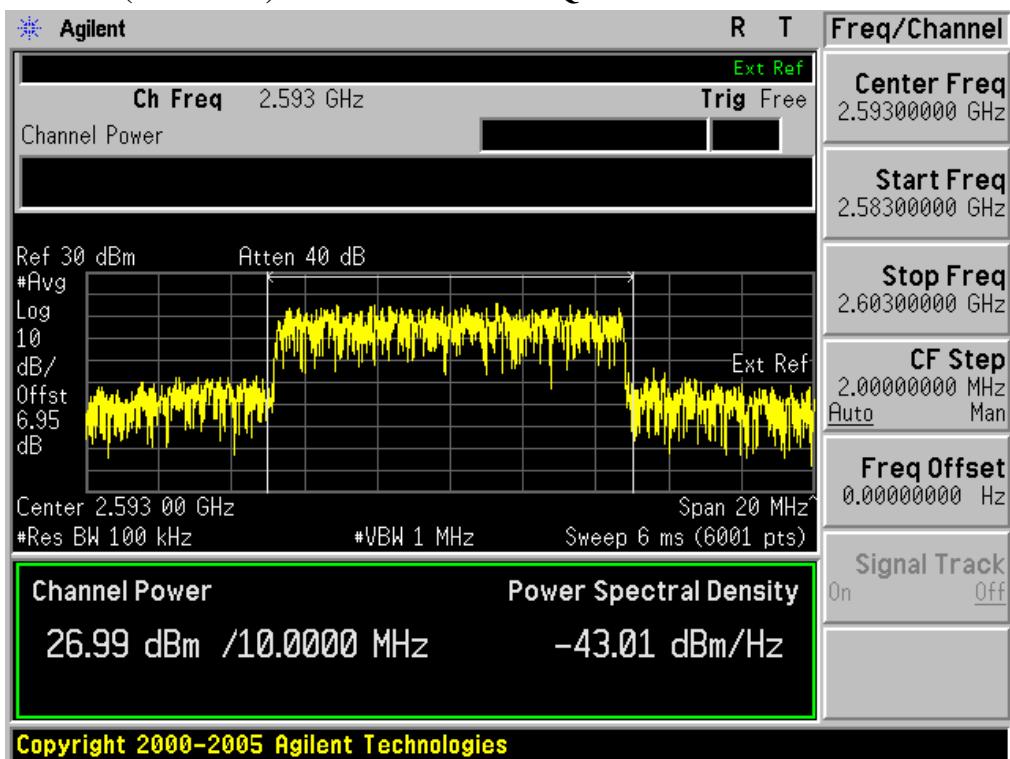
### 5.1.4 Conducted Output Power(BW: 10MHz)

(Continued...)

- Middle Channel(2593MHz) & AMC Mode & 16QAM 1/2



- Middle Channel(2593MHz) & AMC Mode & 16QAM 3/4



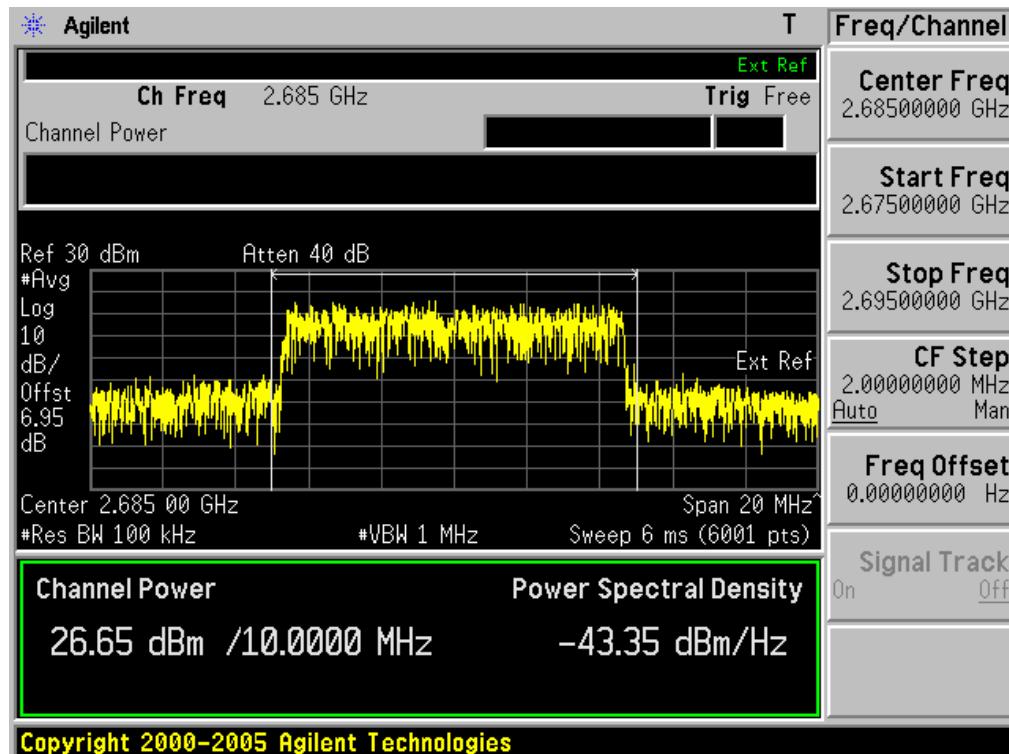
## 5.1 PLOTS OF EMISSIONS

(Continued...)

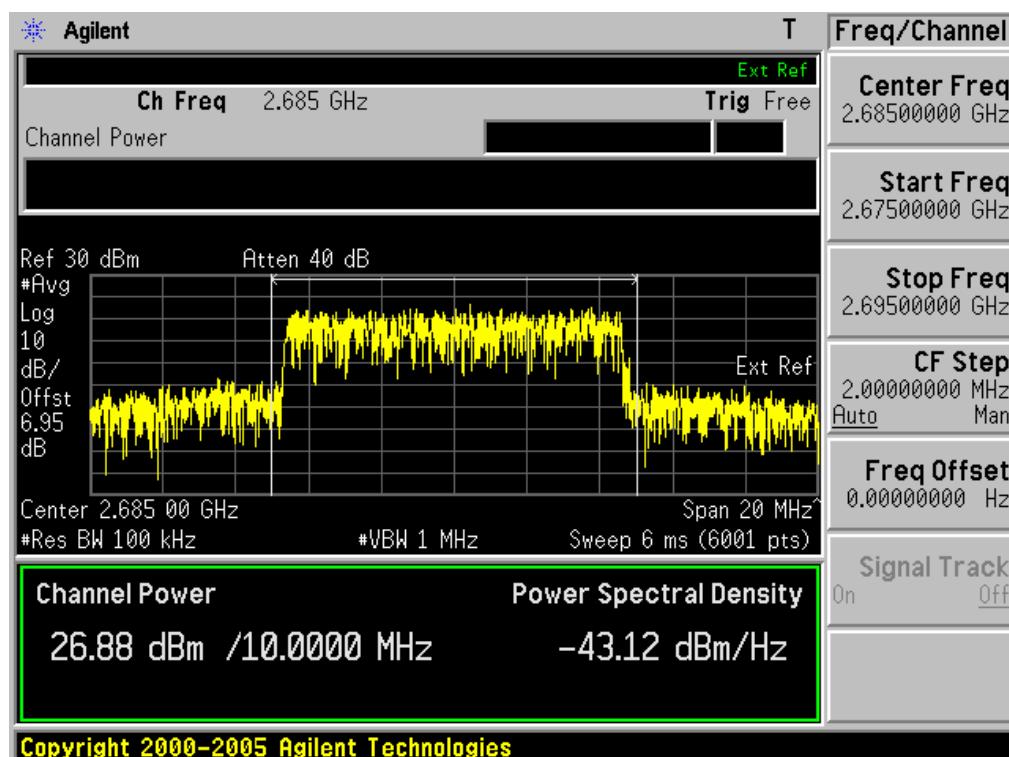
### 5.1.4 Conducted Output Power(BW: 10MHz)

(Continued...)

- High Channel(2685MHz) & PUSC Mode & QPSK 1/2



- High Channel(2685MHz) & PUSC Mode & QPSK 3/4



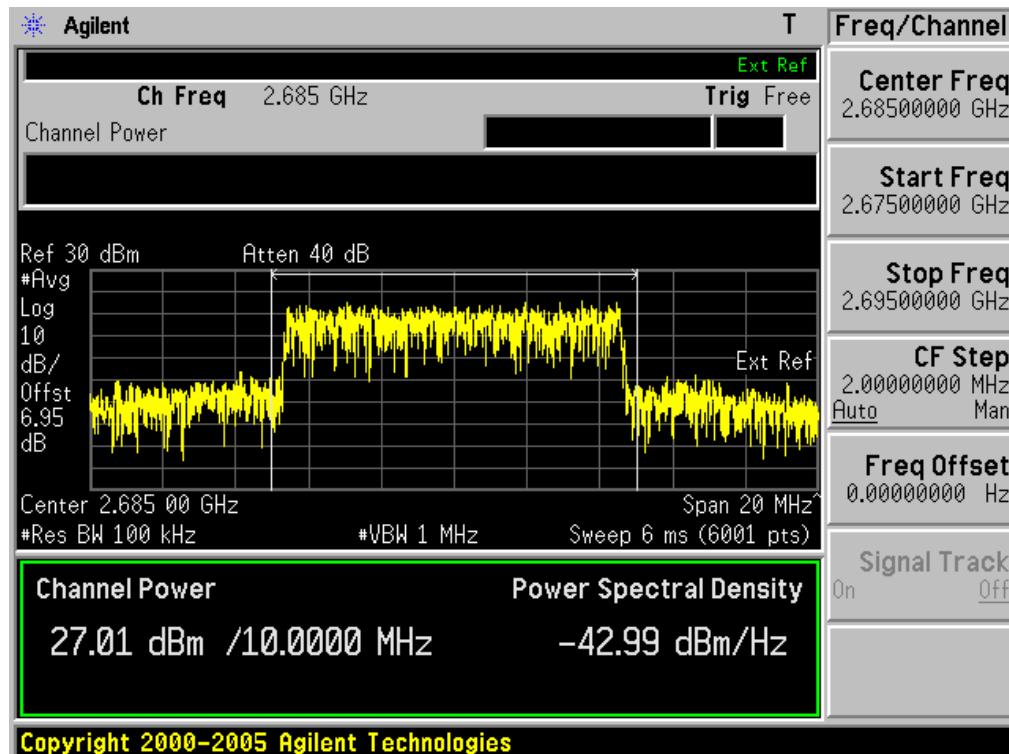
## 5.1 PLOTS OF EMISSIONS

(Continued...)

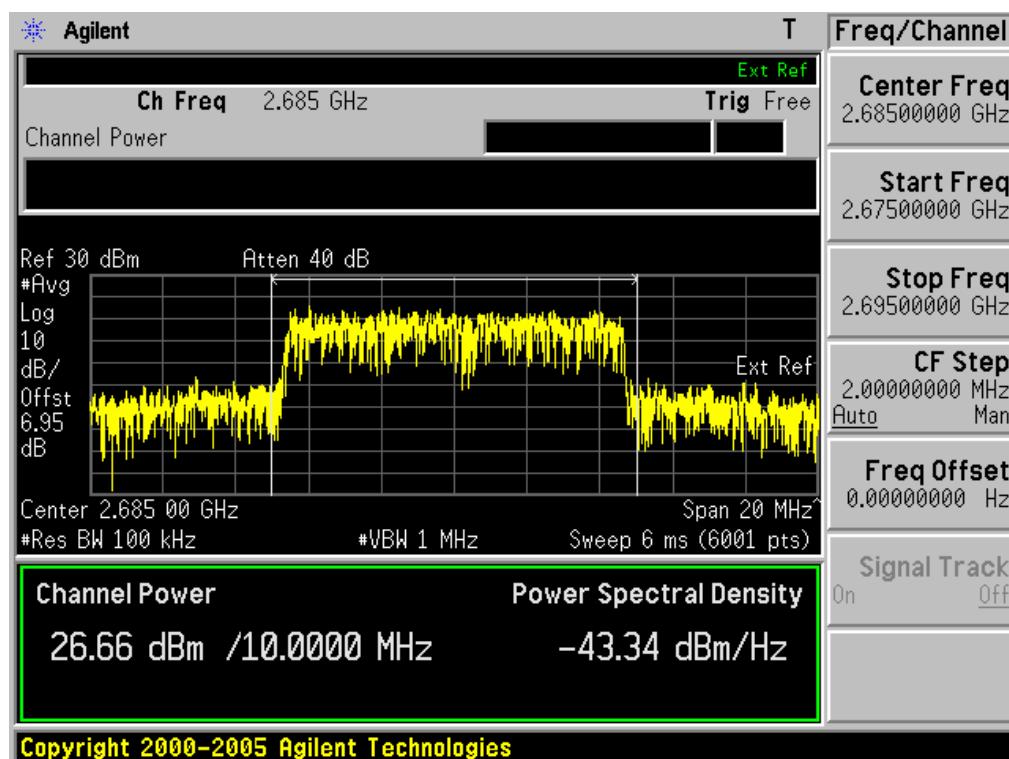
### 5.1.4 Conducted Output Power(BW: 10MHz)

(Continued...)

- High Channel(2685MHz) & PUSC Mode & 16QAM 1/2



- High Channel(2685MHz) & PUSC Mode & 16QAM 3/4



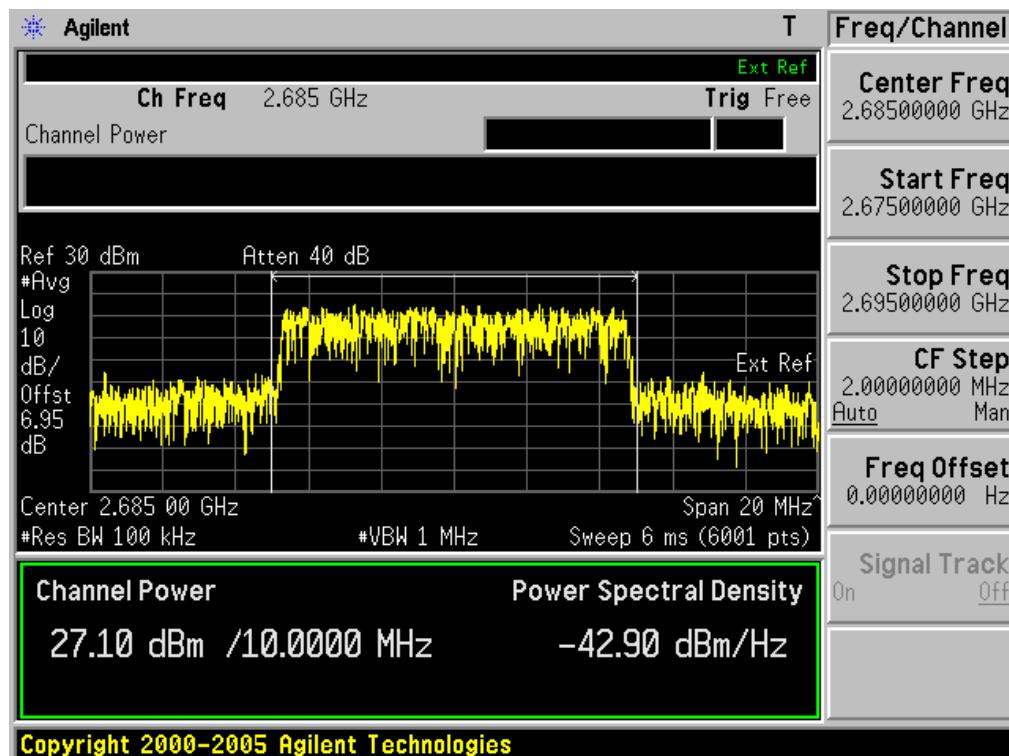
## 5.1 PLOTS OF EMISSIONS

(Continued...)

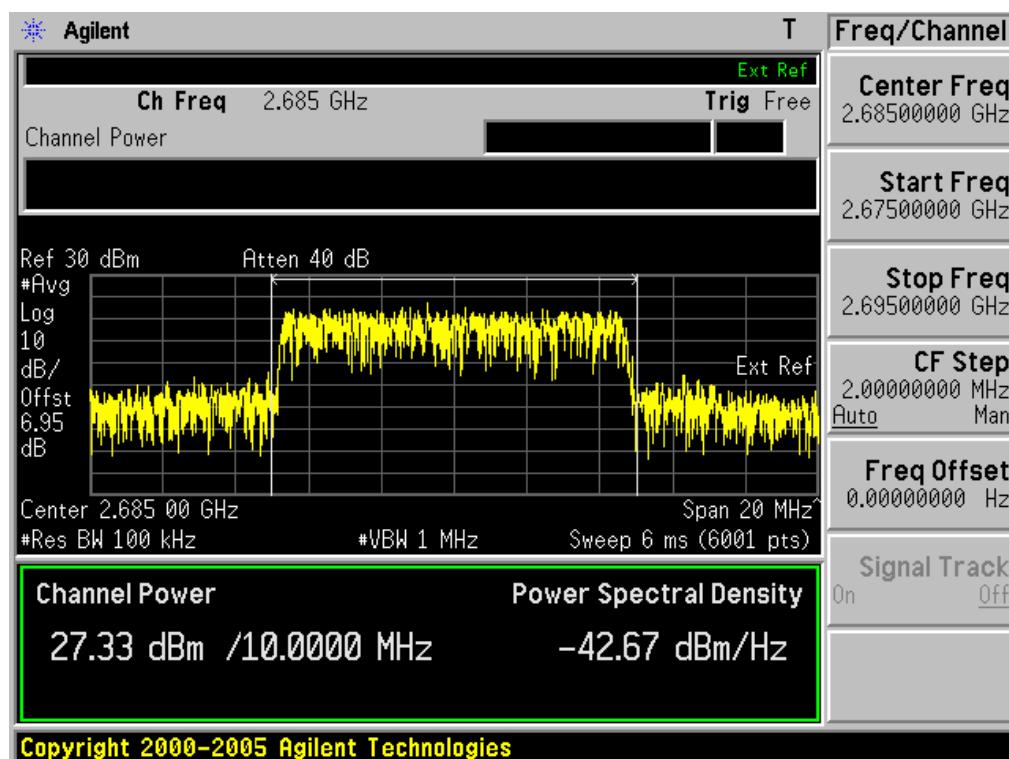
### 5.1.4 Conducted Output Power(BW: 10MHz)

(Continued...)

- High Channel(2685MHz) & AMC Mode & QPSK 1/2



- High Channel(2685MHz) & AMC Mode & QPSK 3/4



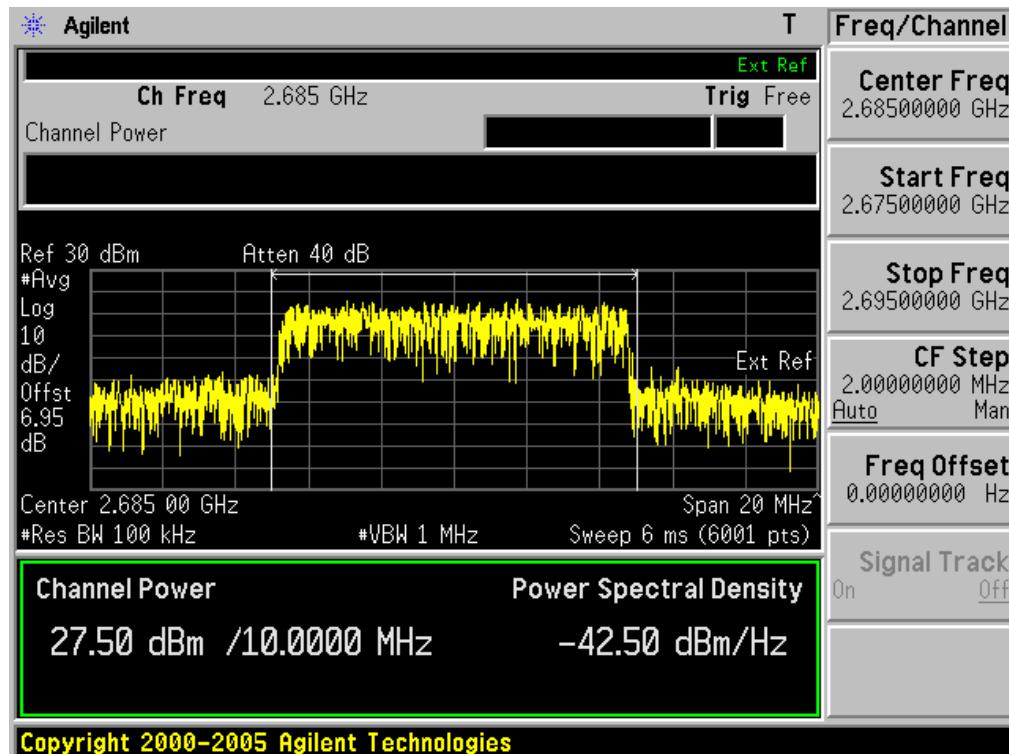
## 5.1 PLOTS OF EMISSIONS

(Continued...)

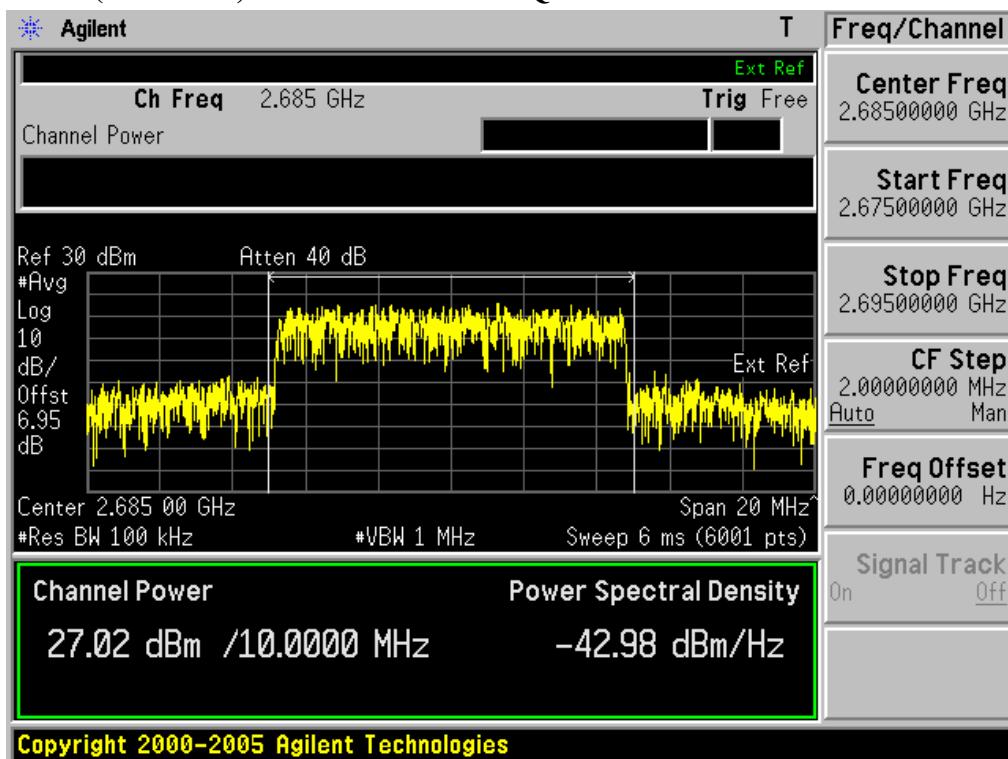
### 5.1.4 Conducted Output Power(BW: 10MHz)

(Continued...)

- High Channel(2685MHz) & AMC Mode & 16QAM 1/2



- High Channel(2685MHz) & AMC Mode & 16QAM 3/4



## 6.1 LIST OF TEST EQUIPMENT

|                                     | Type                                    | Manufacturer       | Model                           | Cal.Due.Date<br>(dd/mm/yy) | Next.Due.Date<br>(dd/mm/yy) | S/N             |
|-------------------------------------|---|--------------------|---------------------------------|----------------------------|-----------------------------|-----------------|
| <input checked="" type="checkbox"/> | Spectrum Analyzer                       | Agilent            | E4440A                          | 06/11/08                   | 06/11/09                    | MY45304199      |
| <input type="checkbox"/>            | Spectrum Analyzer(RE)                   | H.P                | 8563E                           | 13/10/08                   | 13/10/09                    | 3551A04634      |
| <input type="checkbox"/>            | Spectrum Analyzer                       | Rohde Schwarz      | FSP                             | 09/09/08                   | 09/09/09                    | 100385          |
| <input type="checkbox"/>            | Power Meter                             | H.P                | EMP-442A                        | 10/07/08                   | 10/07/09                    | GB37170413      |
| <input type="checkbox"/>            | Power Sensor                            | H.P                | 8481A                           | 14/07/08                   | 14/07/09                    | 3318A96332      |
| <input type="checkbox"/>            | Power Divider                           | Agilent            | 11636B                          | 04/12/08                   | 04/12/09                    | 56471           |
| <input type="checkbox"/>            | Power Splitter                          | Anritsu            | K241B                           | 14/10/08                   | 14/10/09                    | 020611          |
| <input type="checkbox"/>            | Frequency Counter                       | H.P                | 5342A                           | 16/09/08                   | 16/09/09                    | 2119A04450      |
| <input type="checkbox"/>            | TEMP & HUMIDITY Chamber                 | JISCO              | KR-100/J-RHC2                   | 10/10/08                   | 10/10/09                    | 30604493/021031 |
| <input checked="" type="checkbox"/> | Digital Multimeter                      | H.P                | 34401A                          | 13/03/09                   | 13/03/10                    | 3146A13475      |
| <input type="checkbox"/>            | Thermo hygrometer                       | BODYCOM            | BJ5478                          | 06/02/09                   | 06/02/10                    | 090205-3        |
| <input checked="" type="checkbox"/> | Thermo hygrometer                       | BODYCOM            | BJ5478                          | 06/02/09                   | 06/02/10                    | 090205-2        |
| <input type="checkbox"/>            | Thermo hygrometer                       | BODYCOM            | BJ5478                          | 06/02/09                   | 06/02/10                    | 090205-4        |
| <input type="checkbox"/>            | Multifunction Synthesizer               | HP                 | 8904A                           | 06/10/08                   | 06/10/09                    | 3633A08404      |
| <input checked="" type="checkbox"/> | Signal Generator                        | Rohde Schwarz      | SMR20                           | 13/03/09                   | 13/03/10                    | 101251          |
| <input checked="" type="checkbox"/> | Signal Generator                        | H.P                | ESG-3000A                       | 09/07/08                   | 09/07/09                    | US37230529      |
| <input type="checkbox"/>            | Amplifier                               | EMPOWER            | BBS3Q7ELU                       | 02/02/09                   | 02/02/10                    | 1020            |
| <input checked="" type="checkbox"/> | Vector Signal Generator                 | Rohde Schwarz      | SMJ100A                         | 02/02/09                   | 02/02/10                    | 100148          |
| <input type="checkbox"/>            | Audio Analyzer                          | H.P                | 8903B                           | 09/07/08                   | 09/07/09                    | 3011A09448      |
| <input type="checkbox"/>            | Modulation Analyzer                     | H.P                | 8901B                           | 18/07/08                   | 18/07/09                    | 3028A03029      |
| <input type="checkbox"/>            | 8960 Series 10 Wireless Comms. Test Set | Agilent            | E5515C                          | 31/07/08                   | 31/07/09                    | GB43461134      |
| <input type="checkbox"/>            | Universal Radio communication Tester    | Rohde Schwarz      | CMU 200                         | 13/03/09                   | 13/03/10                    | 107631          |
| <input type="checkbox"/>            | Bluetooth Tester                        | TESCOM             | TC-3000A                        | 16/12/08                   | 16/12/09                    | 3000A4A0121     |
| <input type="checkbox"/>            | BAND Reject Filter                      | Microwave Circuits | N0308372                        | 06/10/08                   | 06/10/09                    | 3125-01DC0352   |
| <input type="checkbox"/>            | BAND Reject Filter                      | Wainwright         | WRCG1750                        | 06/10/08                   | 06/10/09                    | 2               |
| <input type="checkbox"/>            | High-Pass Filter                        | ANRITSU            | MP526D                          | 06/10/08                   | 06/10/09                    | MP27756         |
| <input type="checkbox"/>            | High-pass filter                        | Wainwright         | WHKX2.1                         | N/A                        | N/A                         | 1               |
| <input checked="" type="checkbox"/> | High-Pass Filter                        | Wainwright         | WHKX3.0                         | N/A                        | N/A                         | 9               |
| <input type="checkbox"/>            | Tunable Notch Filter                    | Wainwright         | WRCT800.0 /960.0-0.2/40-8SSK    | N/A                        | N/A                         | 10              |
| <input type="checkbox"/>            | Tunable Notch Filter                    | Wainwright         | WRCD1700.0 /2000.0-0.2/40-10SSK | N/A                        | N/A                         | 27              |
| <input type="checkbox"/>            | Tunable Notch Filter                    | Wainwright         | WRCT1900.0 /2200.0-5/40-10SSK   | N/A                        | N/A                         | 7               |
| <input checked="" type="checkbox"/> | AC Power supply                         | DAEKWANG           | 5KVA                            | 13/03/09                   | 13/03/10                    | 20060321-1      |
| <input type="checkbox"/>            | DC Power Supply                         | HP                 | 6622A                           | 13/03/09                   | 13/03/10                    | 3448A03760      |
| <input type="checkbox"/>            | DC Power Supply                         | HP                 | 6633A                           | 13/03/09                   | 13/03/10                    | 3524A06634      |
| <input checked="" type="checkbox"/> | HORN ANT                                | ETS                | 3115                            | 13/06/08                   | 13/06/09                    | 6419            |
| <input checked="" type="checkbox"/> | HORN ANT                                | ETS                | 3115                            | 10/09/08                   | 10/09/09                    | 21097           |
| <input type="checkbox"/>            | HORN ANT                                | A.H.Systems        | SAS-574                         | 13/06/08                   | 13/06/09                    | 154             |
| <input type="checkbox"/>            | HORN ANT                                | A.H.Systems        | SAS-574                         | 13/06/08                   | 13/06/09                    | 155             |

**6.1 LIST OF TEST EQUIPMENT****(Continued...)**

|                                     | Type                      | Manufacturer   | Model            | Cal.Due.Date<br>(dd/mm/yy) | Next.Due.Date<br>(dd/mm/yy) | S/N           |
|-------------------------------------|---------------------------|----------------|------------------|----------------------------|-----------------------------|---------------|
| <input checked="" type="checkbox"/> | Dipole Antenna            | Schwarzbeck    | VHA9103          | 25/11/08                   | 25/11/09                    | 2116          |
| <input checked="" type="checkbox"/> | Dipole Antenna            | Schwarzbeck    | VHA9103          | 25/11/08                   | 25/11/09                    | 2117          |
| <input checked="" type="checkbox"/> | Dipole Antenna            | Schwarzbeck    | UHA9105          | 25/11/08                   | 25/11/09                    | 2261          |
| <input checked="" type="checkbox"/> | Dipole Antenna            | Schwarzbeck    | UHA9105          | 25/11/08                   | 25/11/09                    | 2262          |
| <input type="checkbox"/>            | Coaxial Fixed Attenuators | Agilent        | 8491B            | 01/08/08                   | 01/08/09                    | MY39260700    |
| <input type="checkbox"/>            | Coaxial Fixed Attenuators | Agilent        | 8491B            | 15/07/08                   | 15/07/09                    | MY39260699    |
| <input type="checkbox"/>            | Attenuator (10dB)         | WEINSCHEL      | 23-10-34         | 01/10/08                   | 01/10/09                    | BP4386        |
| <input type="checkbox"/>            | Attenuator (20dB)         | WEINSCHEL      | 86-20-11         | 06/10/08                   | 06/10/09                    | 432           |
| <input checked="" type="checkbox"/> | Attenuator (10dB)         | WEINSCHEL      | 86-10-11         | 06/10/08                   | 06/10/09                    | 446           |
| <input type="checkbox"/>            | Attenuator (10dB)         | WEINSCHEL      | 86-10-11         | 06/10/08                   | 06/10/09                    | 408           |
| <input type="checkbox"/>            | Attenuator (40dB)         | WEINSCHEL      | 57-40-33         | 01/10/08                   | 01/10/09                    | NN837         |
| <input type="checkbox"/>            | Attenuator (30dB)         | JFW            | 50FH-030-300     | 13/03/09                   | 13/03/10                    | 060320-1      |
| <input type="checkbox"/>            | Type N Coaxial CIRCULATOR | NOVA MICROWAVE | 0088CAN          | 11/07/08                   | 11/07/09                    | 788           |
| <input type="checkbox"/>            | Type N Coaxial CIRCULATOR | NOVA MICROWAVE | 0185CAN          | 11/07/08                   | 11/07/09                    | 790           |
| <input type="checkbox"/>            | Type N Coaxial CIRCULATOR | NOVA MICROWAVE | 0215CAN          | 11/07/08                   | 11/07/09                    | 112           |
| <input checked="" type="checkbox"/> | Amplifier (30dB)          | Agilent        | 8449B            | 13/10/08                   | 13/10/09                    | 3008A01590    |
| <input type="checkbox"/>            | EMI TEST RECEIVER         | R&S            | ESU              | 02/02/09                   | 02/02/10                    | 100014        |
| <input type="checkbox"/>            | BILOG ANTENNA             | SCHAFFNER      | CBL6112B         | 13/06/08                   | 13/06/09                    | 2737          |
| <input type="checkbox"/>            | Amplifier (22dB)          | H.P            | 8447E            | 05/02/09                   | 05/02/10                    | 2945A02865    |
| <input type="checkbox"/>            | Position Controller       | TOKIN          | 5905A            | N/A                        | N/A                         | N/A           |
| <input type="checkbox"/>            | Software                  | ToYo EMI       | EP5/RE           | N/A                        | N/A                         | Ver 2.0.800   |
| <input type="checkbox"/>            | EMI TEST RECEIVER         | R&S            | ESCI             | 13/05/08                   | 13/05/09                    | 100364        |
| <input checked="" type="checkbox"/> | Log Periodic Antenna      | Schwarzbeck    | UHALP9108A1      | 30/09/08                   | 30/09/09                    | 1098          |
| <input checked="" type="checkbox"/> | Biconical Antenna         | Schwarzbeck    | VHA9103          | 13/06/08                   | 13/06/09                    | 2233          |
| <input type="checkbox"/>            | Low Noise Pre Amplifier   | TSJ            | MLA-100K01-B01-2 | 13/03/09                   | 13/03/10                    | 1252741       |
| <input checked="" type="checkbox"/> | Amplifier (25dB)          | Agilent        | 8447D            | 18/08/08                   | 18/08/09                    | 2648A04922    |
| <input checked="" type="checkbox"/> | Position Controller       | TOKIN          | 5901T            | N/A                        | N/A                         | 14173         |
| <input type="checkbox"/>            | Software                  | AUDIX          | e3               | N/A                        | N/A                         | Ver 3.0       |
| <input type="checkbox"/>            | Driver                    | TOKIN          | 5902T2           | N/A                        | N/A                         | 14174         |
| <input type="checkbox"/>            | Spectrum Analyzer(CE)     | H.P            | 8591E            | 26/04/08                   | 26/04/09                    | 3649A05889    |
| <input type="checkbox"/>            | LISN                      | Kyoritsu       | KNW-407          | 04/08/08                   | 04/08/09                    | 8-317-8       |
| <input type="checkbox"/>            | LISN                      | Kyoritsu       | KNW-242          | 11/09/08                   | 11/09/09                    | 8-654-15      |
| <input type="checkbox"/>            | CVCF                      | NF Electronic  | 4420             | N/A                        | N/A                         | 304935/337980 |
| <input type="checkbox"/>            | Software                  | ToYo EMI       | EP5/CE           | N/A                        | N/A                         | Ver 2.0.801   |
| <input type="checkbox"/>            | DC BLOCK                  | Hyuplip        | KEL-007          | N/A                        | N/A                         | 7-1581-5      |
| <input type="checkbox"/>            | 50 ohm Terminator         | HME            | CT-01            | 22/01/09                   | 22/01/10                    | N/A           |
| <input type="checkbox"/>            | RFI/FIELD Intensity Meter | Kyoritsu       | KNM-2402         | 11/09/08                   | 11/09/09                    | 4N-170-3      |

## **7.1 EMISSION DESIGNATOR**

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### **A. Emission Designator**

#### **- Bandwidth: 5MHz**

**QPSK Modulation**

**16QAM Modulation**

Emission Designator = 4M73G7D

Emission Designator = 4M71W7D

WiMAX BW = 4.7257 MHz

WiMAX BW = 4.7117 MHz

G = Phase Modulation

W = Composite – Quadrature Amplitude Modulation

7 = Quantized/Digital Information

7 = Quantized/Digital Information

D = Data Transmission

D = Data Transmission

#### **- Bandwidth: 10MHz**

**QPSK Modulation**

**16QAM Modulation**

Emission Designator = 9M37G7D

Emission Designator = 9M37W7D

WiMAX BW = 9.3740 MHz

WiMAX BW = 9.3704 MHz

G = Phase Modulation

W = Composite – Quadrature Amplitude Modulation

7 = Quantized/Digital Information

7 = Quantized/Digital Information

D = Data Transmission

D = Data Transmission

## **8.1 CONCLUSION**

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The data collected shows that the **SEOWONINTECH CO., LTD.** Simple CPE WIMAX (**FCC ID: V7MSWC-3100**) complies with all the requirements of Parts 2 and 27 of the FCC rules.