# TEST REPORT

| | | |
|---|---|---|
| **Product** | : | WCDMA Digital Mobile Phone |
| **Trade mark** | : | RugGear |
| **Model/Type reference** | : | RG310, RG310EX, RG320EX |
| **Serial Number** | : | N/A |
| **Report Number** | : | EED32I00185905 |
| **FCC ID** | : | ZLE-RG310 |
| **Date of Issue** | : | Jul. 18, 2016 |
| **Test Standards** | : | 47 CFR Part 2(2015)<br>47 CFR Part 22 subpart H(2015)<br>47 CFR Part 24 subpart E(2015) |
| **Test result** | : | PASS |

Prepared for:

**Power Idea Technology Limited.**
**4th Floor, A Section, Languang Science&technology Xinxi RD,**
**Hi-Tech Industrial Park North, Nanshan, ShenZhen, China**

Prepared by:

**Centre Testing International Group Co., Ltd.**
**Hongwei Industrial Zone, Bao'an 70 District,**
**Shenzhen, Guangdong, China**
**TEL: +86-755-3368 3668**
**FAX: +86-755-3368 3385**

Tested By: Tom chen (Test Project)

Compiled by: Kevin yang (Project Engineer)

Reviewed by: Sheek Luo (Reviewer)

Approved by: Sheek Luo (Lab supervisor)

Date: Jul. 18, 2016

Check No.: 2384307786

# 2 Version

| Version No. | Date | Description |
|---|---|---|
| 00 | Jul. 18, 2016 | Original |
| | | |
| | | |

# 3 Test Summary

| GSM 850, WCDMA(Band V) | | | |
|---|---|---|---|
| **Test Item** | **Test Requirement** | **Test method** | **Result** |
| **Conducted output power** | Part 2.1046(a)/Part 22.913(a) | TIA-603-D-2010 &KDB 971168 D01v02r02 | PASS |
| **Effective Radiated Power of Transmitter(ERP)** | Part 2.1046(a)/Part 22.913(a) | TIA-603-D-2010 &KDB 971168 D01v02r02 | PASS |
| **99%&26dB Occupied Bandwidth** | Part 2.1049(h) | Part 22.917(b) &KDB 971168 D01v02r02 | PASS |
| **Band Edge at antenna terminals** | Part 2.1051/Part 22.917(a) | Part 22.917(b) &KDB 971168 D01v02r02 | PASS |
| **Spurious emissions at antenna terminals** | Part 2.1051/ Part 2.1057/ Part 22.917(a)(b) | TIA-603-D-2010 &KDB 971168 D01v02r02 | PASS |
| **Field strength of spurious radiation** | Part 2.1053/ Part 2.1057/ Part 22.917(a)(b) | TIA-603-D-2010 &KDB 971168 D01v02r02 | PASS |
| **Frequency stability** | Part 2.1055/ Part 22.355 | TIA-603-D-2010 &KDB 971168 D01v02r02 | PASS |
| **GSM 1900,WCDMA(Band II)** | | | |
| **Test Item** | **Test Requirement** | **Test method** | **Result** |
| **Conducted output power** | Part 2.1046(a) /Part 24.232(c) | TIA-603-D-2010&KDB 971168 D01v02r02 | PASS |
| **Effective Radiated Power of Transmitter(EIRP)** | Part 2.1046(a) / Part 24.232(c) | TIA-603-D-2010 &KDB 971168 D01v02r02 | PASS |
| **peak-to-average ratio** | Part 24.232(d) | KDB 971168 D01v02r02 | PASS |
| **99% &26dBOccupied Bandwidth** | Part 2.1049(h) | Part 24.238(b) &KDB 971168 D01v02r02 | PASS |
| **Band Edge at antenna terminals** | Part 2.1051/ Part 24.238(a) | Part 24.238(b) &KDB 971168 D01v02r02 | PASS |
| **Spurious emissions at antenna terminals** | Part 2.1051/ Part 2.1057/ Part 24.238(a)(b) | TIA-603-D-2010 &KDB 971168 D01v02r02 | PASS |
| **Field strength of spurious radiation** | Part 2.1053 /Part 2.1057 / Part 24.238(a)(b) | TIA-603-D-2010 &KDB 971168 D01v02r02 | PASS |
| **Frequency stability** | Part 2.1055/Part 24.235 | TIA-603-D-2010 &KDB 971168 D01v02r02 | PASS |

Remark:

The tested sample and the sample information are provided by the client.

Model No.: RG310, RG310EX, RG320EX

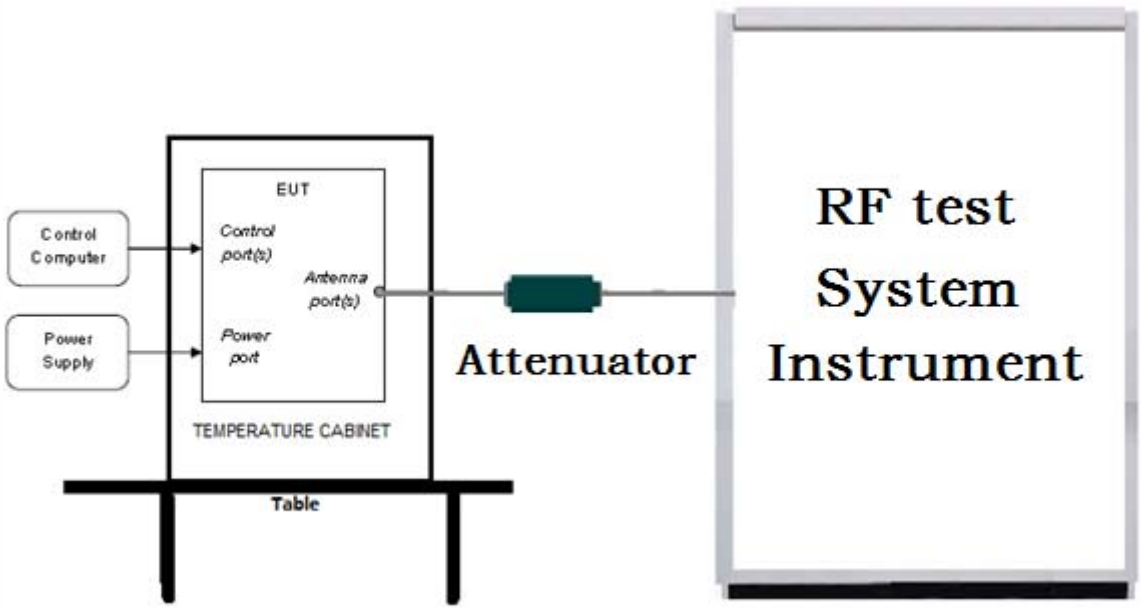
Only the model RG310 was tested, the PCB, Schematic, Hardware etc were identical for the above models, Only different model name due to difference agent and marketing purposes.

# 4 Content

# 5 Test Requirement

## 5.1 Test setup

### 5.1.1 For Conducted test setup




### 5.1.2 For Radiated Emissions test setup

**Radiated Emissions setup:**

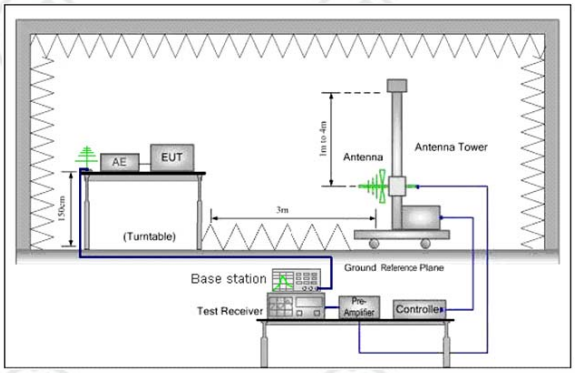



Figure 1.30MHz to 1GHz

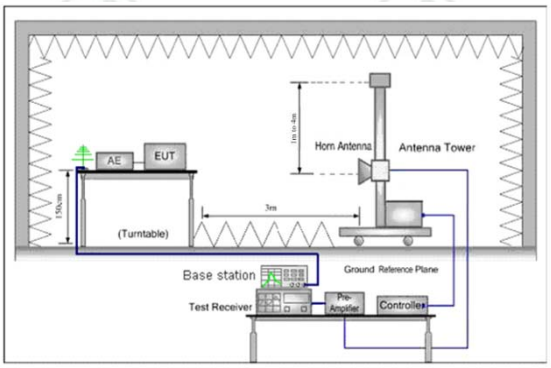



Figure 2. above 1GHz

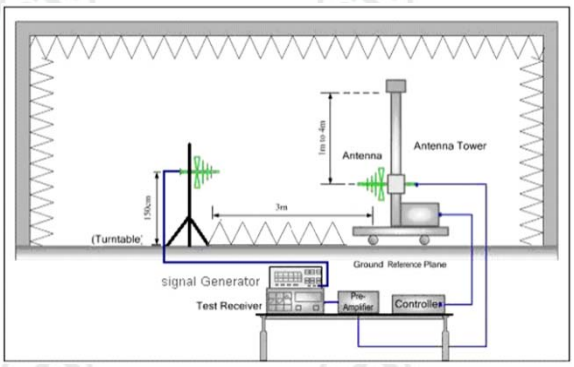



Figure 1. 30MHz to 1GHz

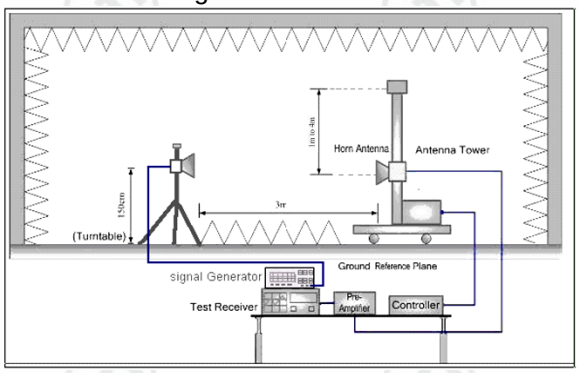



Figure 2. above 1GHz

## 5.2 Test Environment

| **Operating Environment:** | |
|---|---|
| Temperature: | 21°C |
| Humidity: | 54% RH |
| Atmospheric Pressure: | 1010mbar |

## 5.3 Test Condition

**Test channel:**

| Test Mode | Tx/Rx | RF Channel | | |
|---|---|---|---|---|
| | | Low(L) | Middle(M) | High(H) |
| GSM/GPRS/ EDGE850 | Tx (824 MHz ~849 MHz) | Channel 128 | Channel 190 | Channel 251 |
| | | 824.2MHz | 836.6 MHz | 848.8 MHz |
| | Rx (869 MHz ~894 MHz) | Channel 128 | Channel 190 | Channel 251 |
| | | 869.2 MHz | 881.6 MHz | 893.8 MHz |
| WCDMA/HSDPA HSUPA HSPA+(Down Link) band V | Tx (824 MHz ~849 MHz) | Channel 4132 | Channel 4182 | Channel 4233 |
| | | 826.4 MHz | 836.4 MHz | 846.6 MHz |
| | Rx (869 MHz ~894 MHz) | Channel 4357 | Channel 4407 | Channel 4458 |
| | | 871.4 MHz | 881.4 MHz | 891.6 MHz |
| GSM/GPRS/ EDGE1900 | Tx (1850 MHz ~1910 MHz) | Channel 512 | Channel 661 | Channel 810 |
| | | 1850.2MHz | 1880.0 MHz | 1909.8 MHz |
| | Rx (1930 MHz ~1990 MHz) | Channel 512 | Channel 661 | Channel 810 |
| | | 1930.2 MHz | 1960.0 MHz | 1989.8 MHz |
| WCDMA/HSDPA HSUPA HSPA+(Down Link) Band II | Tx (1850 MHz ~1910 MHz) | Channel 9262 | Channel 9400 | Channel 9538 |
| | | 1852.4 MHz | 1880.0 MHz | 1907.6 MHz |
| | Rx (1930 MHz ~1990 MHz) | Channel 9662 | Channel 9800 | Channel 9938 |
| | | 1932.4 MHz | 1960.0 MHz | 1987.6 MHz |

**Test mode:**

**Pre-scan under all rate at lowest middle and highest channel ,find the transmitter power as below:**

SIM 1 Card Conducted transmitter power measurement result.

| **band** | **GSM850 (dBm)** | | | **GSM1900 (dBm)** | | |
|---|---|---|---|---|---|---|
| **Channel** | **128** | **190** | **251** | **512** | **661** | **810** |
| Frequency(MHz) | 824.2MHz | 836.6MHz | 848.8MHz | 1850.2MHz | 1880MHz | 1909.8MHz |
| GSM | 33.21 | 33.87 | 33.95 | 30.76 | 30.18 | 30.43 |
| GPRS Class 8 | 33.21 | 33.82 | 33.92 | 30.74 | 30.12 | 30.44 |
| EDGE Class 8 | 28.13 | 28.80 | 28.52 | 28.71 | 28.88 | 28.45 |

| band | WCDMA Band V (dBm) | | | WCDMA Band II (dBm) | | |
|---|---|---|---|---|---|---|
| Channel | 4132 | 4182 | 4233 | 9262 | 9400 | 9538 |
| Frequency(MHz) | 826.4MHz | 836.4MHz | 846.6MHz | 1852.4MHz | 1880MHz | 1907.6MHz |
| RMC 12.2K | 23.92 | 23.76 | 23.78 | 24.52 | 24.55 | 24.85 |
| HSDPA | 22.92 | 22.82 | 22.88 | 23.52 | 23.68 | 24.02 |
| HSUPA | 22.17 | 22.12 | 22.17 | 22.82 | 22.79 | 23.18 |

SIM 2 Card Conducted transmitter power measurement result.

| band | GSM850 (dBm) | | | GSM1900 (dBm) | | |
|---|---|---|---|---|---|---|
| Channel | 128 | 190 | 251 | 512 | 661 | 810 |
| Frequency(MHz) | 824.2MHz | 836.6MHz | 848.8MHz | 1850.2MHz | 1880MHz | 1909.8MHz |
| GSM | 33.13 | 33.73 | 33.79 | 30.70 | 30.02 | 30.42 |
| GPRS Class 8 | 33.13 | 33.69 | 33.74 | 30.68 | 30.21 | 30.36 |
| EDGE Class 8 | 28.06 | 28.75 | 28.50 | 28.67 | 28.86 | 28.41 |

| band | WCDMA Band V (dBm) | | | WCDMA Band II (dBm) | | |
|---|---|---|---|---|---|---|
| Channel | 4132 | 4182 | 4233 | 9262 | 9400 | 9538 |
| Frequency(MHz) | 826.4MHz | 836.4MHz | 846.6MHz | 1852.4MHz | 1880MHz | 1907.6MHz |
| RMC 12.2K | 23.85 | 23.71 | 23.72 | 24.50 | 24.52 | 24.72 |
| HSDPA | 22.86 | 22.75 | 22.79 | 23.48 | 23.64 | 23.95 |
| HSUPA | 22.14 | 22.10 | 22.14 | 22.75 | 22.73 | 23.12 |

Pre-scan all mode and data rates and positions,find worse case mode of SIM1 card are chosen to the report ,the worse case mode as below:

| band | Radiated | Conducted |
|---|---|---|
| GSM/GPRS/EDGE 850 | 1)GSM Link<br>2)GPRS 8 Link<br>3)EDGE 8 Link | 1)GSM Link<br>2)GPRS 8 Link<br>3)EDGE 8 Link |
| GSM/GPRS/EDGE 1900 | 1)GSM Link<br>2)GPRS 8 Link<br>3)EDGE 8 Link | 1)GSM Link<br>2)GPRS 8 Link<br>3)EDGE 8 Link |
| WCDMA Band V | 1)RMC 12.2Kbps Link<br>2)HSDPA | 1)RMC 12.2Kbps Link<br>1)HSDPA |
| WCDMA Band II | 1)RMC 12.2Kbps Link<br>2)HSDPA | 1)RMC 12.2Kbps Link<br>2)HSDPA |

**Test mode:**

| Test Mode | Test Modes description |
|---|---|
| GSM/TM1 | GSM system, GSM, GMSK modulation |
| GSM/TM2 | GSM system, GPRS, GMSK modulation |
| GSM/TM3 | GSM system, EDGE, 8PSK modulation |
| Test Mode | Test Modes description |
| UMTS/TM1 | WCDMA system, QPSK modulation |
| UMTS/TM2 | HSDPA system, QPSK modulation |

# 6 General Information

## 6.1 Client Information

| | |
|---|---|
| Applicant: | Power Idea Technology Limited. |
| Address of Applicant: | 4th Floor, A Section, Languang Science&technology Xinxi RD, Hi-Tech Industrial Park North, Nanshan, ShenZhen, China |
| Manufacturer: | Power Idea Technology Limited. |
| Address of Manufacturer: | 4th Floor, A Section, Languang Science&technology Xinxi RD, Hi-Tech Industrial Park North, Nanshan, ShenZhen, China |

## 6.2 General Description of EUT

| | |
|---|---|
| Product Name: | WCDMA Digital Mobile Phone |
| Mode No.(EUT): | RG310, RG310EX, RG320EX |
| Test Mode No.: | RG310 |
| Trade Mark: | RugGear |
| EUT Supports Radios application: | GSM/GPRS/EDGE 850/1900<br>WCDMA/HSDPA HSUPA HSPA+(Down Link) Band V/Band II |
| Power Supply: | Model: HKC0055010-2D<br>Input: 100-240V~ 50/60Hz 0.2A<br>Output: 5.0V ⎓1.0A |
| Battery | Li-ion 3.7V/3600mAh |
| Sample Received Date: | Jun. 30, 2016 |
| Sample tested Date: | Jun. 30, 2016 to Jul. 18, 2016 |

## 6.3 Product Specification subjective to this standard

| | |
|---|---|
| Frequency Band: | **GSM/GPRS/EDGE 850:**<br>Tx:824.20 -848.80MHz; Rx: 869.20 – 893.80MHz<br>**GSM/GPRS/EDGE 1900:**<br>Tx:1850.20 – 1909.80MHz; Rx:1930.20 – 1989.80MHz<br>**WCDMA/HSDPA/HSUPA/HSPA+(Down Link) Band V:**<br>Tx:826.40 -846.60MHz; Rx: 871.40 – 891.60MHz<br>**WCDMA/HSDPA/HSUPA/HSPA+(Down Link) Band II:**<br>Tx:1852.40 – 1907.60MHz; Rx:1932.40 – 1987.60MHz |
| Modulation Type: | GSM/GPRS Mode with GMSK Modulation<br>EDGE Mode with 8PSK Modulation<br>WCDMA Mode with QPSK Modulation |
| Sample Type: | Portable production |
| Antenna Type: | Integral |
| Antenna Gain: | GSM 850: 0.82dBi, GSM 1900: 3.4dBi, WCDMA Band II: 3.4dBi, WCDMA Band V: 0.82dBi |
| Test Voltage: | AC 120V/60Hz |

## 6.4 Description of Support Units

The EUT has been tested independently.

## 6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd.

Hongwei Industrial Zone, Bao'an 70 District, Shenzhen, Guangdong, China 518101

Telephone: +86 (0) 755 33683668 Fax:+86 (0) 755 33683385

No tests were sub-contracted.

## 6.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

**CNAS-Lab Code: L1910**

Centre Testing International Group Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC 17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories..

**A2LA-Lab Cert. No. 3061.01**

Centre Testing International Group Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

**FCC-Registration No.: 886427**

Centre Testing International Group Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files. Registration 886427.

**IC-Registration No.: 7408A-2**

The 3m Alternate Test Site of Centre Testing International Group Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 7408A-2 .

**IC-Registration No.: 7408B-1**

The 10m Alternate Test Site of Centre Testing International Group Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No. 7408B-1.

**NEMKO-Aut. No.: ELA503**

Centre Testing International Group Co., Ltd. has been assessed the quality assurance system, the testing facilities, qualifications and testing practices of the relevant parts of the organization. The quality assurance system of the Laboratory has been validated against ISO/IEC 17025 or equivalent. The laboratory also fulfils the conditions described in Nemko Document NLA-10.

**VCCI**

The Radiation 3 &10 meters site of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: R-4096.

Main Ports Conducted Interference Measurement of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: C-4563.

Telecommunication Ports Conducted Disturbance Measurement of

Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: T-2146.

The Radiation 3 meters site of Centre Testing International Group Co., Ltd. has been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-758

## 6.7 Deviation from Standards

None.

## 6.8 Abnormalities from Standard Conditions

None.

## 6.9 Other Information Requested by the Customer

None.

## 6.10 Measurement Uncertainty (95% confidence levels, k=2)

| No. | Item | Measurement Uncertainty |
|---|---|---|
| 1 | Radio Frequency | $7.9 \times 10^{-8}$ |
| 2 | RF power, conducted | 0.31dB (30MHz-1GHz) |
| | | 0.57dB (1GHz-18GHz) |
| 3 | Radiated Spurious emission test | 4.5dB (30MHz-1GHz) |
| | | 4.8dB (1GHz-12.75GHz) |
| 4 | Conduction emission | 3.6dB (9kHz to 150kHz) |
| | | 3.2dB (150kHz to 30MHz) |
| 5 | Temperature test | 0.64°C |
| 6 | Humidity test | 2.8% |
| 7 | DC power voltages | 0.025% |

# 7 Equipment List

| Communication RF test system | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Mode No.** | **Serial Number** | **Cal. Date (mm-dd-yyyy)** | **Cal. Due date (mm-dd-yyyy)** |
| Spectrum Analyzer | Agilent | E4440A | MY46185649 | 12-31-2015 | 12-29-2016 |
| Signal Generator | Agilent | E4438C | MY45095744 | 04-01-2016 | 03-31-2017 |
| Communication test set | Agilent | E5515C | GB47050534 | 04-01-2016 | 03-31-2017 |
| Signal Generator | Keysight | E8257D | MY53401106 | 04-01-2016 | 03-31-2017 |
| Communication test set | R&S | CMW500 | 152394 | 04-01-2016 | 03-31-2017 |
| High-pass filter | Sinoscite | FL3CX03WG18 NM12-0398-002 | --- | 01-12-2016 | 01-11-2017 |
| High-pass filter | MICRO-TRONICS | SPA-F-63029-4 | --- | 01-12-2016 | 01-11-2017 |
| band rejection filter | Sinoscite | FL5CX01CA09C L12-0395-001 | --- | 01-12-2016 | 01-11-2017 |
| band rejection filter | Sinoscite | FL5CX01CA08C L12-0393-001 | --- | 01-12-2016 | 01-11-2017 |
| band rejection filter | Sinoscite | FL5CX02CA04C L12-0396-002 | --- | 01-12-2016 | 01-11-2017 |
| band rejection filter | Sinoscite | FL5CX02CA03C L12-0394-001 | --- | 01-12-2016 | 01-11-2017 |
| DC Power | Keysight | E3642A | MY54426112 | 04-08-2016 | 04-07-2017 |
| DC Power | Keysight | E3642A | MY54426115 | 04-01-2016 | 03-31-2017 |
| PC-2 | Lenovo | R4960d | --- | 04-01-2016 | 03-31-2017 |
| PC-3 | Lenovo | R4960d | --- | 04-01-2016 | 03-31-2017 |
| RF control unit | JS Tonscend | JS0806-1 | 158060004 | 04-01-2016 | 03-31-2017 |
| DC power Box | JS Tonscend | JS0806-4 | 158060007 | 04-01-2016 | 03-31-2017 |
| LTE Automatic test software | JS Tonscend | JS1120-1 | --- | 04-01-2016 | 03-31-2017 |
| WCDMA Automatic test software | JS Tonscend | JS1120-3 | --- | 04-01-2016 | 03-31-2017 |
| GSM Automatic test software | JS Tonscend | JS1120-3 | --- | 04-01-2016 | 03-31-2017 |

| Radiated Spurious Emission & Radiated Emission | | | | | |
|---|---|---|---|---|---|
| **Equipment** | **Manufacturer** | **Mode No.** | **Serial Number** | **Cal. date (mm-dd-yyyy)** | **Cal. Due date (mm-dd-yyyy)** |
| 3M Chamber & Accessory Equipment | TDK | SAC-3 | --- | 06-05-2016 | 06-05-2019 |
| TRILOG Broadband Antenna | SCHWARZBECK | VULB9163 | 9163-484 | 05-23-2016 | 05-22-2017 |
| Microwave Preamplifier | Agilent | 8449B | 3008A02425 | 02-04-2016 | 02-03-2017 |
| Horn Antenna | ETS-LINDGREN | 3117 | 00057407 | 07-20-2015 | 07-18-2018 |
| Loop Antenna | ETS | 6502 | 00071730 | 07-30-2015 | 07-28-2017 |
| Spectrum Analyzer | R&S | FSP40 | 100416 | 06-16-2016 | 06-15-2017 |
| Receiver | R&S | ESCI | 100435 | 06-16-2016 | 06-15-2017 |
| Multi device Controller | maturo | NCD/070/10711112 | --- | 01-12-2016 | 01-11-2017 |
| LISN | schwarzbeck | NNBM8125 | 81251547 | 06-16-2016 | 06-15-2017 |
| LISN | schwarzbeck | NNBM8125 | 81251548 | 06-16-2016 | 06-15-2017 |
| Signal Generator | Agilent | E4438C | MY45095744 | 04-01-2016 | 03-31-2017 |
| Signal Generator | Keysight | E8257D | MY53401106 | 04-01-2016 | 03-31-2017 |
| Temperature/ Humidity Indicator | TAYLOR | 1451 | 1905 | 04-27-2016 | 04-26-2017 |
| Communication test set | Agilent | E5515C | GB47050534 | 04-01-2016 | 03-31-2017 |
| Cable line | Fulai(7M) | SF106 | 5219/6A | 01-12-2016 | 01-11-2017 |
| Cable line | Fulai(6M) | SF106 | 5220/6A | 01-12-2016 | 01-11-2017 |
| Cable line | Fulai(3M) | SF106 | 5216/6A | 01-12-2016 | 01-11-2017 |
| Cable line | Fulai(3M) | SF106 | 5217/6A | 01-12-2016 | 01-11-2017 |
| Communication test set | R&S | CMW500 | 152394 | 04-01-2016 | 03-31-2017 |
| High-pass filter(3-18GHz) | Sinoscite | FL3CX03WG18NM12-0398-002 | --- | 01-12-2016 | 01-11-2017 |
| High-pass filter(6-18GHz) | MICRO-TRONICS | SPA-F-63029-4 | --- | 01-12-2016 | 01-11-2017 |
| band rejection filter | Sinoscite | FL5CX01CA09CL12-0395-001 | --- | 01-12-2016 | 01-11-2017 |
| band rejection filter | Sinoscite | FL5CX01CA08CL12-0393-001 | --- | 01-12-2016 | 01-11-2017 |
| band rejection filter | Sinoscite | FL5CX02CA04CL12-0396-002 | --- | 01-12-2016 | 01-11-2017 |
| band rejection filter | Sinoscite | FL5CX02CA03CL12-0394-001 | --- | 01-12-2016 | 01-11-2017 |

# 8 Radio Technical Requirements Specification

**Reference documents for testing:**

| No. | Identity | Document Title |
|---|---|---|
| 1 | PART 22 (2015) | PART 22 – PUBLIC MOBILE SERVICES<br>Subpart H – Cellular Radiotelephone Service |
| 2 | PART 24 (2015) | PART 24 – PERSONAL COMMUNICATIONS SERVICES<br>Subpart E – Broadband PCS |
| 3 | PART 2 (2015) | Frequency allocations and radio treaty matters; general rules and regulations |
| 4 | TIA-603-D-2010 | Land Mobile FM or PM -Communications Equipment -Measurement and Performance Standards |
| 5 | KDB971168 D01 | KDB971168 D01 Power Meas License Digital Systems v02r02 |

**Test Results List:**

| Test Requirement | Test method | Test item | Verdict | Note |
|---|---|---|---|---|
| Part 2.1046(a)/Part 22.913(a)/ part 24.232(c) | TIA-603-D&KDB 971168 D01v02r02 | Conducted output power | PASS | Appendix A) |
| Part 24.232(d) | KDB 971168 D01v02r02 | peak-to-average ratio | PASS | Appendix B) |
| Part 2.1049(h) | Part 22.917(b)/ Part 24.238(b) &KDB 971168 D01v02r02 | 99% &26dBOccupied Bandwidth | PASS | Appendix C) |
| Part 2.1051/Part 22.917(a)/ Part 24.238(a) | Part 22.917(b)/ Part 24.238(b) &KDB 971168 D01v02r02 | Band Edge at antenna terminals | PASS | Appendix D) |
| Part 2.1051/ Part 2.1057/ Part 22.917(a)(b)/ Part 24.238(a)(b) | TIA-603-D &KDB 971168 D01v02r02 | Spurious emissions at antenna terminals | PASS | Appendix E) |
| Part 2.1055/ Part 22.355/ Part 24.235 | TIA-603-D &KDB 971168 D01v02r02 | Frequency stability | PASS | Appendix F) |
| Part 2.1053/ Part 2.1057/ Part 22.917(a)(b)/ Part 24.238(a)(b) | TIA-603-D &KDB 971168 D01v02r02 | Field strength of spurious radiation | PASS | Appendix G) |
| Part 2.1046(a)/Part 22.913(a)/ Part 24.232(c) | TIA-603-D &KDB 971168 D01v02r02 | Effective Radiated Power of Transmitter(ERP) | PASS | Appendix H) |

# Appendix A): RF Power Output

| | |
|---|---|
| **Test Requirement:** | Part 2.1046(a) |
| **Test Method:** | TIA-603-D-2010 Clause 2.2.1 |
| **Test Setup:** | Refer to section 5 for details |
| **Limit:** | <table><tr><td>Mode</td><td>GSM 850/WCDMA/HSDPA /HSUPA 850 Band V</td><td>GSM 1900/WCDMA/HSDPA /HSUPA 1900 Band II</td></tr><tr><td>Frequency</td><td>824 – 849MHz</td><td>1850 – 1910MHz</td></tr><tr><td>Limit</td><td>38.45dBm（ERP）</td><td>33.01dBm（EIRP）</td></tr></table> |
| **Measurement Procedure:** | The transmitter output was connected to a calibrated coaxial cable, attenuator and power meter, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The power output at the transmitter antenna port was determined by adding the value of the cable insertion loss to the power reading. The tests were performed at three frequencies (low channel, middle channel and high channel) and on the highest power levels, which can be setup on the transmitters. |
| **Instruments Used:** | Refer to section 7 for details |
| **Test Results:** | Pass |

**Test Data:**

| Test Band | Test Mode | Test Channel | Measured(dbm) | Limit(dbm) | Verdict |
|---|---|---|---|---|---|
| GSM850 | GSM/TM1 | LCH | 33.21 | 38.5 | PASS |
| | | MCH | 33.87 | 38.5 | PASS |
| | | HCH | 33.95 | 38.5 | PASS |
| | GSM/TM2 | LCH | 33.21 | 38.5 | PASS |
| | | MCH | 33.82 | 38.5 | PASS |
| | | HCH | 33.92 | 38.5 | PASS |
| | GSM/TM3 | LCH | 28.13 | 38.5 | PASS |
| | | MCH | 28.80 | 38.5 | PASS |
| | | HCH | 28.52 | 38.5 | PASS |
| Test Band | Test Mode | Test Channel | Measured(dbm) | Limit(dbm) | Verdict |
| GSM1900 | GSM/TM1 | LCH | 30.76 | 33 | PASS |
| | | MCH | 30.18 | 33 | PASS |
| | | HCH | 30.43 | 33 | PASS |
| | GSM/TM2 | LCH | 30.74 | 33 | PASS |
| | | MCH | 30.12 | 33 | PASS |
| | | HCH | 30.44 | 33 | PASS |
| | GSM/TM3 | LCH | 28.71 | 33 | PASS |
| | | MCH | 28.88 | 33 | PASS |
| | | HCH | 28.45 | 33 | PASS |

| Test Band | Test Mode | Test Channel | Measured(dbm) | Limit(dbm) | Verdict |
|---|---|---|---|---|---|
| WCDMA850 | UMTS/TM1 | LCH | 23.92 | 38.5 | PASS |
| | | MCH | 23.76 | 38.5 | PASS |
| | | HCH | 23.78 | 38.5 | PASS |
| Test Band | Test Mode | Test Channel | Measured(dbm) | Limit(dbm) | Verdict |
| WCDMA850 | UMTS/TM2 | LCH | 22.92 | 38.5 | PASS |
| | | MCH | 22.82 | 38.5 | PASS |
| | | HCH | 22.88 | 38.5 | PASS |

| Test Band | Test Mode | Test Channel | Measured(dbm) | Limit(dbm) | Verdict |
|---|---|---|---|---|---|
| WCDMA1900 | UMTS/TM1 | LCH | 24.52 | 33 | PASS |
| | | MCH | 24.55 | 33 | PASS |
| | | HCH | 24.85 | 33 | PASS |
| Test Band | Test Mode | Test Channel | Measured(dbm) | Limit(dbm) | Verdict |
| WCDMA1900 | UMTS/TM2 | LCH | 23.52 | 33 | PASS |
| | | MCH | 23.68 | 33 | PASS |
| | | HCH | 24.02 | 33 | PASS |

# Appendix B): Peak-to-Average Ratio

| | |
|---|---|
| **Test Requirement:** | Part 24.232(d) |
| **Test Method:** | KDB 971168 D01 |
| **Test Setup:** | Refer to section 5 for details |
| **Limit:** | 13dBm |
| **Measurement Procedure:** | Use one of the procedures to measure the total peak power and record as PPk. Use one of the applicable procedures to measure the total average power and record as PAvg. Both the peak and average power levels must be expressed in the same logarithmic units (e.g., dBm). Determine the PAPR from:<br>PAPR (dB) = PPk (dBm) - PAvg (dBm). |
| **Instruments Used:** | Refer to section 7 for details |
| **Test Results:** | Pass |

**Test Data:**

| Test Band | Test Mode | Test Channel | Measured (dbm) | Limit (dbm) | Verdict |
|---|---|---|---|---|---|
| GSM1900 | GSM/TM1 | LCH | 2.65 | 13 | PASS |
| | | MCH | 2.65 | 13 | PASS |
| | | HCH | 2.65 | 13 | PASS |
| | GSM/TM2 | LCH | 2.65 | 13 | PASS |
| | | MCH | 2.65 | 13 | PASS |
| | | HCH | 2.66 | 13 | PASS |
| | GSM/TM3 | LCH | 5.08 | 13 | PASS |
| | | MCH | 4.99 | 13 | PASS |
| | | HCH | 5.07 | 13 | PASS |

| Test Band | Test Mode | Test Channel | Measured (db) | Limit (db) | Verdict |
|---|---|---|---|---|---|
| WCDMA1900 | UMTS/TM1 | LCH | 2.98 | 13 | PASS |
| | | MCH | 3.11 | 13 | PASS |
| | | HCH | 3.05 | 13 | PASS |

| Test Band | Test Mode | Test Channel | Measured (db) | Limit (db) | Verdict |
|---|---|---|---|---|---|
| WCDMA1900 | UMTS/TM2 | LCH | 3.18 | 13 | PASS |
| | | MCH | 3.24 | 13 | PASS |
| | | HCH | 3.32 | 13 | PASS |

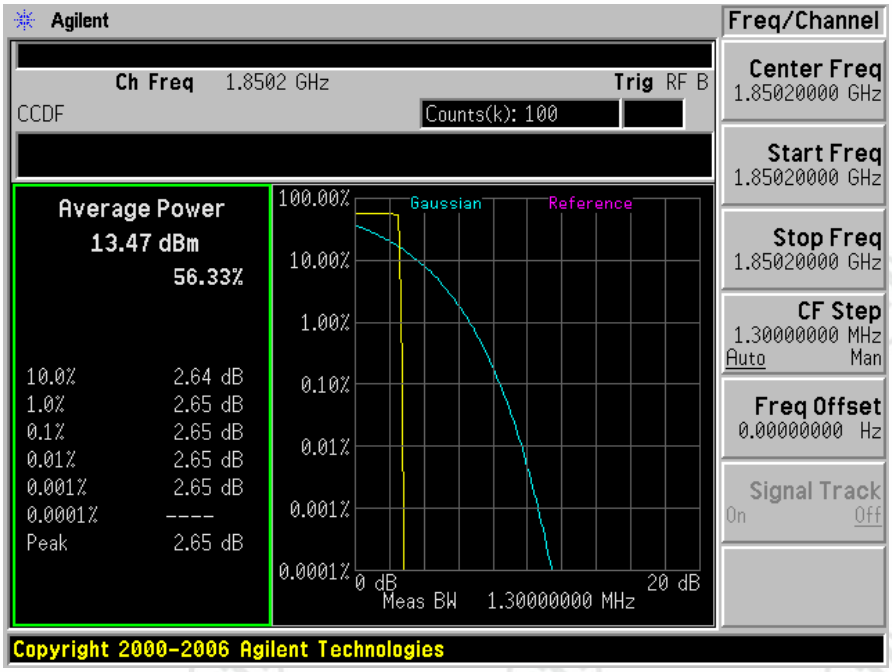
**Test Graphs:**

**For GSM**

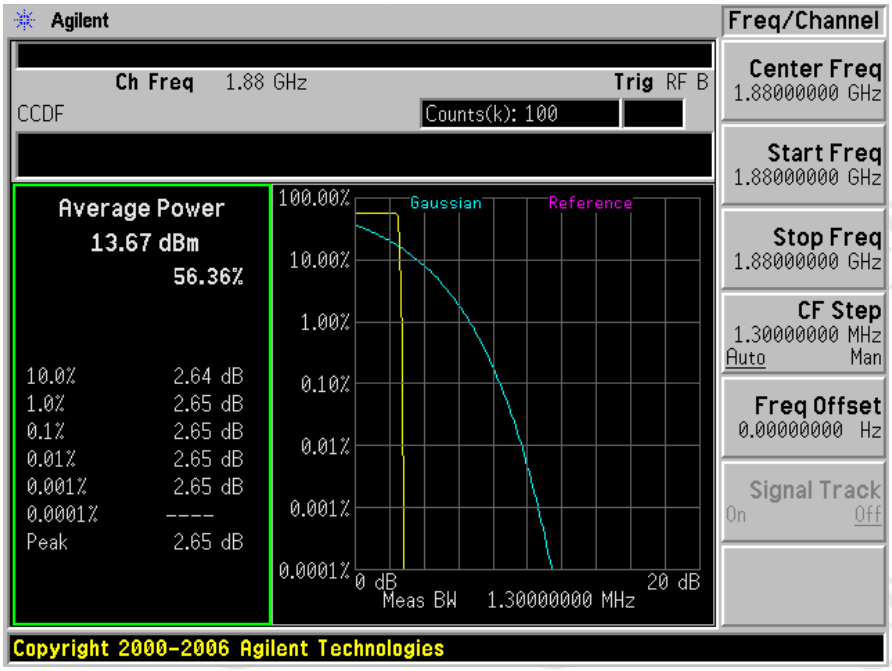
**Test Band=GSM1900**

**Test Mode=GSM/TM1**

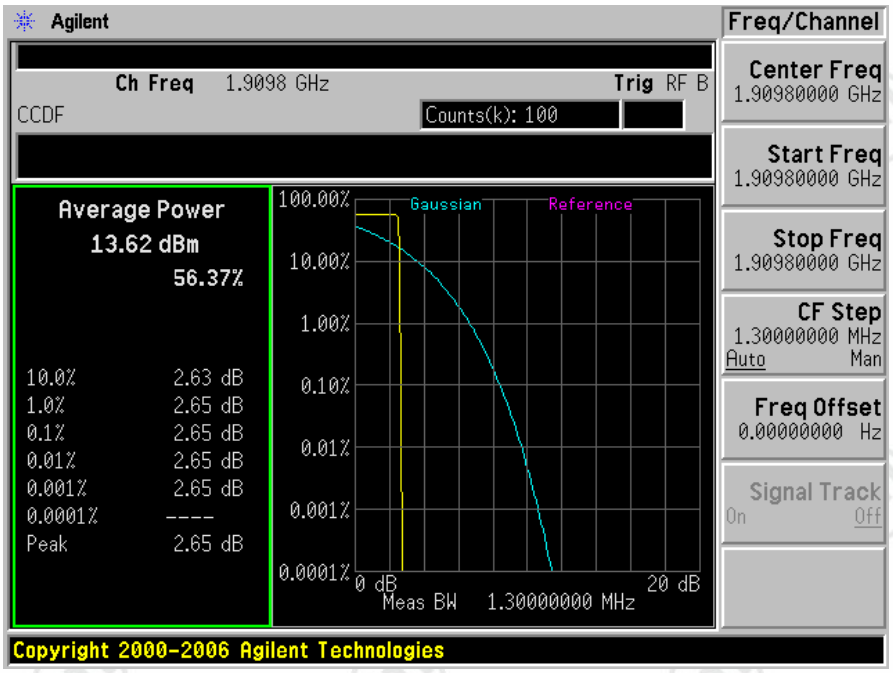
**Test Channel=LCH**




**Test Channel=MCH**



**Test Channel=HCH**

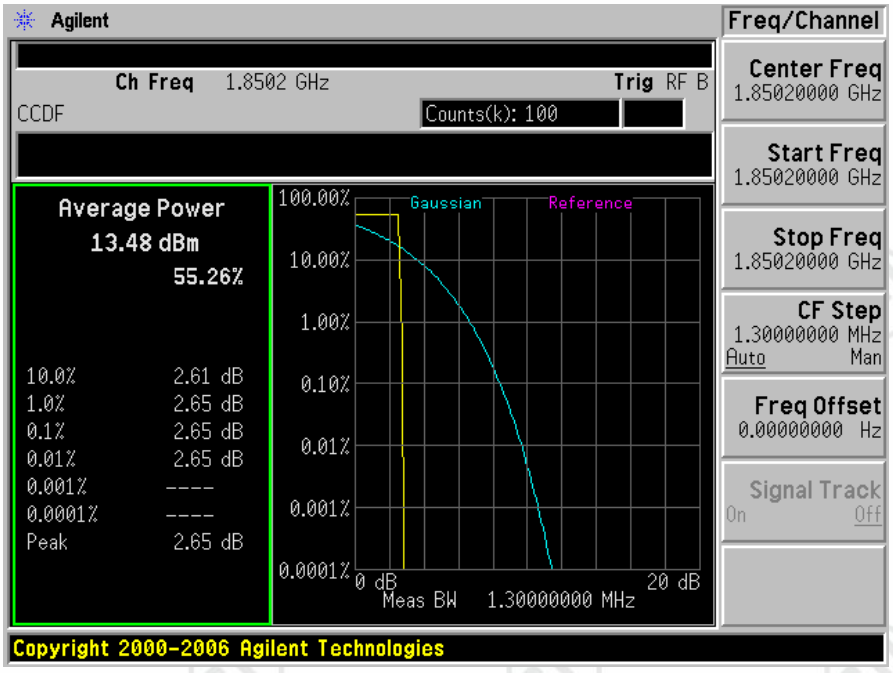



**For GSM**

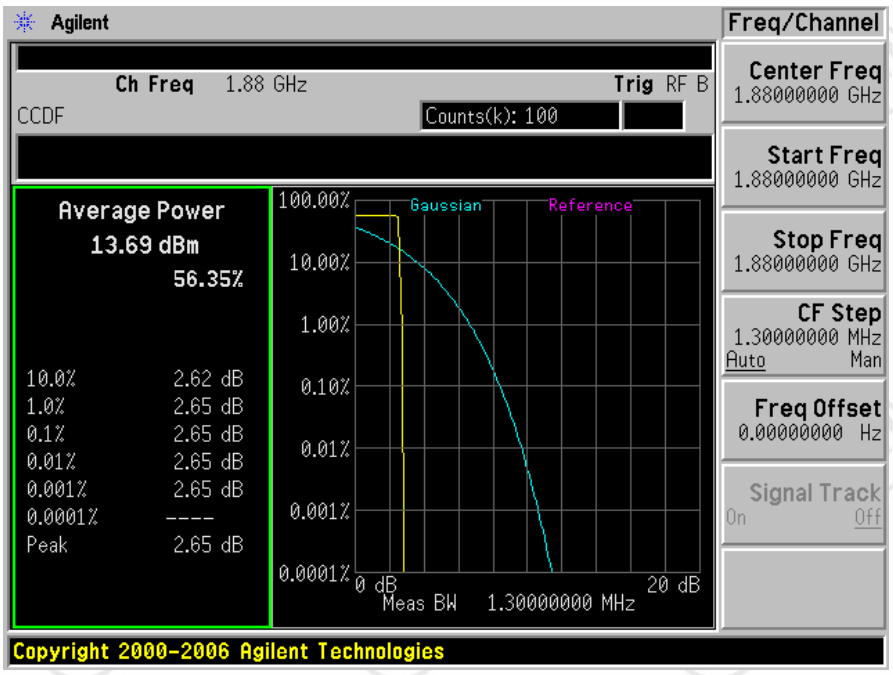
**Test Band=GSM1900**

**Test Mode=GSM/TM2**

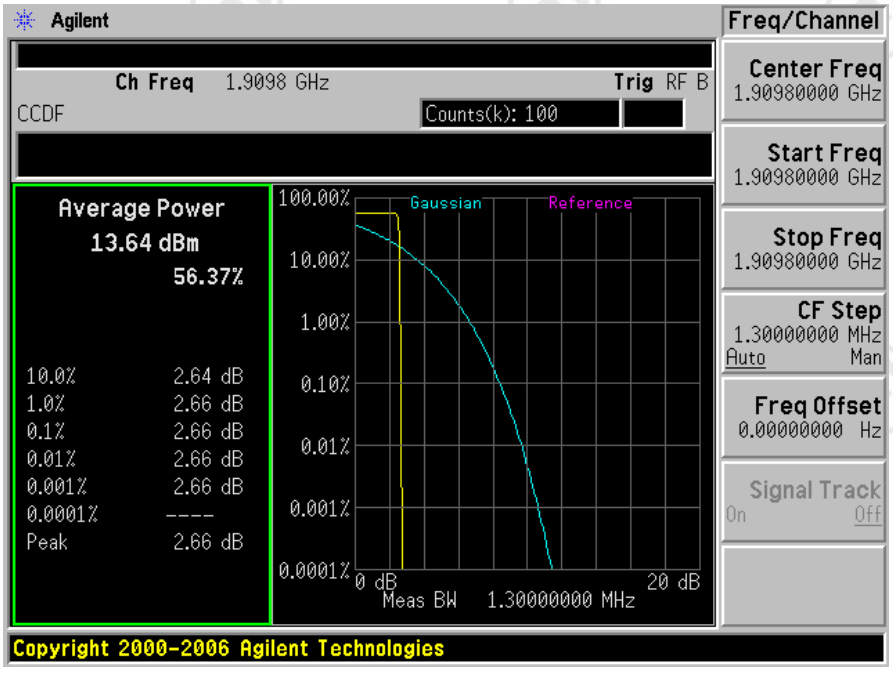
**Test Channel=LCH**



**Test Channel=MCH**




**Test Channel=HCH**

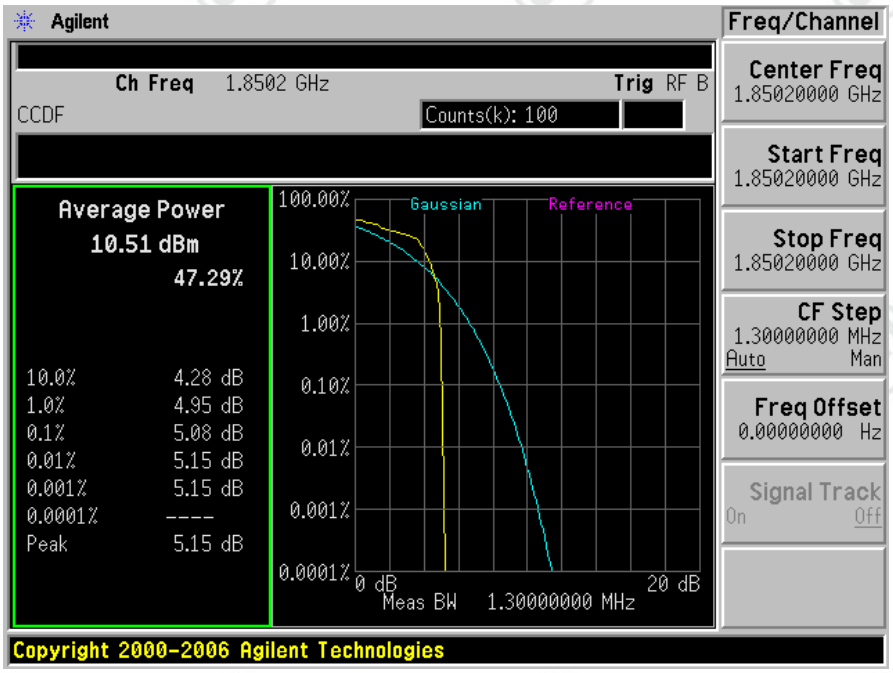


**For GSM**

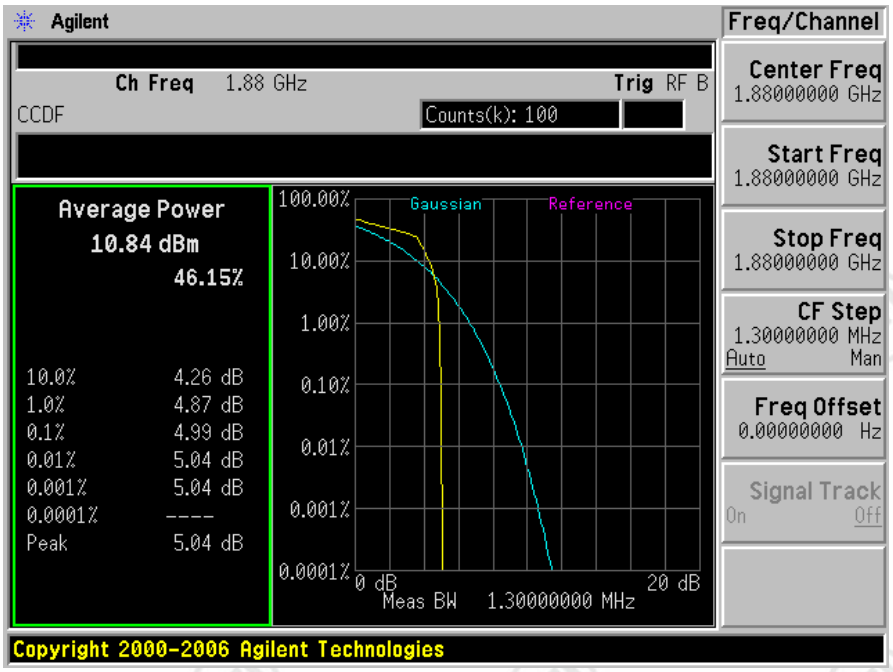
**Test Band=GSM1900**

**Test Mode=GSM/TM3**

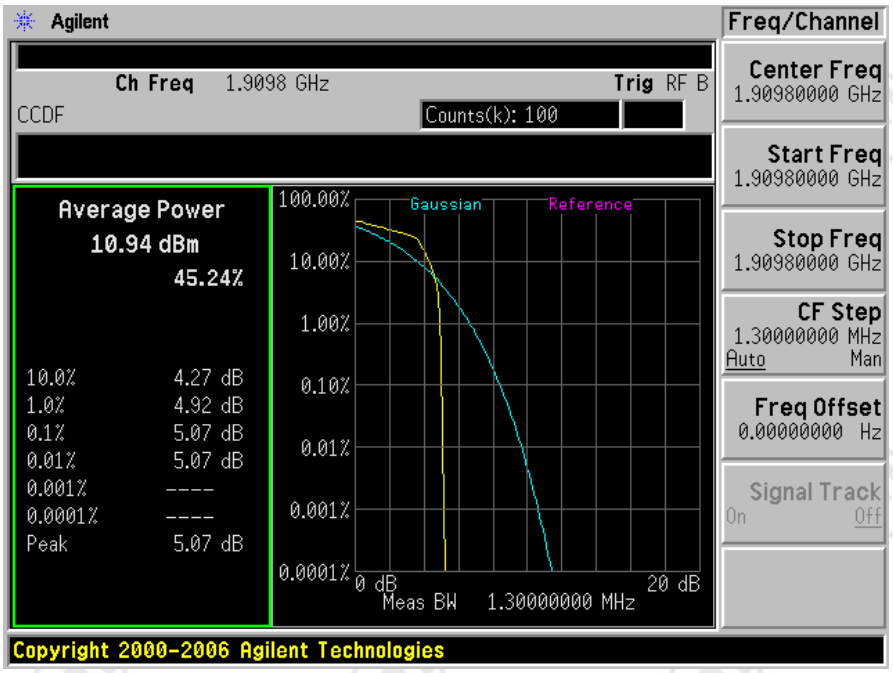
**Test Channel=LCH**




**Test Channel=MCH**



**Test Channel=HCH**

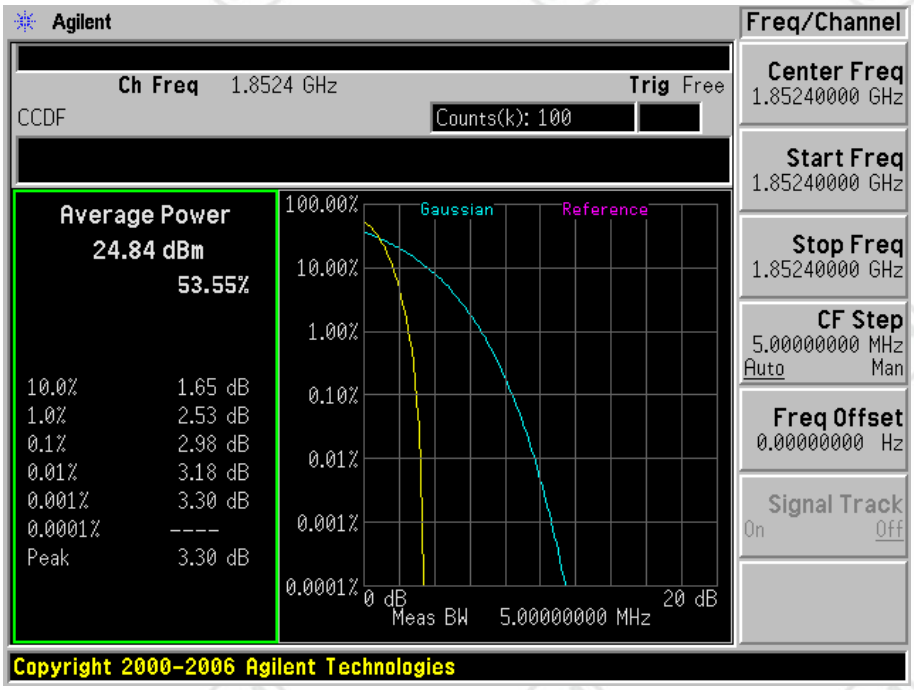



**For WCDMA**

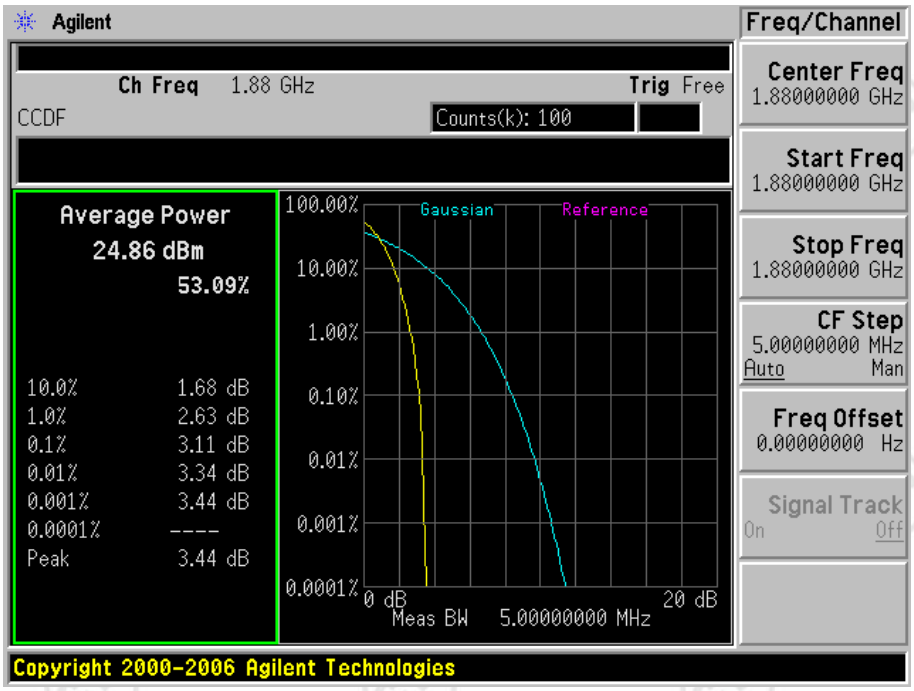
**Test Band=WCDMA1900**

**Test Mode=UMTS/TM1**

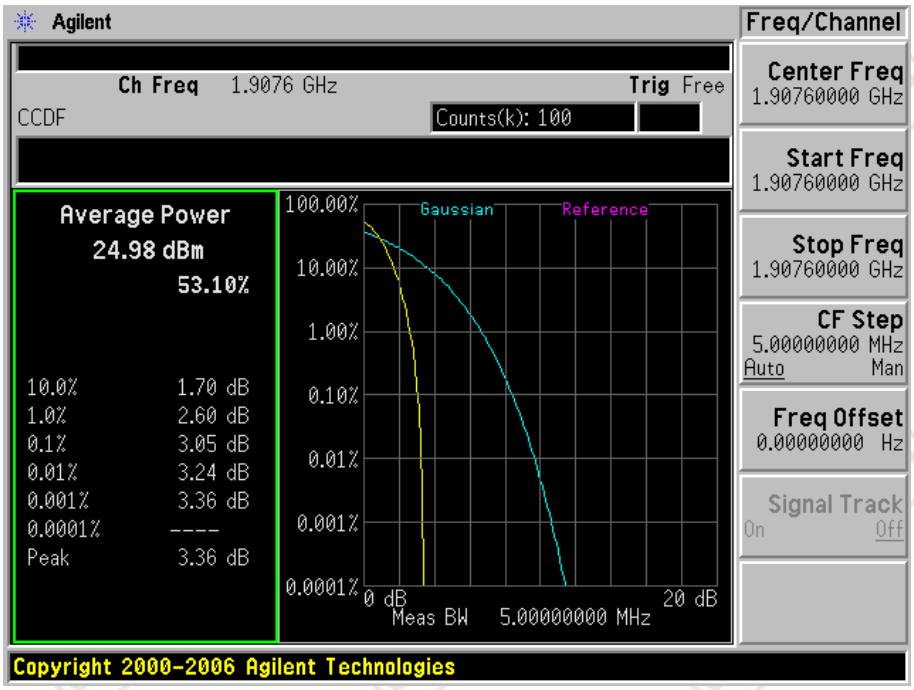
**Test Channel=LCH**



**Test Channel=MCH**




**Test Channel=HCH**

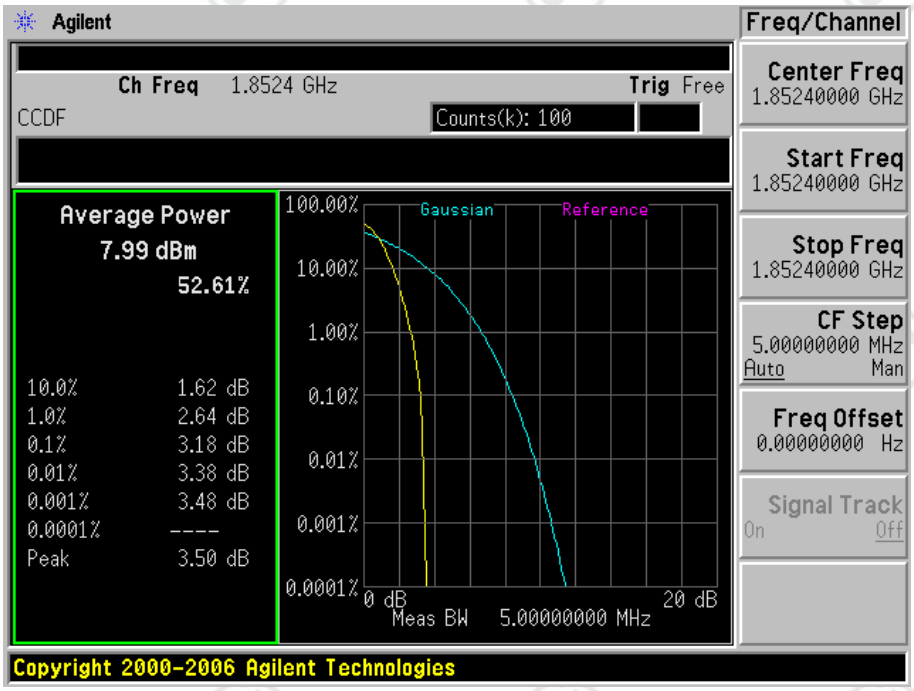


**For WCDMA**

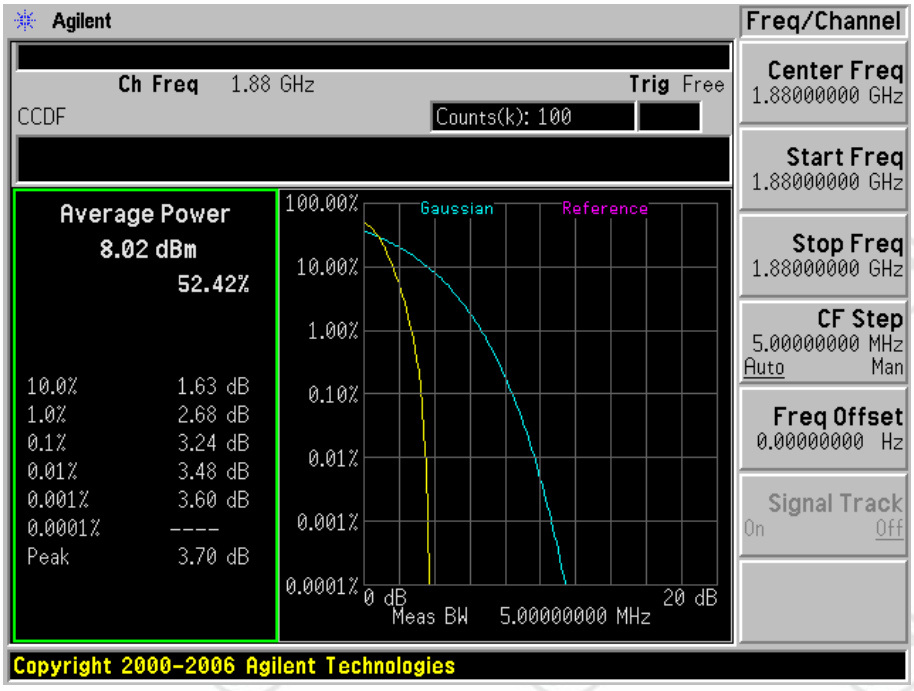
**Test Band=WCDMA1900**

**Test Mode=UMTS/TM2**

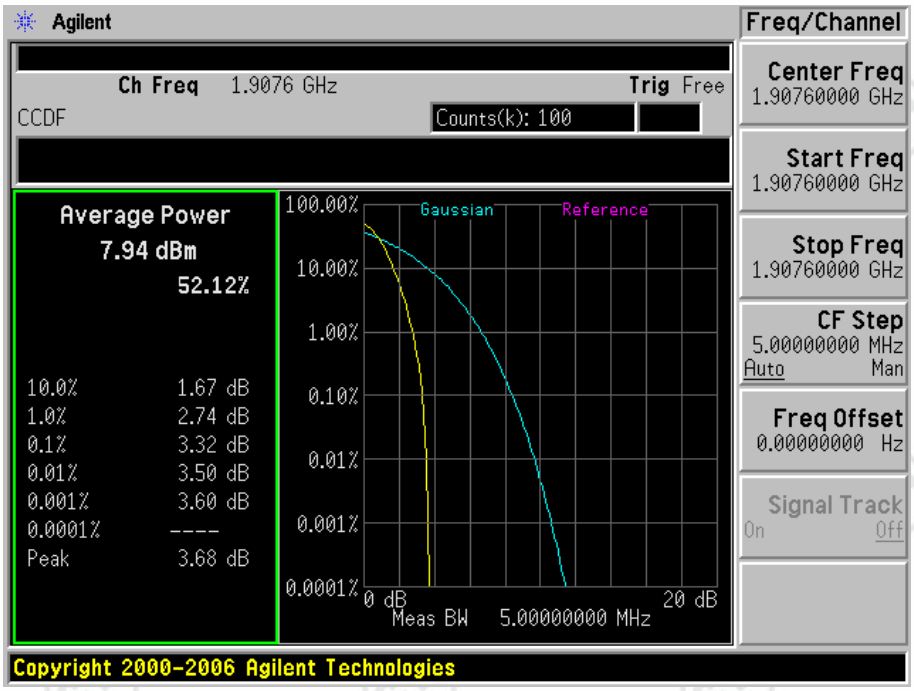
**Test Channel=LCH**




**Test Channel=MCH**



**Test Channel=HCH**



# Appendix C): BandWidth

| | |
|---|---|
| **Test Requirement:** | Part 2.1049(h) |
| **Test Method:** | Part 22.917(b)/Part 24.238(b) |
| **Test Setup:** | Refer to section 5 for details |
| **Limit:** | N/A |
| **Measurement Procedure:** | The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyser, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel, middle channel and high channel).the resolution bandwidth of the analyser is set to 100kHz or 1% of the emission bandwidth, the EUT emission bandwidth is measured as the width of the signal between two points, outside of which all emission are attenuated at least 26dB below the transmitter power. The video bandwidth of the spectrum analyzer was set at thrice the resolution bandwidth. Detector Mode was set to peak or peak hold power. |
| **Instruments Used:** | Refer to section 7 for details |
| **Test Results:** | Pass |

**Test Data:**

| Test Band | Test Mode | Test Channel | Occupied Bandwidth (KHz) | Emission Bandwidth (KHz) | Verdict |
|---|---|---|---|---|---|
| GSM850 | GSM/TM1 | LCH | 244.30 | 315.09 | PASS |
| | | MCH | 247.79 | 309.88 | PASS |
| | | HCH | 242.62 | 317.38 | PASS |
| | GSM/TM2 | LCH | 244.13 | 316.06 | PASS |
| | | MCH | 242.20 | 314.85 | PASS |
| | | HCH | 246.23 | 312.42 | PASS |
| | GSM/TM3 | LCH | 251.95 | 312.18 | PASS |
| | | MCH | 250.11 | 310.86 | PASS |
| | | HCH | 248.17 | 324.74 | PASS |

| Test Band | Test Mode | Test Channel | Occupied Bandwidth (KHz) | Emission Bandwidth (KHz) | Verdict |
|---|---|---|---|---|---|
| GSM1900 | GSM/TM1 | LCH | 244.27 | 316.47 | PASS |
| | | MCH | 243.76 | 321.04 | PASS |
| | | HCH | 247.64 | 314.88 | PASS |
| | GSM/TM2 | LCH | 245.53 | 314.92 | PASS |
| | | MCH | 244.97 | 310.96 | PASS |
| | | HCH | 249.78 | 314.05 | PASS |
| | GSM/TM3 | LCH | 252.46 | 321.90 | PASS |
| | | MCH | 255.19 | 322.42 | PASS |
| | | HCH | 255.29 | 325.35 | PASS |

| Test Band | Test Mode | Test Channel | Occupied Bandwidth (KHz) | Emission Bandwidth (KHz) | Verdict |
|---|---|---|---|---|---|
| WCDMA850 | UMTS/TM1 | LCH | 4169.4 | 4733 | PASS |
| | | MCH | 4168.8 | 4708 | PASS |
| | | HCH | 4136.8 | 4702 | PASS |

| Test Band | Test Mode | Test Channel | Occupied Bandwidth (KHz) | Emission Bandwidth (KHz) | Verdict |
|---|---|---|---|---|---|
| WCDMA850 | UMTS/TM2 | LCH | 4174.5 | 4699 | PASS |
| | | MCH | 4161.6 | 4708 | PASS |
| | | HCH | 4152.4 | 4640 | PASS |

| Test Band | Test Mode | Test Channel | Occupied Bandwidth (KHz) | Emission Bandwidth (KHz) | Verdict |
|---|---|---|---|---|---|
| WCDMA1900 | UMTS/TM1 | LCH | 4141.0 | 4696 | PASS |
| | | MCH | 4152.9 | 4707 | PASS |
| | | HCH | 4150.6 | 4698 | PASS |

| Test Band | Test Mode | Test Channel | Occupied Bandwidth (KHz) | Emission Bandwidth (KHz) | Verdict |
|---|---|---|---|---|---|
| WCDMA1900 | UMTS/TM2 | LCH | 4170.7 | 4714 | PASS |
| | | MCH | 4153.1 | 4708 | PASS |
| | | HCH | 4165.2 | 4716 | PASS |

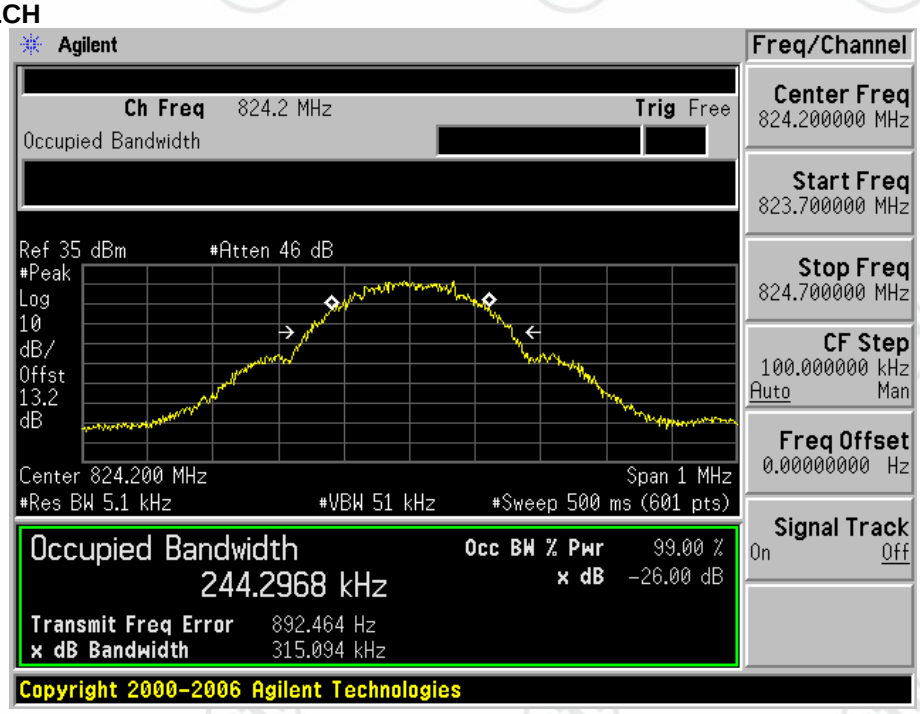
**Test Graph:**

**For GSM**

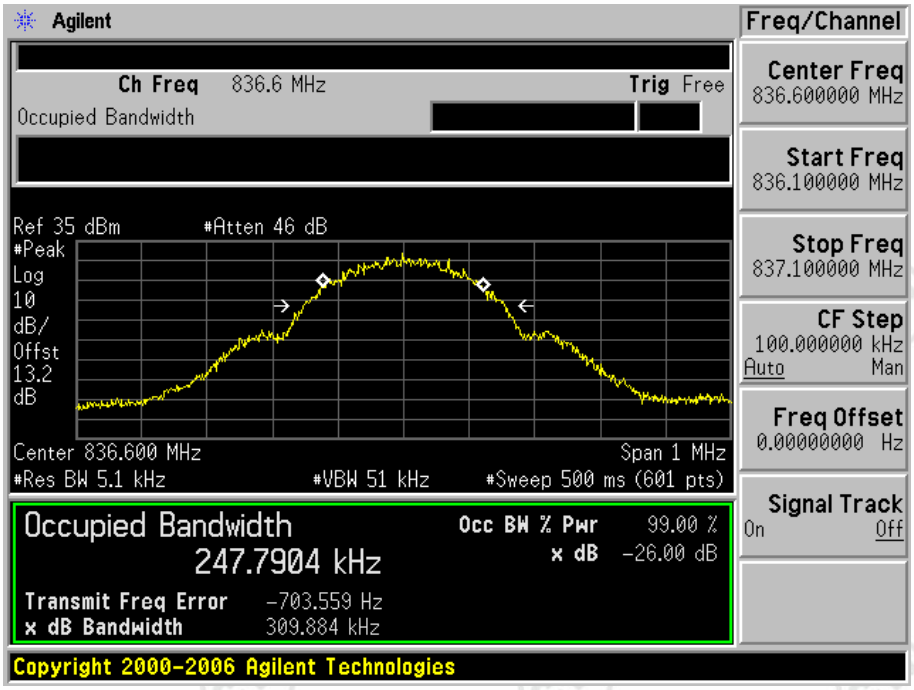
**Test Band=GSM850**

**Test Mode=GSM/TM1**

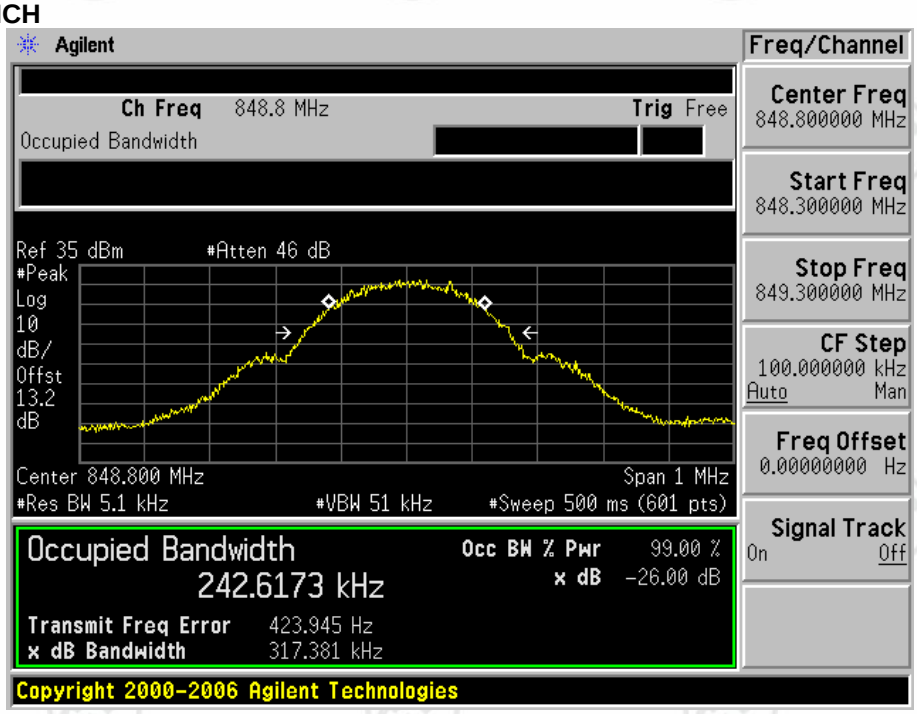
**Test Channel=LCH**




**Test Channel=MCH**

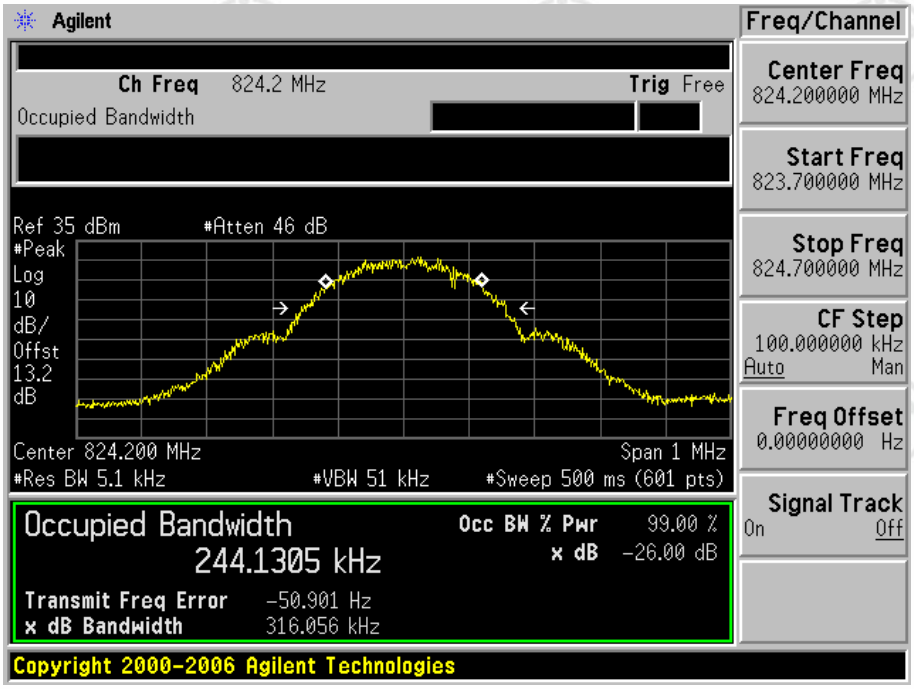


**Test Channel=HCH**

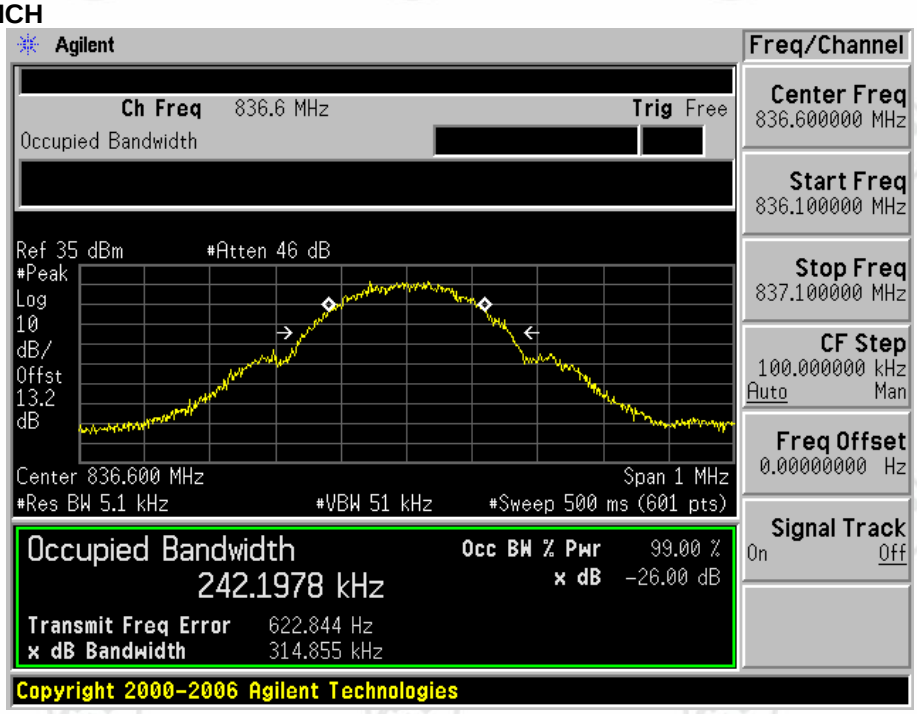



**Test Mode=GSM/TM2**

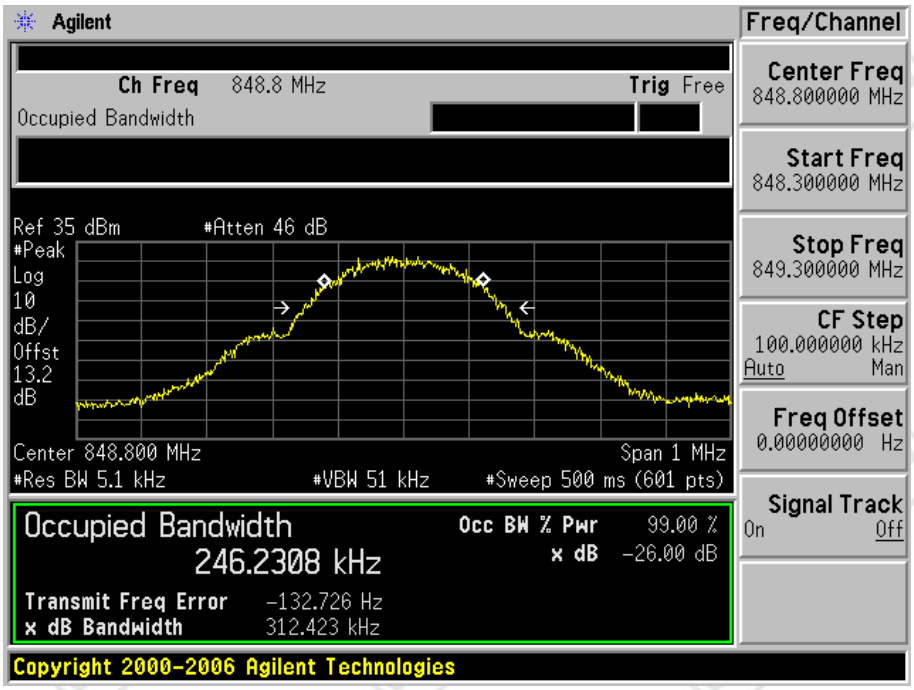
**Test Channel=LCH**



**Test Channel=MCH**

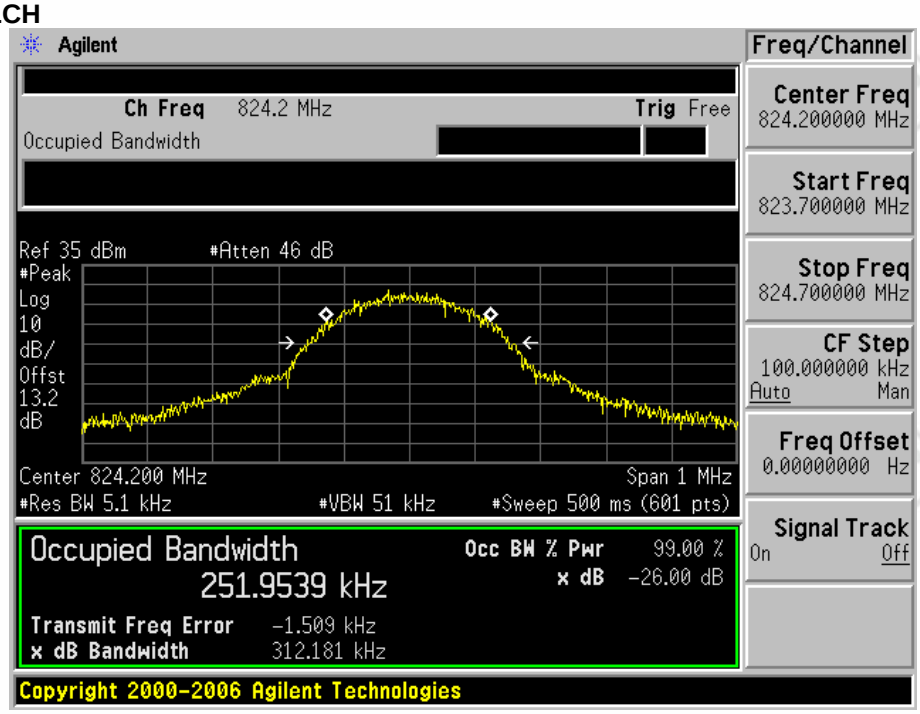



**Test Channel=HCH**

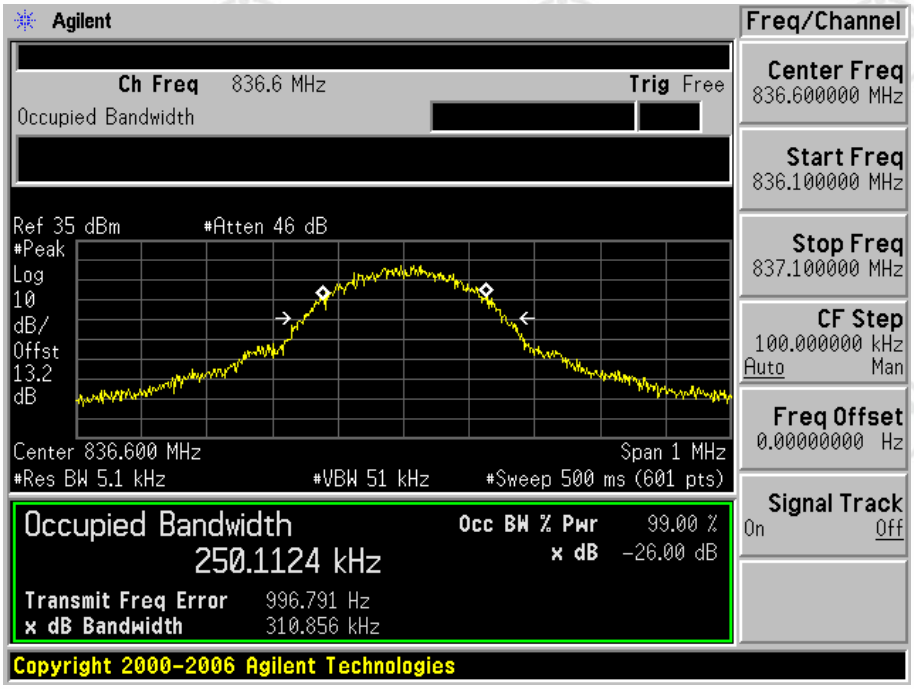


**Test Mode=GSM/TM3**

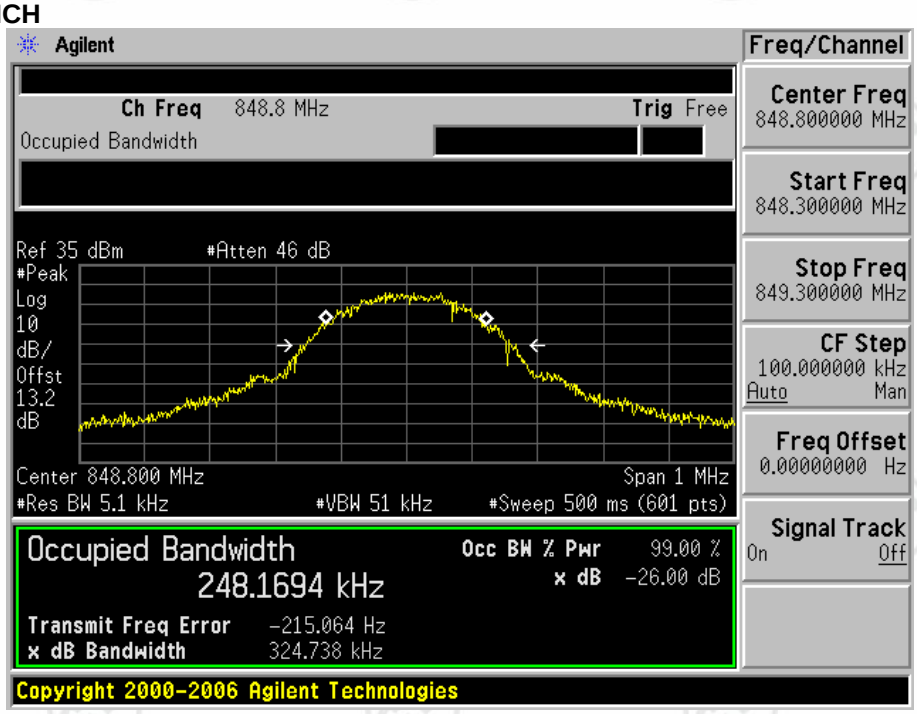
**Test Channel=LCH**




**Test Channel=MCH**



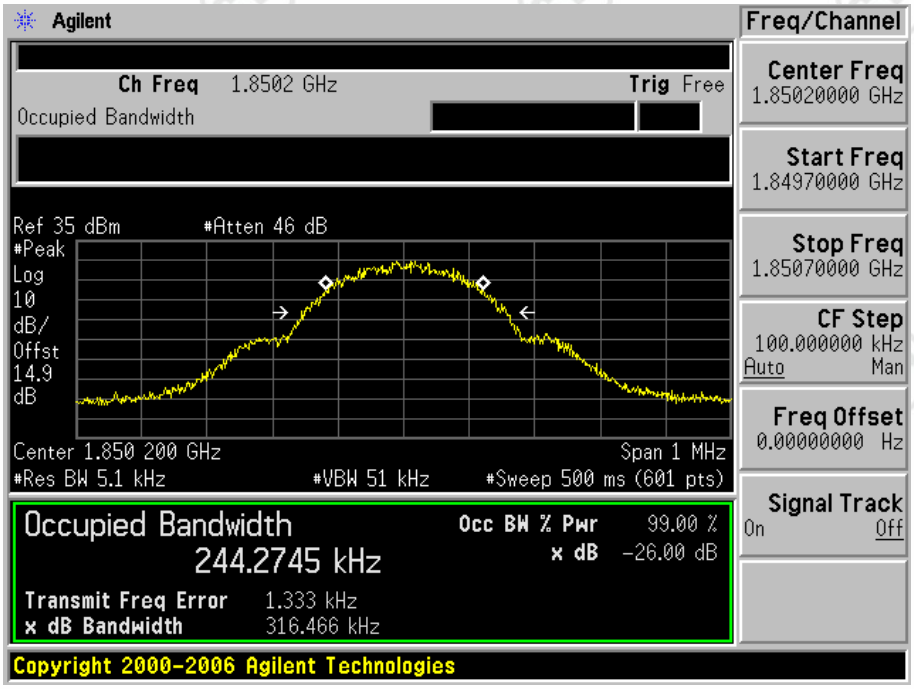
**Test Channel=HCH**



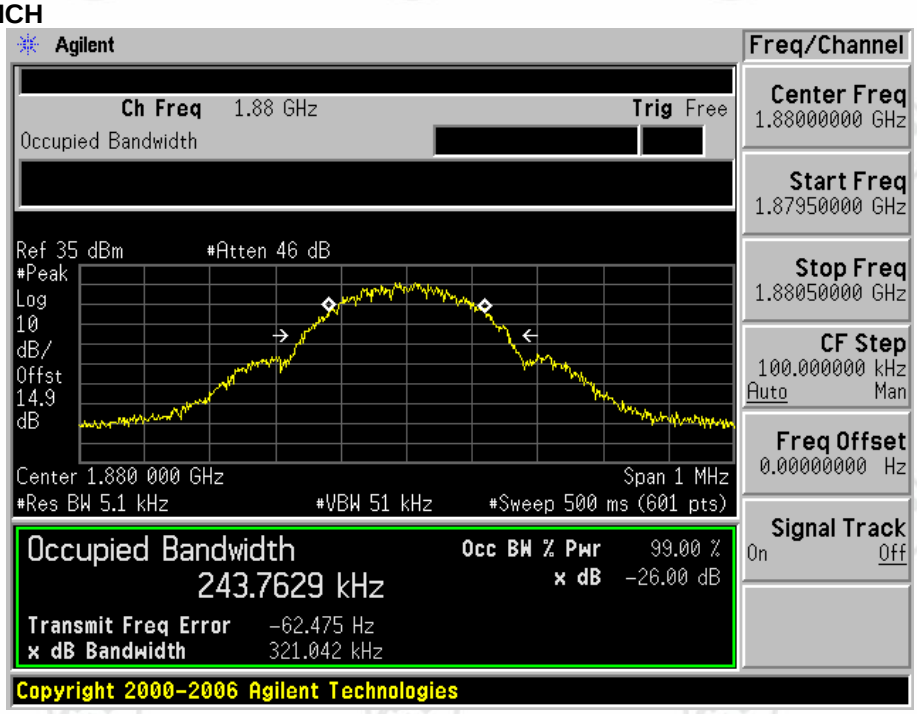

**Test Band=GSM1900**

**Test Mode=GSM/TM1**

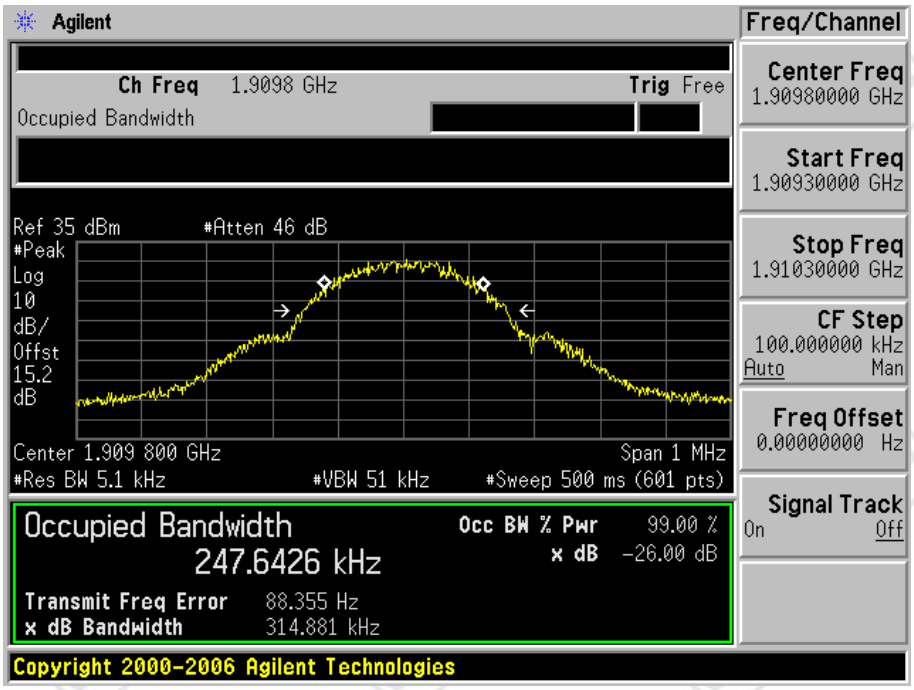
**Test Channel=LCH**



**Test Channel=MCH**

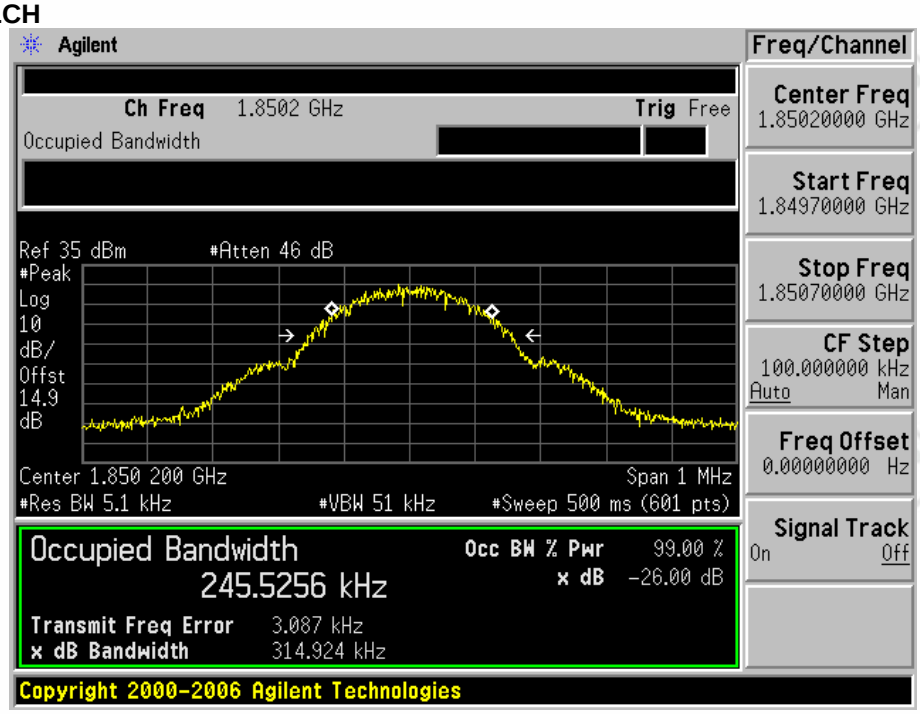



**Test Channel=HCH**

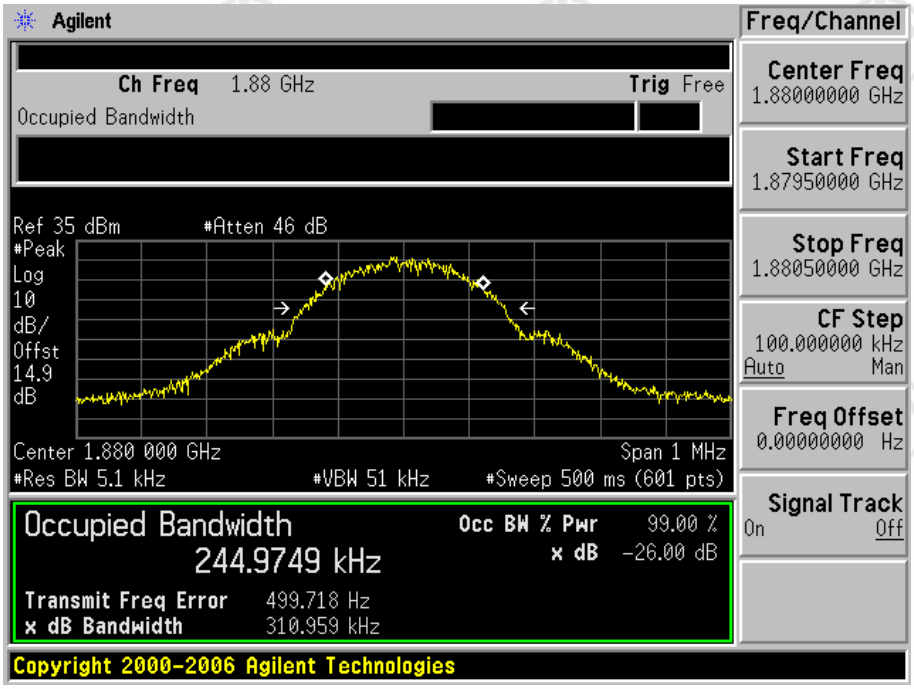


**Test Mode=GSM/TM2**

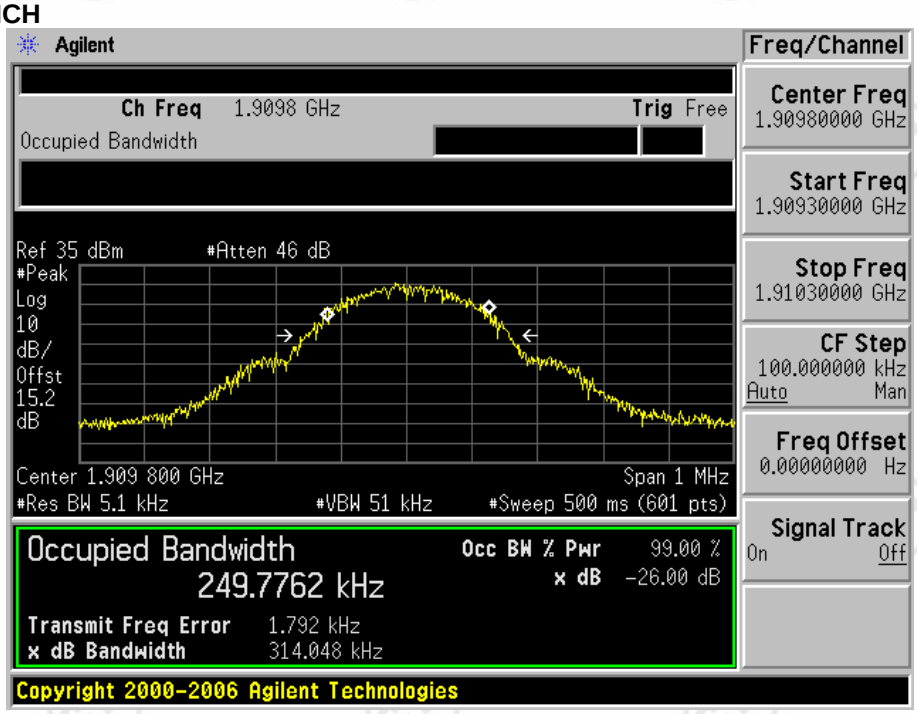
**Test Channel=LCH**




**Test Channel=MCH**

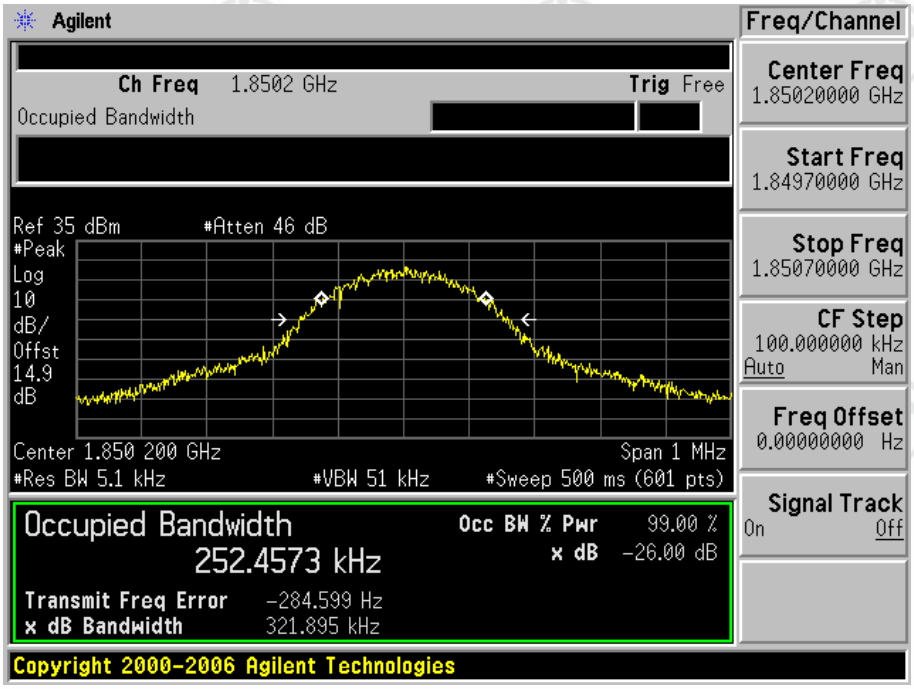


**Test Channel=HCH**

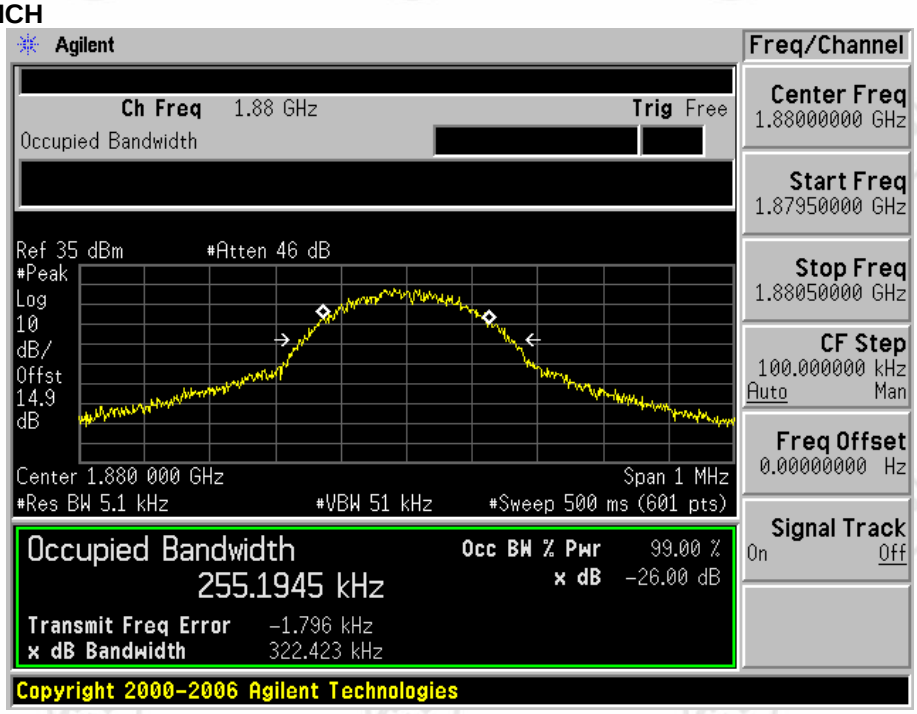



**Test Mode=GSM/TM3**

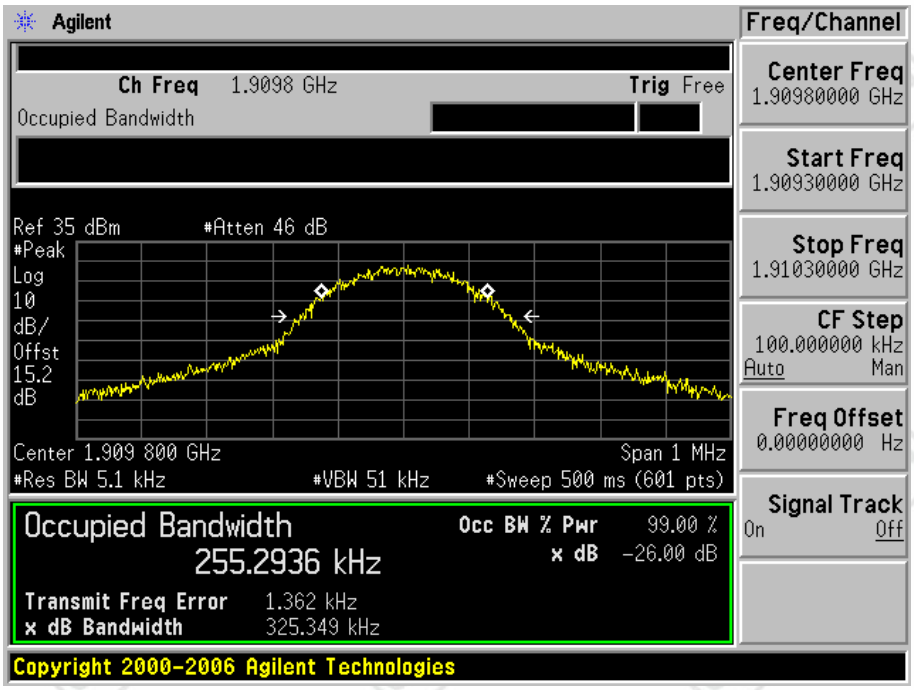
**Test Channel=LCH**



**Test Channel=MCH**




**Test Channel=HCH**

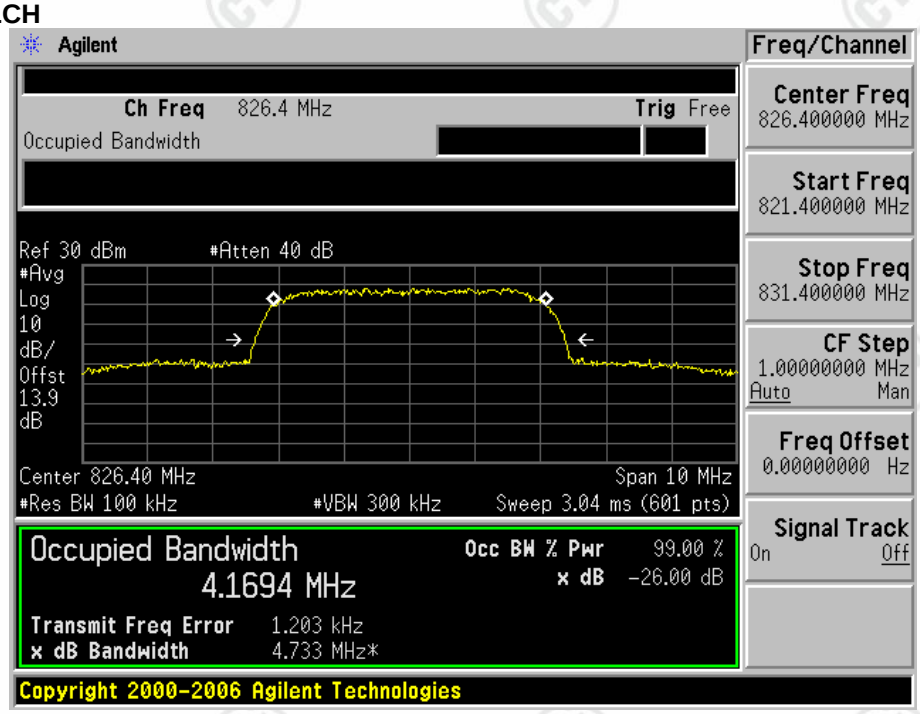


**For WCDMA**

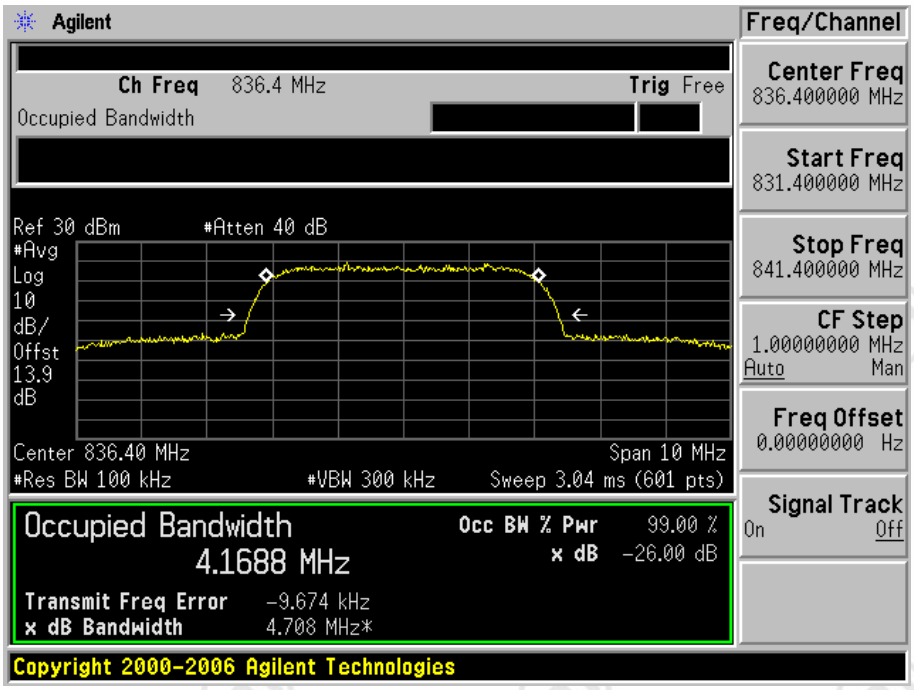
**Test Band=WCDMA850**

**Test Mode=UMTS/TM1**

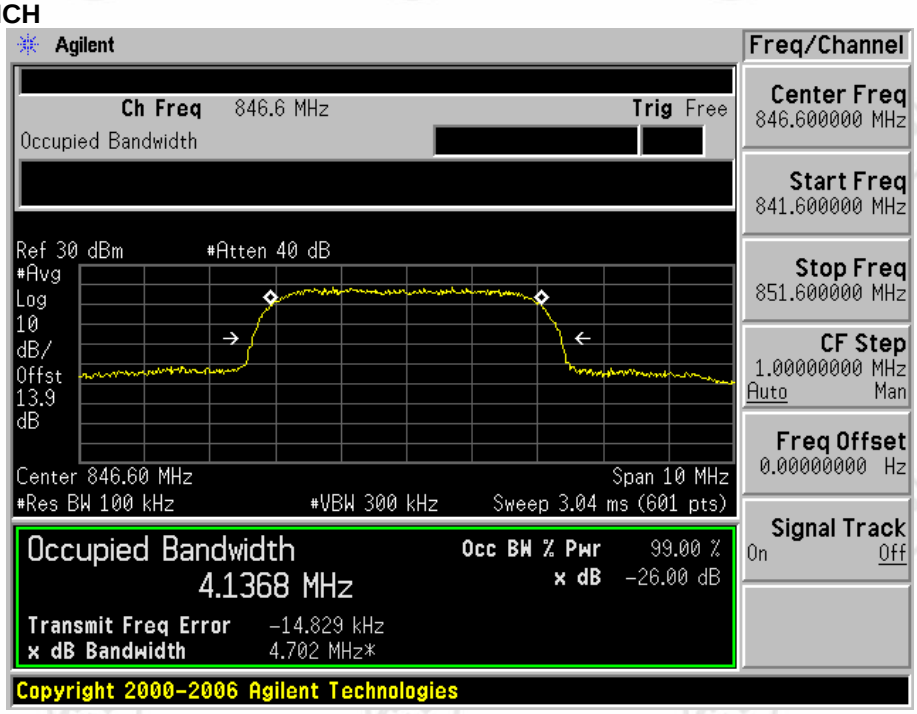
**Test Channel=LCH**




**Test Channel=MCH**



**Test Channel=HCH**

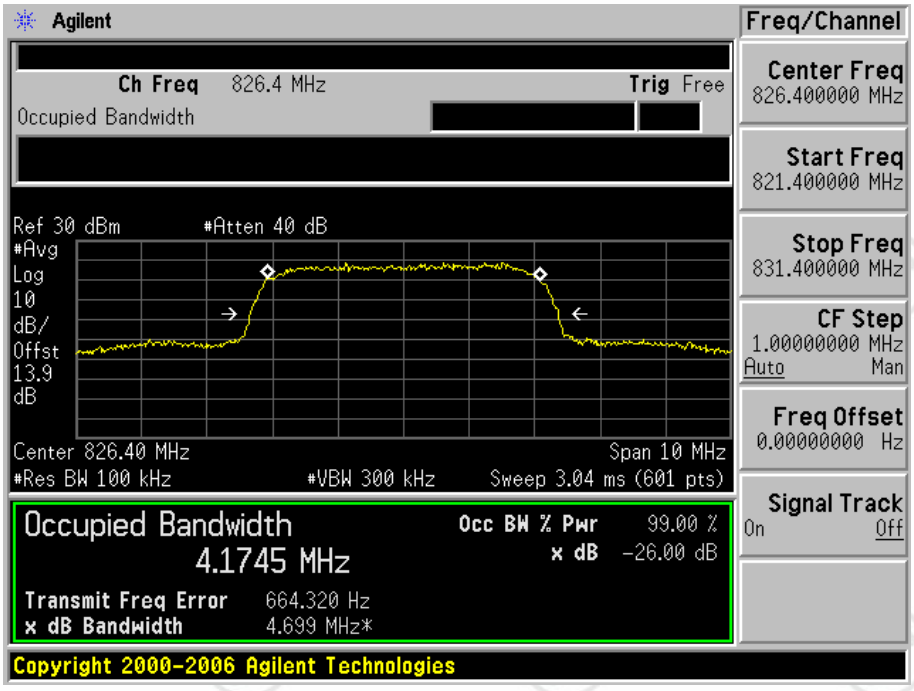



**For WCDMA**

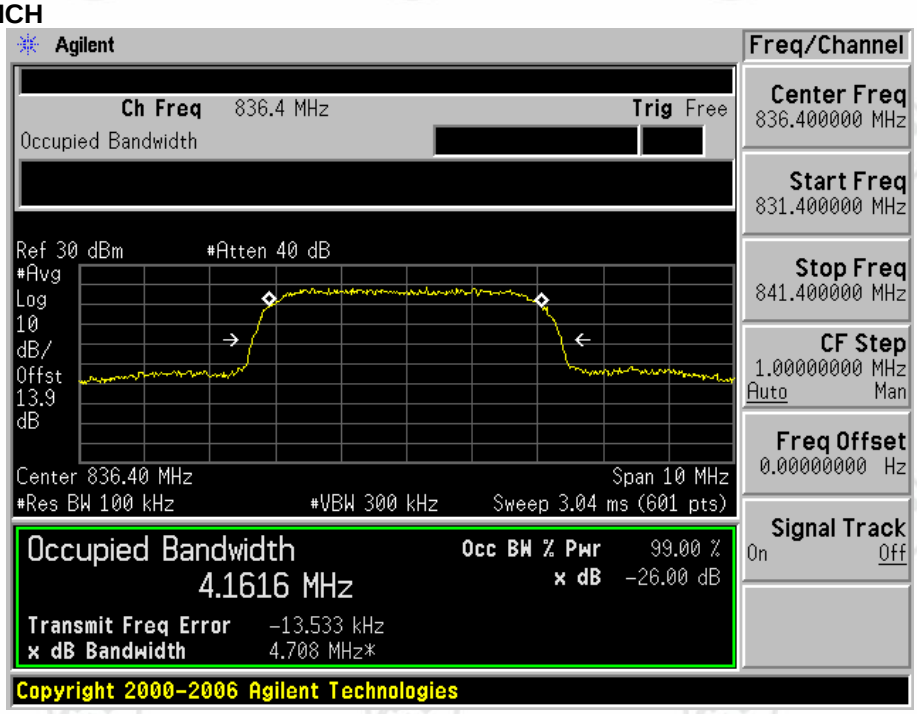
**Test Band=WCDMA850**

**Test Mode=UMTS/TM2**

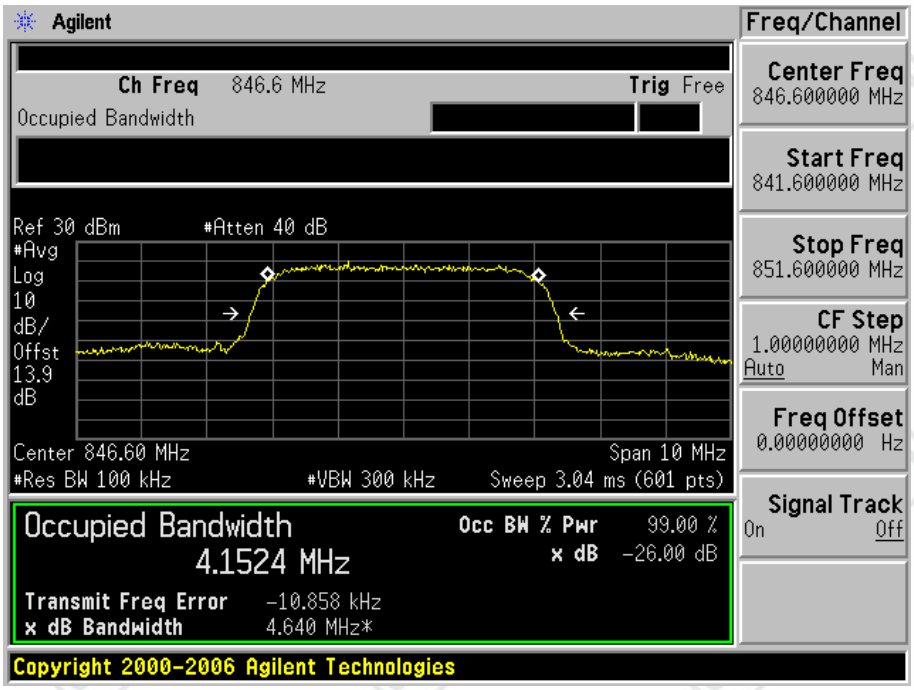
**Test Channel=LCH**



**Test Channel=MCH**



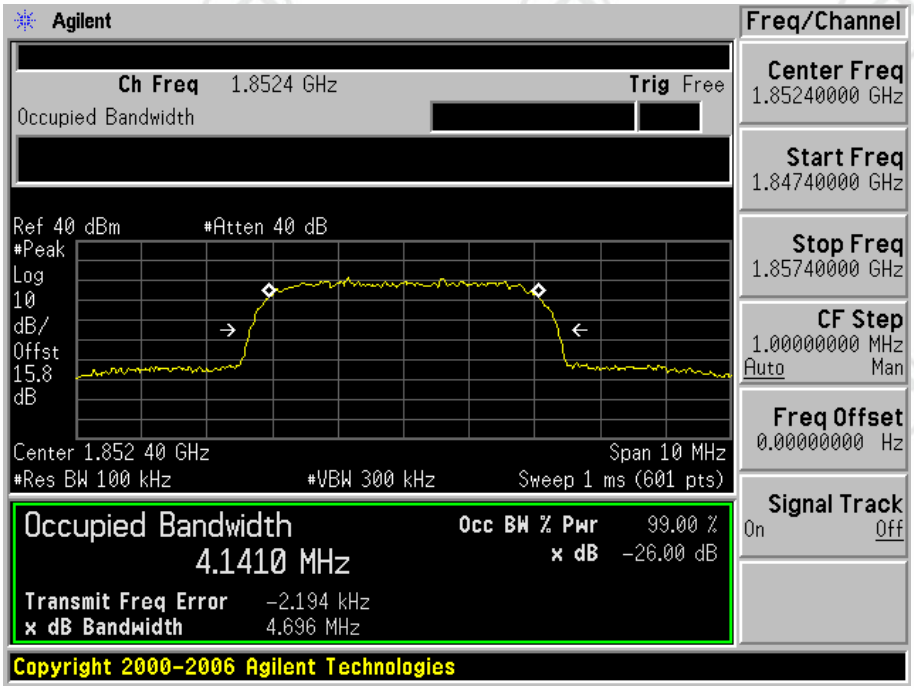

**Test Channel=HCH**



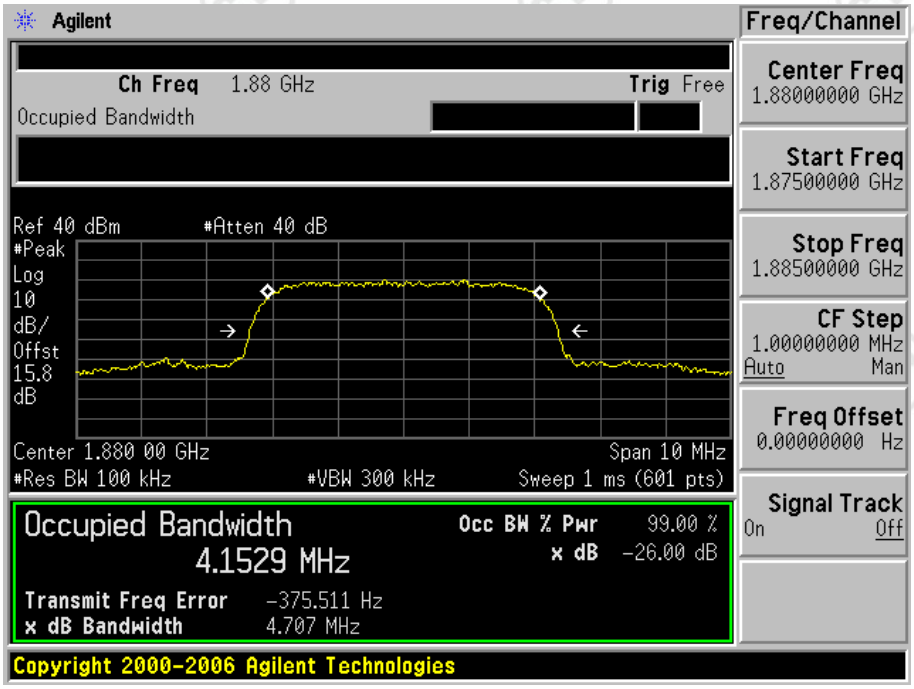
**Test Band=WCDMA1900**

**Test Mode=UMTS/TM1**

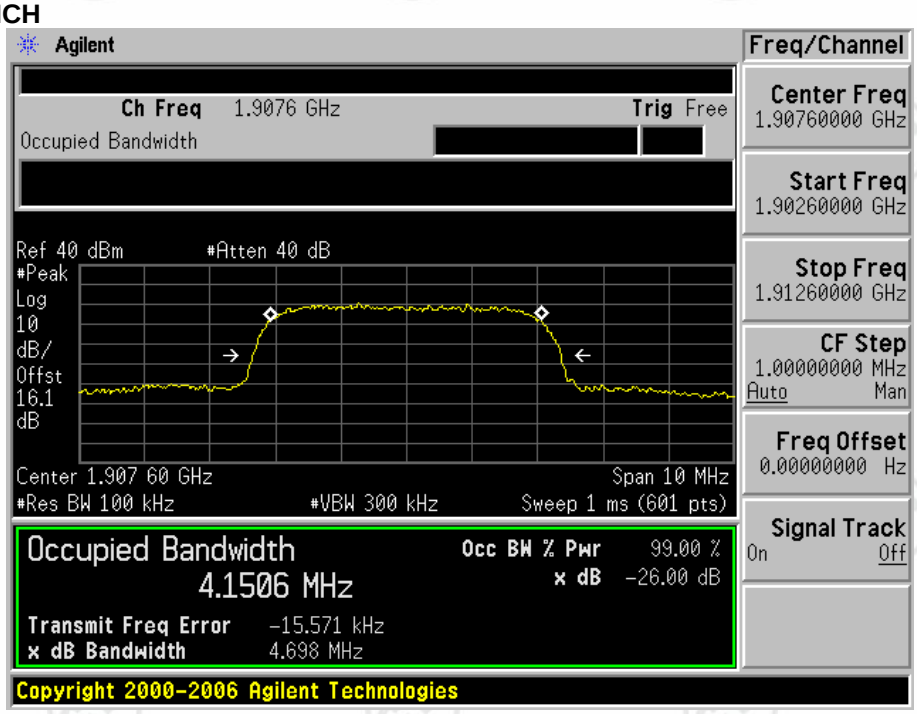
**Test Channel=LCH**




**Test Channel=MCH**



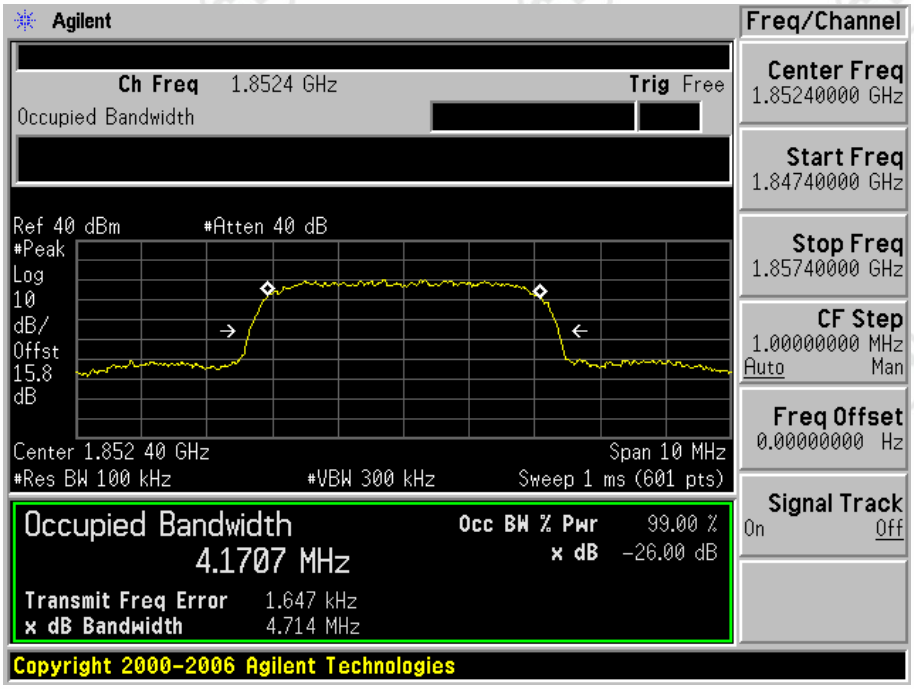
**Test Channel=HCH**



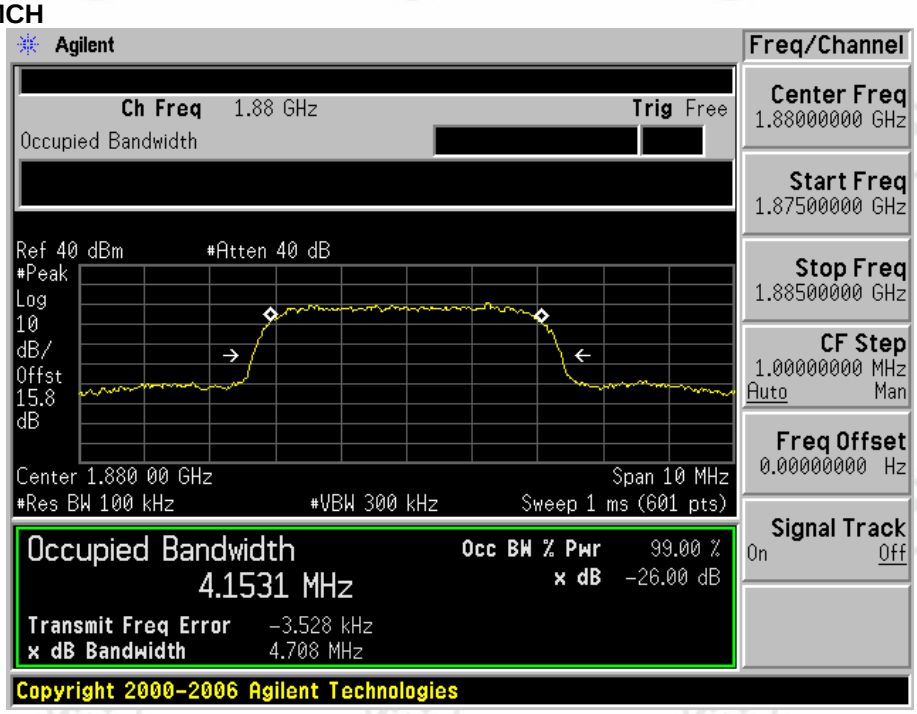

**Test Band=WCDMA1900**

**Test Mode=UMTS/TM2**

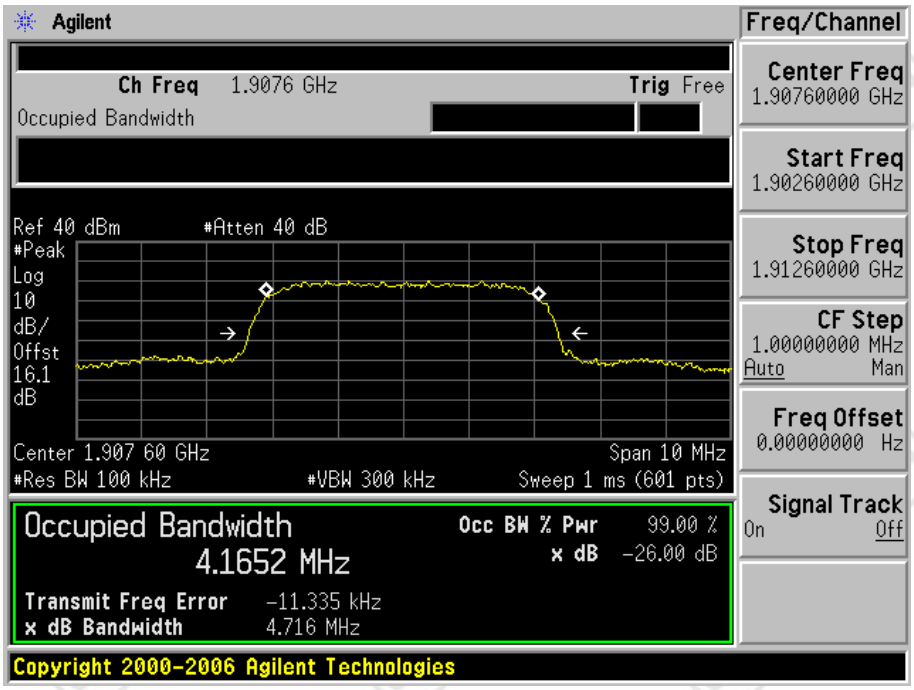
**Test Channel=LCH**



**Test Channel=MCH**



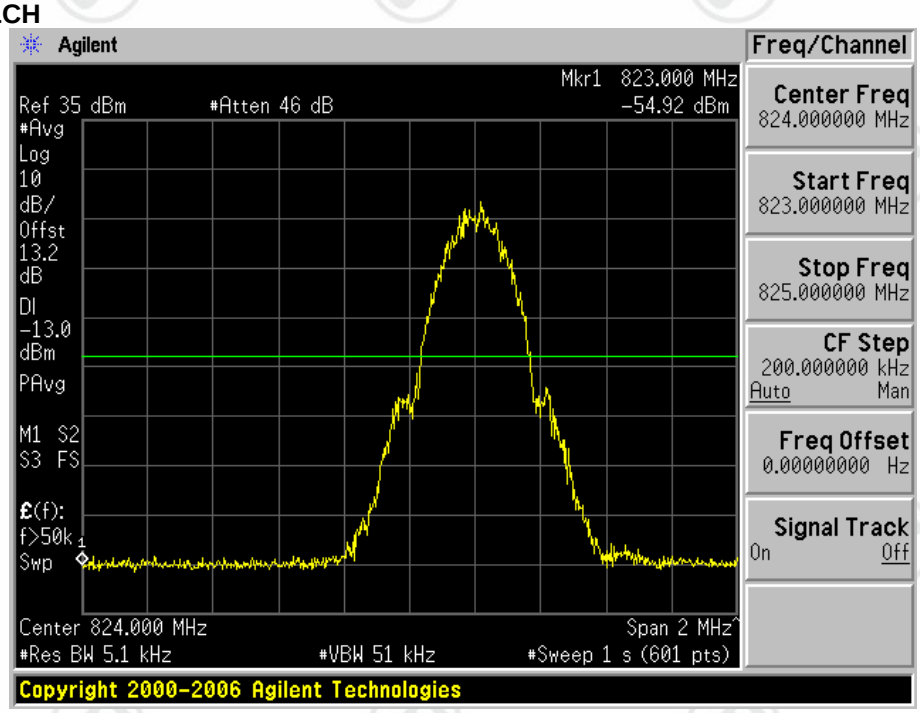

**Test Channel=HCH**



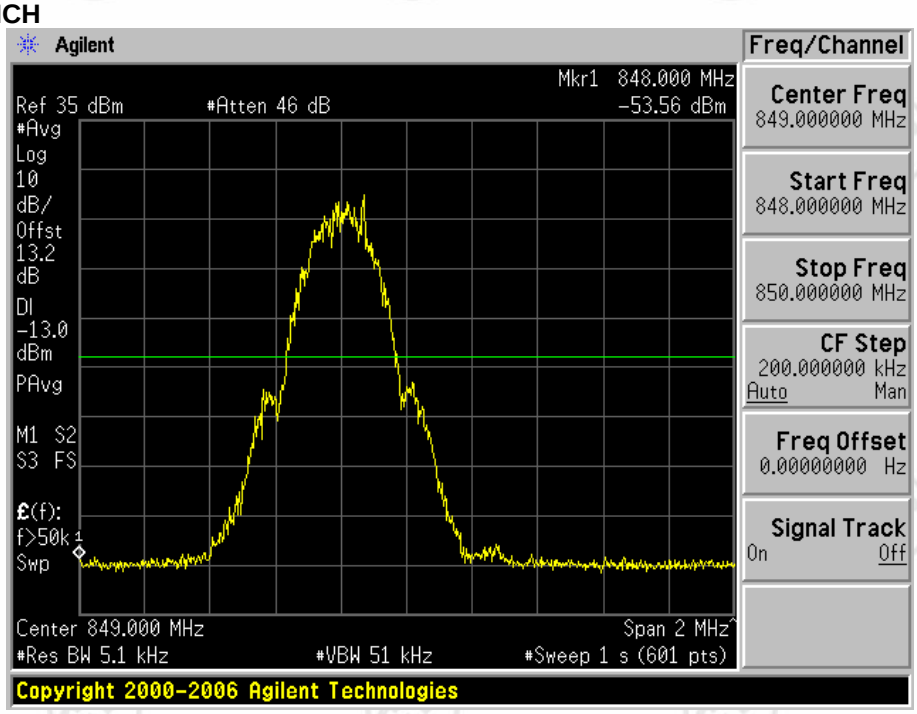
# Appendix D): Band Edges Compliance

| | |
|---|---|
| **Test Requirement:** | Part 2.1051 |
| **Test Method:** | Part 22.917(b)/Part 24.238(b) |
| **Test Setup:** | Refer to section 5 for details |
| **Measurement Procedure:** | The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyser, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel and high channel).in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of 100kHz or 1% of the emission bandwidth of the fundamental emission of the transmitter may be employed. The EUT emission bandwidth is measured as the width of the signal between two points, outside of which all emission are attenuated at least 26dB below the transmitter power. The video bandwidth of the spectrum analyzer was set at thrice the resolution bandwidth. Detector Mode was set to peak or peak hold power. |
| **Limit:** | Operation Band / Frequency Range (MHz) / Limit<br>GSM/GPRS/EDGE/ WCDMA 850 / Below 824 and above 849 / Attenuated at least 43+10log(P)<br>GSM/GPRS/EDGE/ WCDMA 1900 / Below 1850 and above 1910 / Attenuated at least 43+10log(P) |
| **Instruments Used:** | Refer to section 7 for details |
| **Test Results:** | Pass |

**Test Graphs:**
**For GSM**
**Test Band=GSM850**
**Test Mode=GSM/TM1**
**Test Channel=LCH**

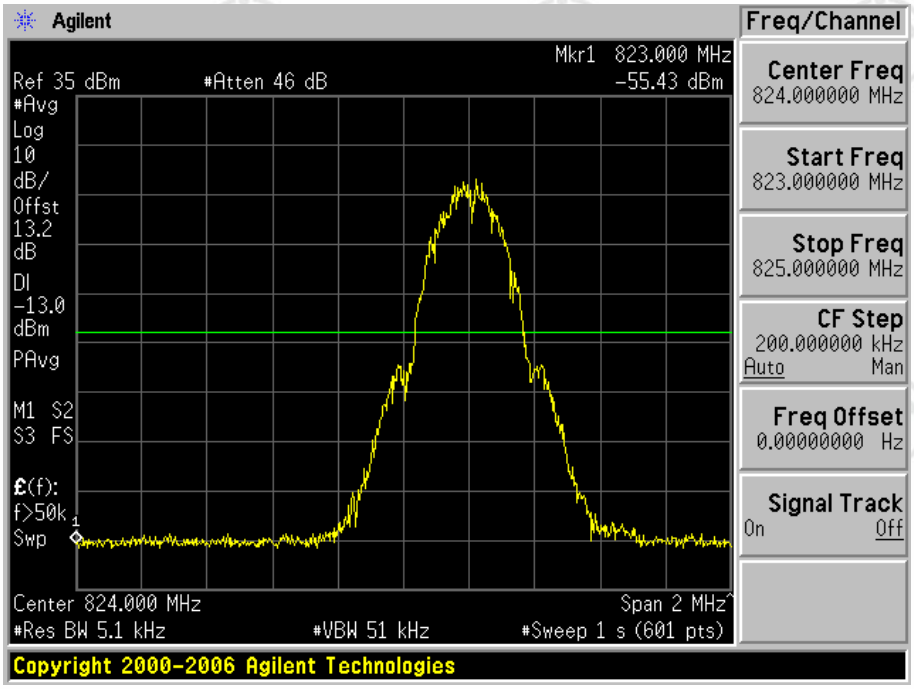


**Test Channel=HCH**

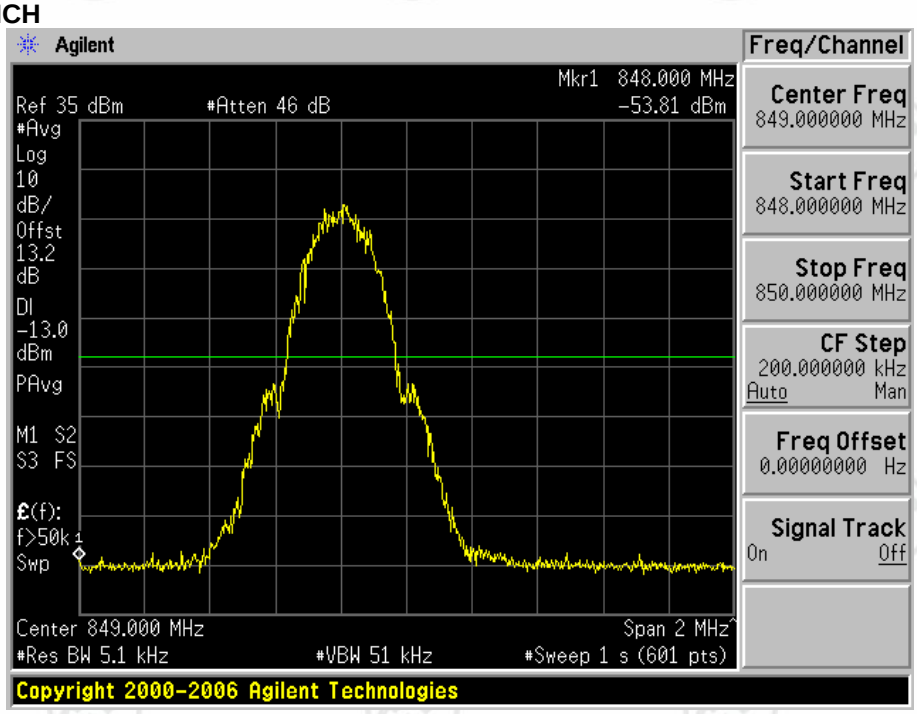



**Test Mode=GSM/TM2**

**Test Channel=LCH**

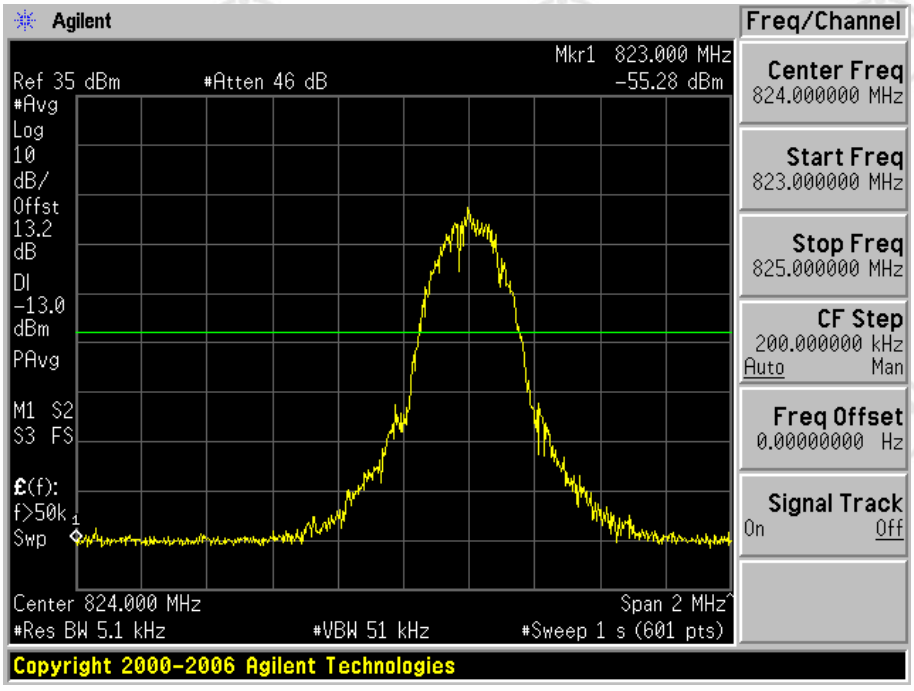


**Test Channel=HCH**

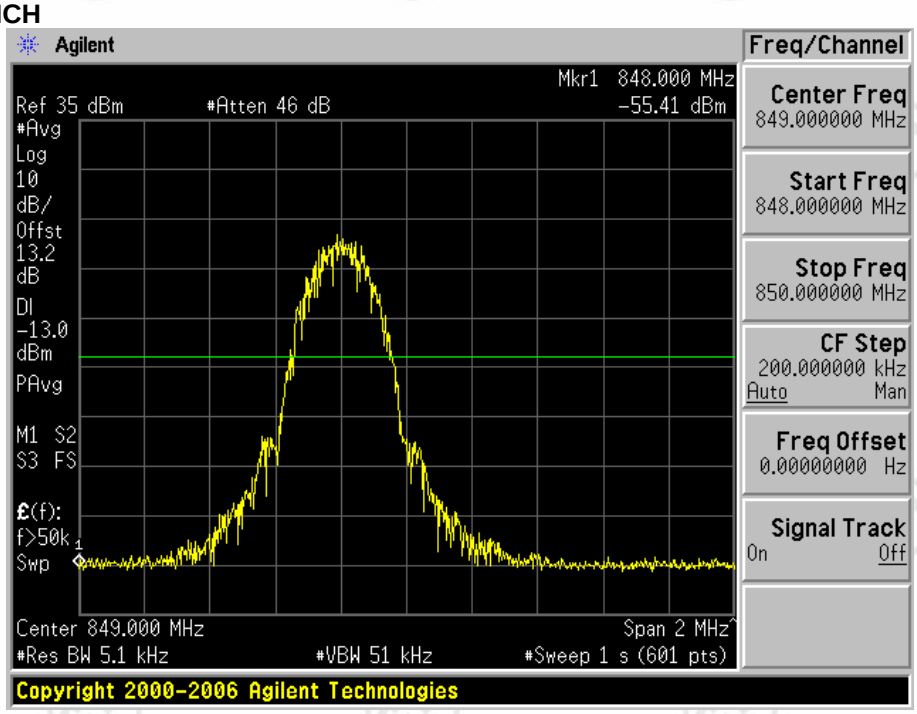



**Test Mode=GSM/TM3**

**TestChannel=LCH**



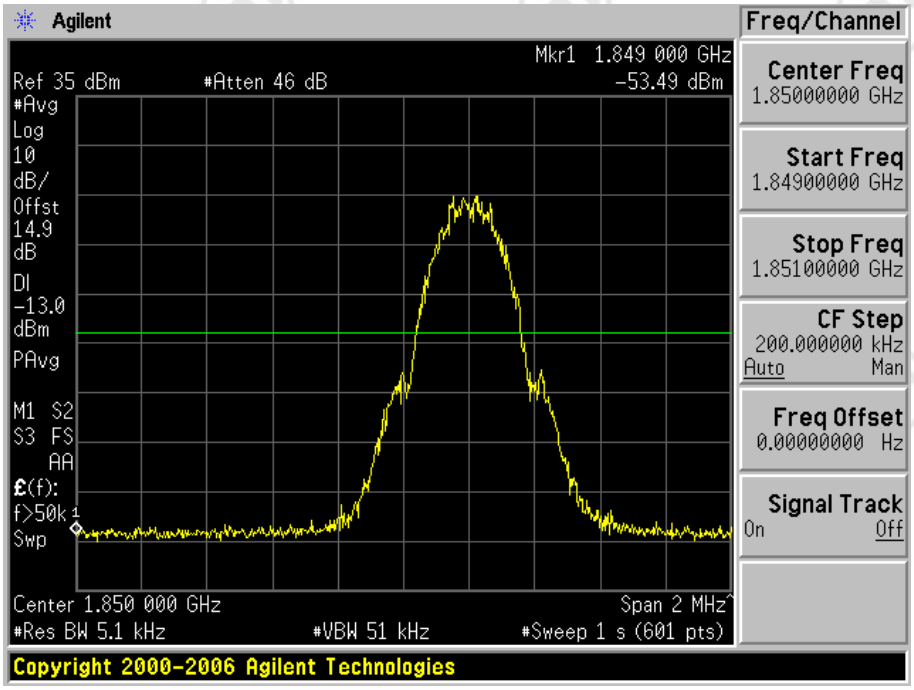
**Test Channel=HCH**



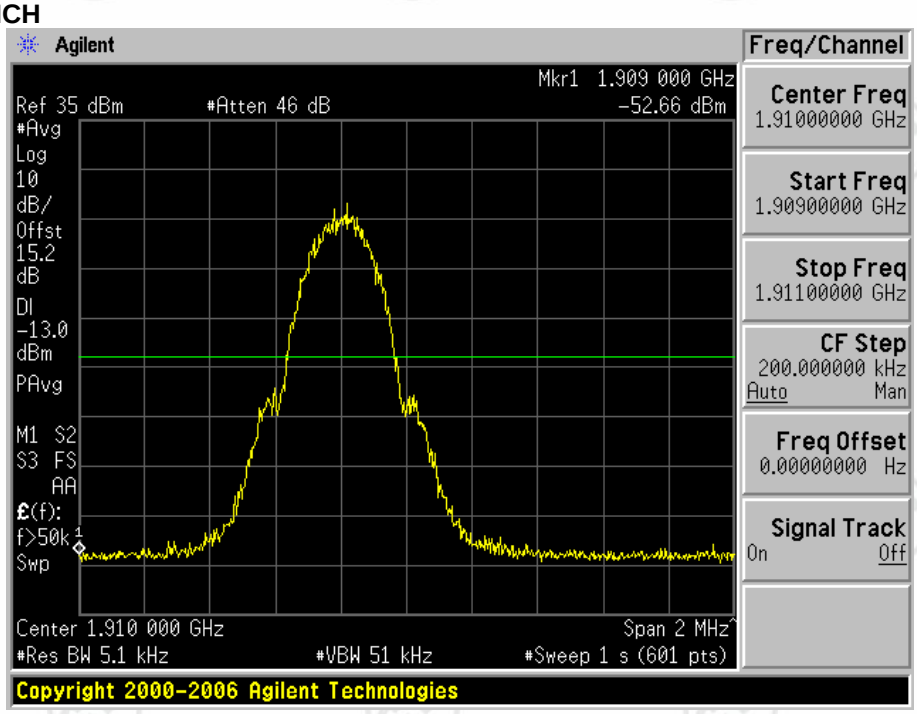

**Test Band=GSM1900**

**Test Mode=GSM/TM1**

**Test Channel=LCH**

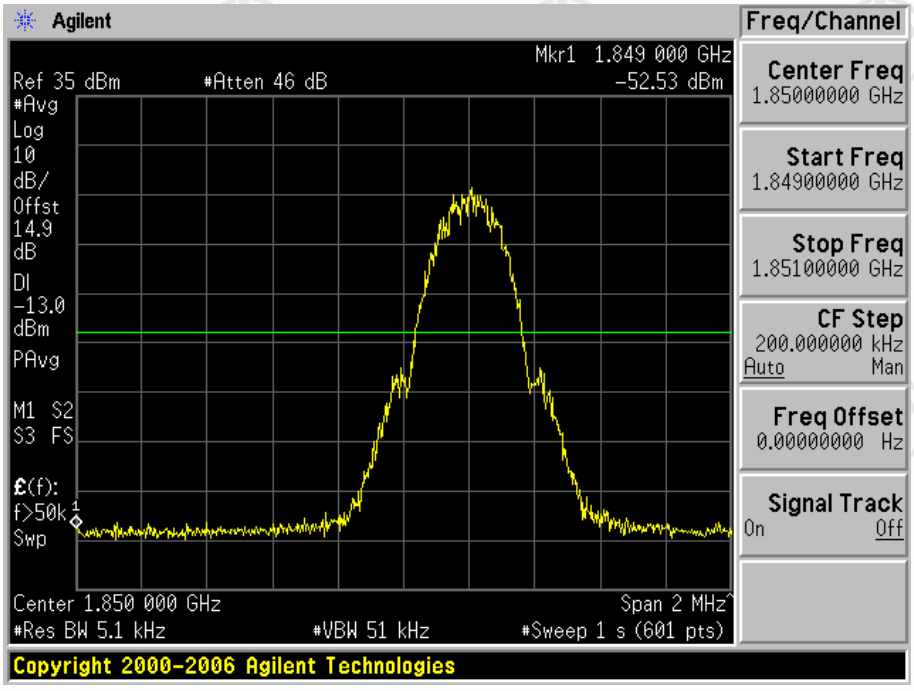


**Test Channel=HCH**

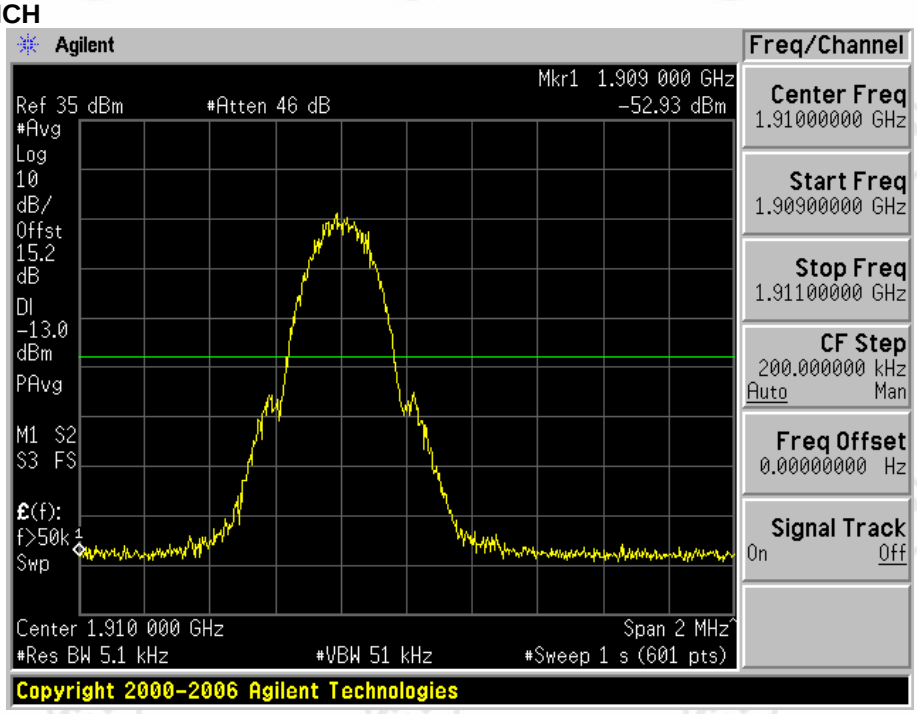



**Test Mode=GSM/TM2**

**Test Channel=LCH**

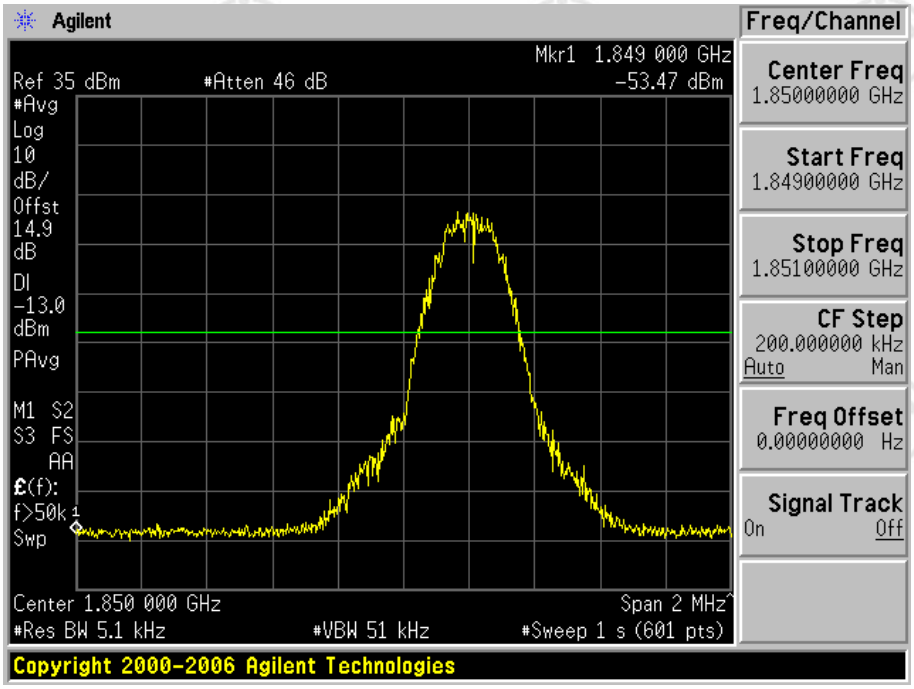


**Test Channel=HCH**

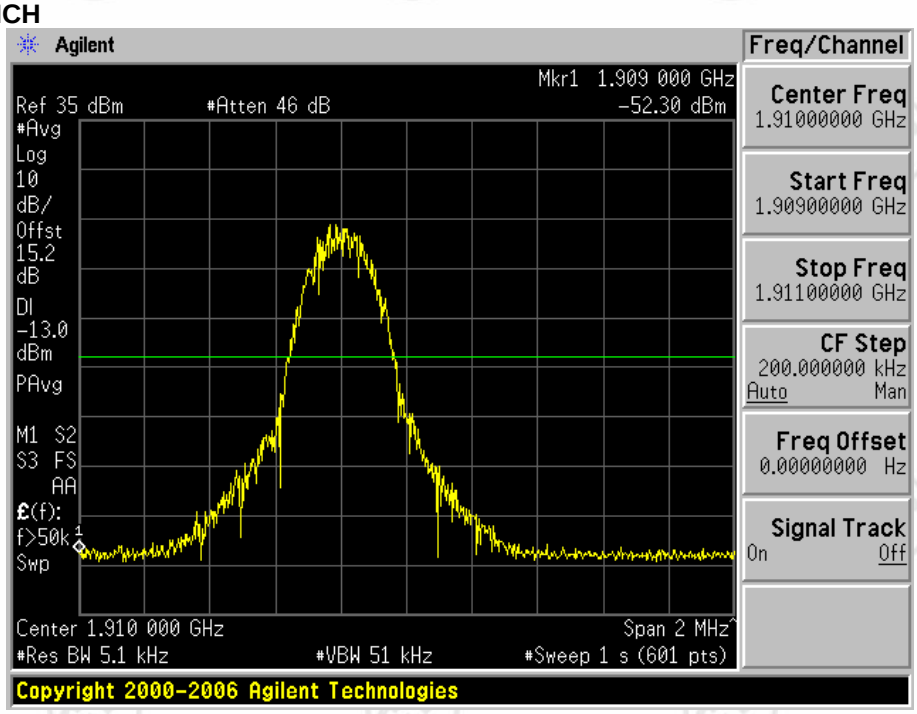



**Test Mode=GSM/TM3**

**Test Channel=LCH**



**Test Channel=HCH**

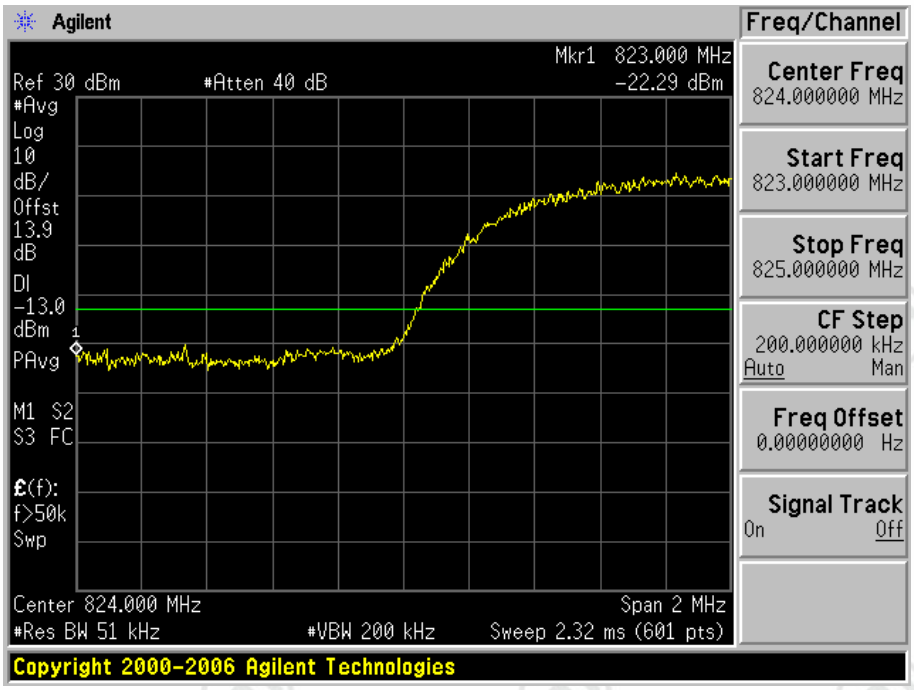



**For WCDMA**

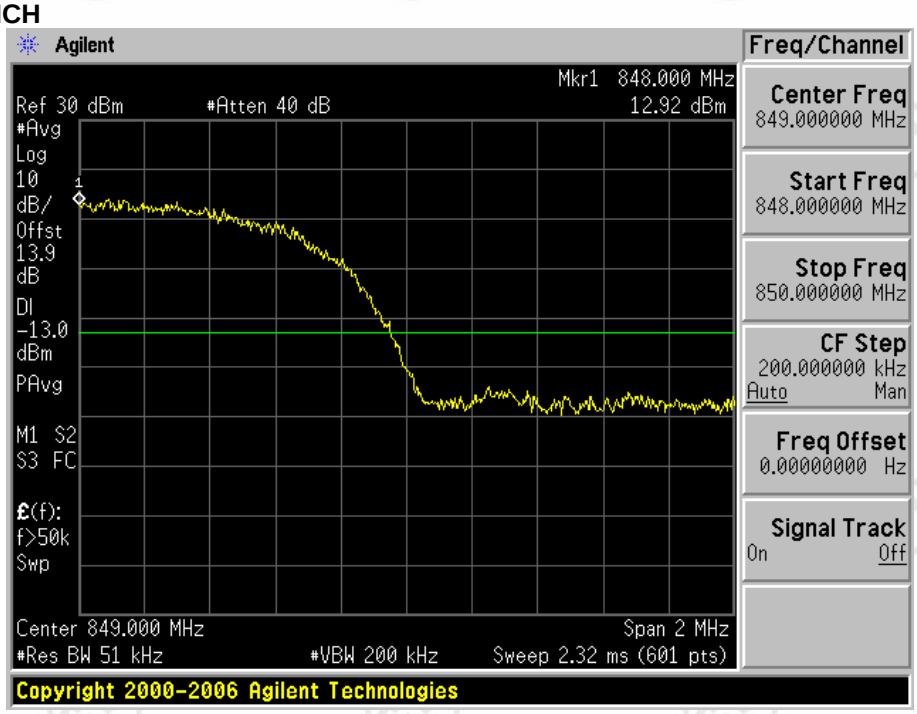
**Test Band=WCDMA850**

**Test Mode=UMTS/TM1**

**Test Channel=LCH**



**Test Channel=HCH**

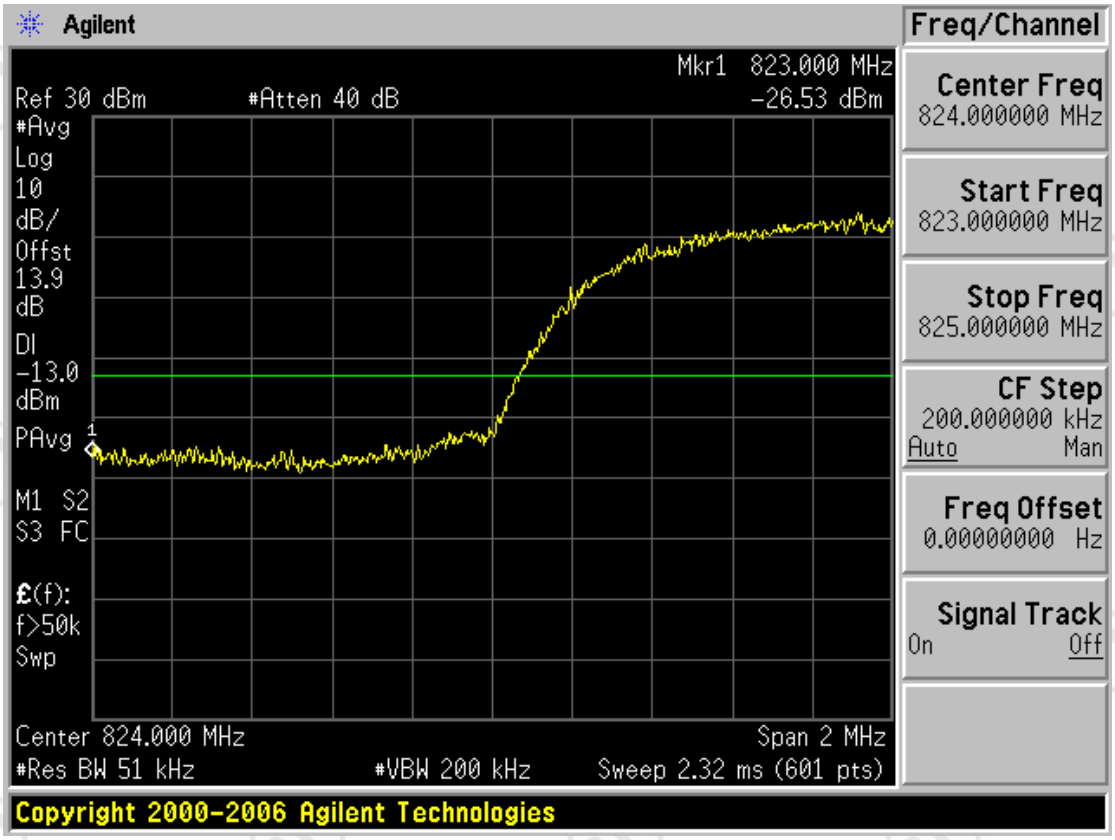



**For WCDMA**

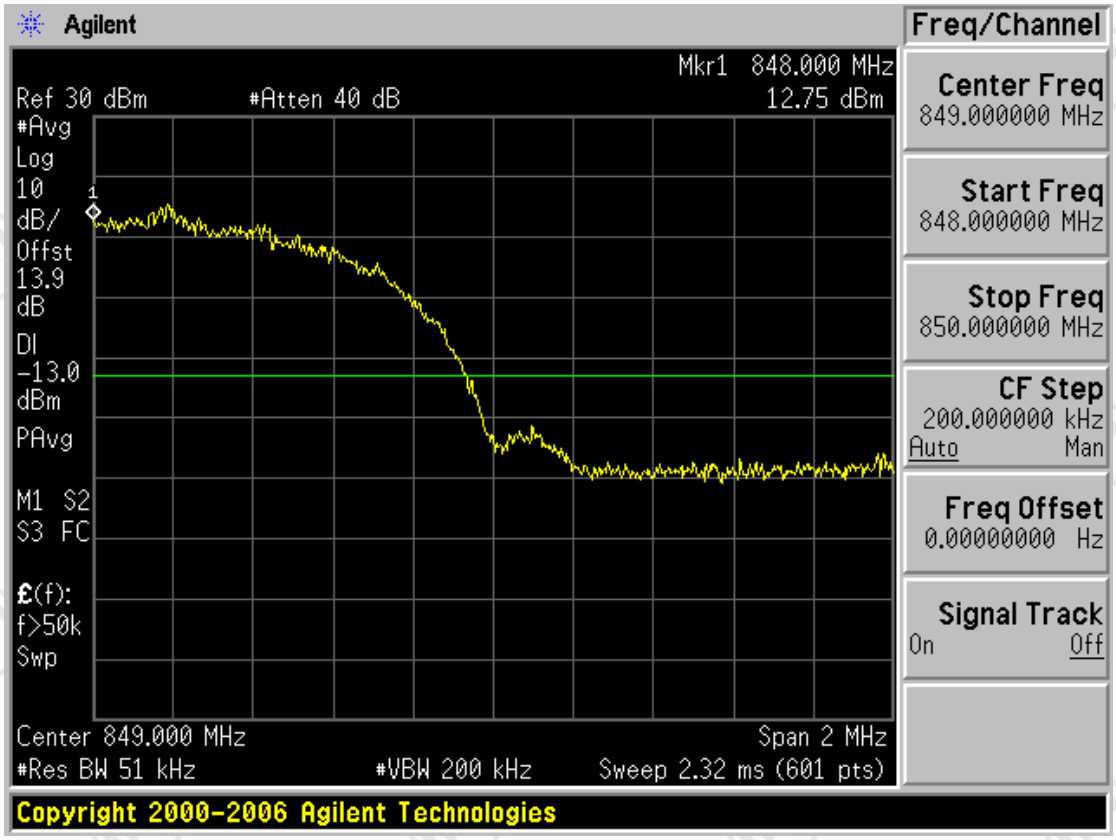
**Test Band=WCDMA850**

**Test Mode=UMTS/TM2**

**Test Channel=LCH**



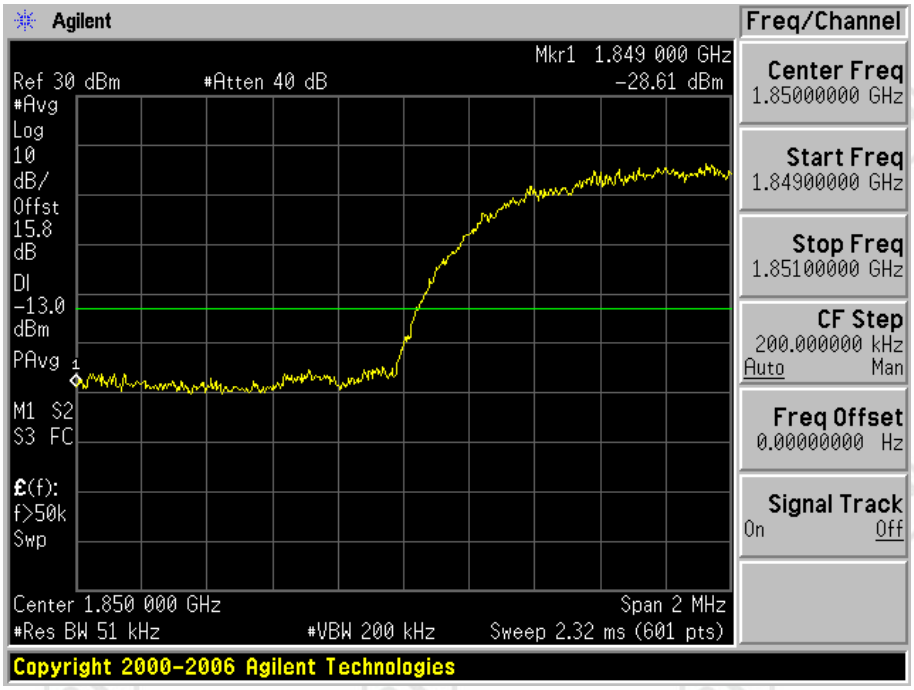
**Test Channel=HCH**



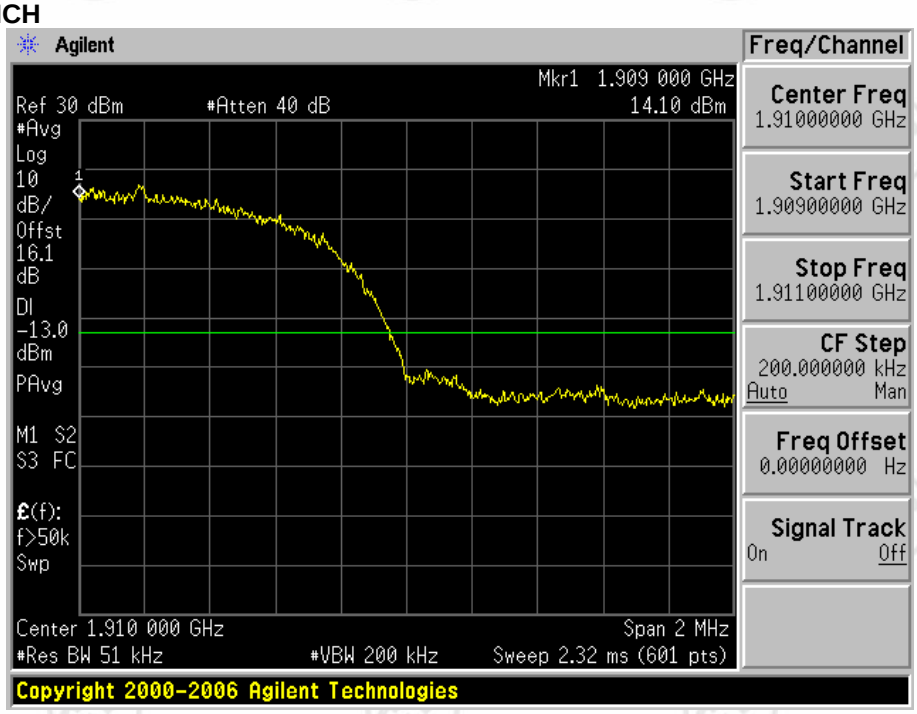

**Test Band=WCDMA1900**

**Test Mode=UMTSTM1**

**Test Channel=LCH**



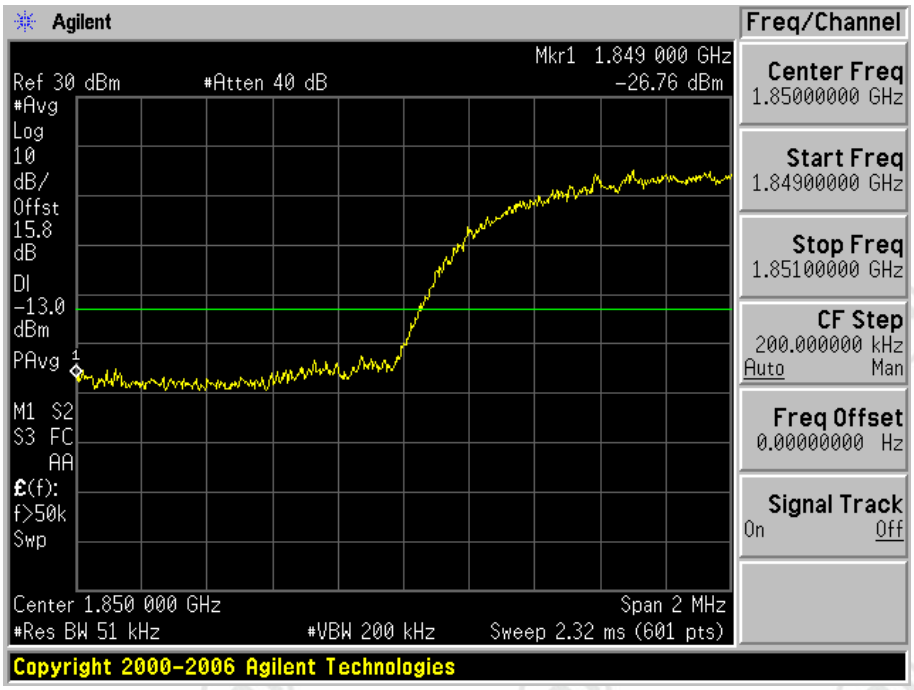
**Test Channel=HCH**



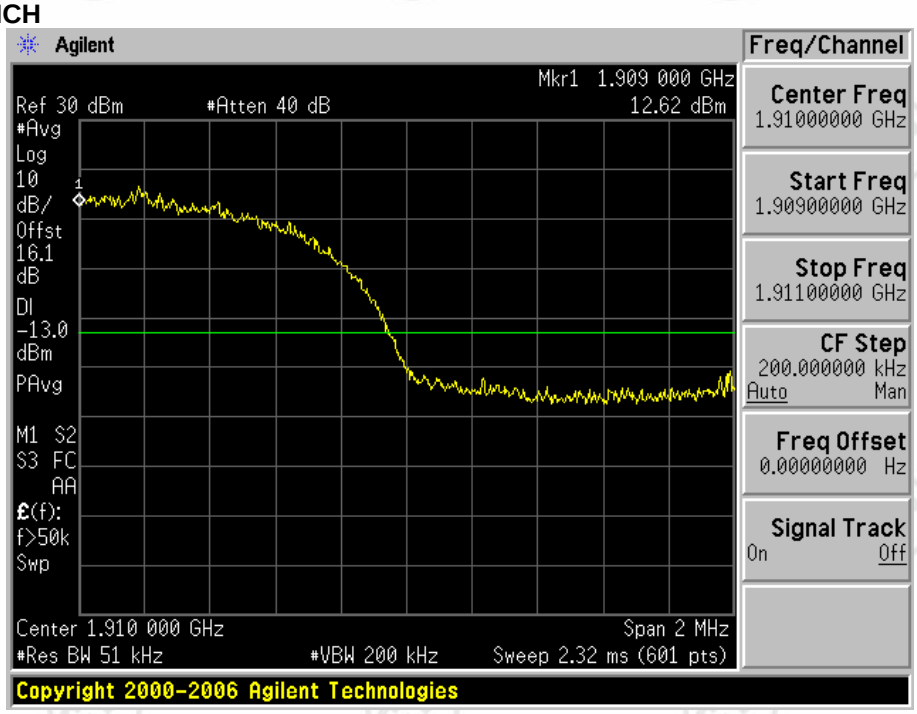

**Test Band=WCDMA1900**

**Test Mode=UMTSTM2**

**Test Channel=LCH**



**Test Channel=HCH**



# Appendix E): Spurious Emission at Antenna Terminal

| | |
|---|---|
| **Test Requirement:** | Part 2.1051/Part 2.1057 |
| **Test Method:** | TIA-603-D-2010 Clause 2.2.13 |
| **Test Setup:** | Refer to section 5 for details |
| **Measurement Procedure:** | The transmitter output was connected to a calibrated coaxial cable, attenuator and Spectrum analyzer, the other end of which was connected to a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel and high channel).the equipment operates below 10GHz: to the tenth harmonic of the highest fundamental frequency or to 40GHz.whichever is lower, the resolution bandwidth of the spectrum analyzer was set at 100kHz for spurious emissions below 1 GHz, and 1 MHz for spurious emissions above 1GHz.the video bandwidth of the spectrum analyzer was set at thrice the resolution bandwidth. Detector Mode was set to mean or average power. |
| **Instruments Used:** | Refer to section 7 for details |
| **Limit:** | Attenuated at least 43+10log(P) |
| **Test Results:** | Pass |

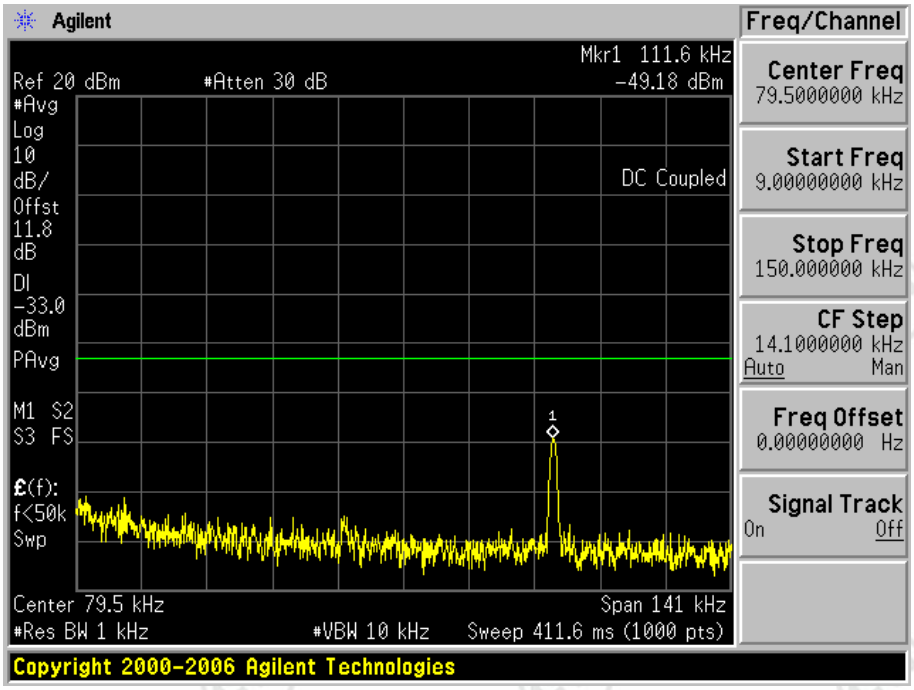
**Test Graphs:**

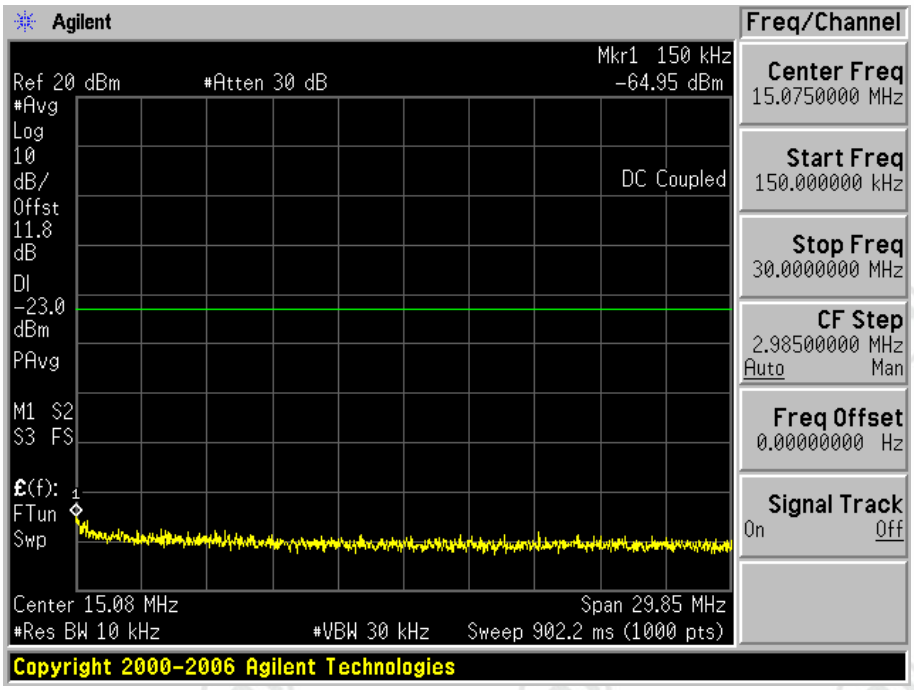
**For GSM**

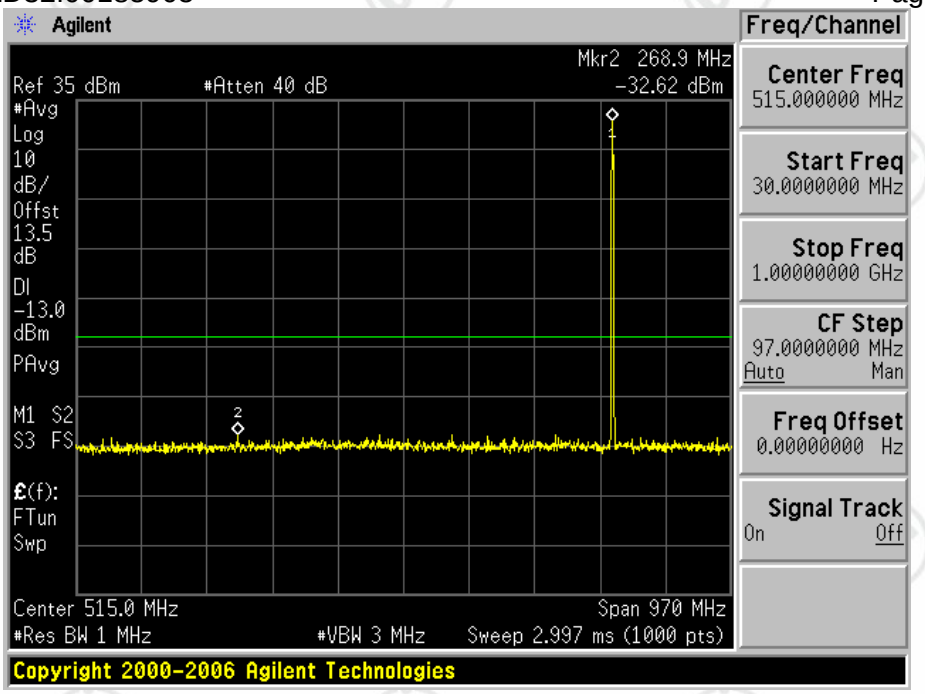
**Test Band=GSM850**

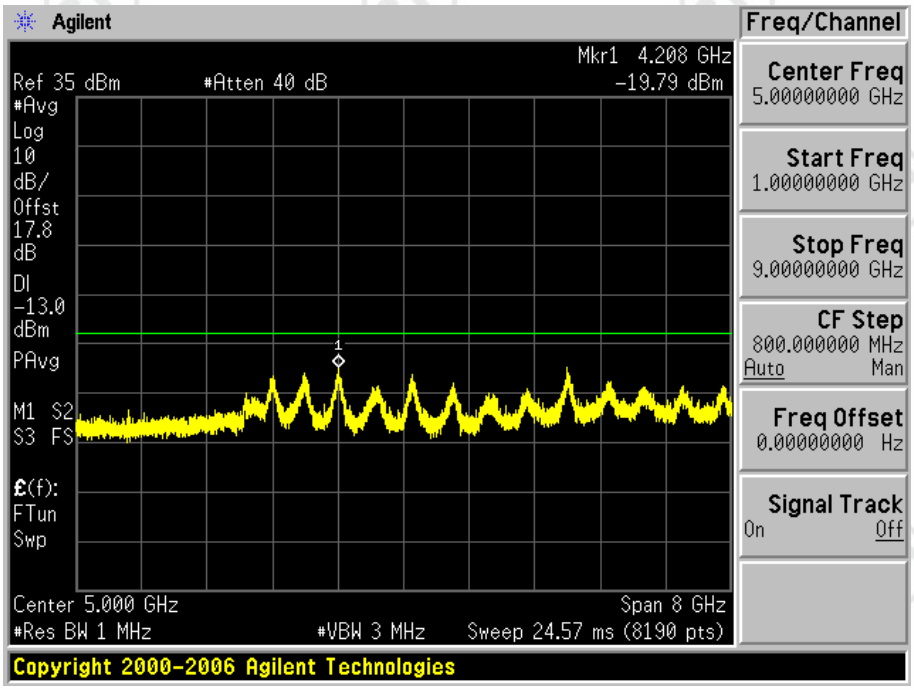
**Test Mode=GSM/TM1**

**Test Channel=LCH**

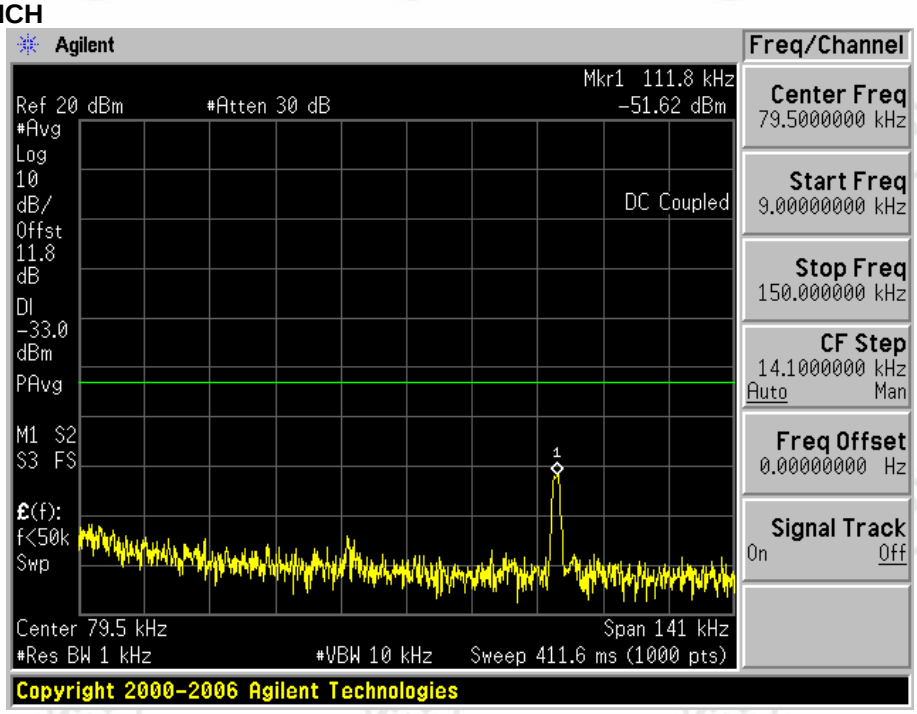


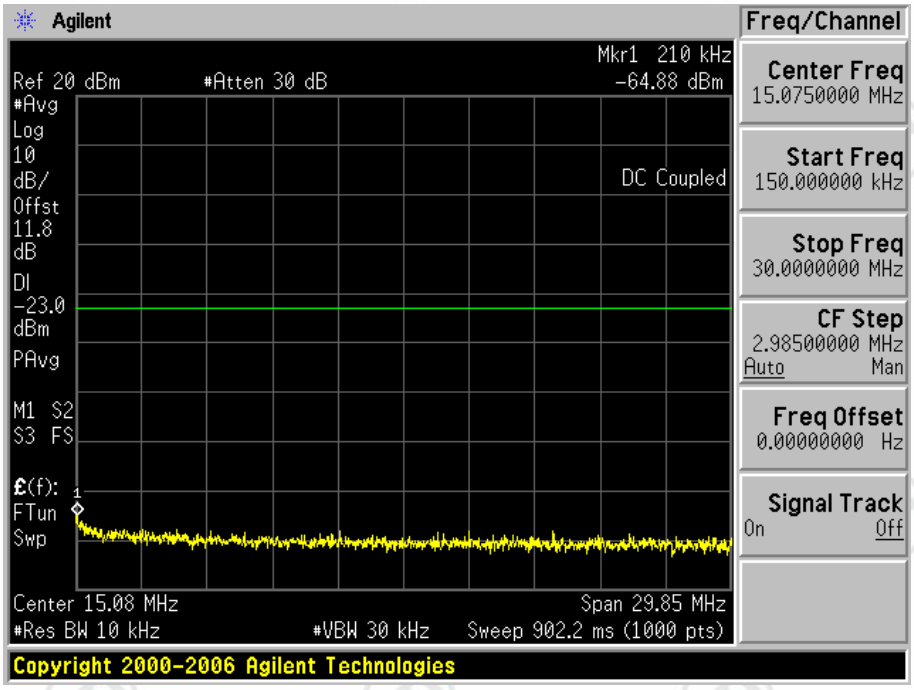



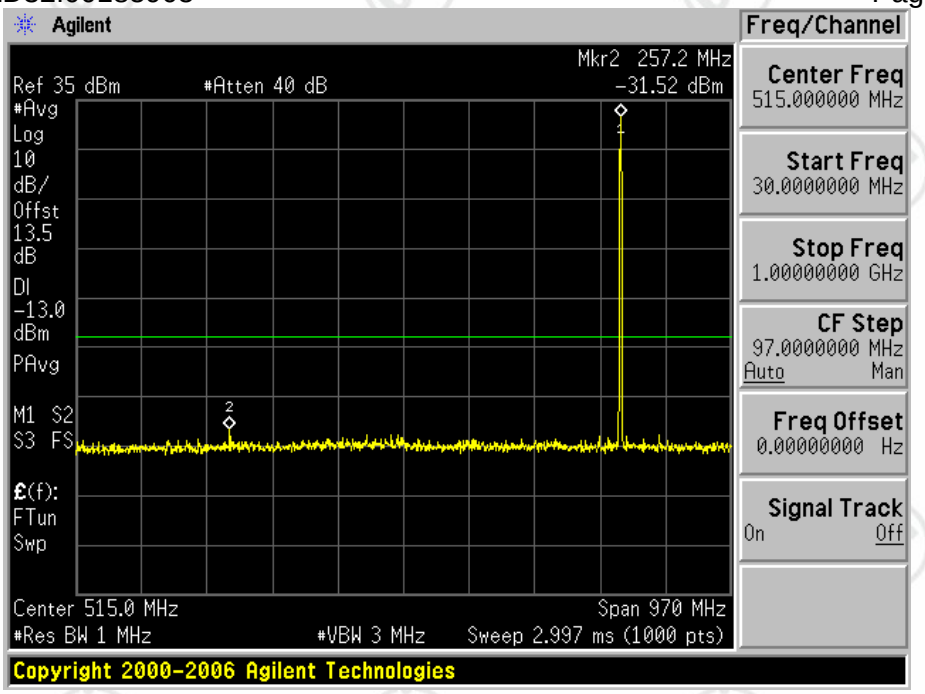

Agilent
Freq/Channel
Mkr2 268.9 MHz
Ref 35 dBm
#Atten 40 dB
-32.62 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

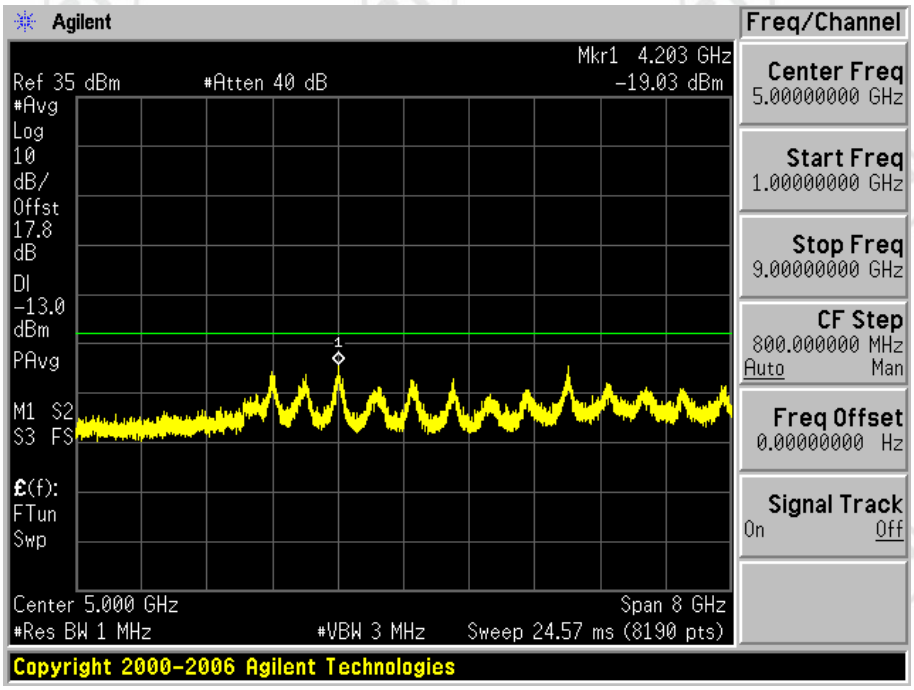

Agilent
Freq/Channel
Mkr1 4.208 GHz
Ref 35 dBm
#Atten 40 dB
-19.79 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.57 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

**Test Channel=MCH**

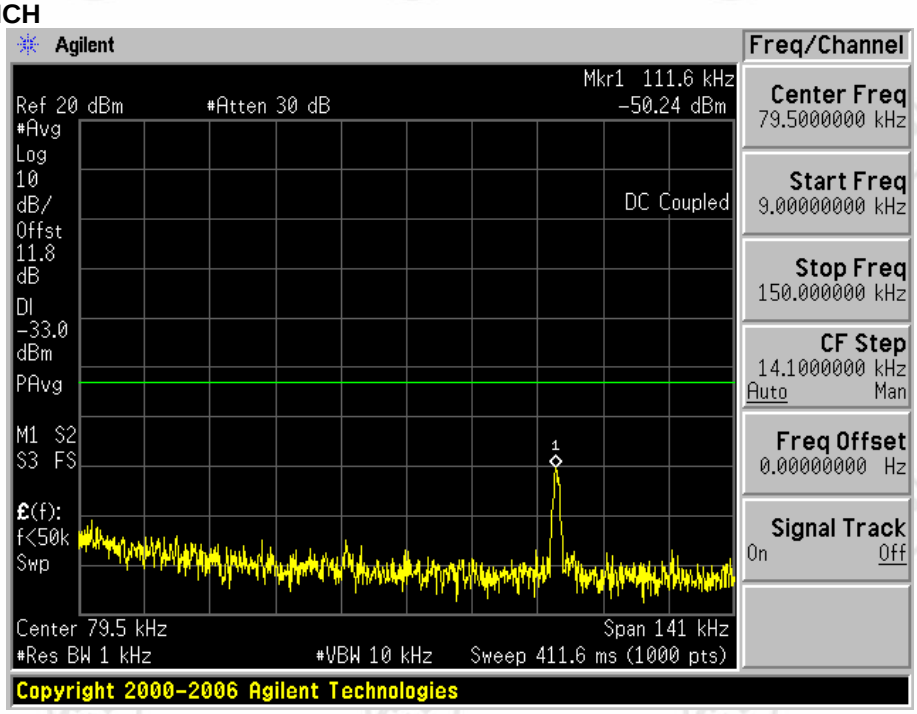


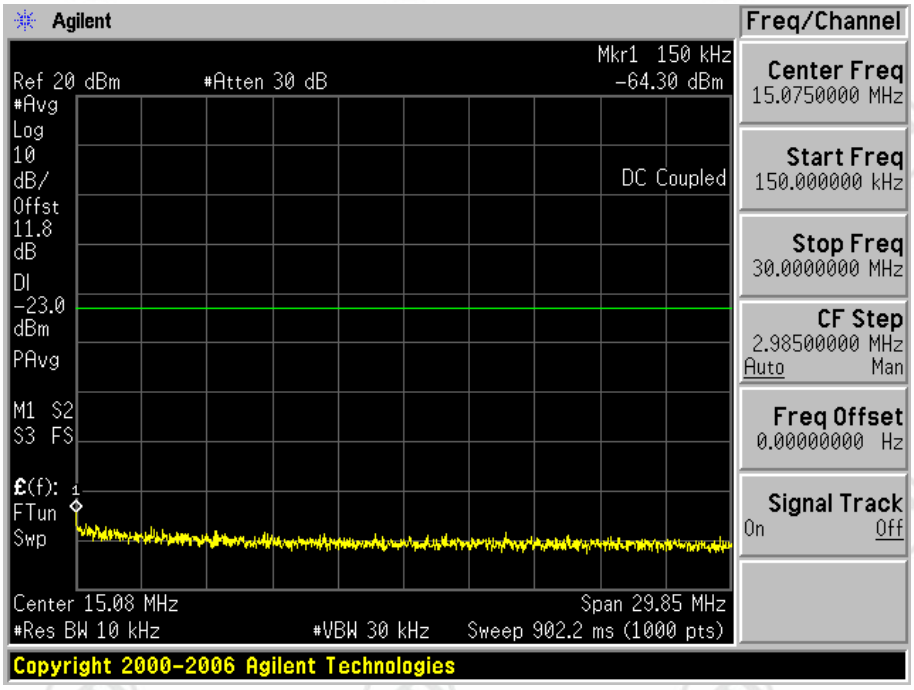



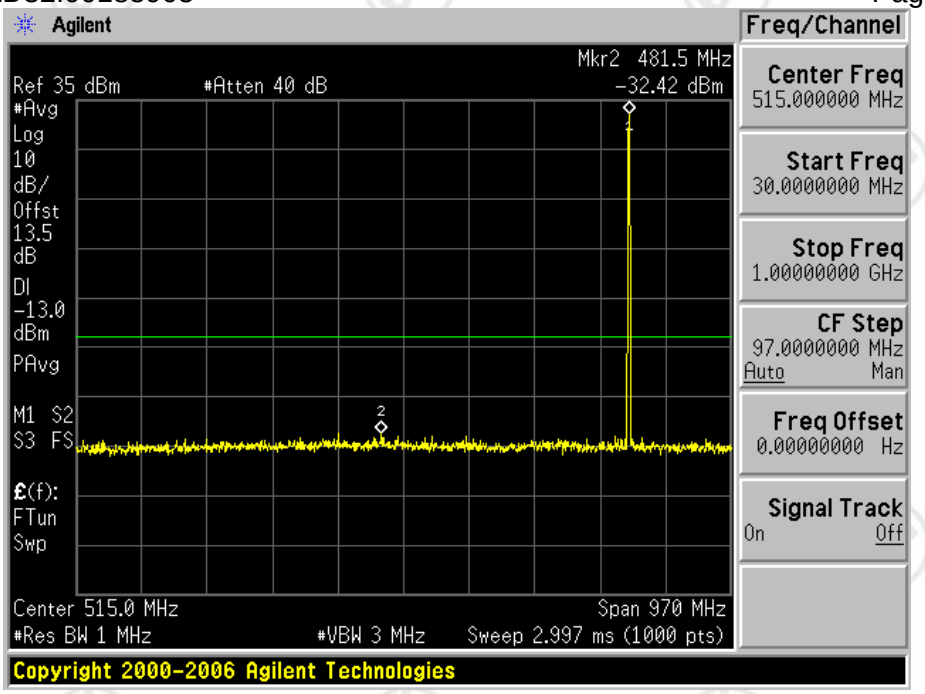

Agilent
Freq/Channel
Mkr2 257.2 MHz
Ref 35 dBm
#Atten 40 dB
-31.52 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

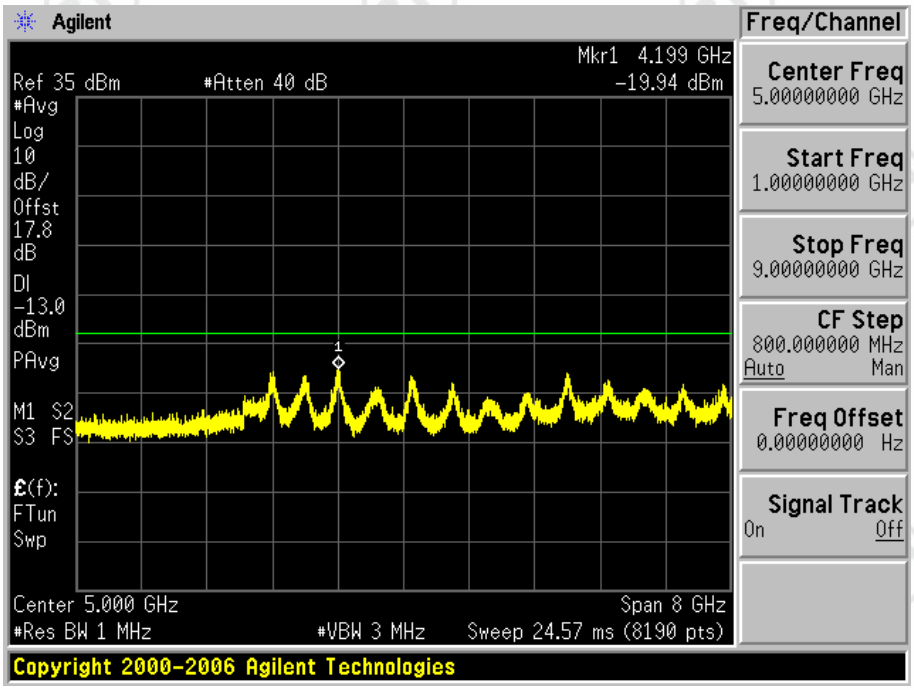

Agilent
Freq/Channel
Mkr1 4.203 GHz
Ref 35 dBm
#Atten 40 dB
-19.03 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.57 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

**Test Channel=HCH**



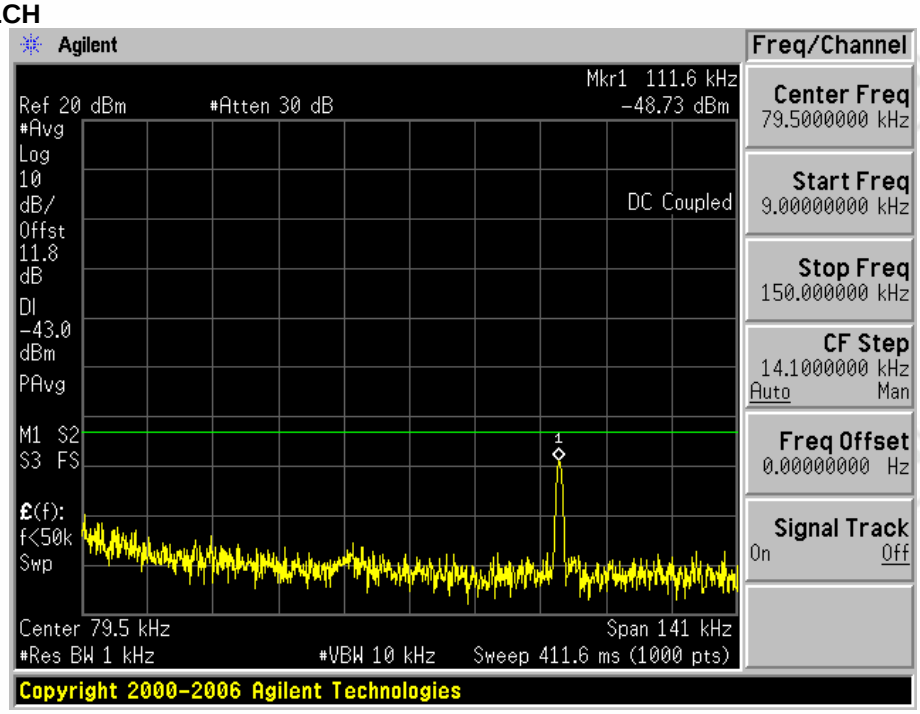



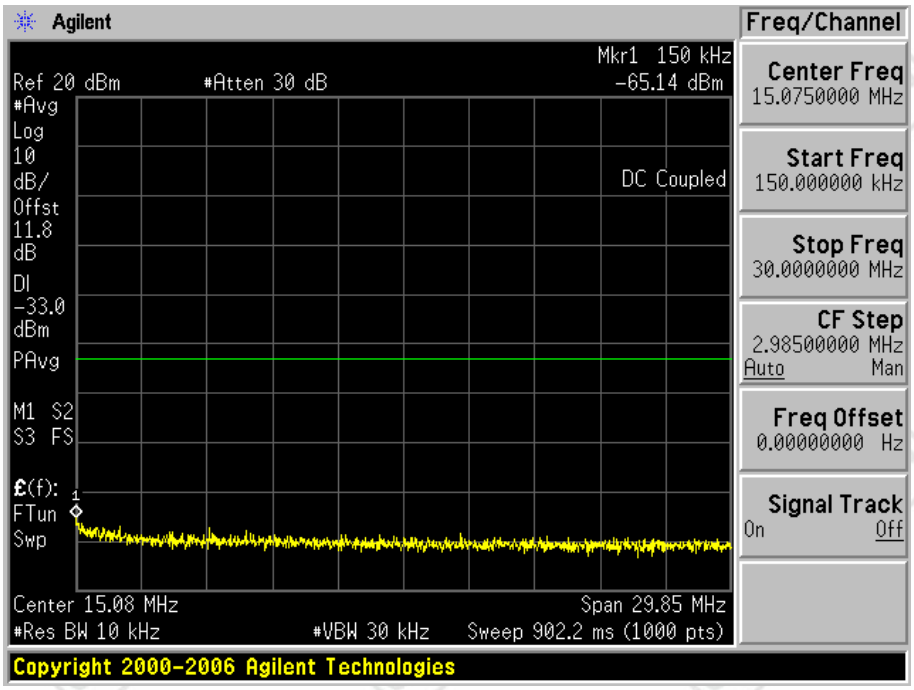

Agilent
Freq/Channel
Mkr2 481.5 MHz
Ref 35 dBm
#Atten 40 dB
-32.42 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

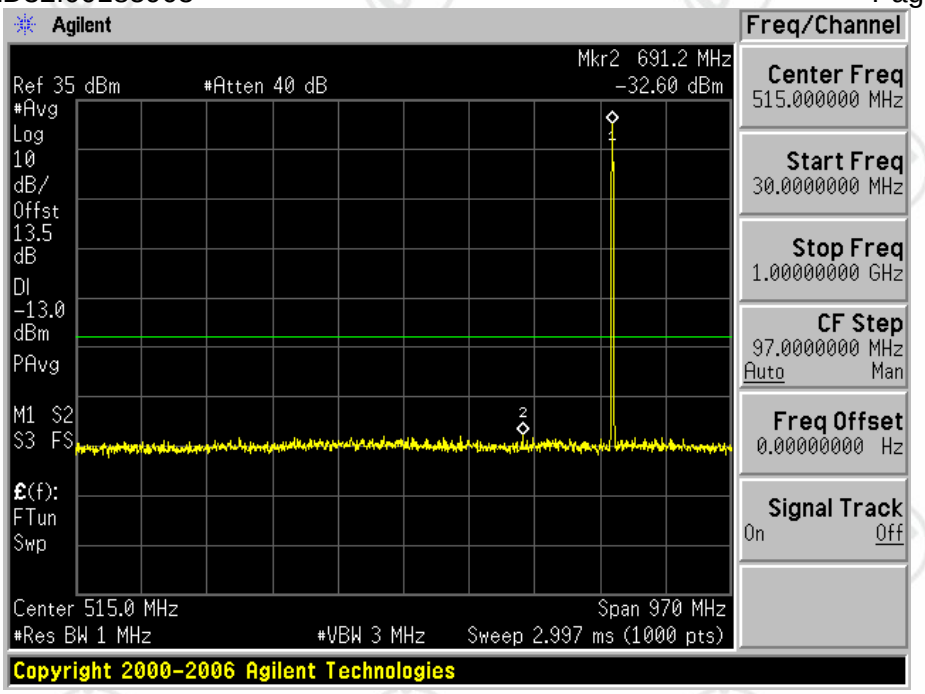

Agilent
Freq/Channel
Mkr1 4.199 GHz
Ref 35 dBm
#Atten 40 dB
-19.94 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.57 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

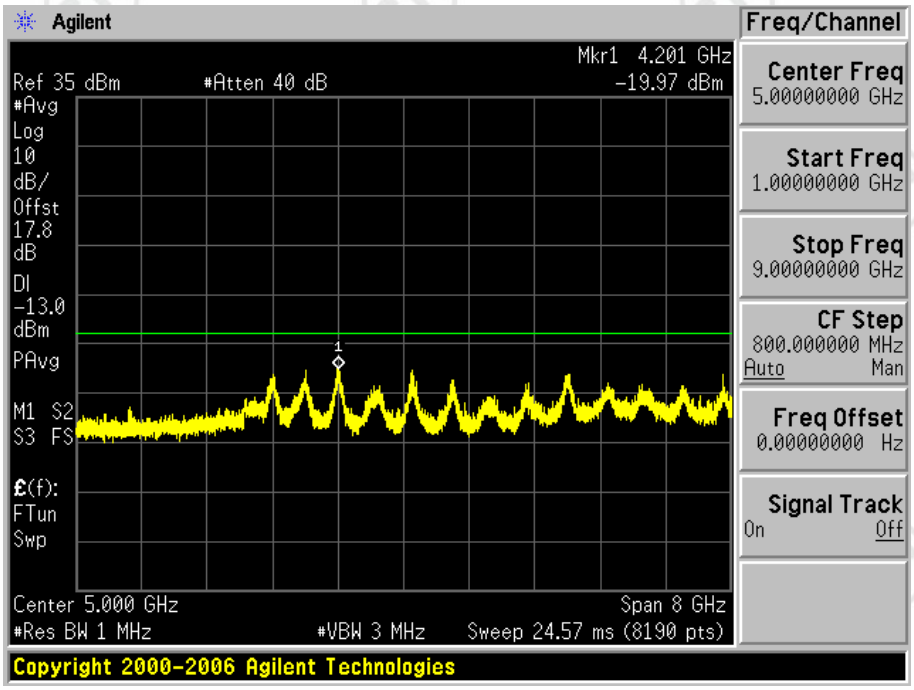
**Test Mode=GSM/TM2**

**Test Channel=LCH**

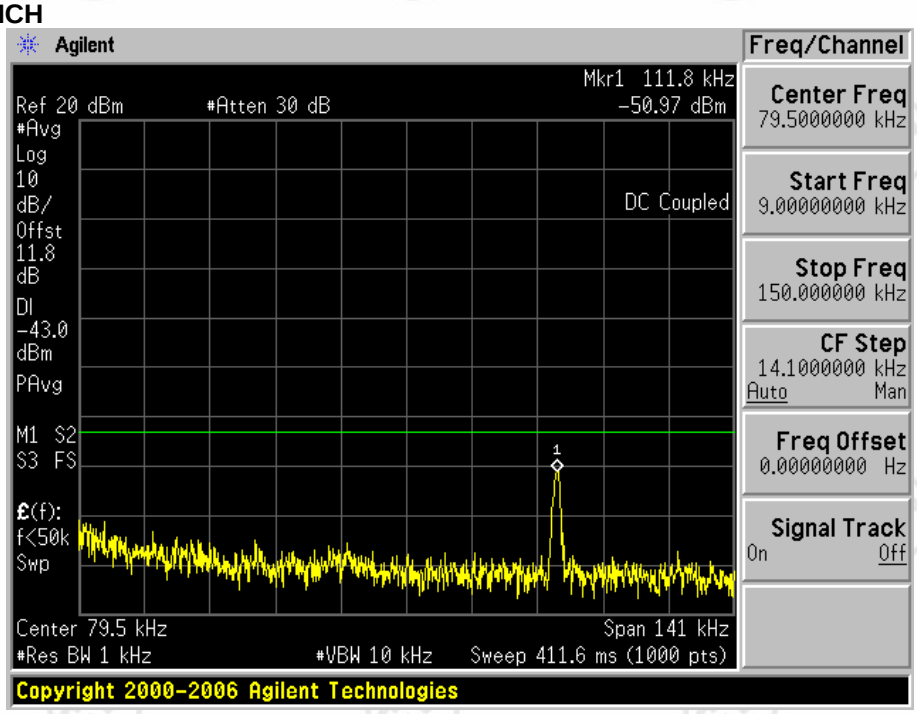


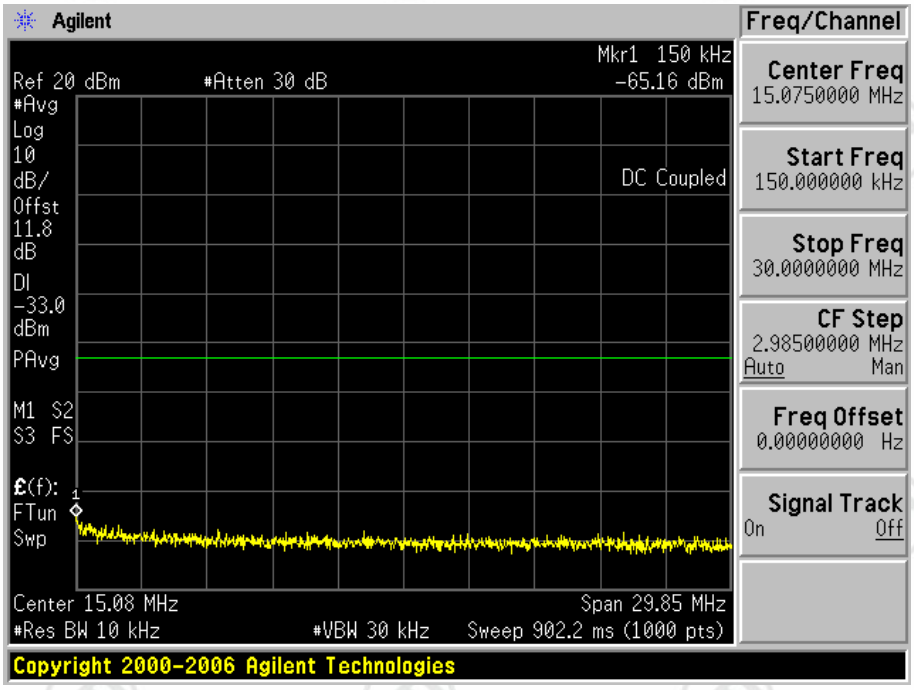



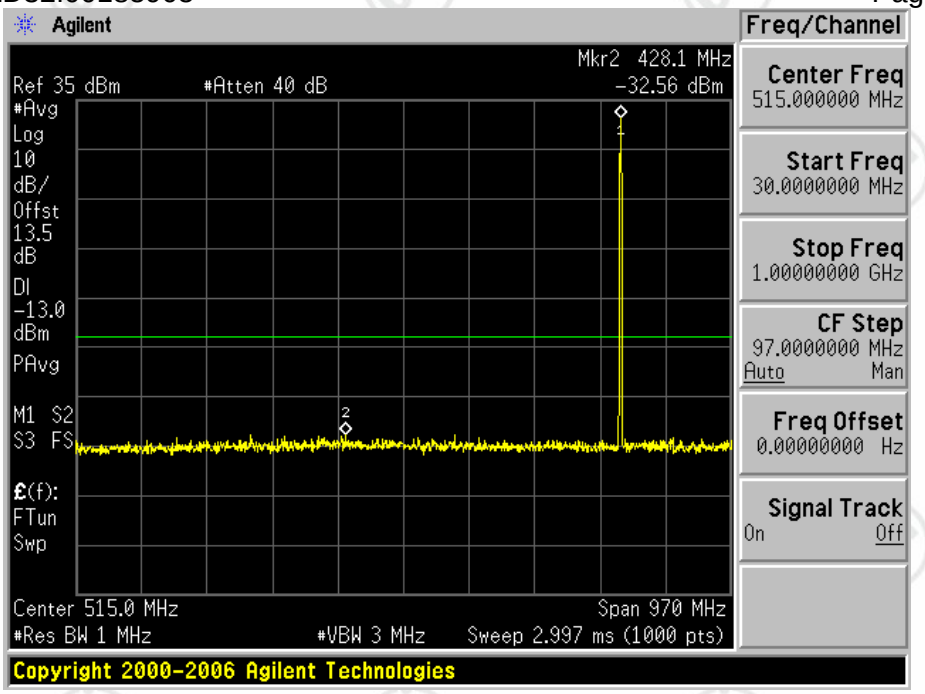

Agilent
Freq/Channel
Mkr2 691.2 MHz
Ref 35 dBm
#Atten 40 dB
-32.60 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

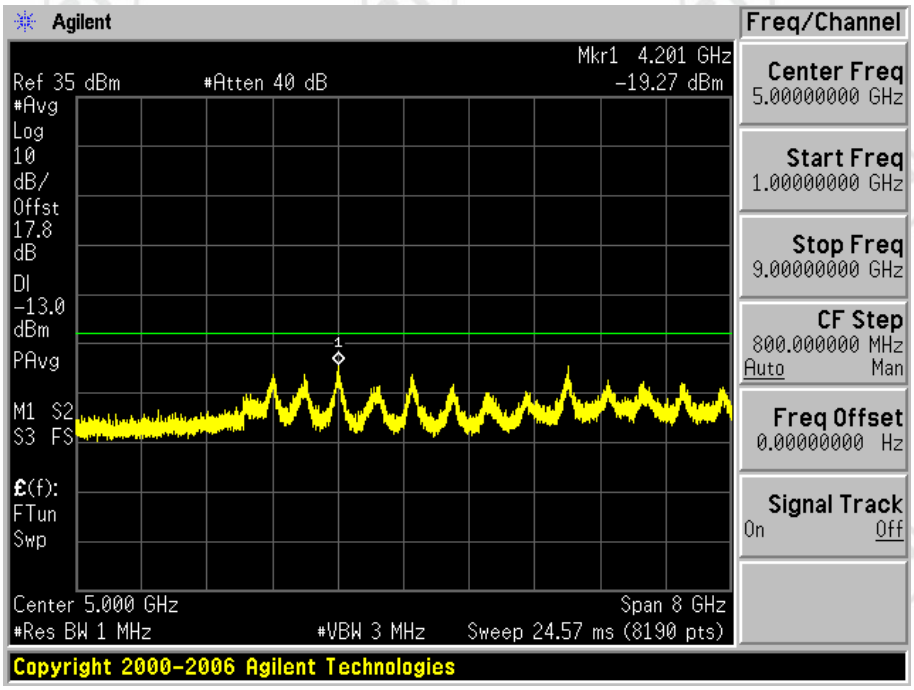

Agilent
Freq/Channel
Mkr1 4.201 GHz
Ref 35 dBm
#Atten 40 dB
-19.97 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.57 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

**Test Channel=MCH**

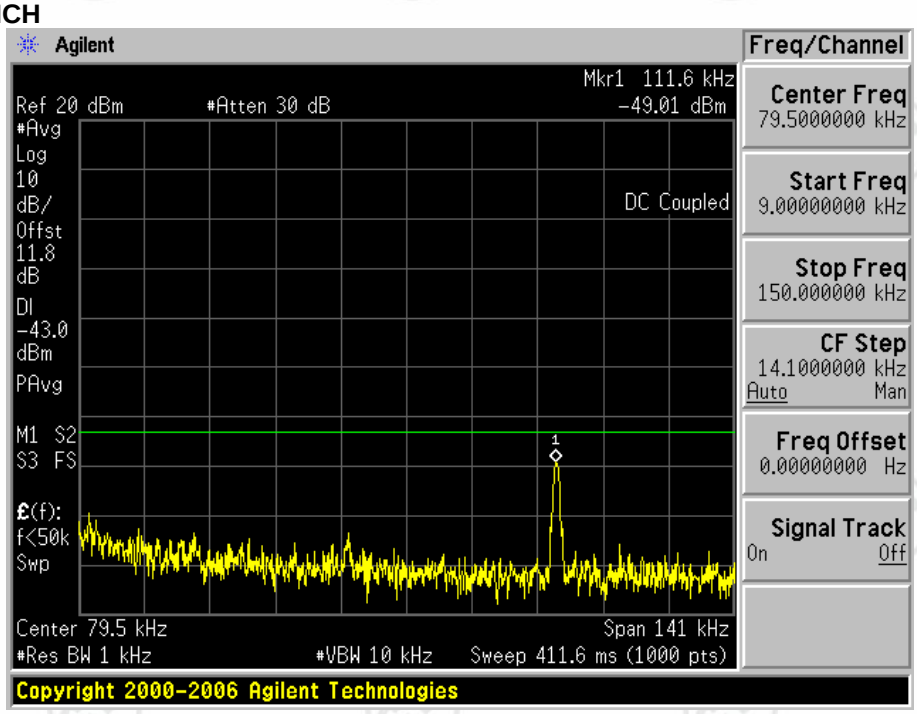


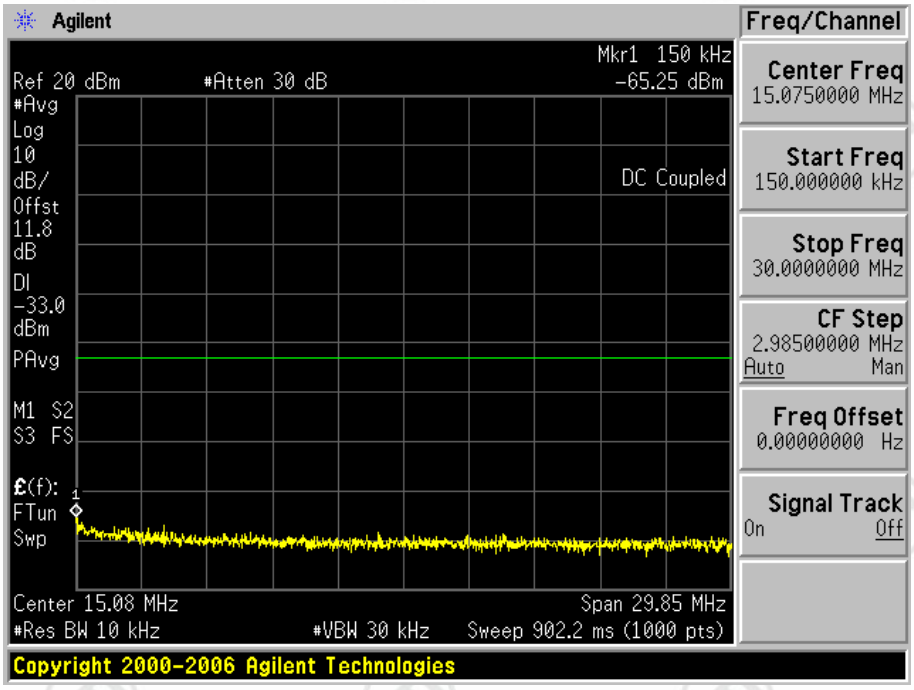



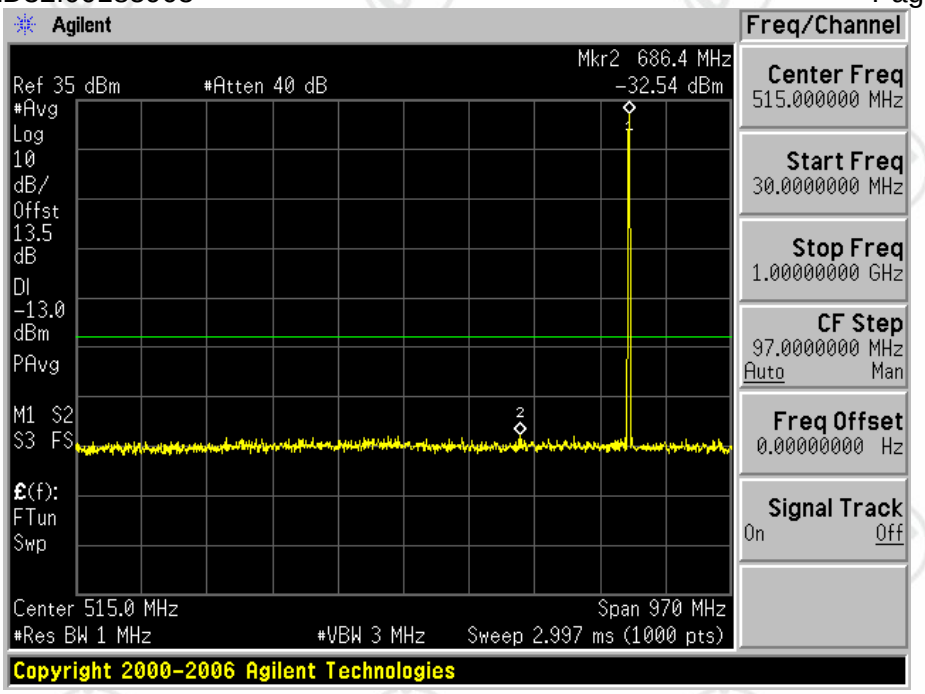

Agilent
Freq/Channel
Mkr2 428.1 MHz
Ref 35 dBm
#Atten 40 dB
-32.56 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

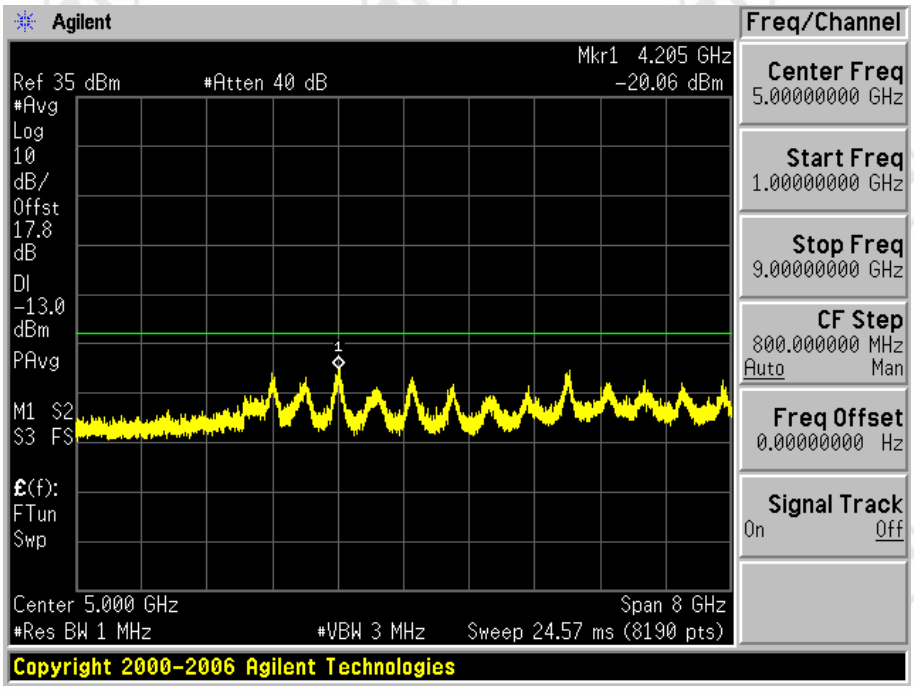

Agilent
Freq/Channel
Mkr1 4.201 GHz
Ref 35 dBm
#Atten 40 dB
-19.27 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.57 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

**Test Channel=HCH**



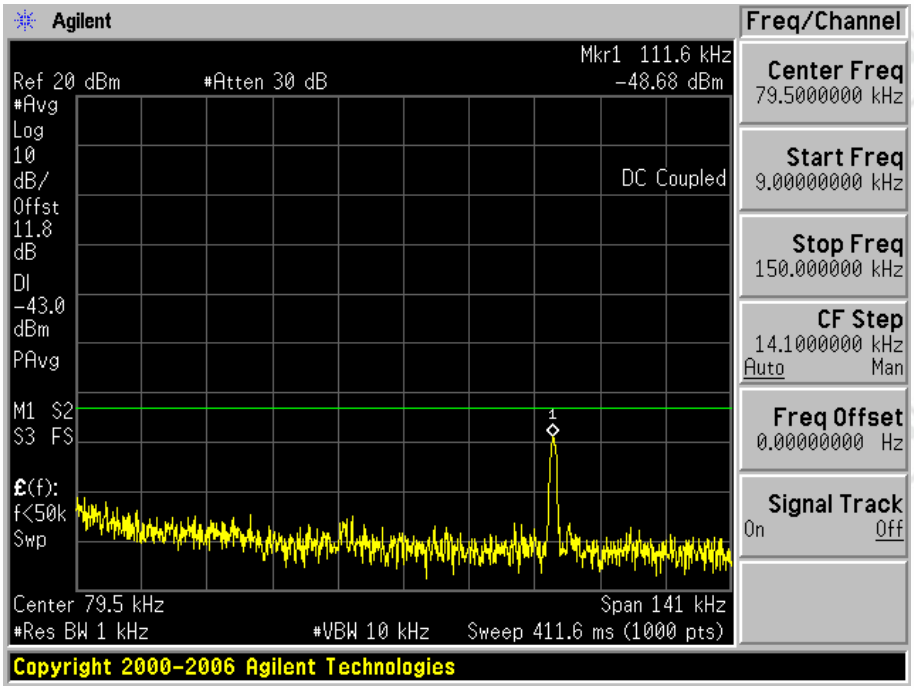



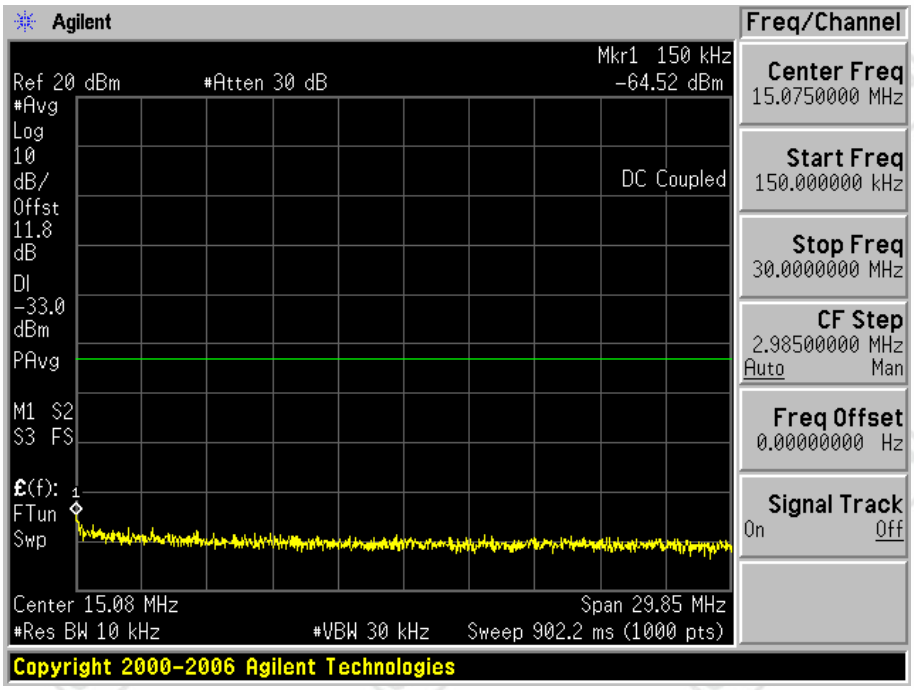

Agilent
Freq/Channel
Mkr2 686.4 MHz
Ref 35 dBm
#Atten 40 dB
-32.54 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

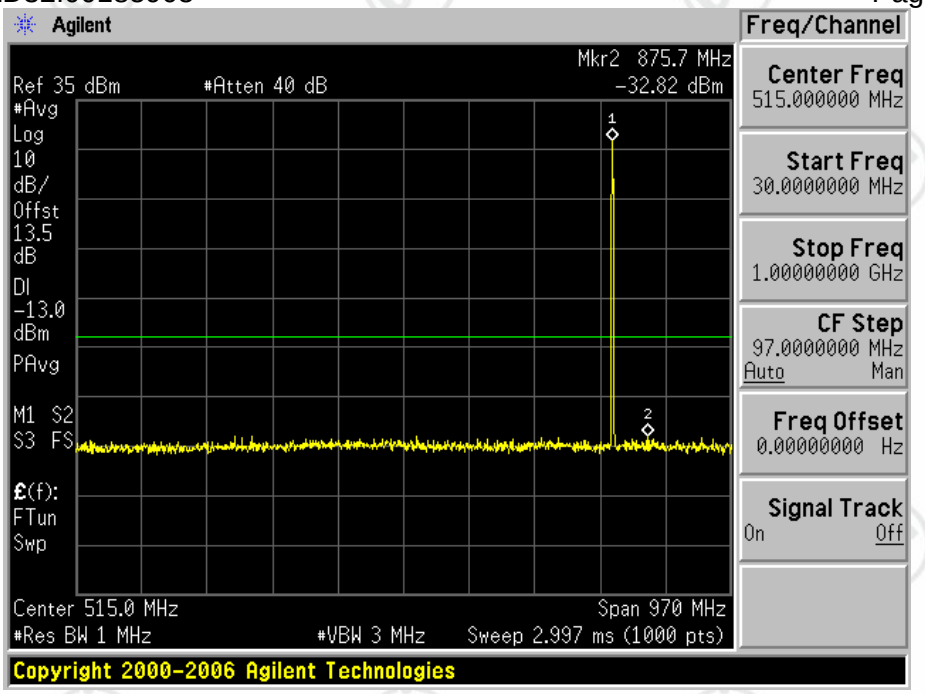

Agilent
Freq/Channel
Mkr1 4.205 GHz
Ref 35 dBm
#Atten 40 dB
-20.06 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.57 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

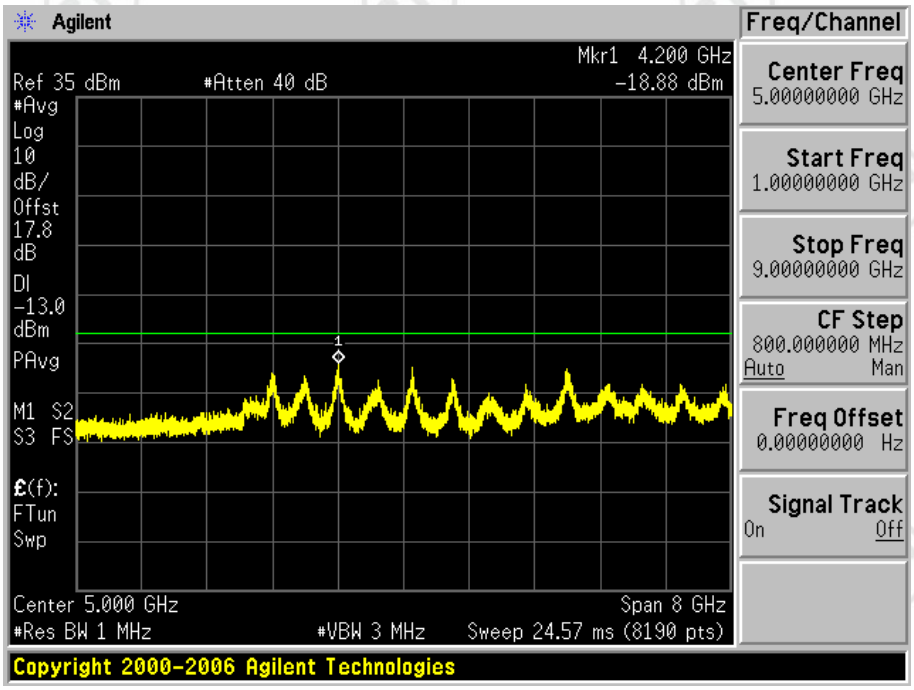
**Test Mode=GSM/TM3**

**Test Channel=LCH**

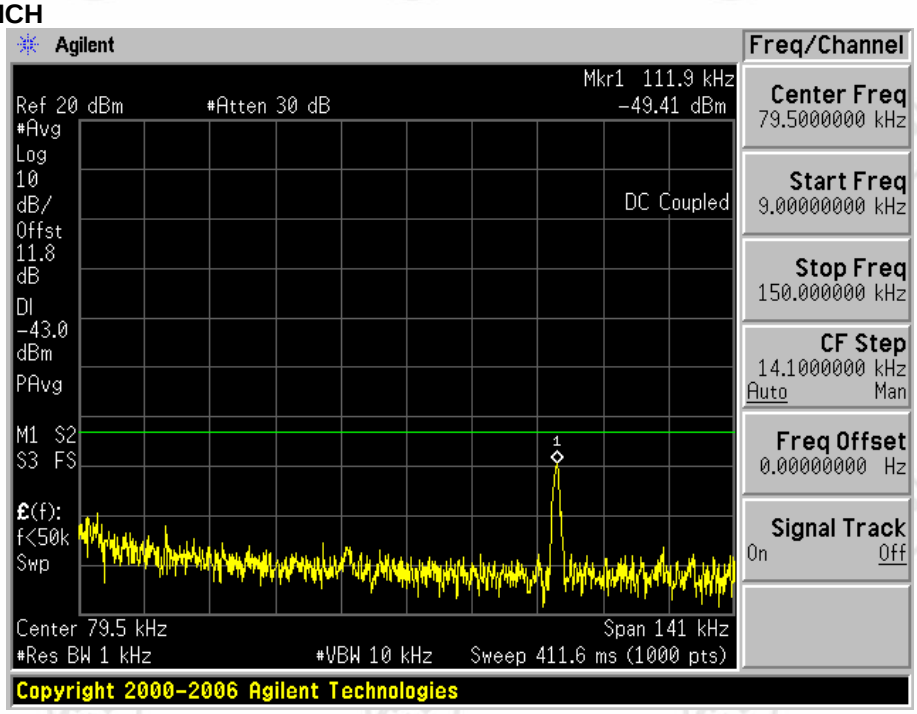


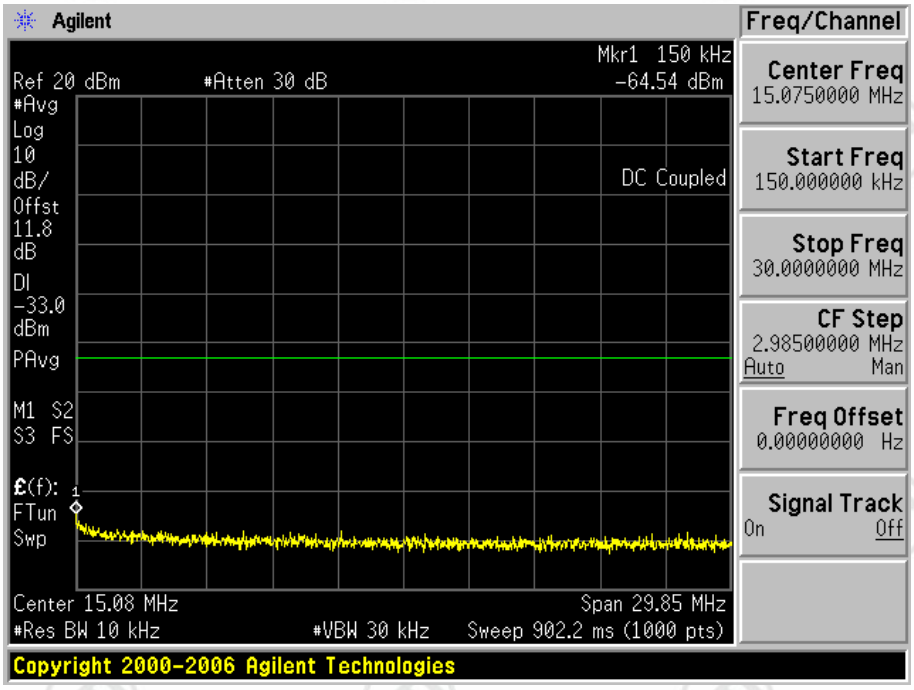



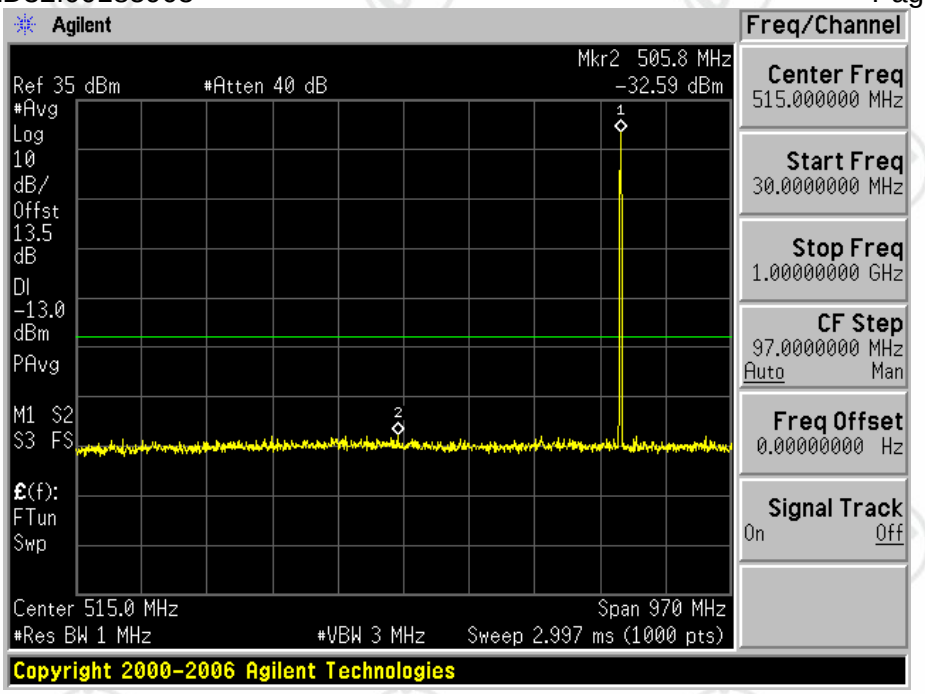

Agilent
Freq/Channel
Mkr2 875.7 MHz
Ref 35 dBm
#Atten 40 dB
-32.82 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

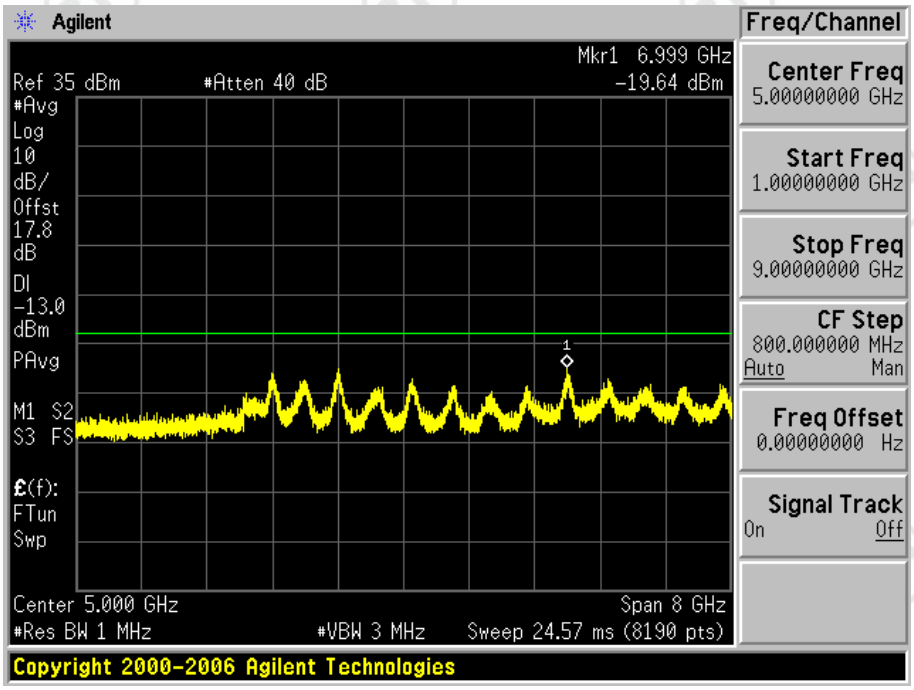

Agilent
Freq/Channel
Mkr1 4.200 GHz
Ref 35 dBm
#Atten 40 dB
-18.88 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.57 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

**Test Channel=MCH**

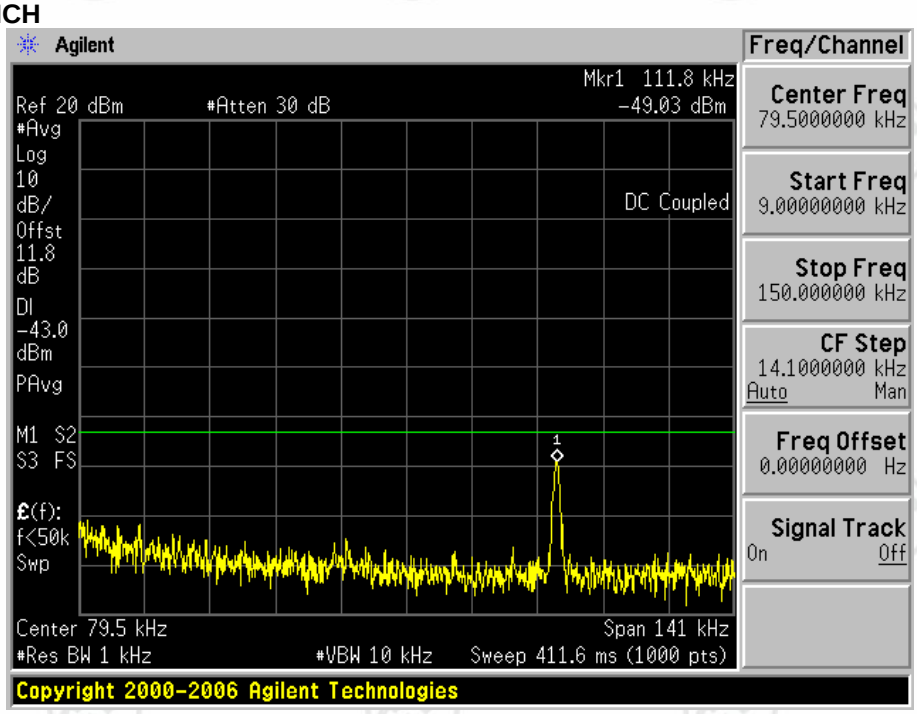


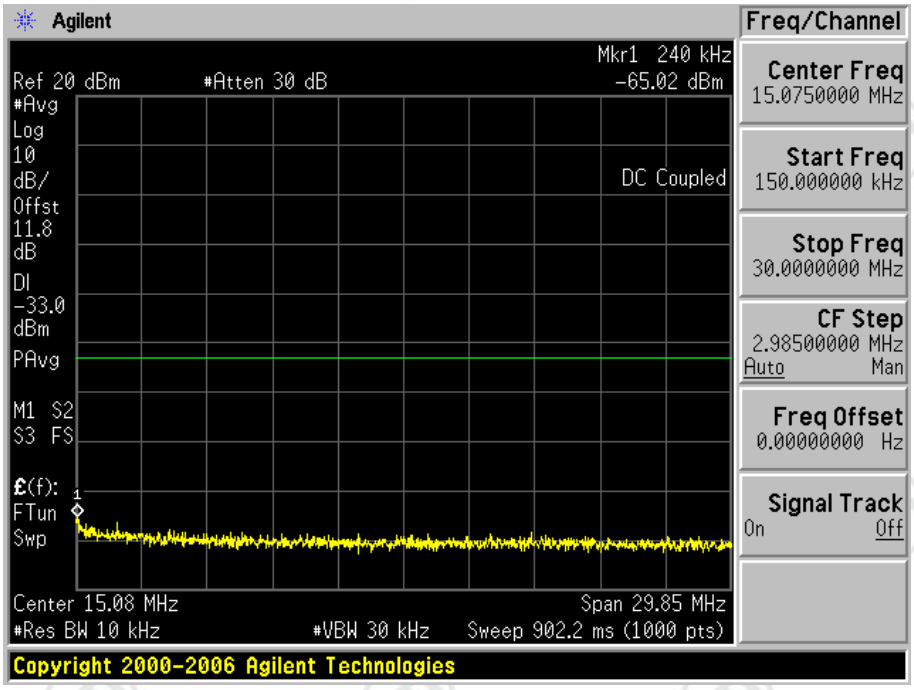



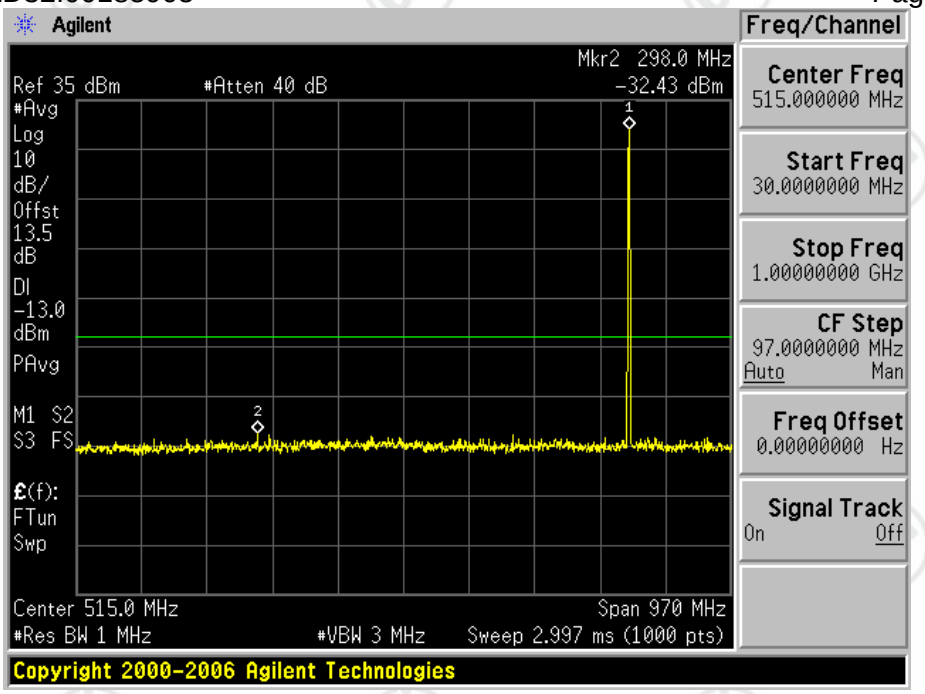

Agilent
Freq/Channel
Mkr2 505.8 MHz
Ref 35 dBm
#Atten 40 dB
-32.59 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

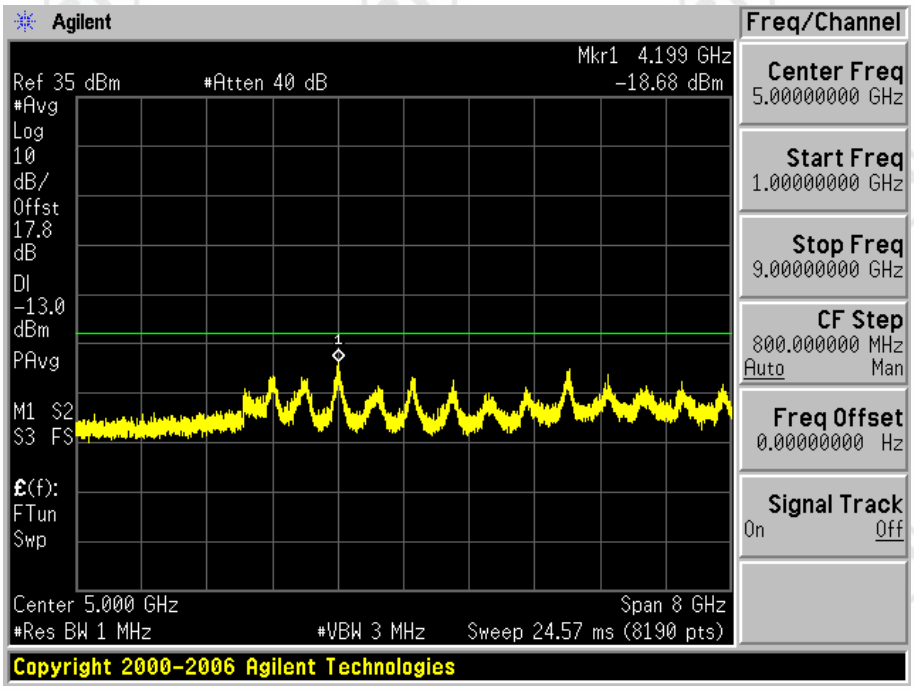

Agilent
Freq/Channel
Mkr1 6.999 GHz
Ref 35 dBm
#Atten 40 dB
-19.64 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.57 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

**Test Channel=HCH**



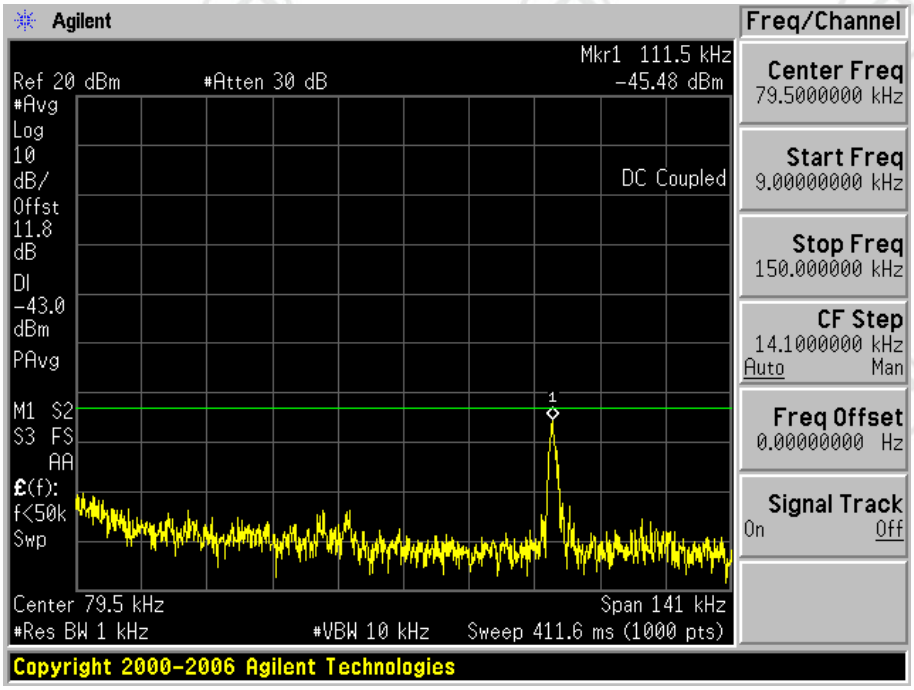

Agilent
Freq/Channel
Mkr2 298.0 MHz
Ref 35 dBm
#Atten 40 dB
-32.43 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

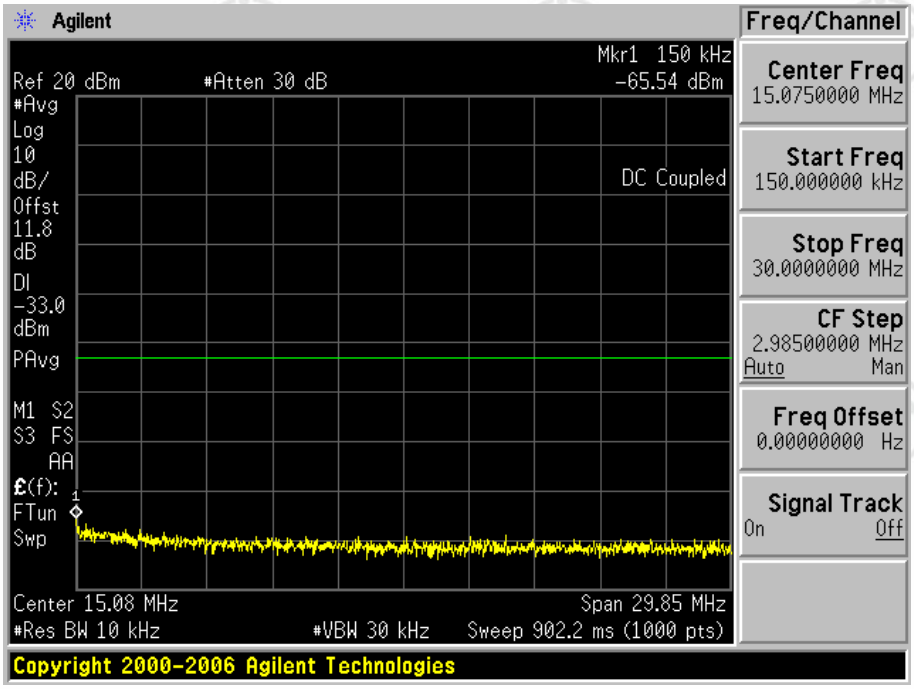

Agilent
Freq/Channel
Mkr1 4.199 GHz
Ref 35 dBm
#Atten 40 dB
-18.68 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.57 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

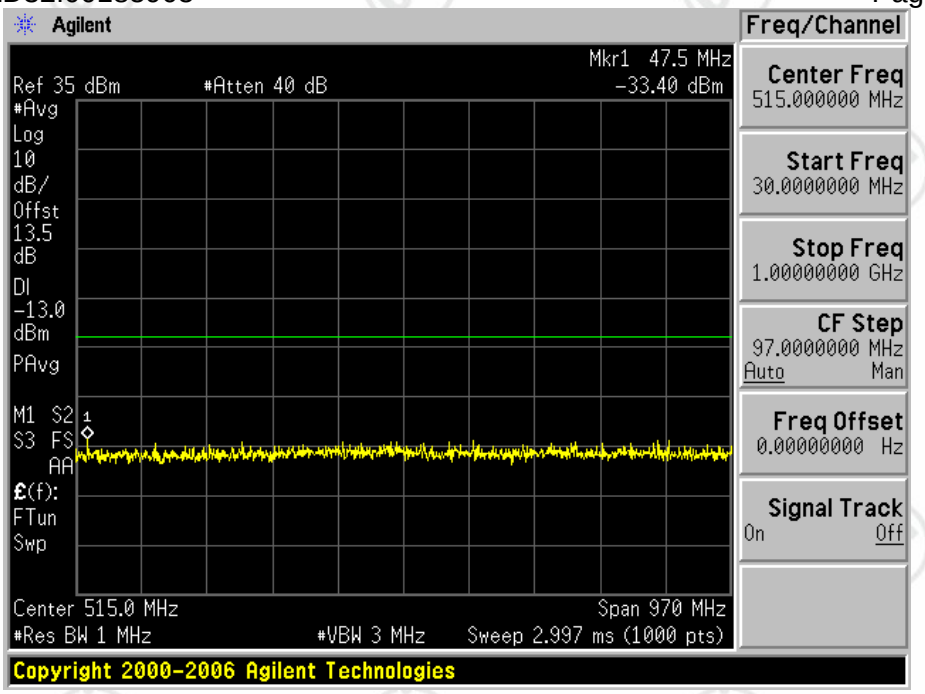
**Test Band=GSM1900**

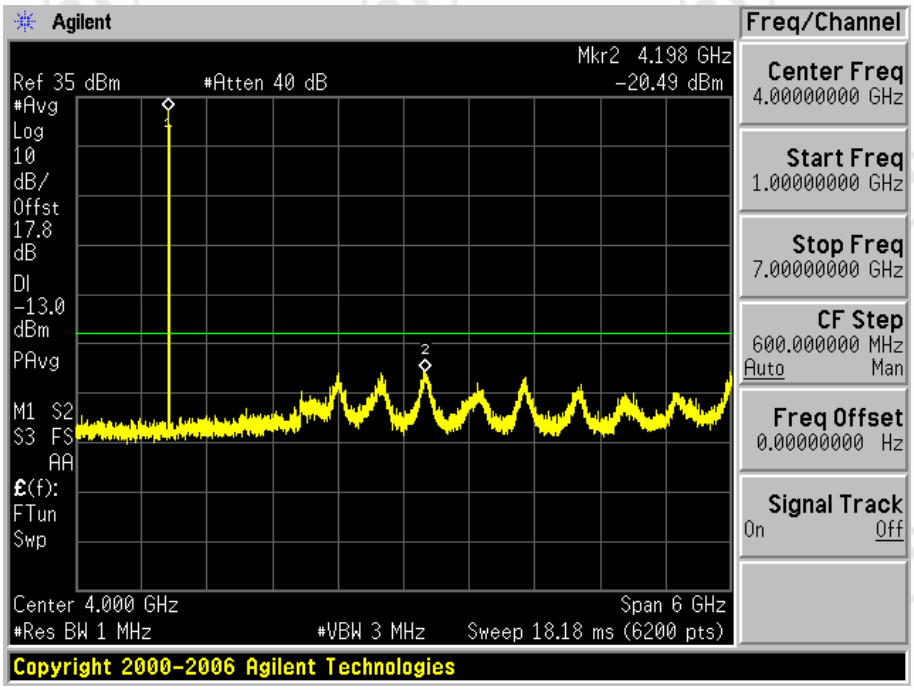
**Test Mode=GSM/TM1**

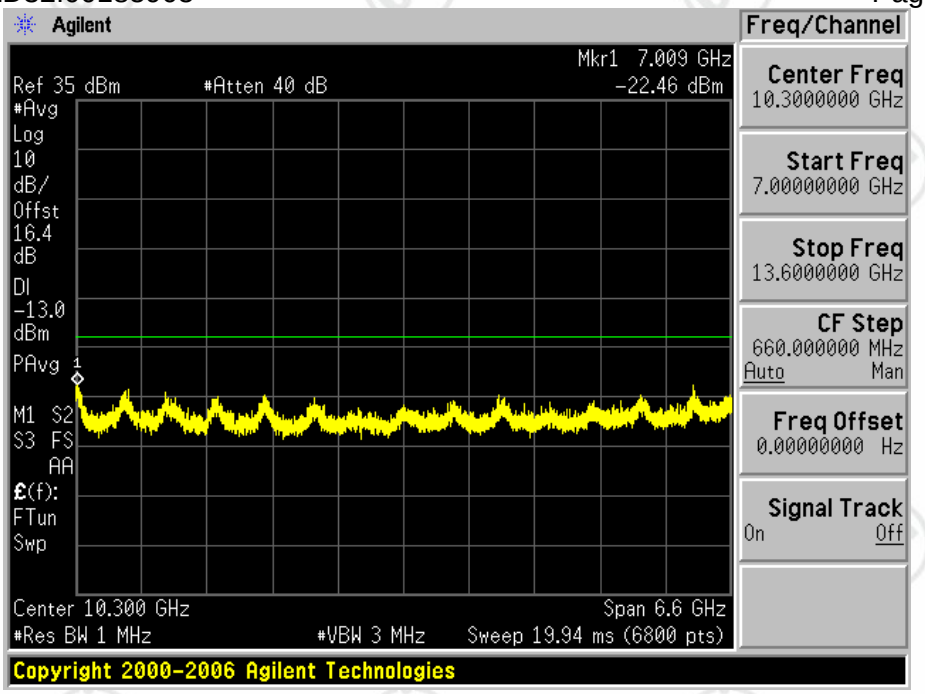
**Test Channel=LCH**

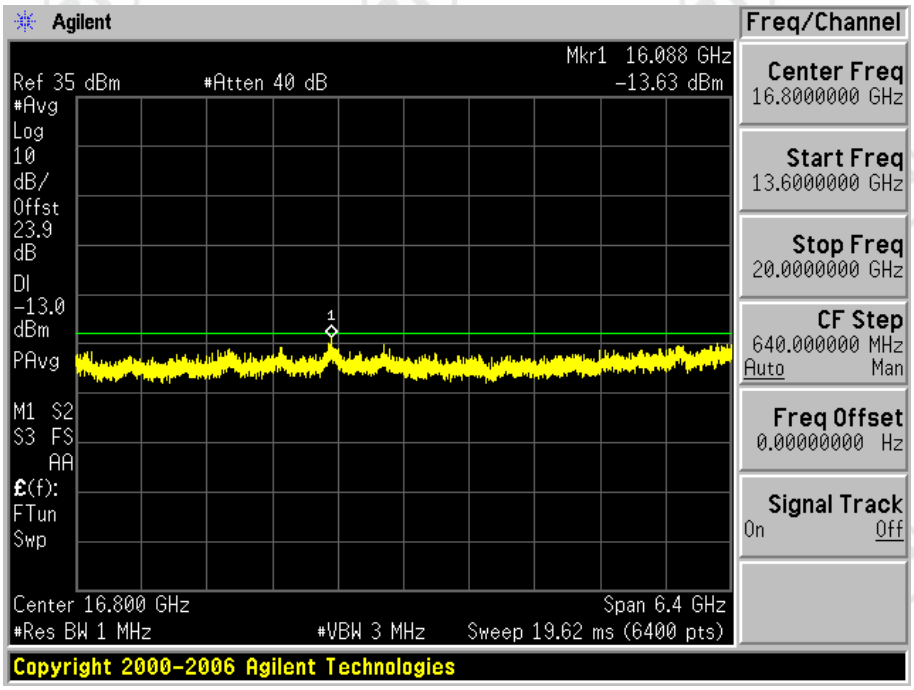


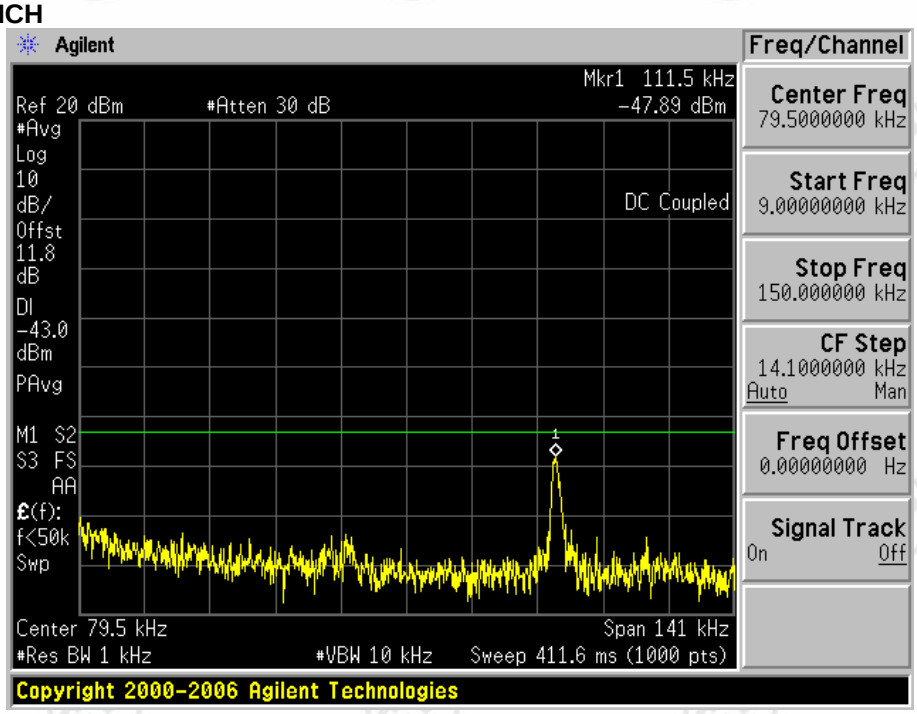

Agilent
Freq/Channel
Mkr1 47.5 MHz
Ref 35 dBm
#Atten 40 dB
-33.40 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

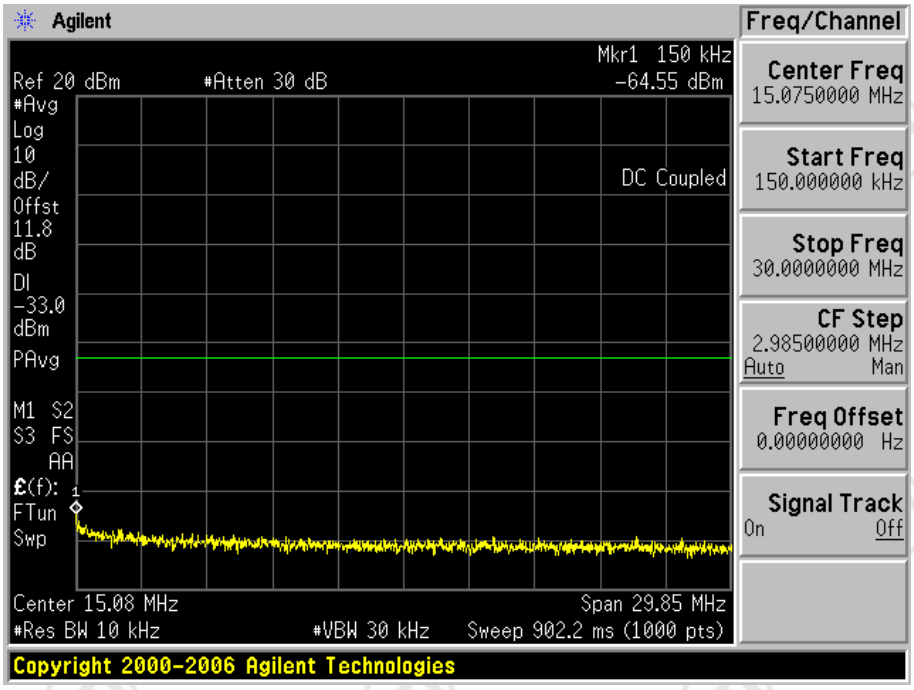

Agilent
Freq/Channel
Mkr2 4.198 GHz
Ref 35 dBm
#Atten 40 dB
-20.49 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

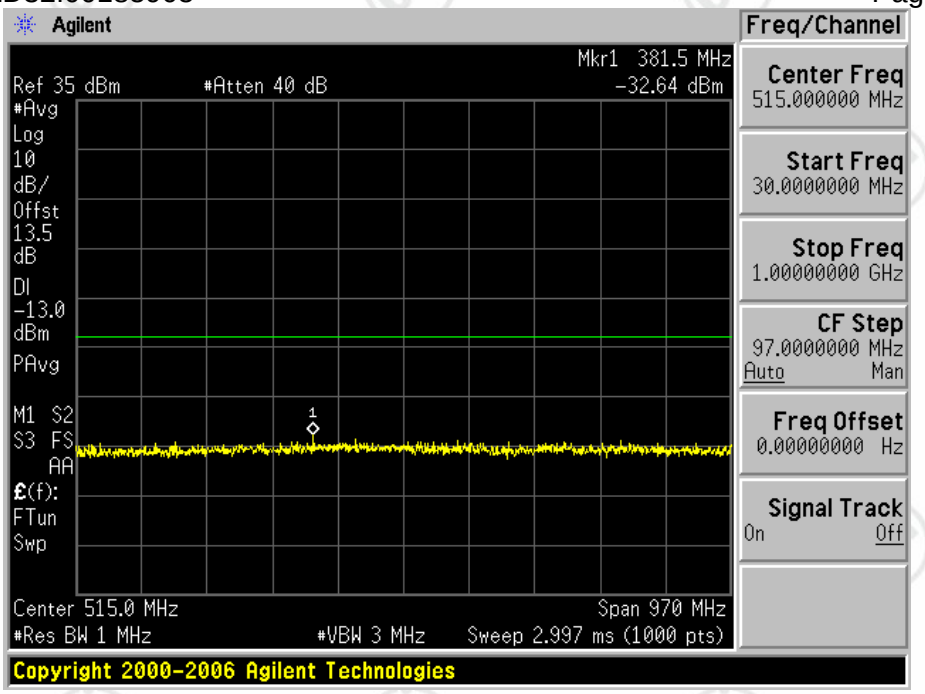

Agilent
Freq/Channel
Mkr1 7.009 GHz
Ref 35 dBm
#Atten 40 dB
-22.46 dBm
#Avg
Log
10
dB/
Offst
16.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

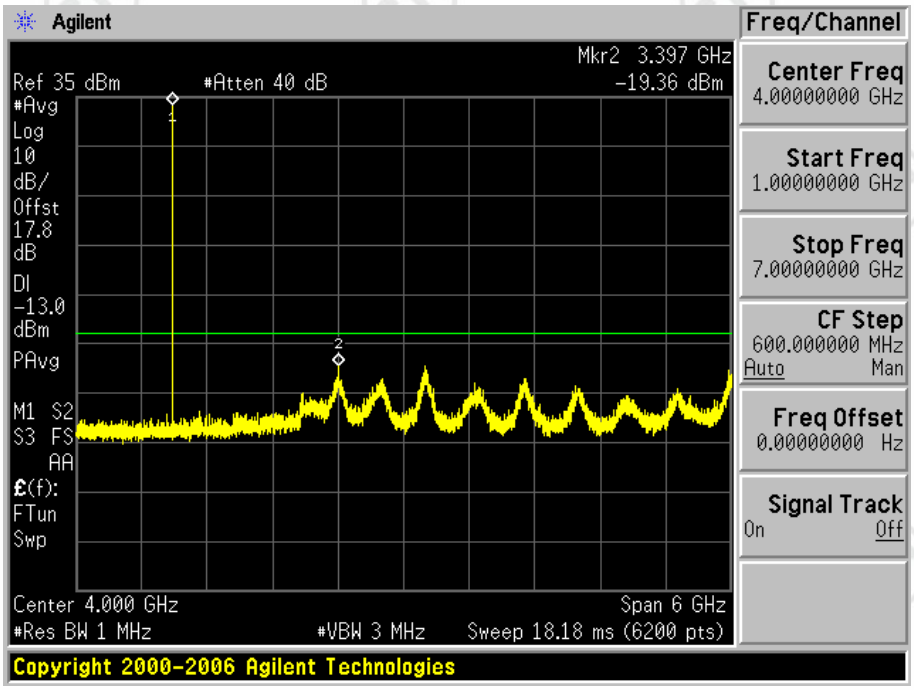

Agilent
Freq/Channel
Mkr1 16.088 GHz
Ref 35 dBm
#Atten 40 dB
-13.63 dBm
#Avg
Log
10
dB/
Offst
23.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

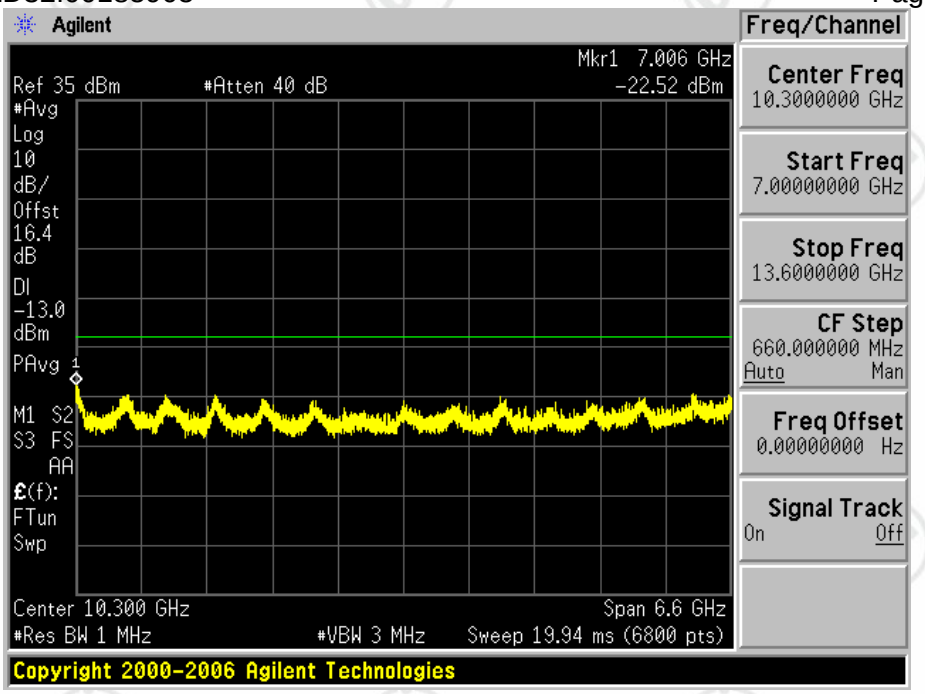
**Test Channel=MCH**

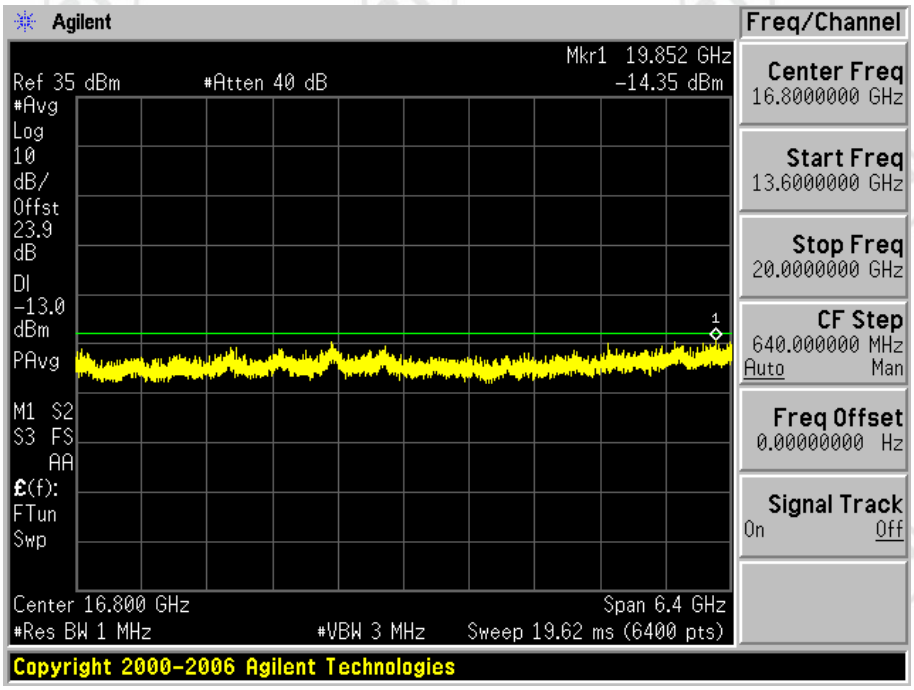


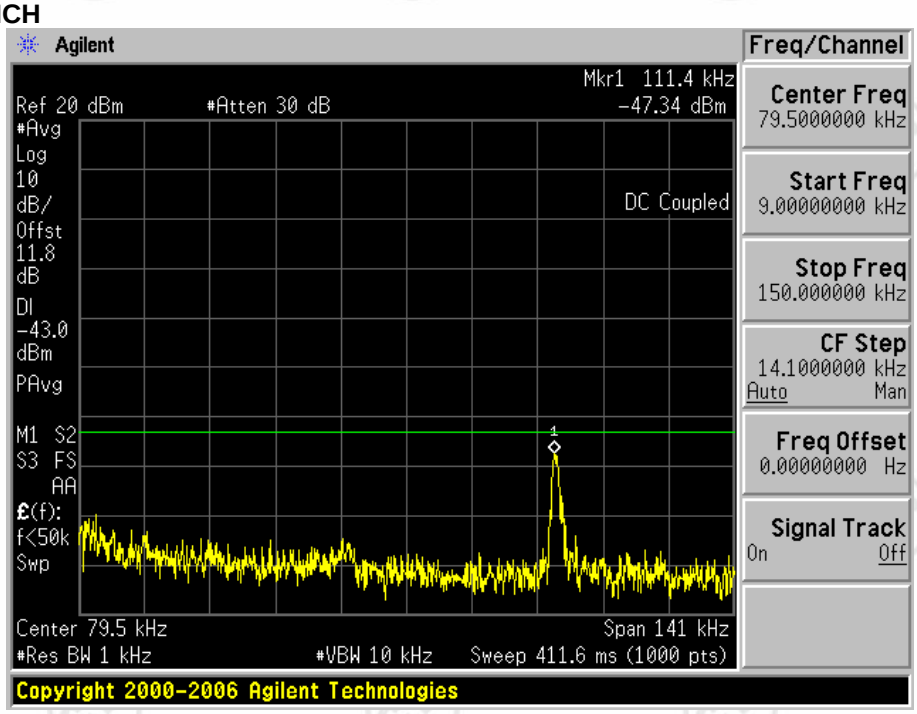

Agilent
Freq/Channel
Mkr1 381.5 MHz
Ref 35 dBm
#Atten 40 dB
-32.64 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

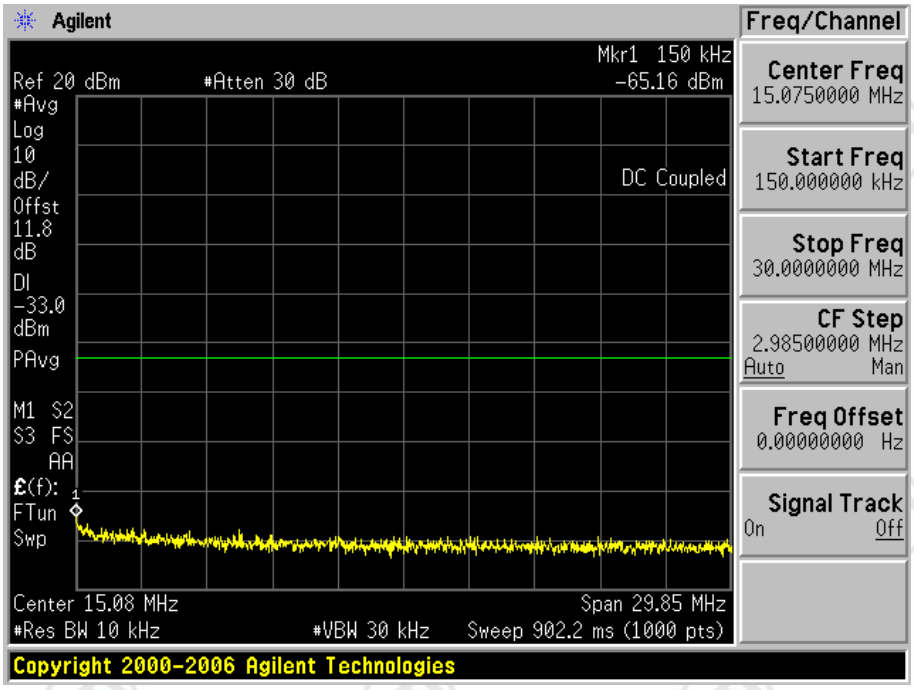

Agilent
Freq/Channel
Mkr2 3.397 GHz
Ref 35 dBm
#Atten 40 dB
-19.36 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

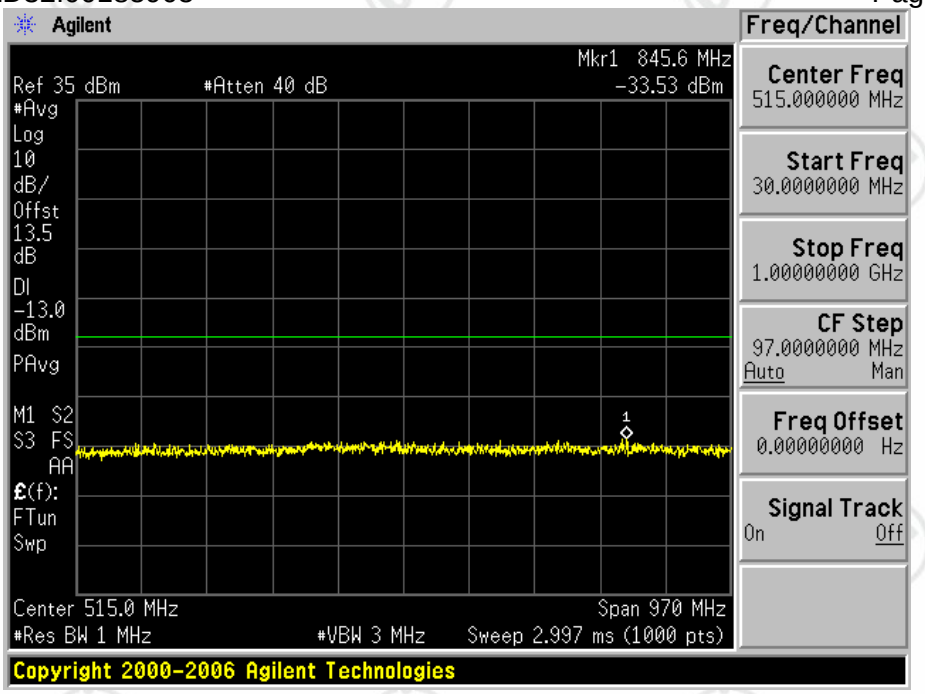

Agilent
Freq/Channel
Mkr1 7.006 GHz
Ref 35 dBm
#Atten 40 dB
-22.52 dBm
#Avg
Log
10
dB/
Offst
16.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

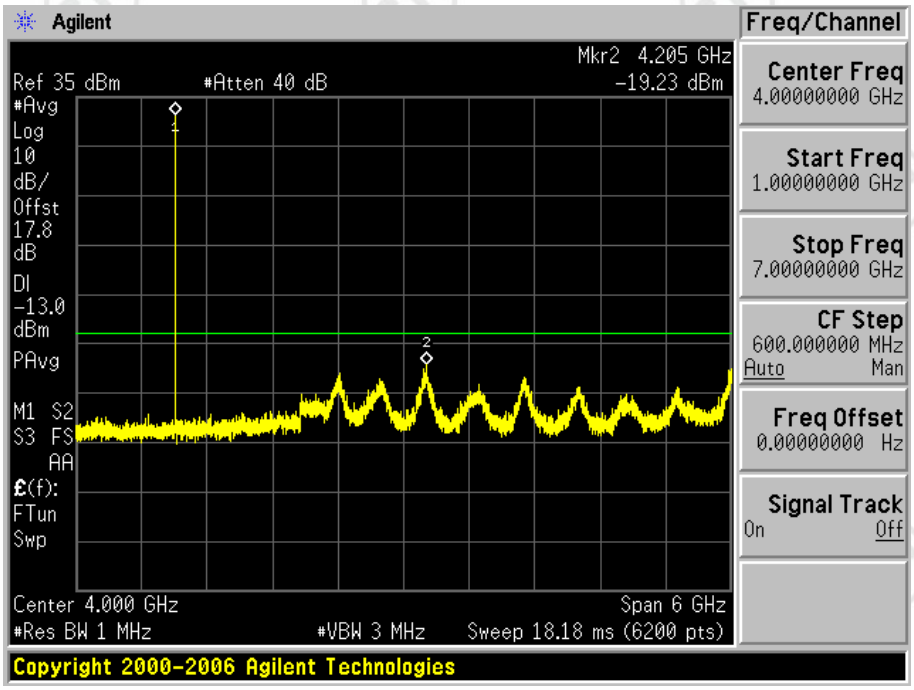

Agilent
Freq/Channel
Mkr1 19.852 GHz
Ref 35 dBm
#Atten 40 dB
-14.35 dBm
#Avg
Log
10
dB/
Offst
23.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

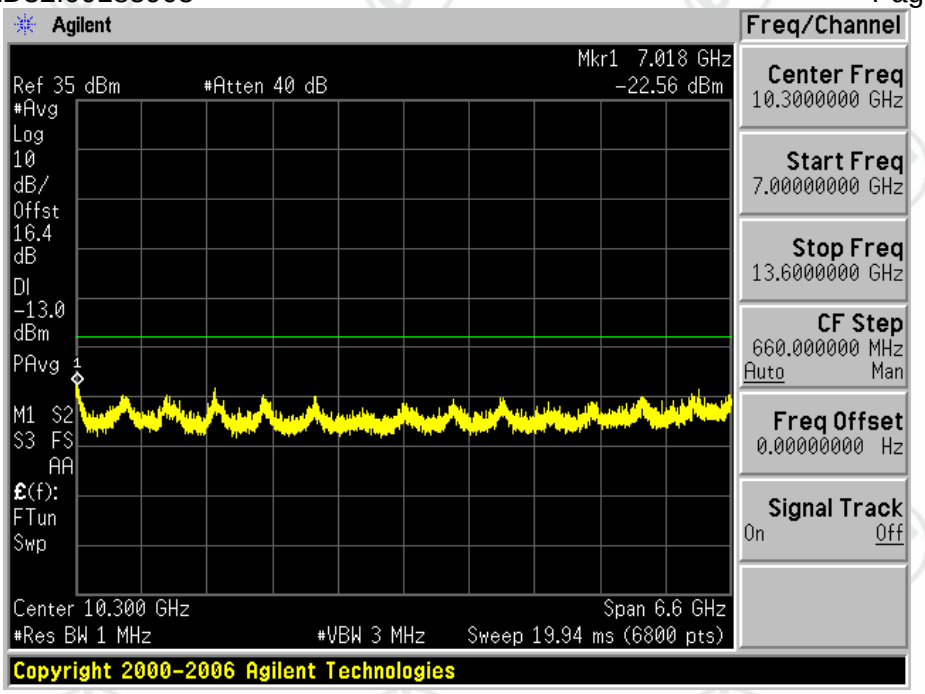
**Test Channel=HCH**

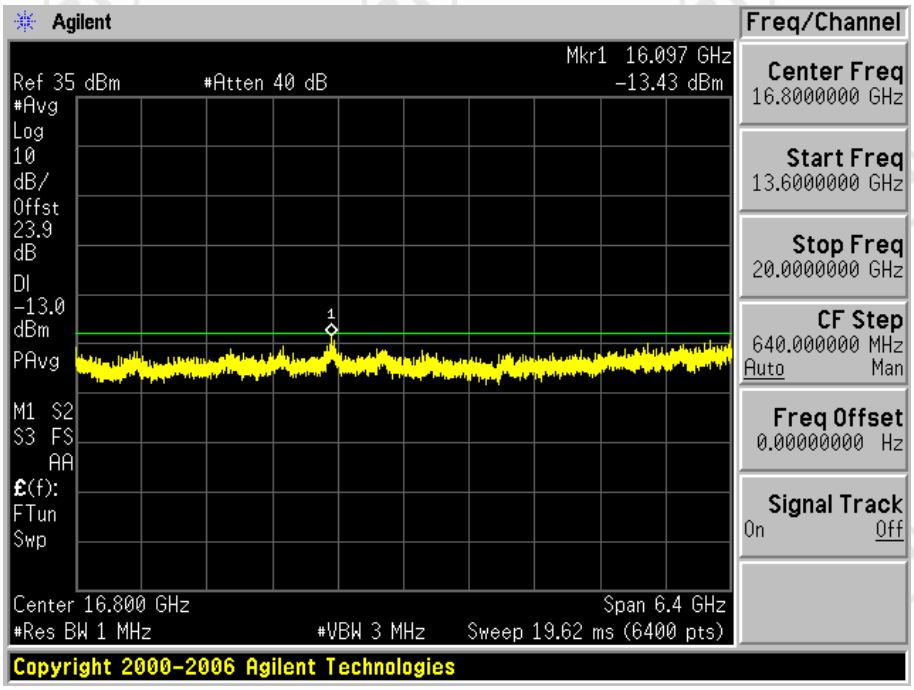



Agilent
Freq/Channel
Mkr1 845.6 MHz
Ref 35 dBm
#Atten 40 dB
-33.53 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

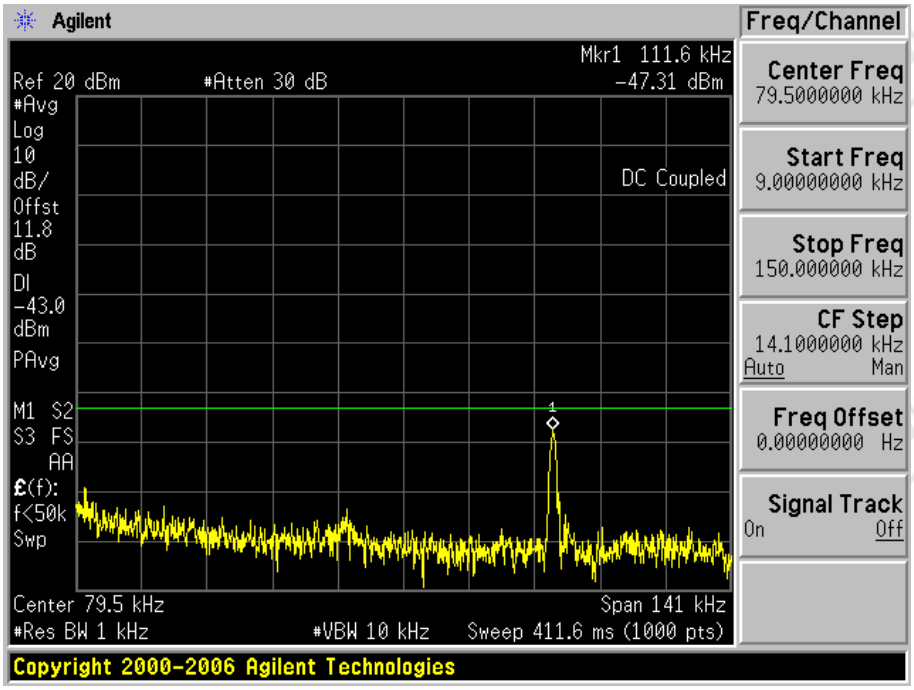

Agilent
Freq/Channel
Mkr2 4.205 GHz
Ref 35 dBm
#Atten 40 dB
-19.23 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

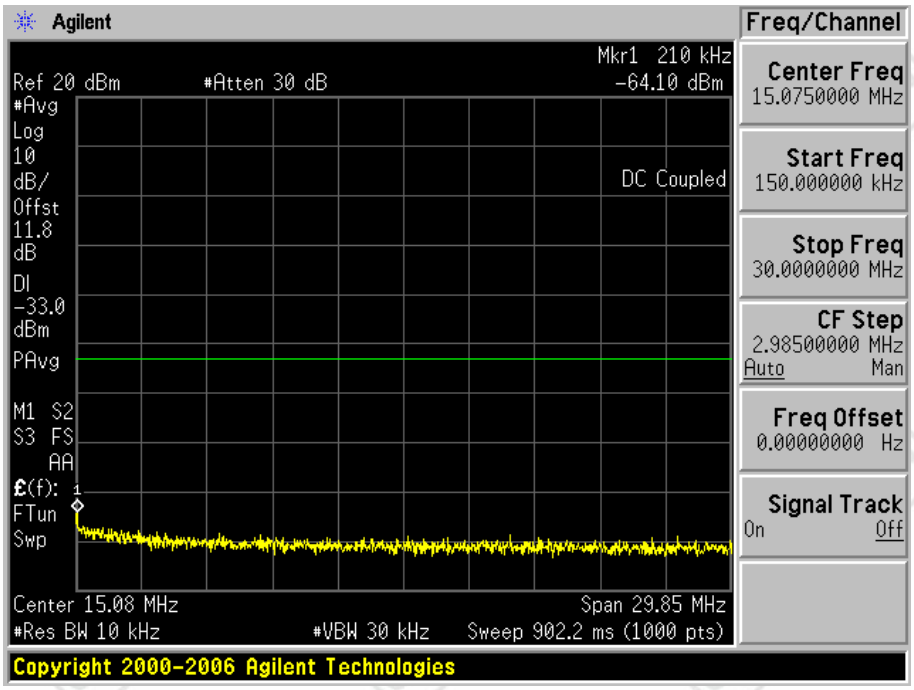

Agilent
Freq/Channel
Mkr1 7.018 GHz
Ref 35 dBm
#Atten 40 dB
-22.56 dBm
#Avg
Log
10
dB/
Offst
16.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

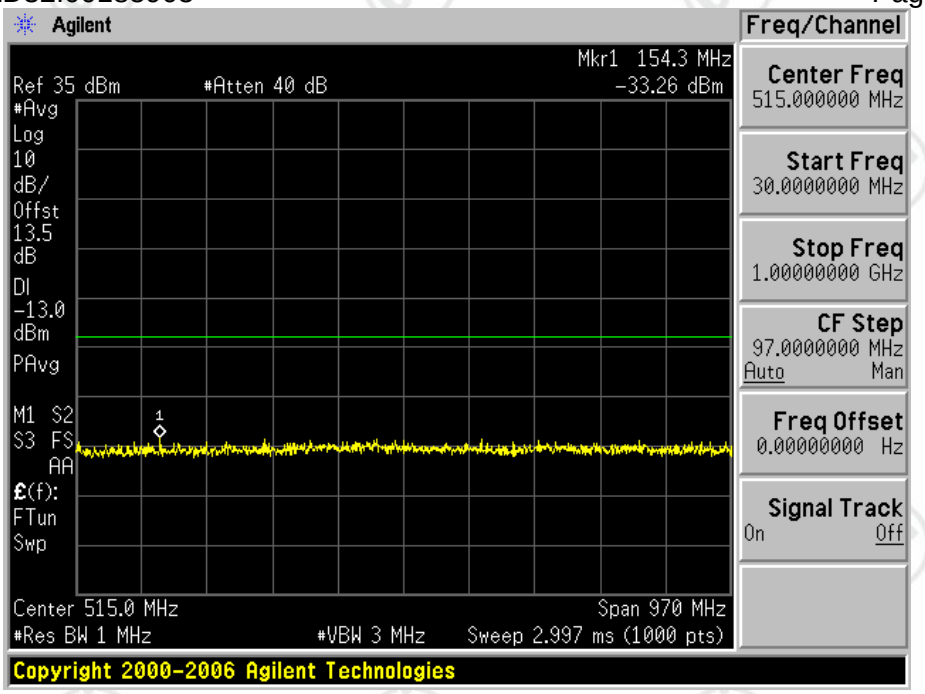

Agilent
Freq/Channel
Mkr1 16.097 GHz
Ref 35 dBm
#Atten 40 dB
-13.43 dBm
#Avg
Log
10
dB/
Offst
23.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

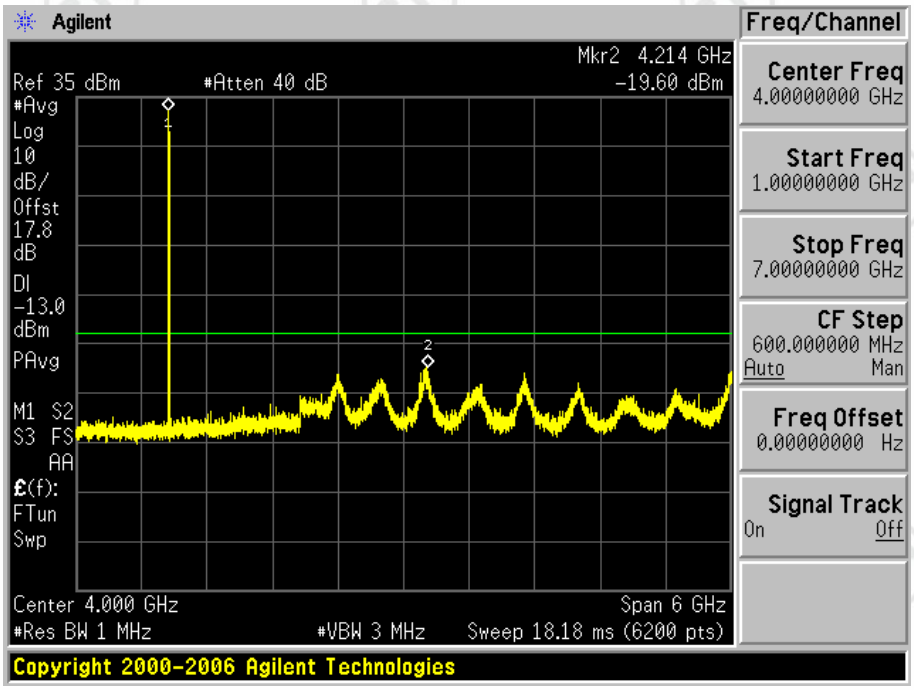
**Test Mode=GSM/TM2**

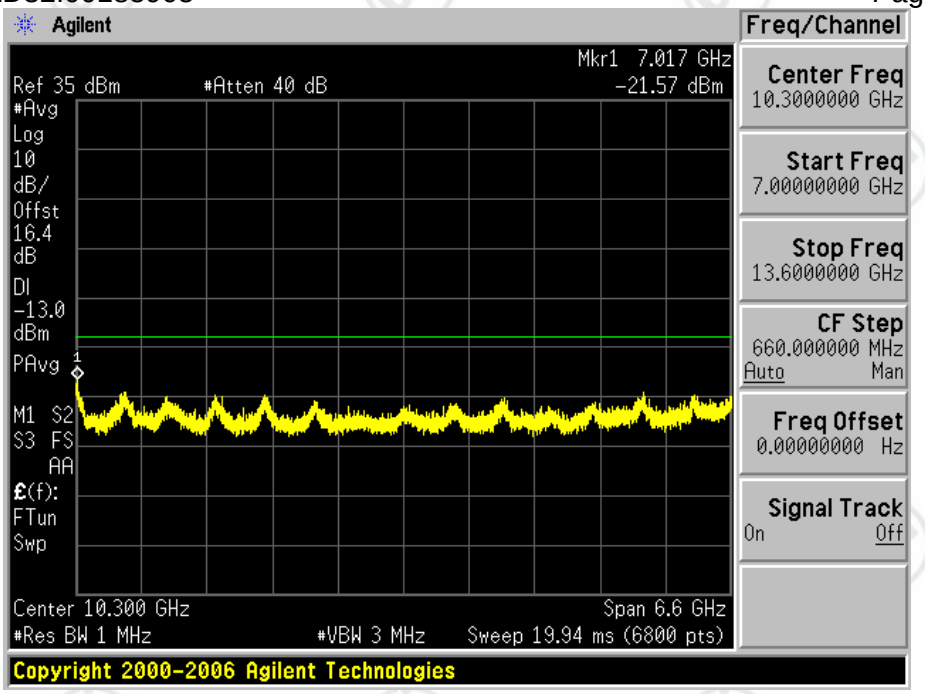
**Test Channel=LCH**

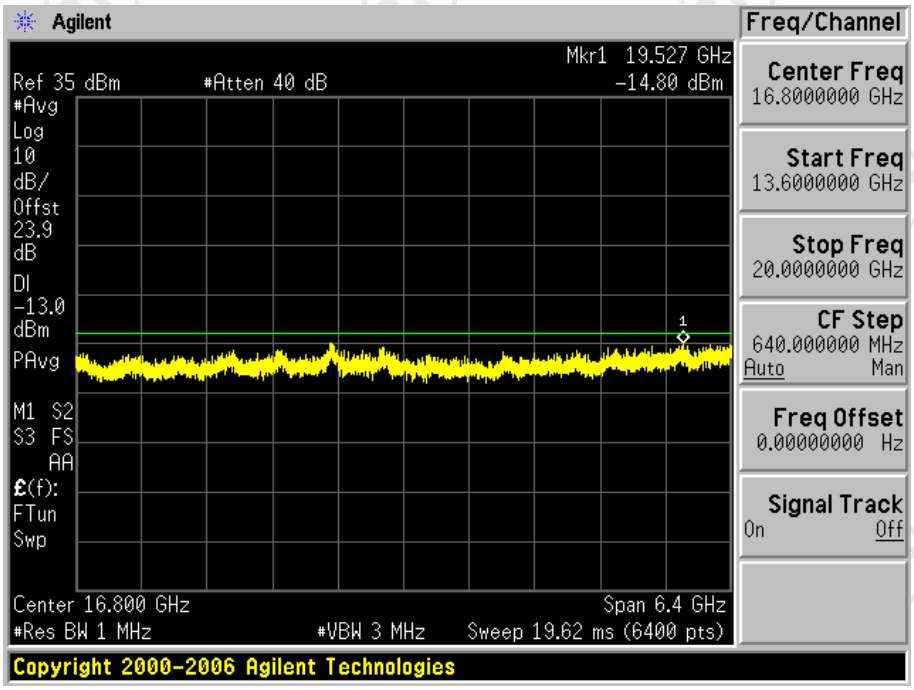


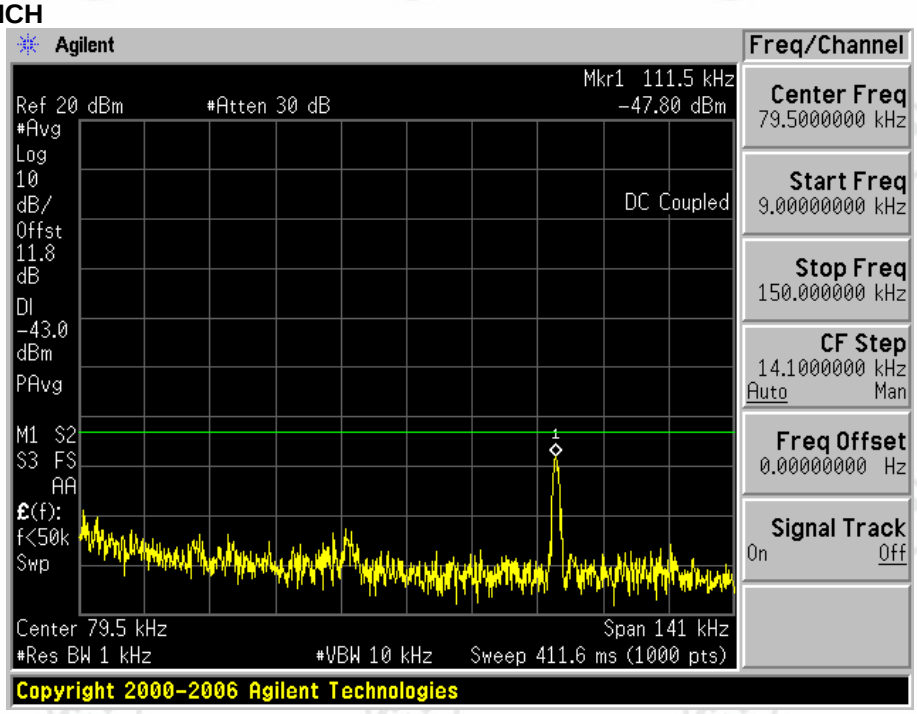

Agilent
Freq/Channel
Mkr1 154.3 MHz
Ref 35 dBm
#Atten 40 dB
-33.26 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Copyright 2000-2006 Agilent Technologies

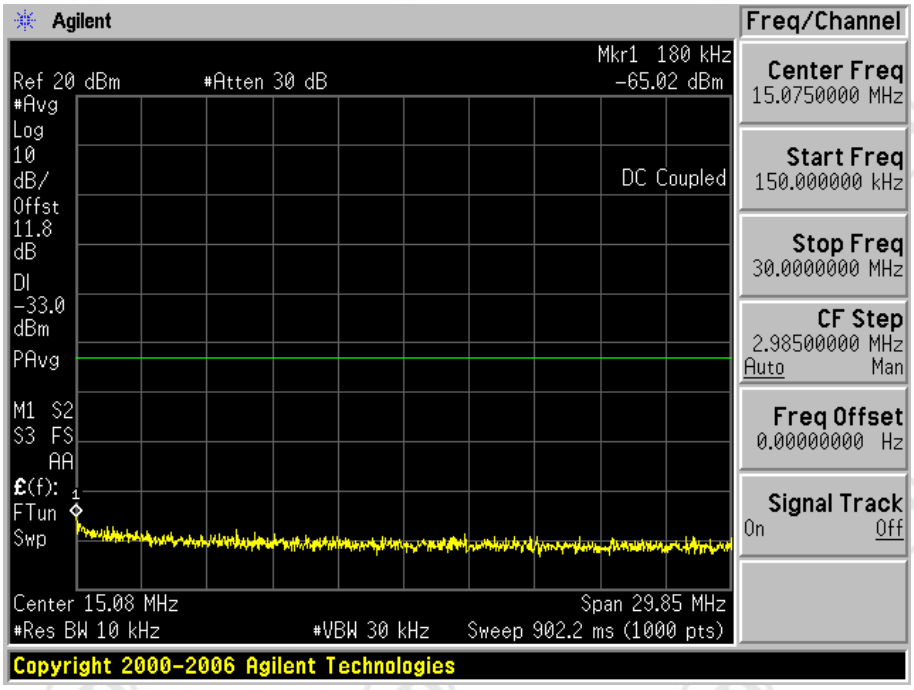

Agilent
Freq/Channel
Mkr2 4.214 GHz
Ref 35 dBm
#Atten 40 dB
-19.60 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Copyright 2000-2006 Agilent Technologies

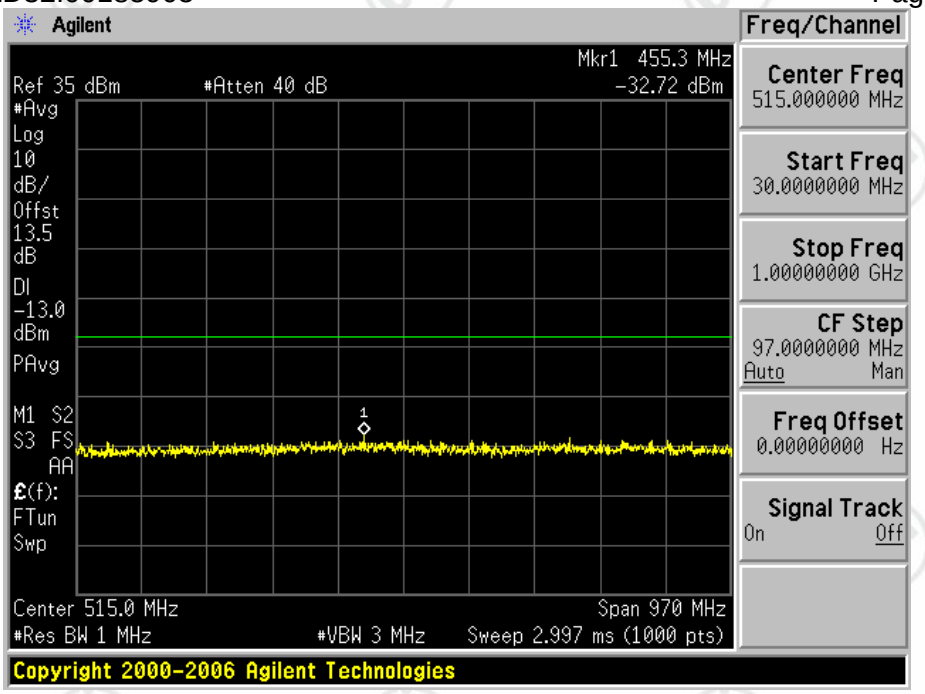

Agilent
Freq/Channel
Mkr1 7.017 GHz
Ref 35 dBm
#Atten 40 dB
-21.57 dBm
#Avg
Log
10
dB/
Offst
16.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

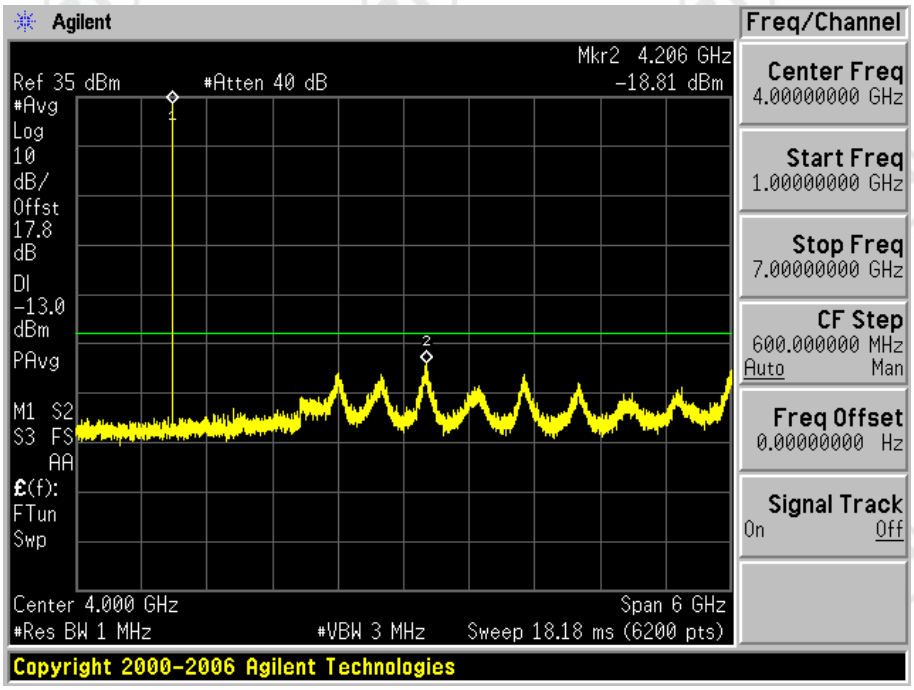

Agilent
Freq/Channel
Mkr1 19.527 GHz
Ref 35 dBm
#Atten 40 dB
-14.80 dBm
#Avg
Log
10
dB/
Offst
23.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

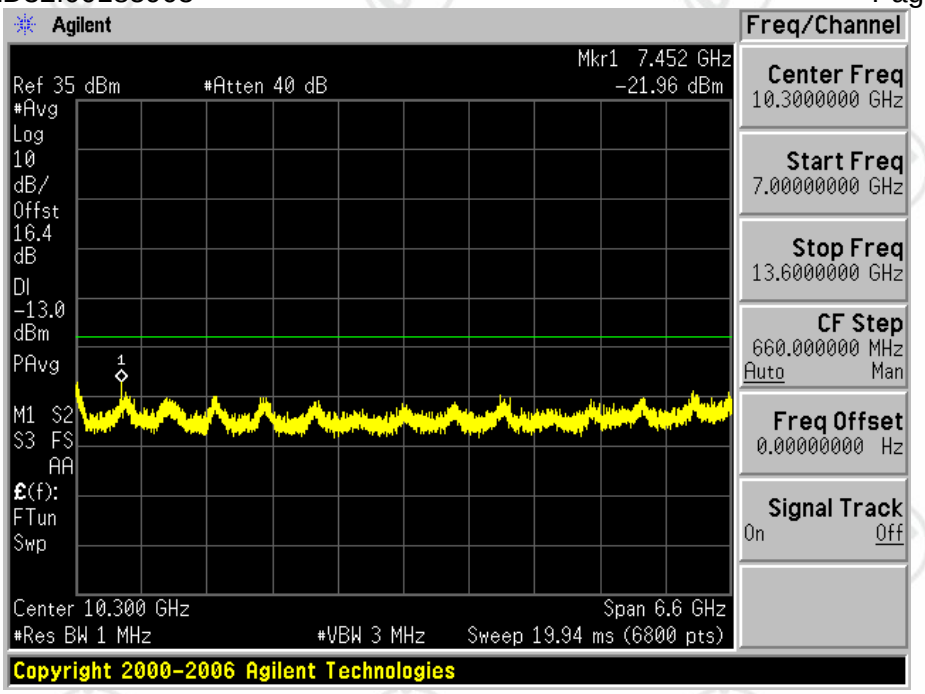
**Test Channel=MCH**

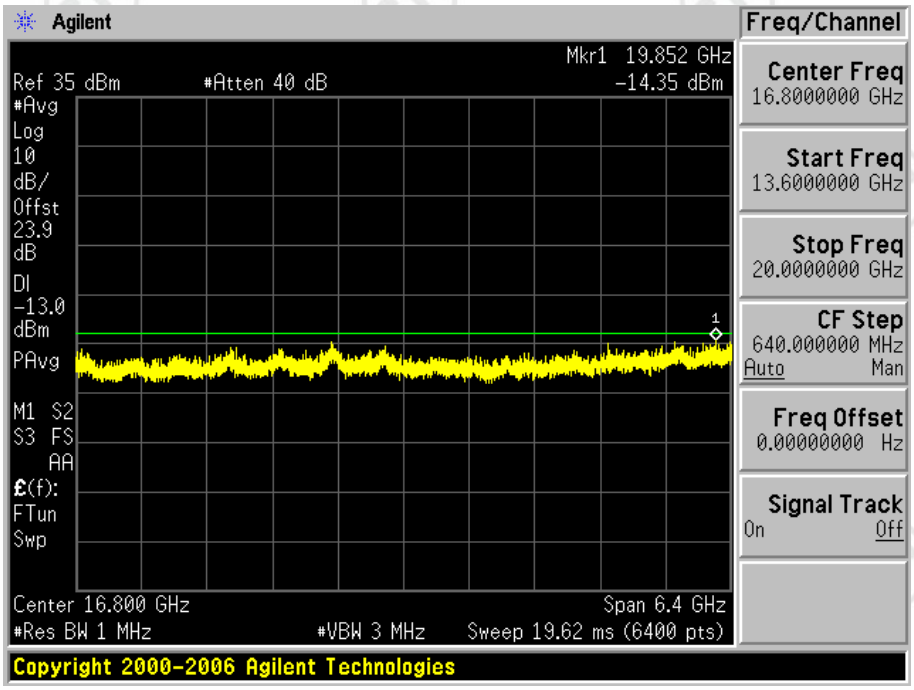


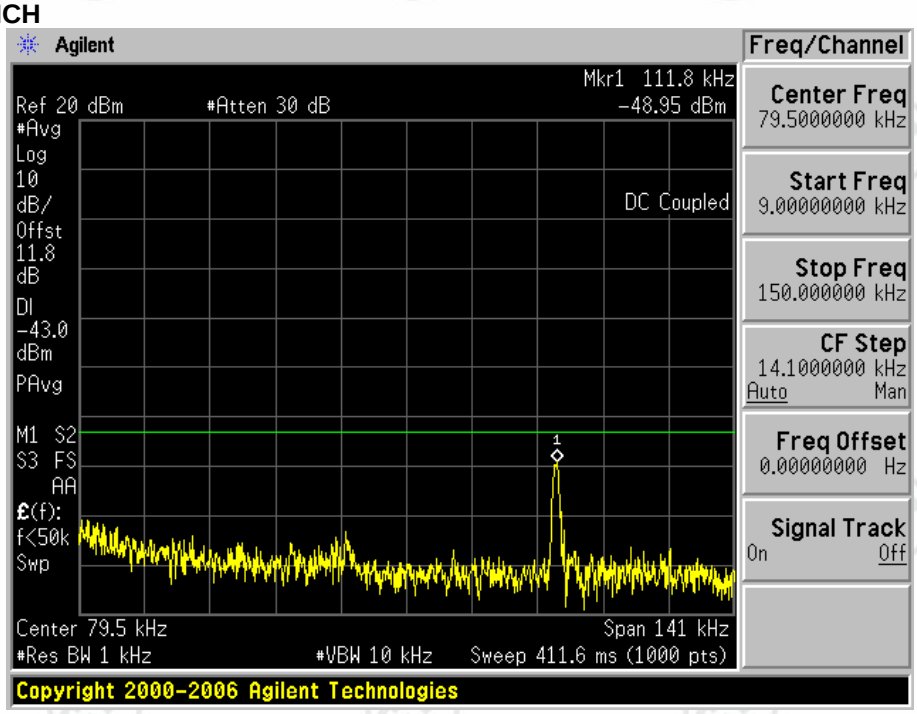

Agilent
Freq/Channel
Mkr1 455.3 MHz
Ref 35 dBm
#Atten 40 dB
-32.72 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Copyright 2000-2006 Agilent Technologies

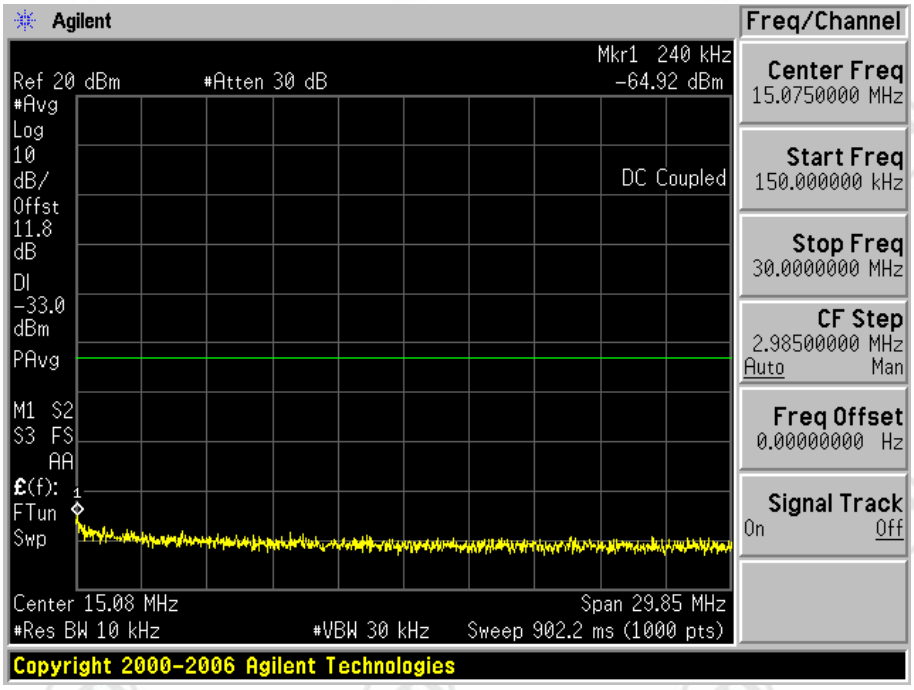

Agilent
Freq/Channel
Mkr2 4.206 GHz
Ref 35 dBm
#Atten 40 dB
-18.81 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Copyright 2000-2006 Agilent Technologies

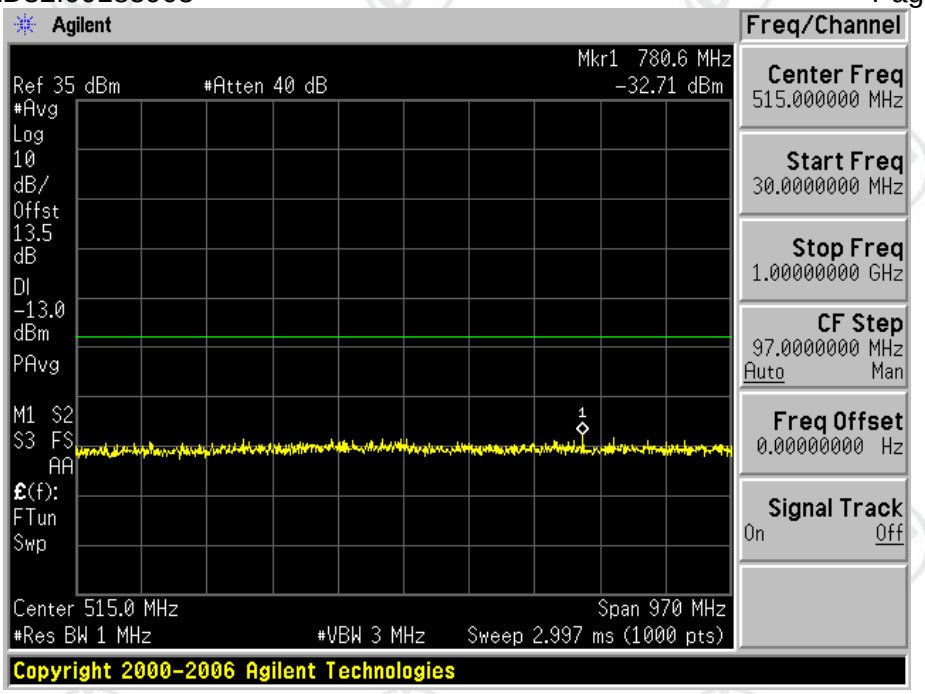

Agilent
Freq/Channel
Mkr1 7.452 GHz
Ref 35 dBm
#Atten 40 dB
-21.96 dBm
#Avg
Log
10
dB/
Offst
16.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

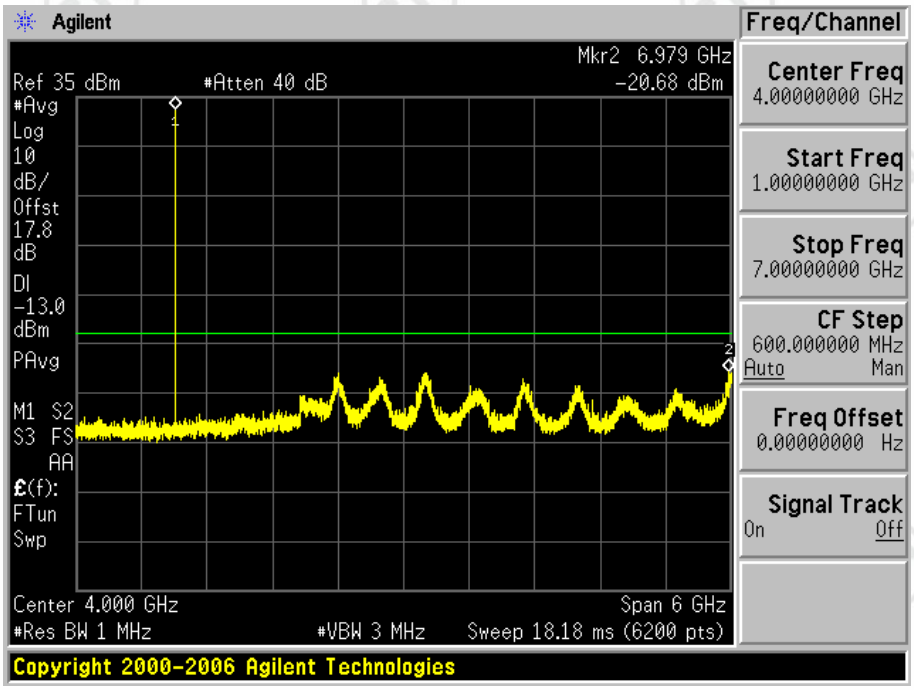

Agilent
Freq/Channel
Mkr1 19.852 GHz
Ref 35 dBm
#Atten 40 dB
-14.35 dBm
#Avg
Log
10
dB/
Offst
23.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

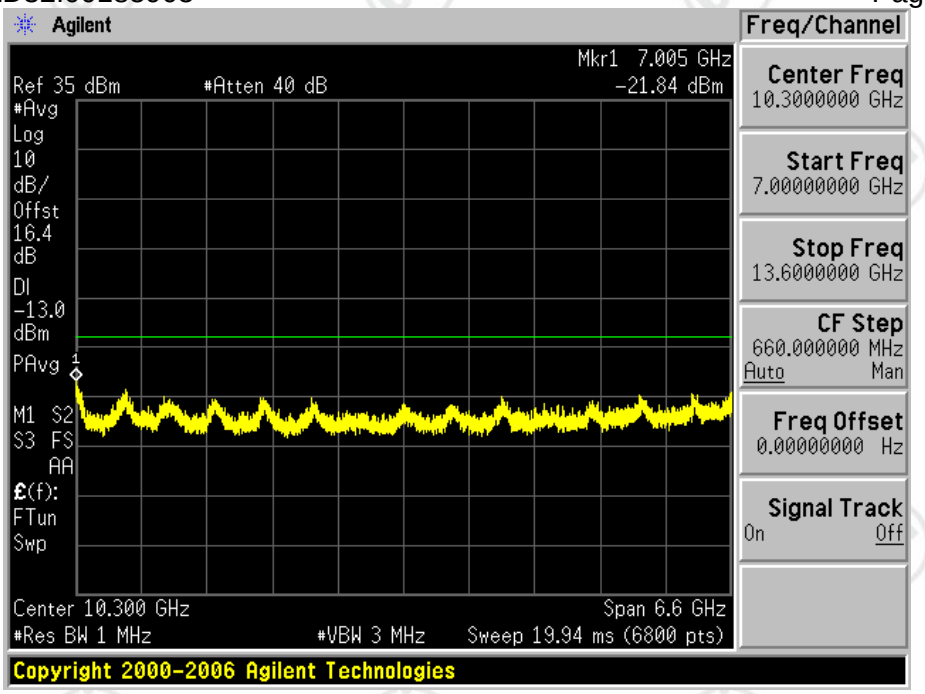
**Test Channel=HCH**

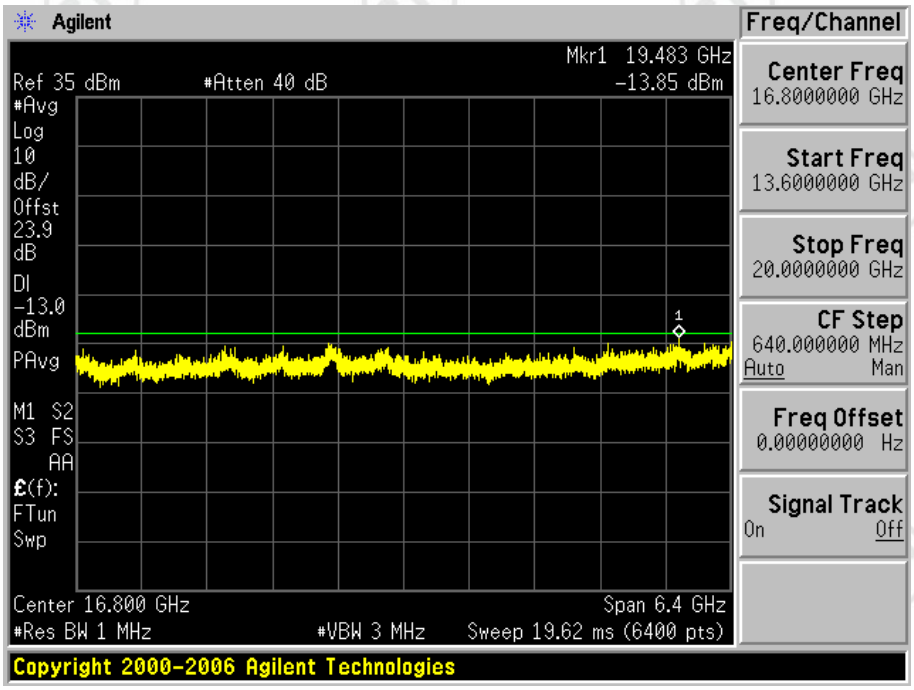



Agilent
Freq/Channel
Mkr1 780.6 MHz
Ref 35 dBm
#Atten 40 dB
-32.71 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Copyright 2000-2006 Agilent Technologies

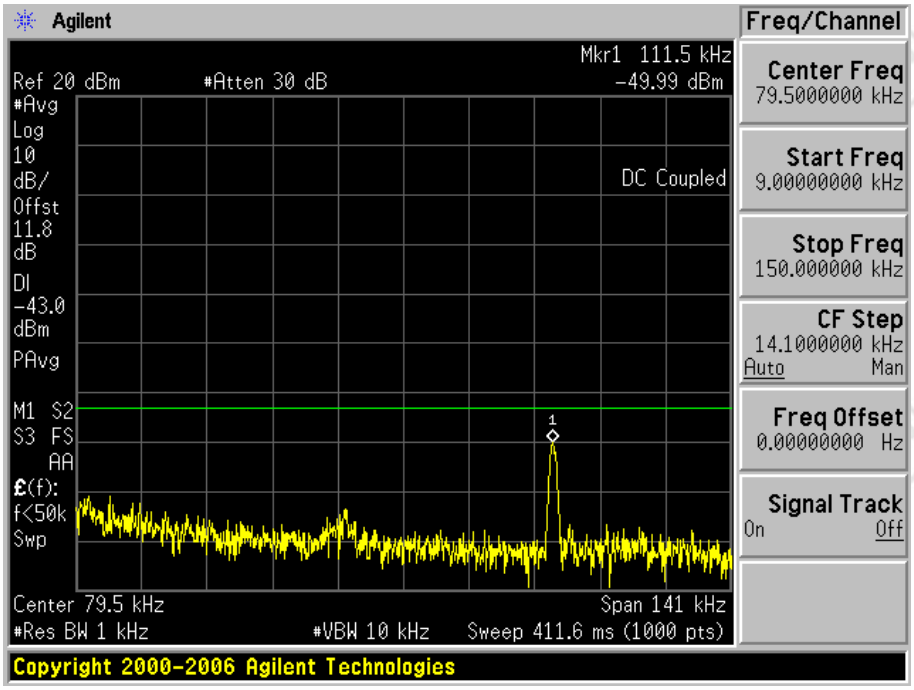

Agilent
Freq/Channel
Mkr2 6.979 GHz
Ref 35 dBm
#Atten 40 dB
-20.68 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Copyright 2000-2006 Agilent Technologies

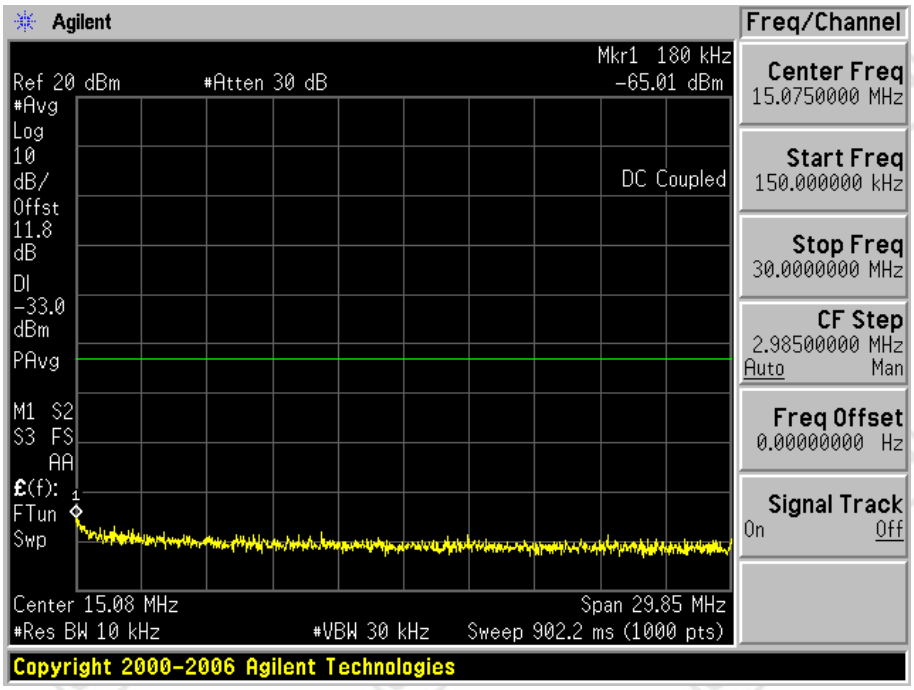

Agilent
Freq/Channel
Mkr1 7.005 GHz
Ref 35 dBm
#Atten 40 dB
-21.84 dBm
#Avg
Log
10
dB/
Offst
16.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

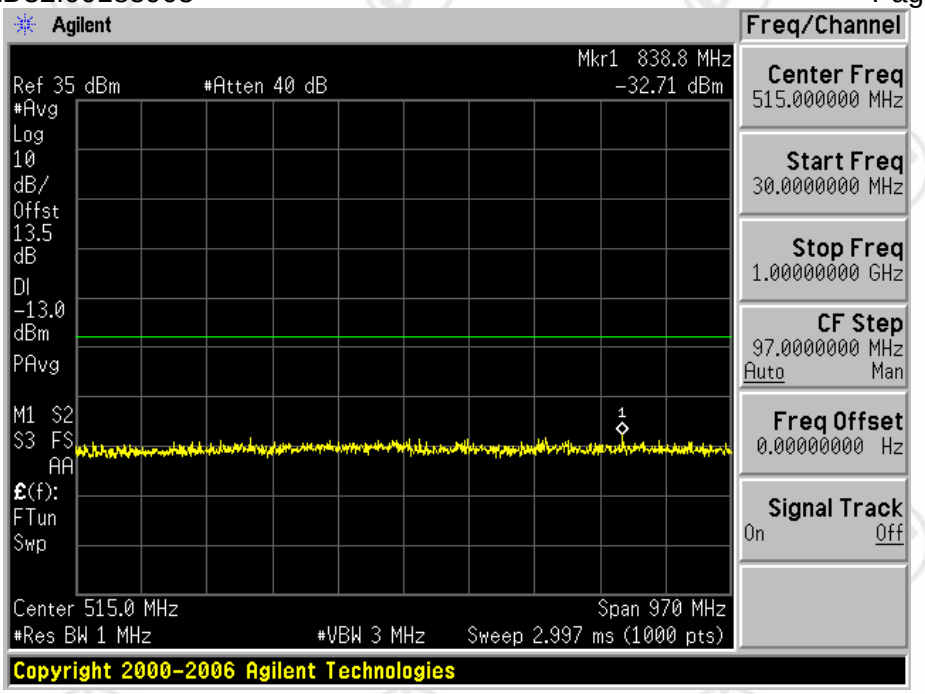

Agilent
Freq/Channel
Mkr1 19.483 GHz
Ref 35 dBm
#Atten 40 dB
-13.85 dBm
#Avg
Log
10
dB/
Offst
23.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

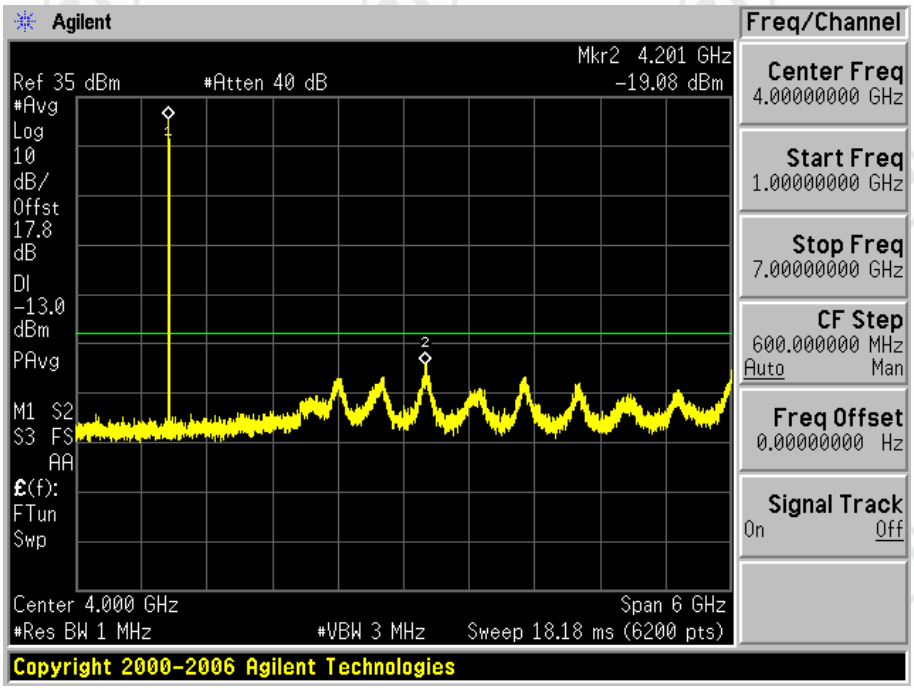
**Test Mode=GSM/TM3**

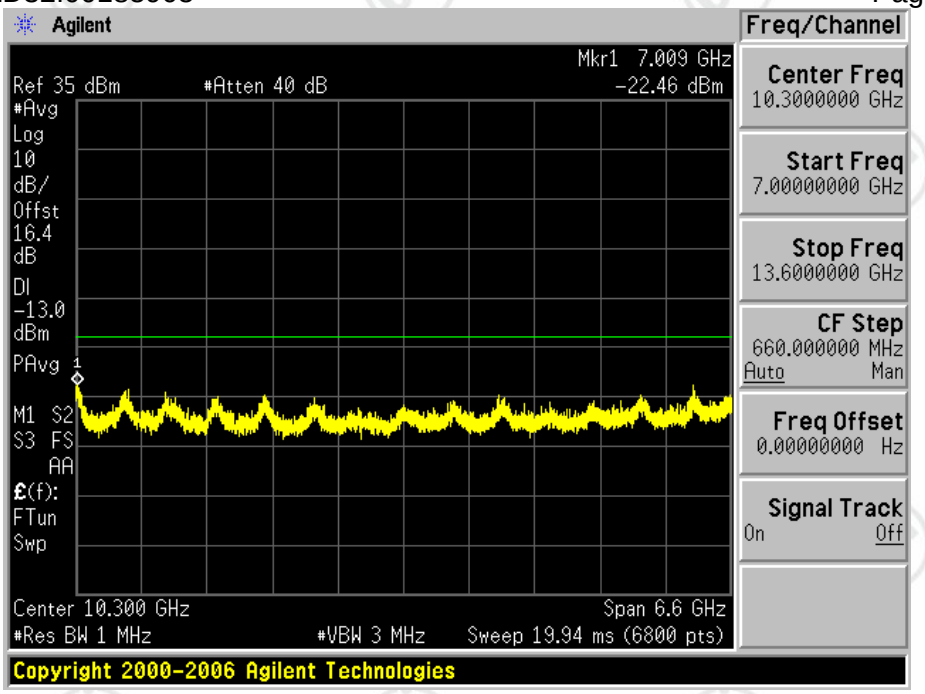
**Test Channel=LCH**

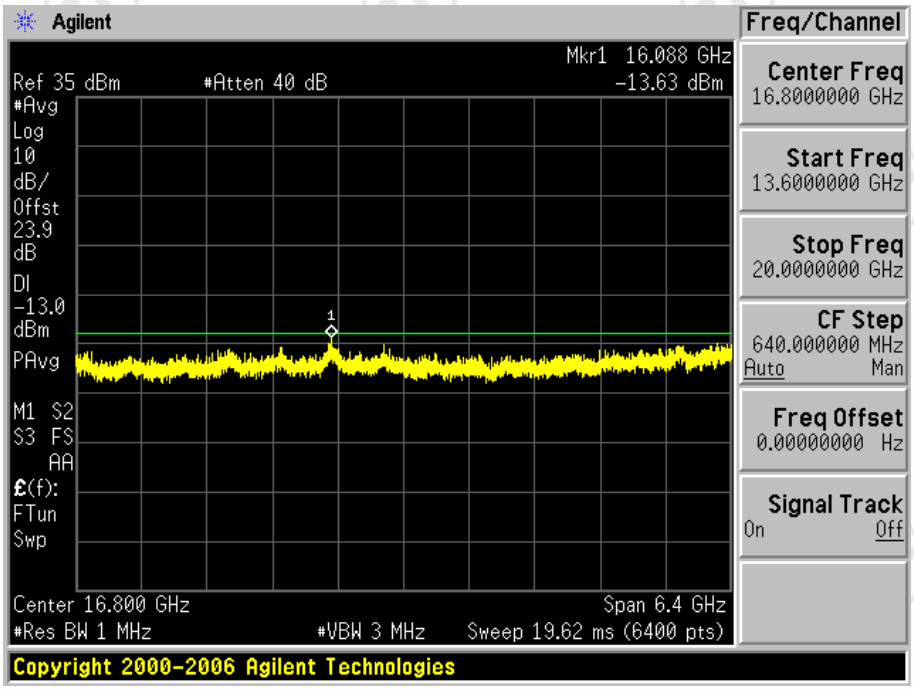


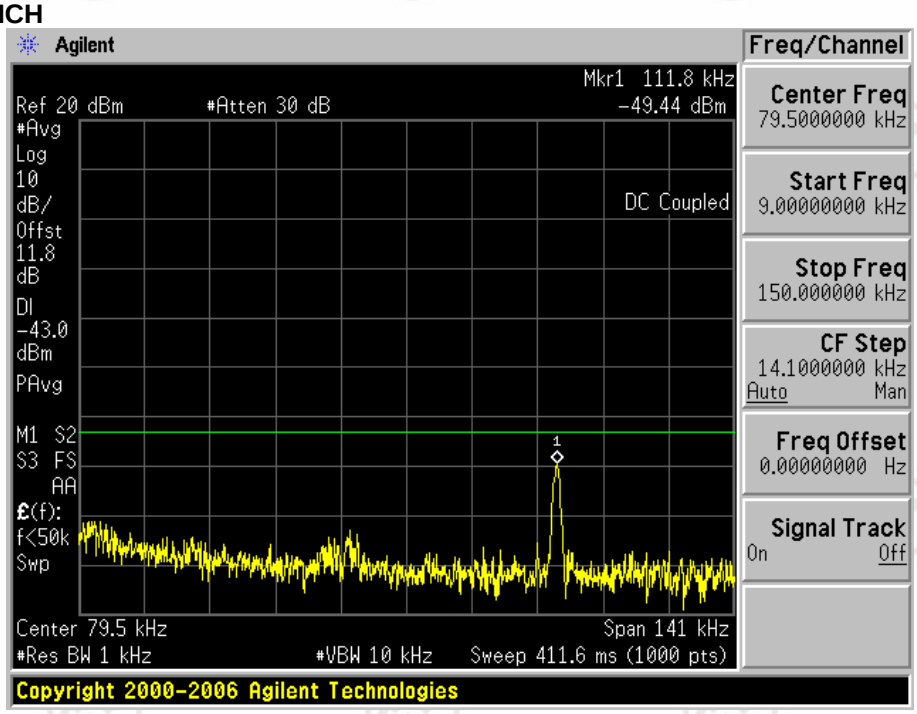

Agilent
Freq/Channel
Mkr1 838.8 MHz
Ref 35 dBm
#Atten 40 dB
-32.71 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Copyright 2000-2006 Agilent Technologies

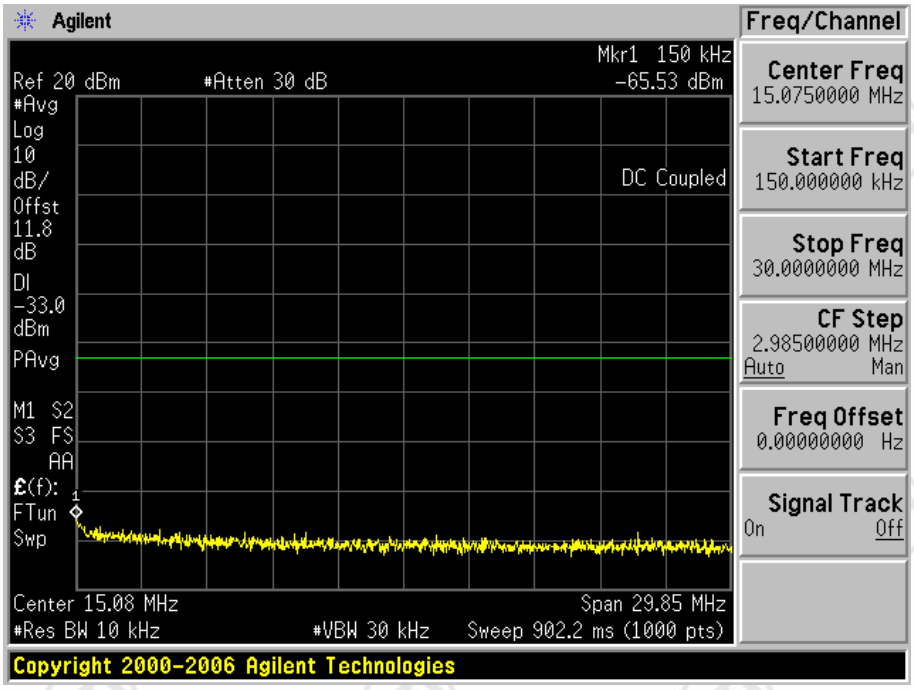

Agilent
Freq/Channel
Mkr2 4.201 GHz
Ref 35 dBm
#Atten 40 dB
-19.08 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Copyright 2000-2006 Agilent Technologies

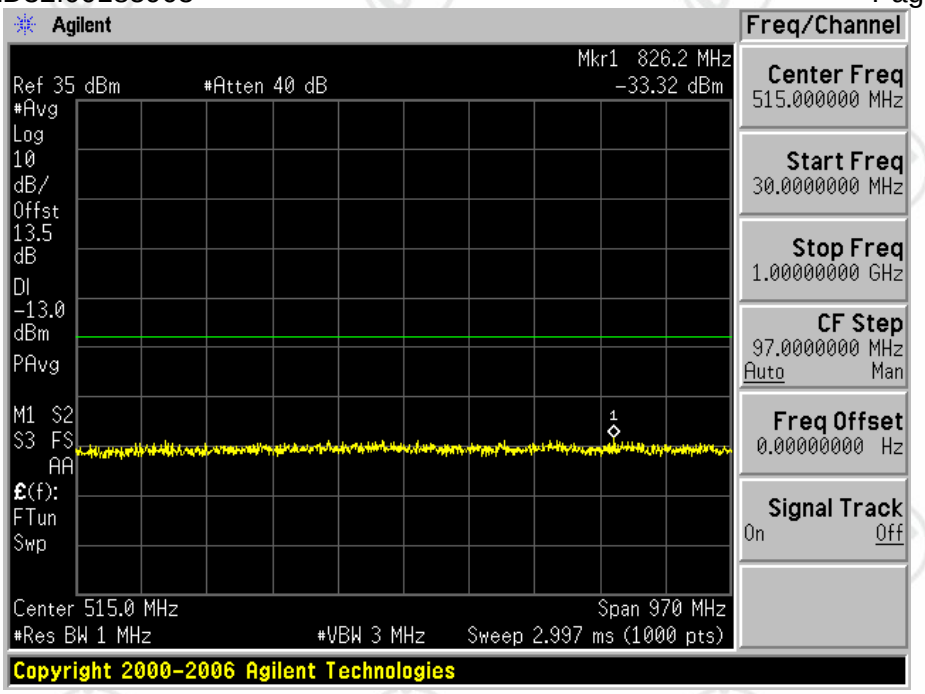

Agilent
Freq/Channel
Mkr1 7.009 GHz
Ref 35 dBm
#Atten 40 dB
-22.46 dBm
#Avg
Log
10
dB/
Offst
16.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

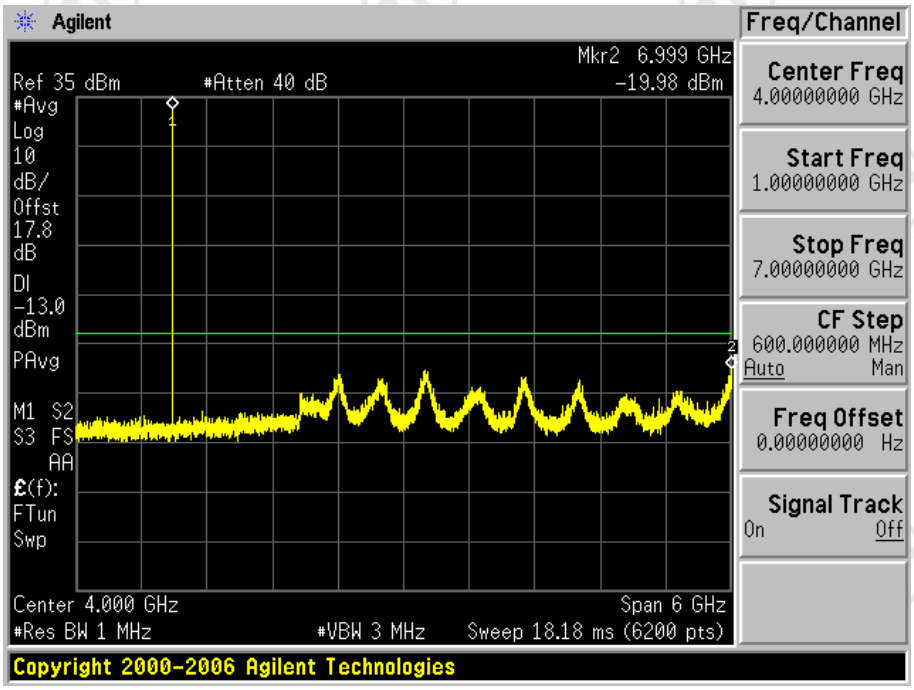

Agilent
Freq/Channel
Mkr1 16.088 GHz
Ref 35 dBm
#Atten 40 dB
-13.63 dBm
#Avg
Log
10
dB/
Offst
23.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

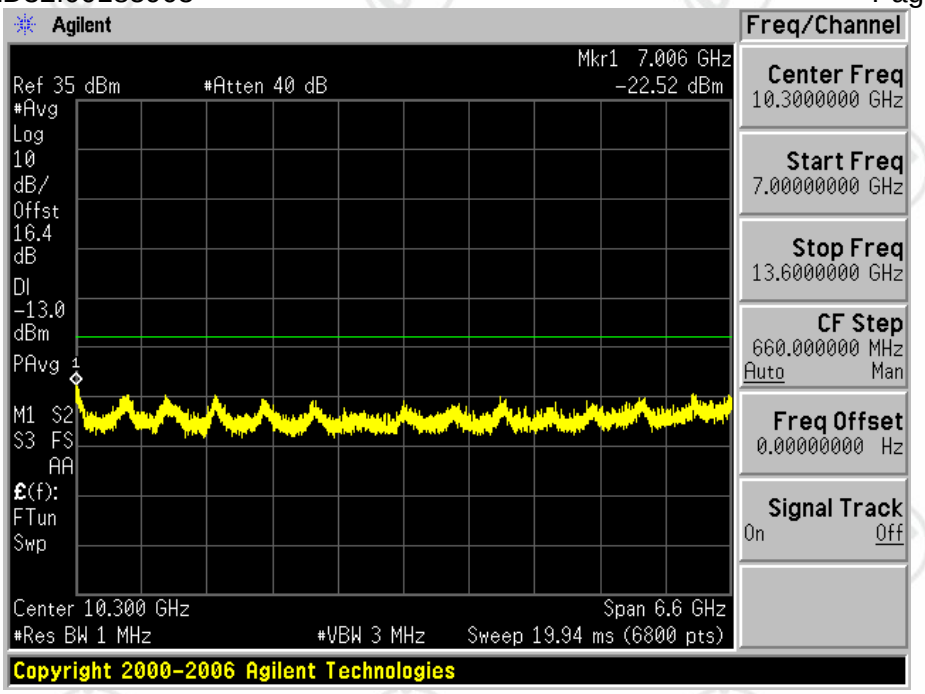
**Test Channel=MCH**

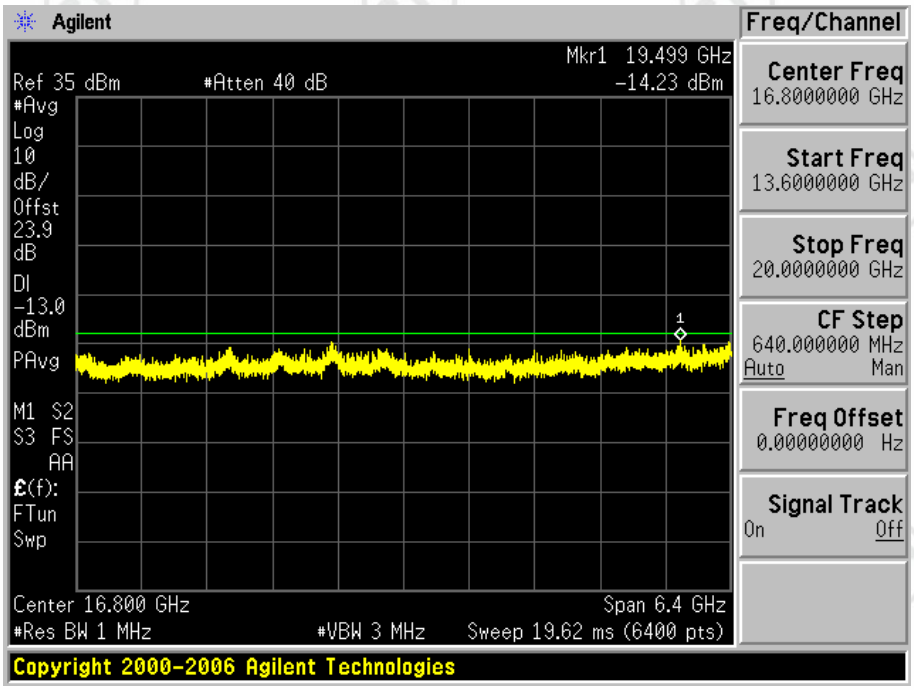


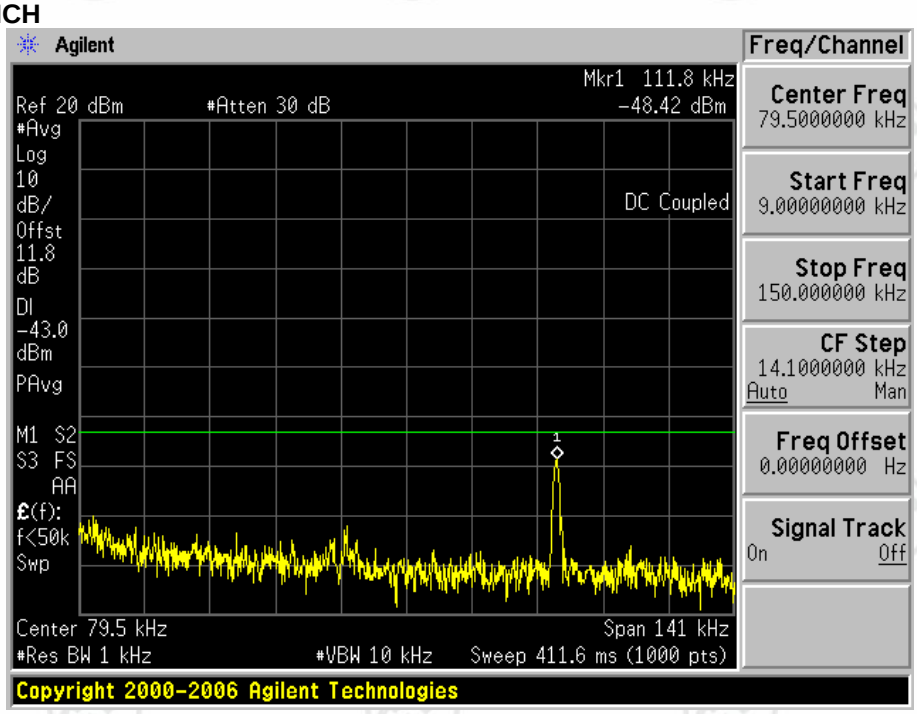

Agilent
Freq/Channel
Mkr1 826.2 MHz
Ref 35 dBm
#Atten 40 dB
-33.32 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

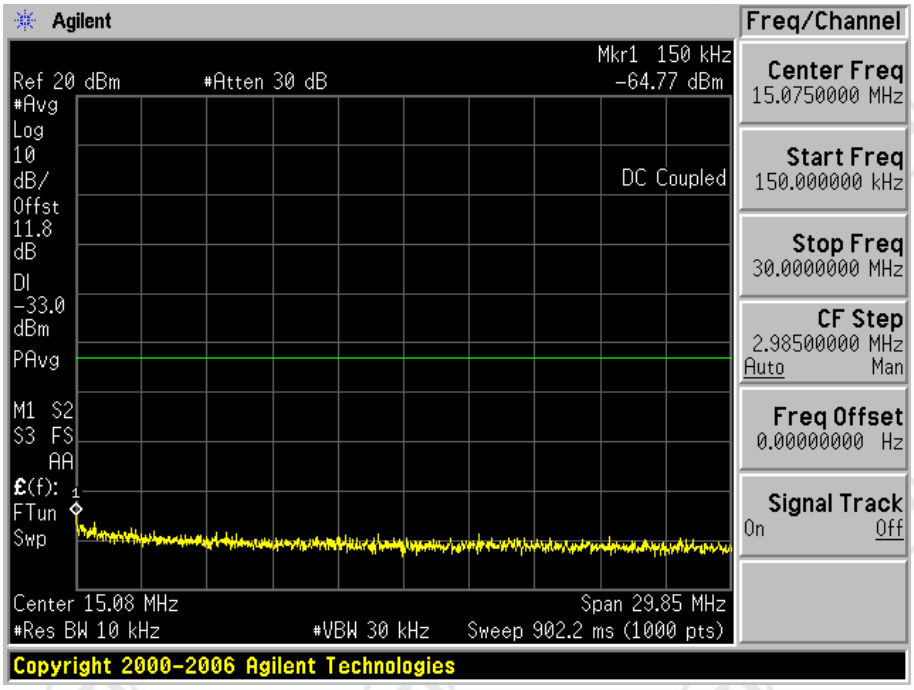

Agilent
Freq/Channel
Mkr2 6.999 GHz
Ref 35 dBm
#Atten 40 dB
-19.98 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

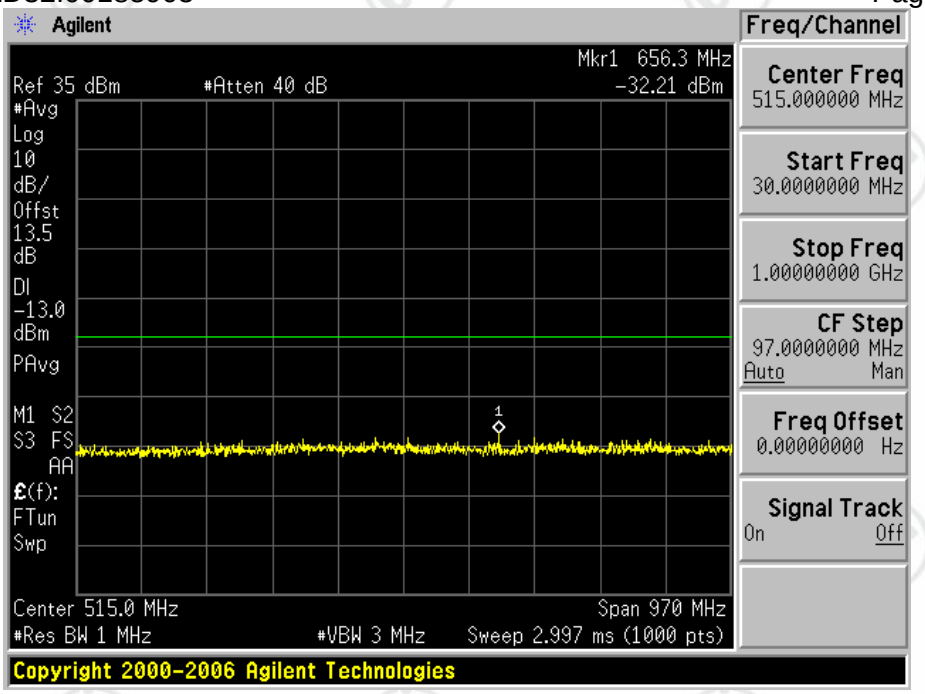

Agilent
Freq/Channel
Mkr1 7.006 GHz
Ref 35 dBm
#Atten 40 dB
-22.52 dBm
#Avg
Log
10
dB/
Offst
16.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

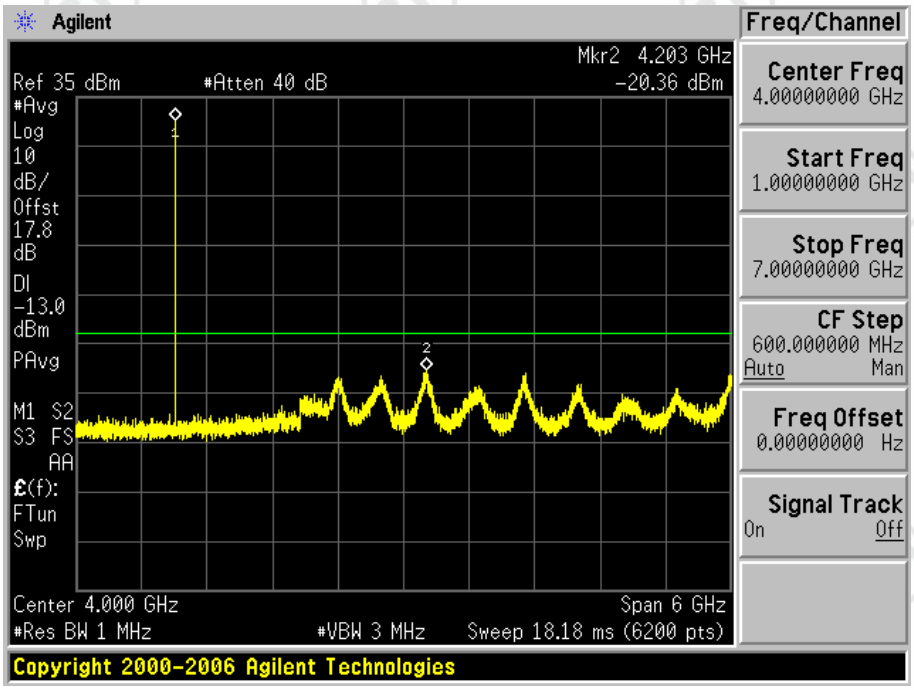

Agilent
Freq/Channel
Mkr1 19.499 GHz
Ref 35 dBm
#Atten 40 dB
-14.23 dBm
#Avg
Log
10
dB/
Offst
23.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

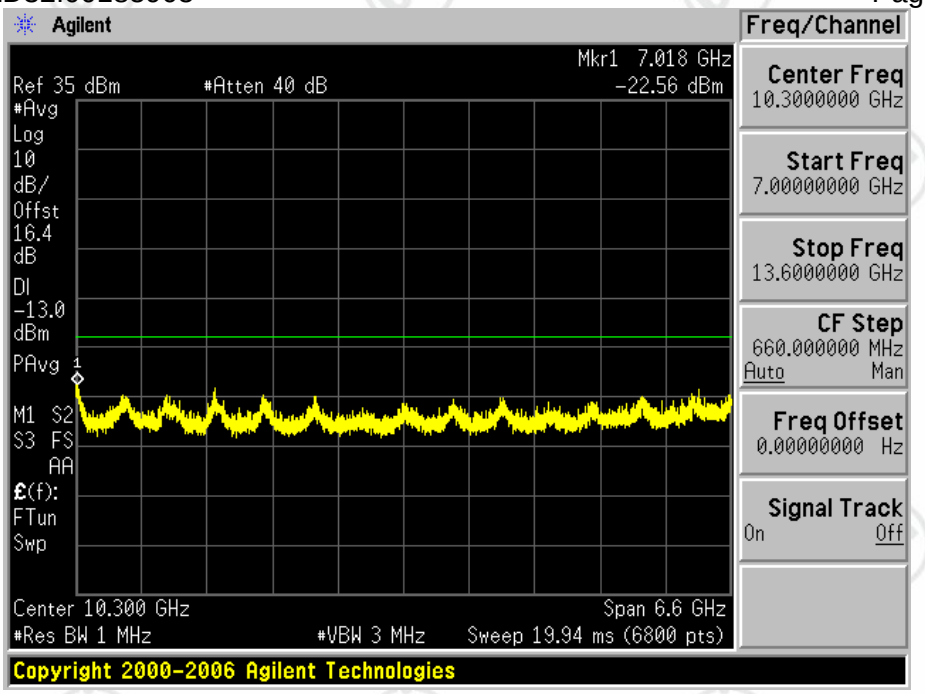
**Test Channel=HCH**

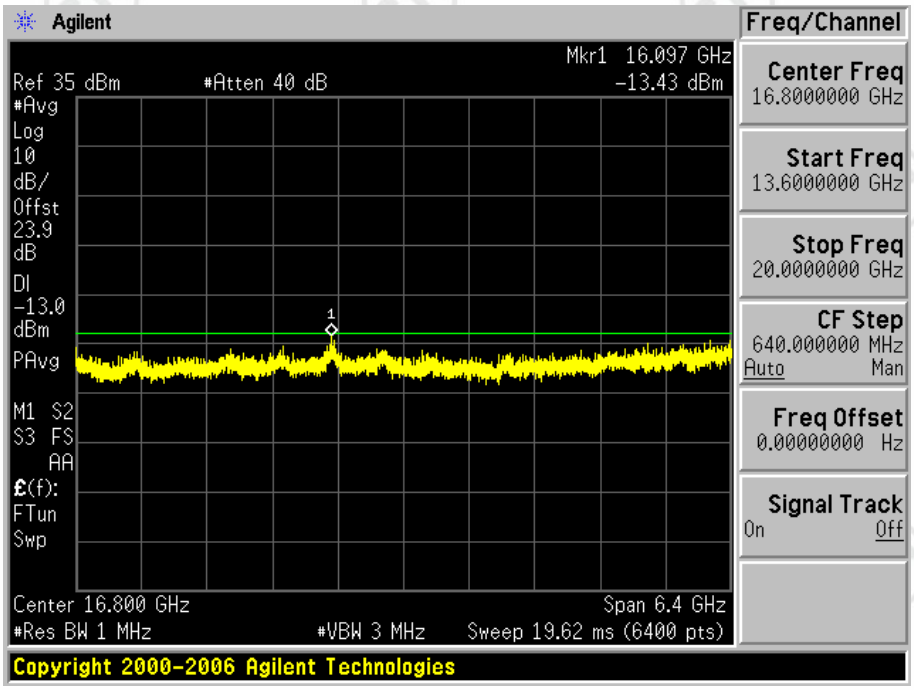



Agilent
Freq/Channel
Mkr1 656.3 MHz
Ref 35 dBm
#Atten 40 dB
-32.21 dBm
#Avg
Log
10
dB/
Offst
13.5
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Copyright 2000-2006 Agilent Technologies


Agilent
Freq/Channel
Mkr2 4.203 GHz
Ref 35 dBm
#Atten 40 dB
-20.36 dBm
#Avg
Log
10
dB/
Offst
17.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Copyright 2000-2006 Agilent Technologies


Agilent
Freq/Channel
Mkr1 7.018 GHz
Ref 35 dBm
#Atten 40 dB
-22.56 dBm
#Avg
Log
10
dB/
Offst
16.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

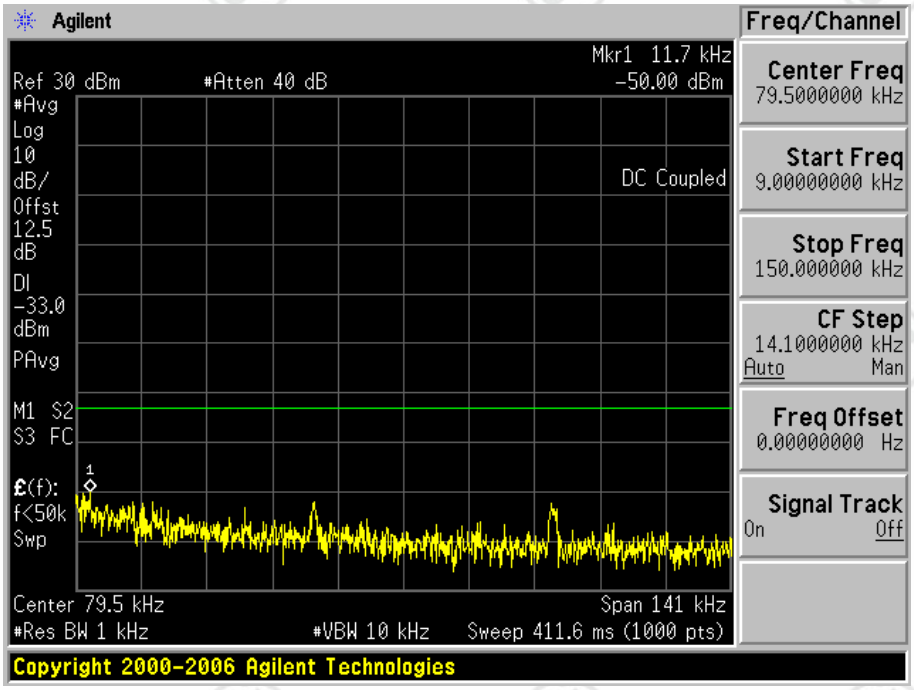

Agilent
Freq/Channel
Mkr1 16.097 GHz
Ref 35 dBm
#Atten 40 dB
-13.43 dBm
#Avg
Log
10
dB/
Offst
23.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
AA
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

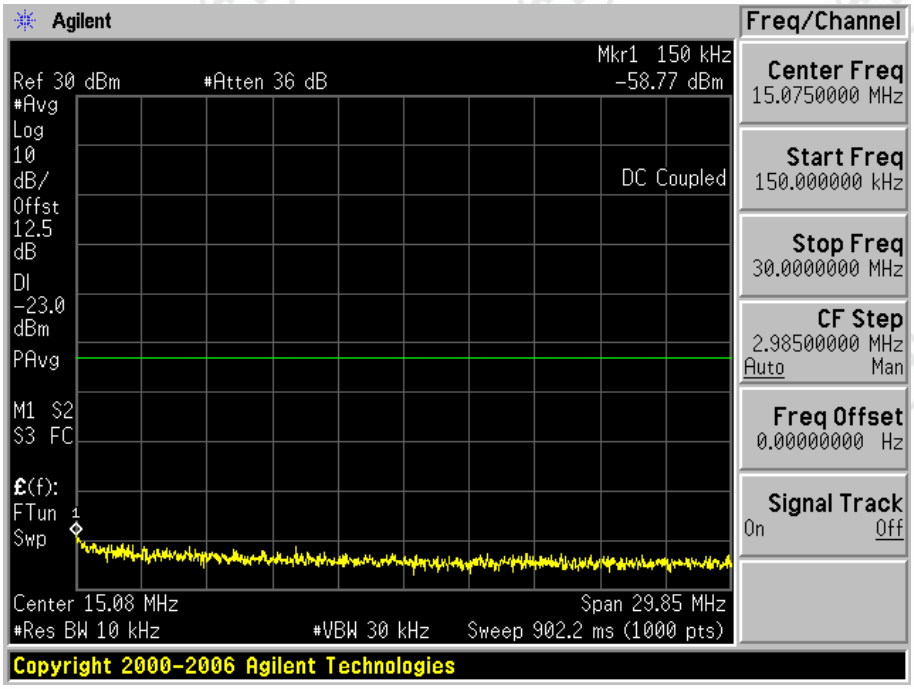
**For WCDMA**

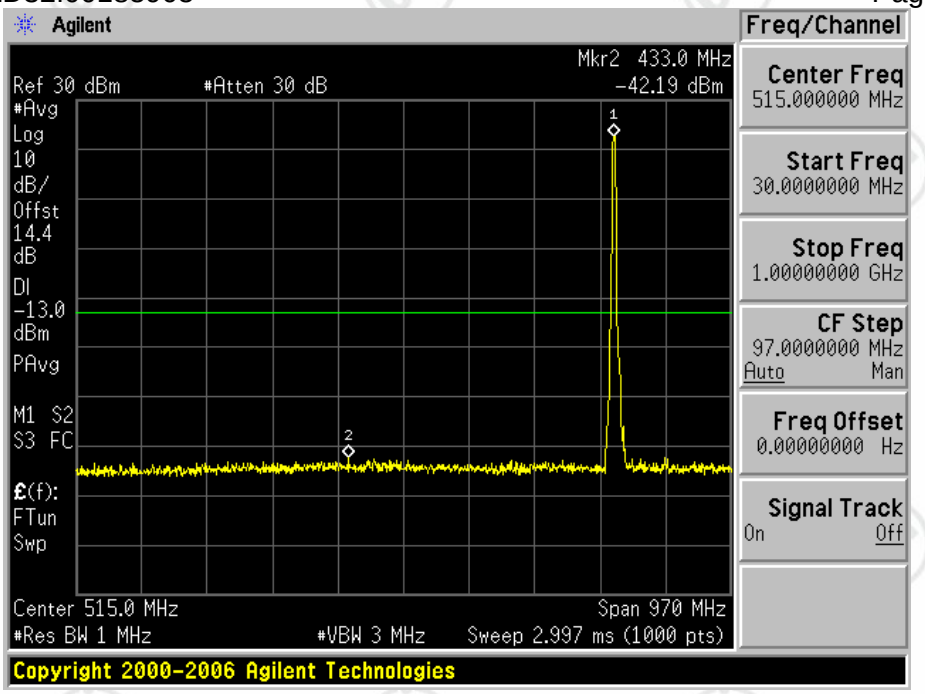
**Test Band=WCDMA850**

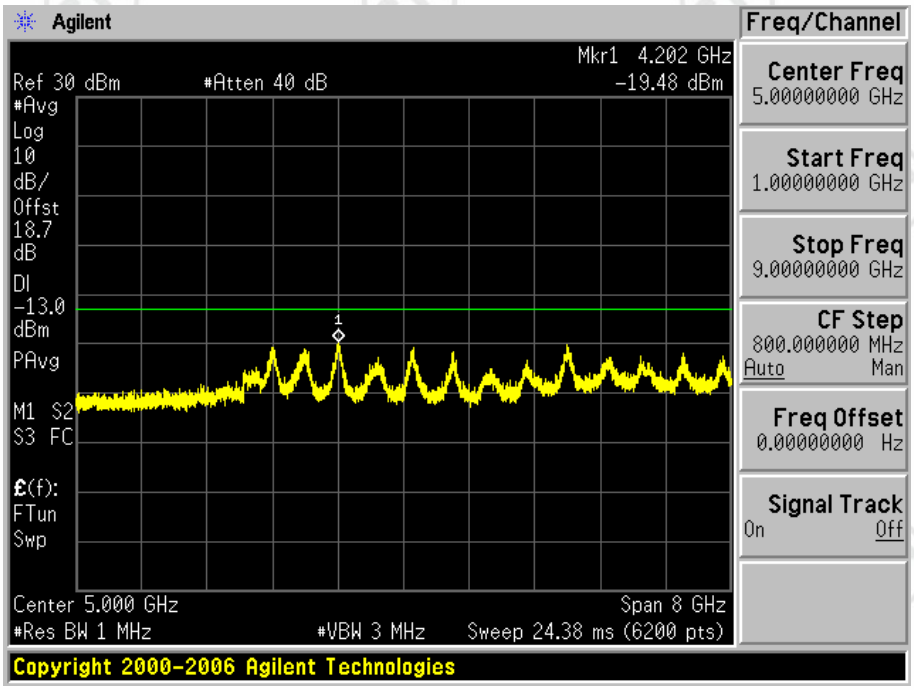
**Test Mode=UMTS/TM1**

**Test Channel=LCH**

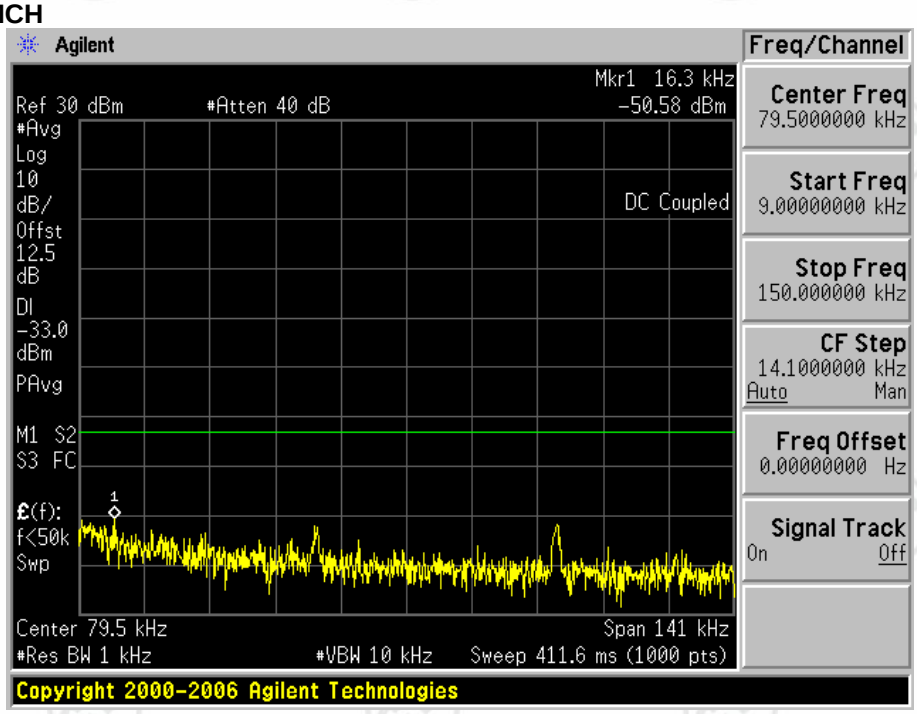


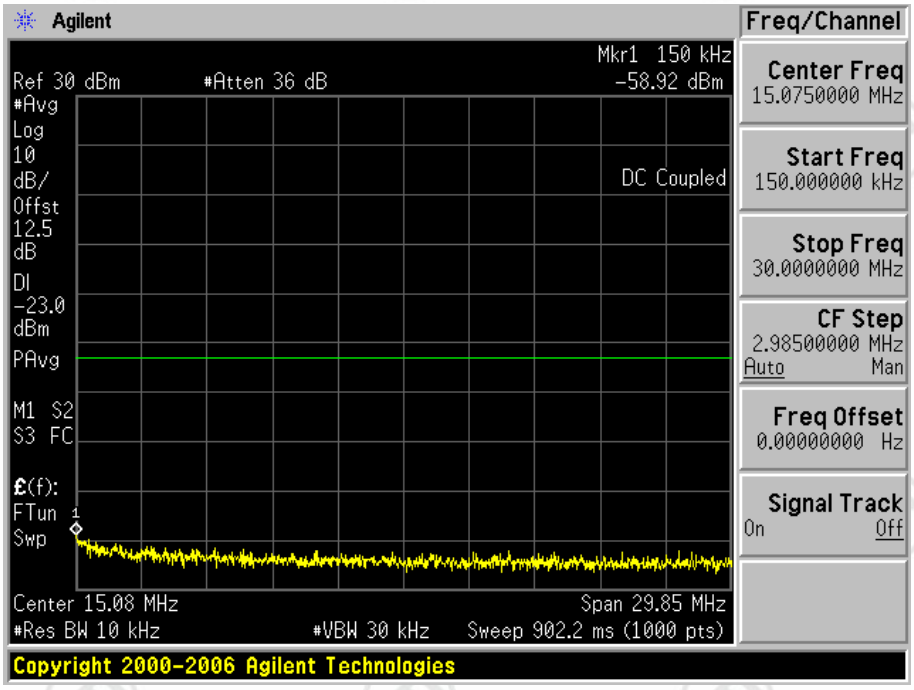



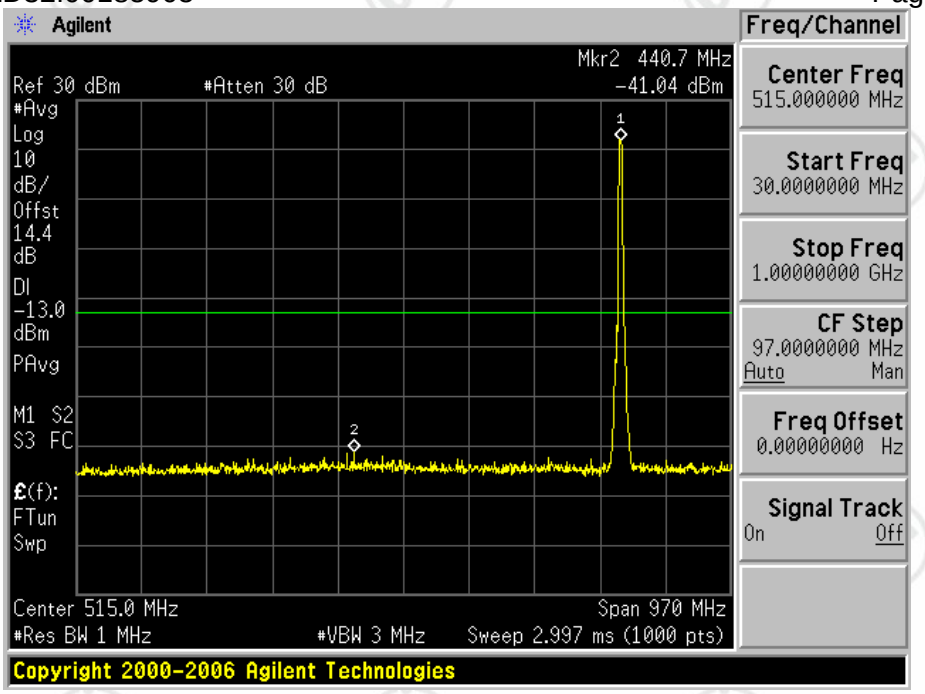

Agilent
Freq/Channel
Mkr2 433.0 MHz
Ref 30 dBm
#Atten 30 dB
-42.19 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

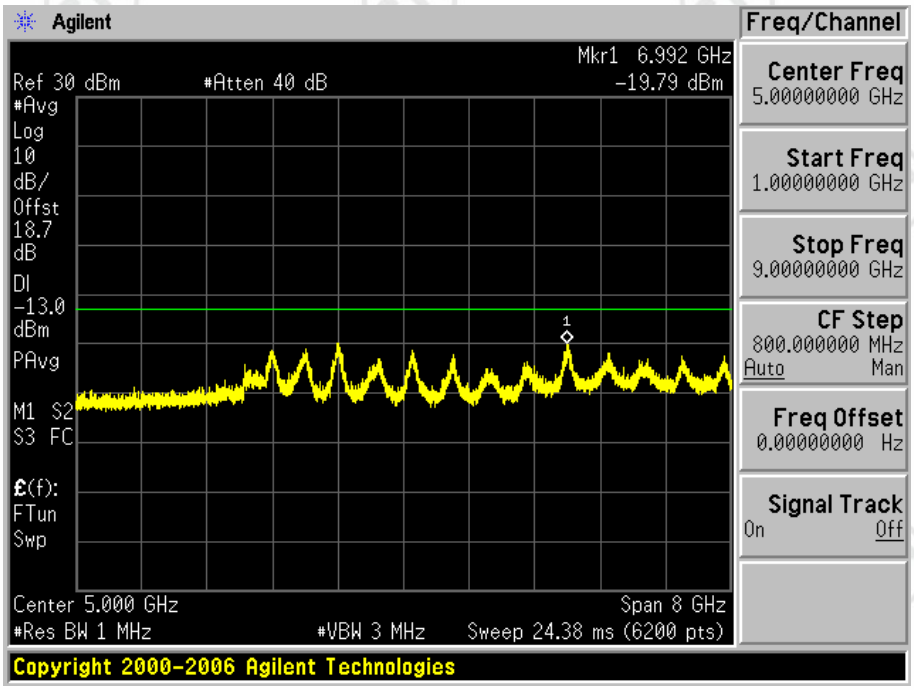

Agilent
Freq/Channel
Mkr1 4.202 GHz
Ref 30 dBm
#Atten 40 dB
-19.48 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.38 ms (6200 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

**Test Channel=MCH**

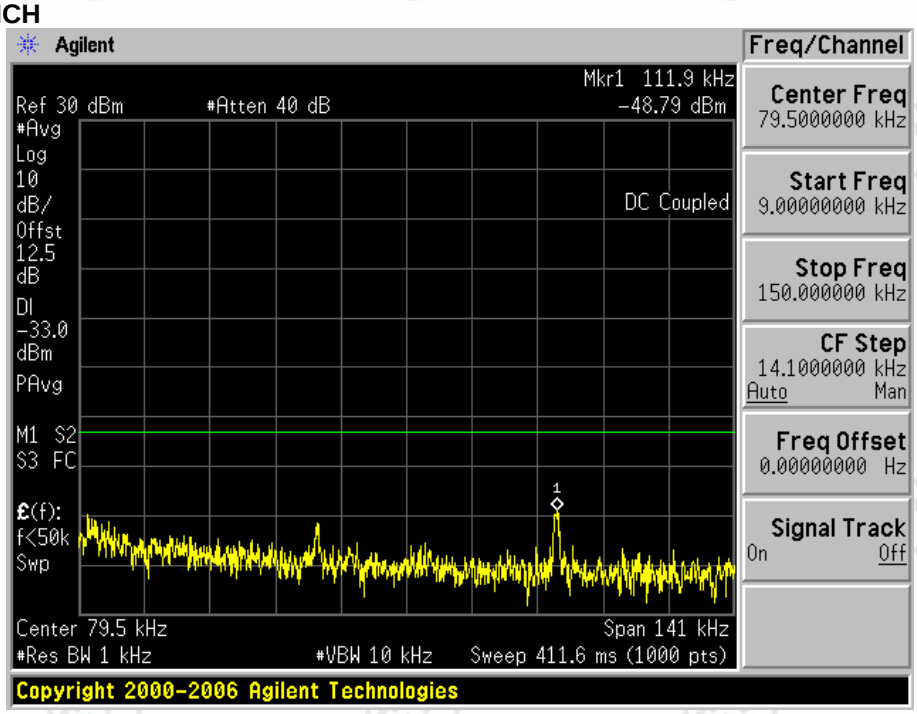


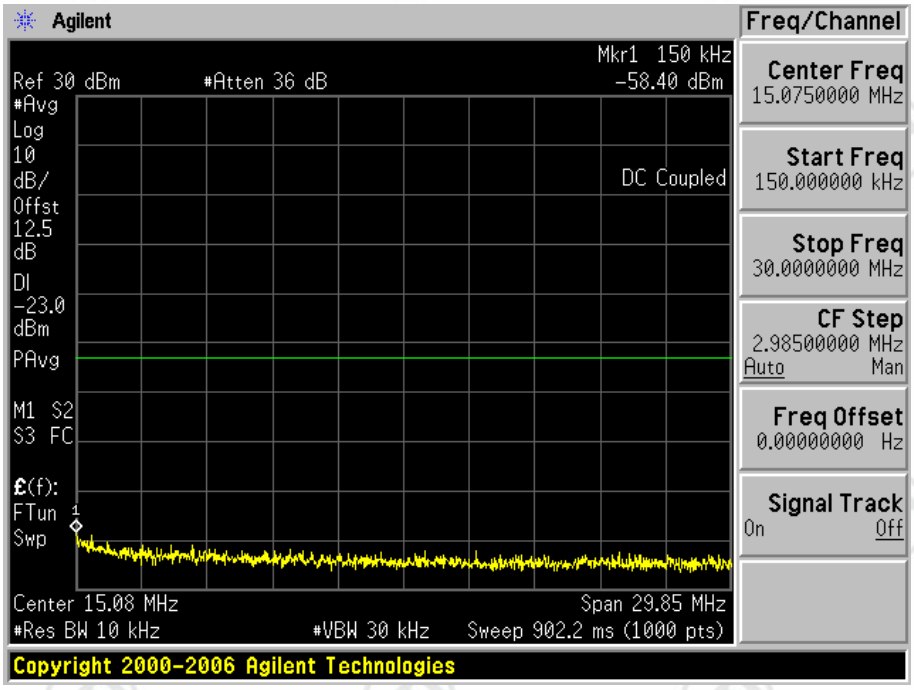



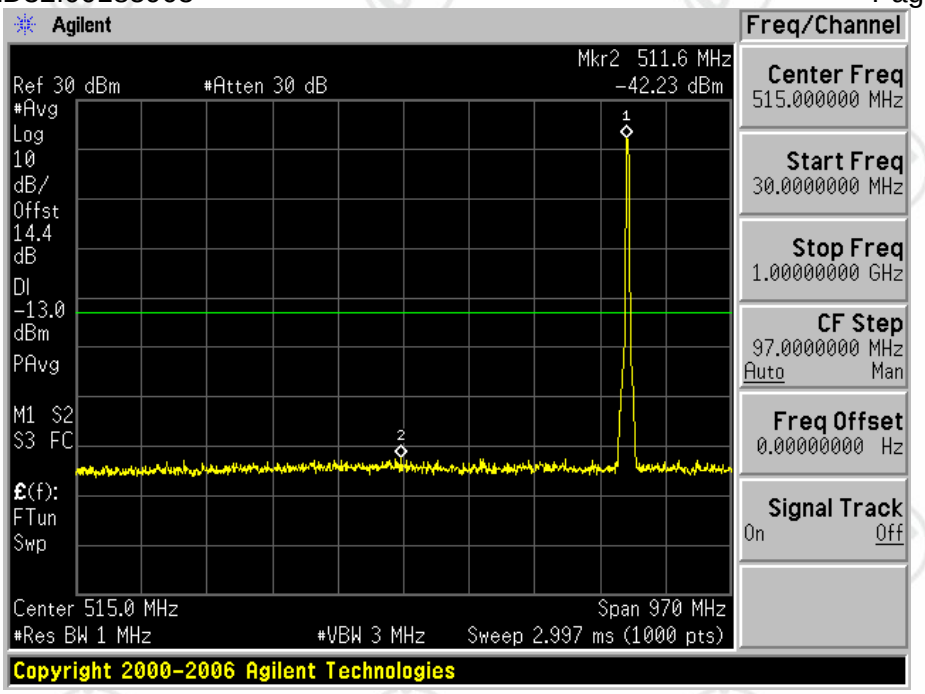

Agilent
Freq/Channel
Mkr2 440.7 MHz
Ref 30 dBm
#Atten 30 dB
-41.04 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

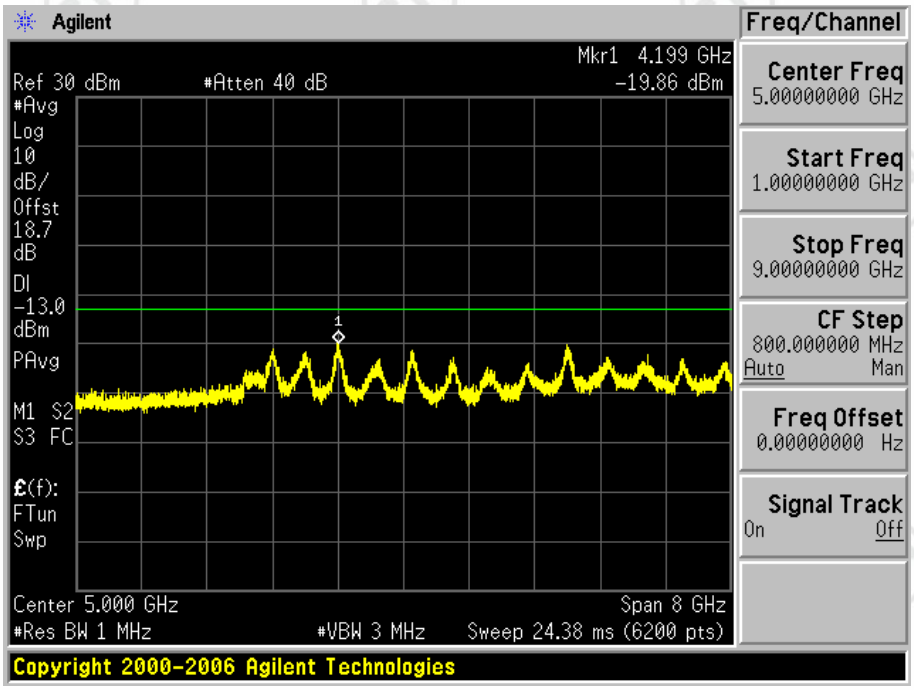

Agilent
Freq/Channel
Mkr1 6.992 GHz
Ref 30 dBm
#Atten 40 dB
-19.79 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.38 ms (6200 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

**Test Channel=HCH**




Agilent
Freq/Channel
Mkr2 511.6 MHz
Ref 30 dBm
#Atten 30 dB
-42.23 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

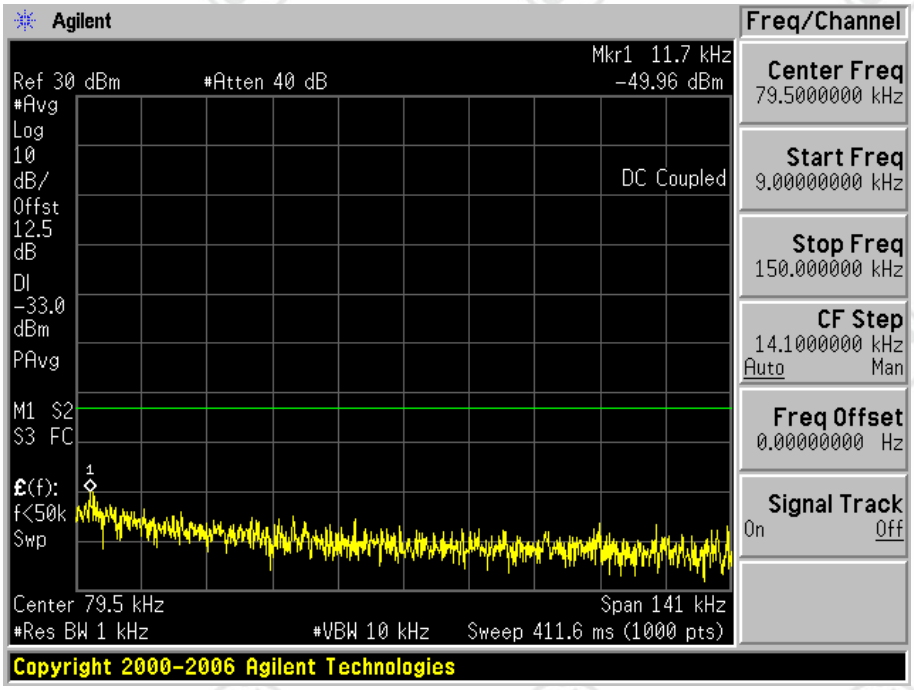

Agilent
Freq/Channel
Mkr1 4.199 GHz
Ref 30 dBm
#Atten 40 dB
-19.86 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.38 ms (6200 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

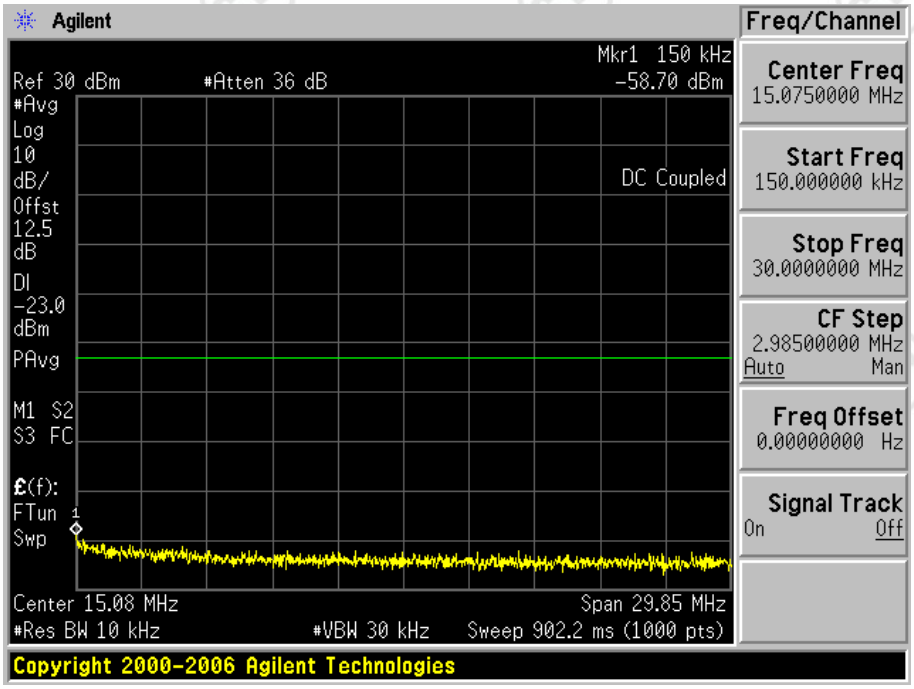
**For WCDMA**

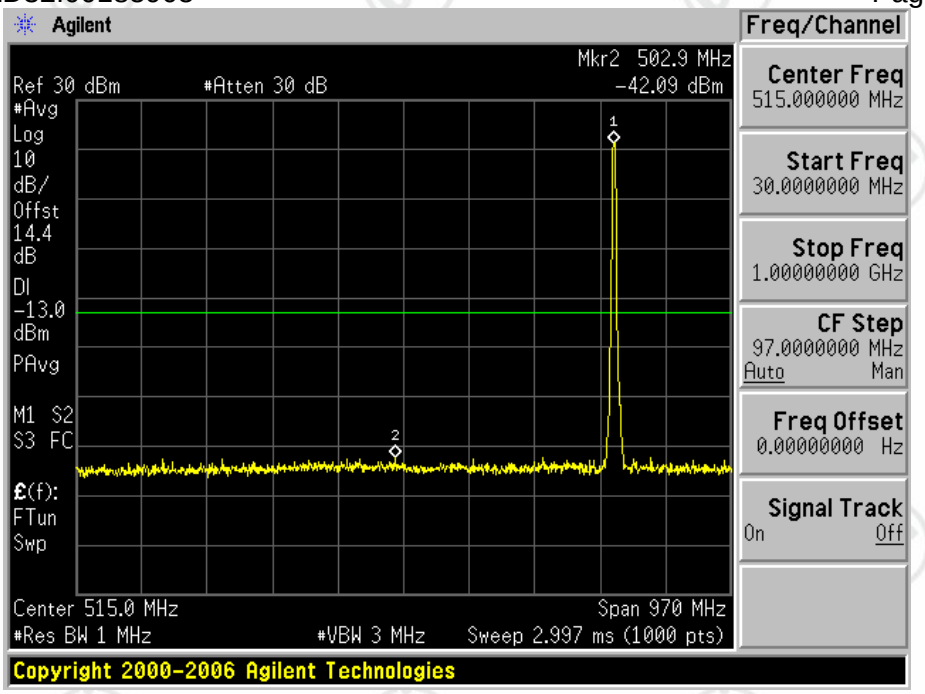
**Test Band=WCDMA850**

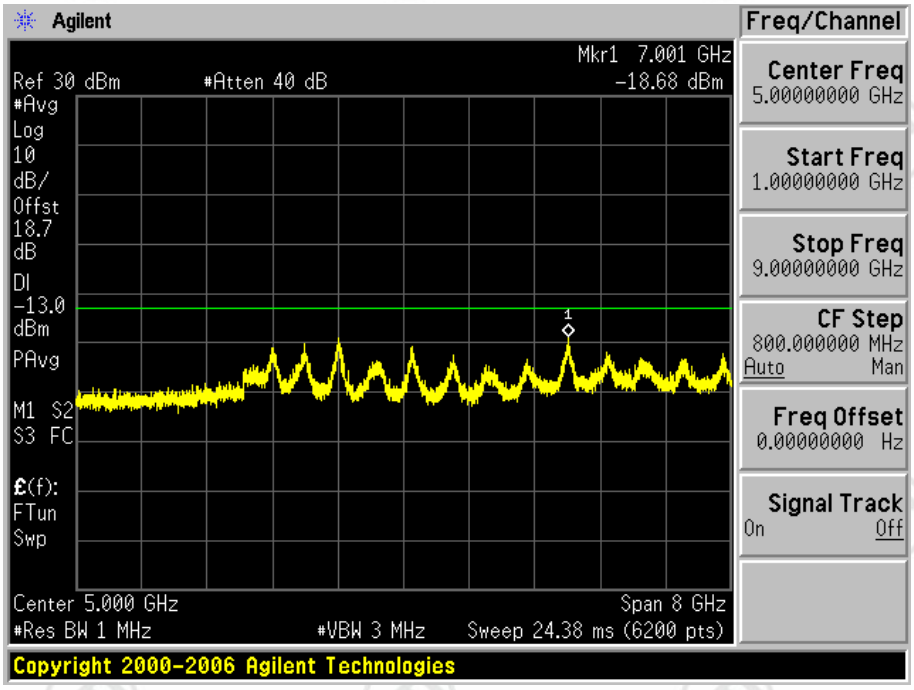
**Test Mode=UMTS/TM2**

**Test Channel=LCH**

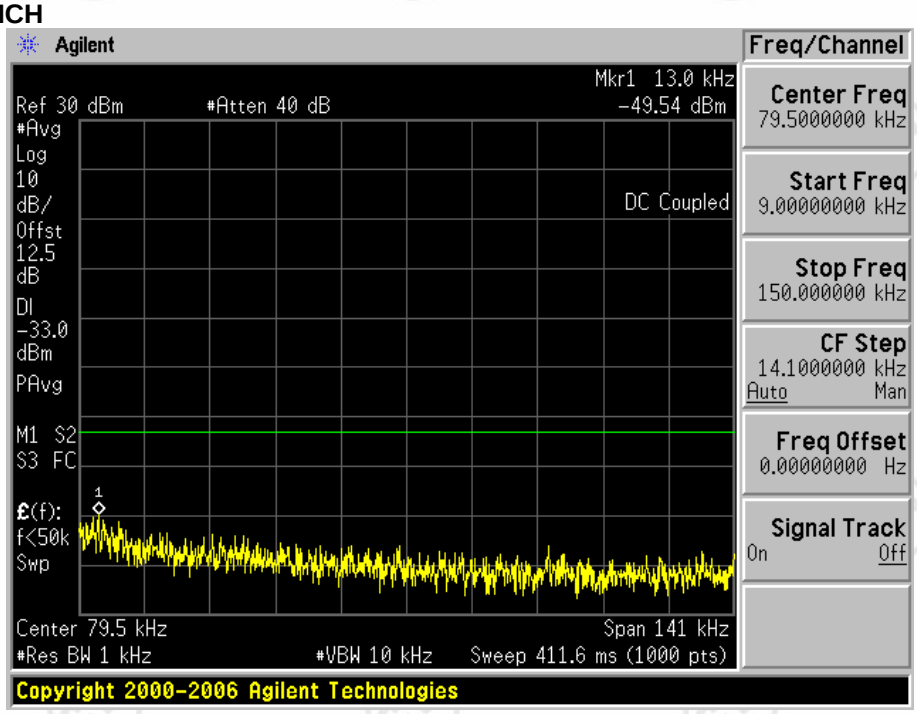


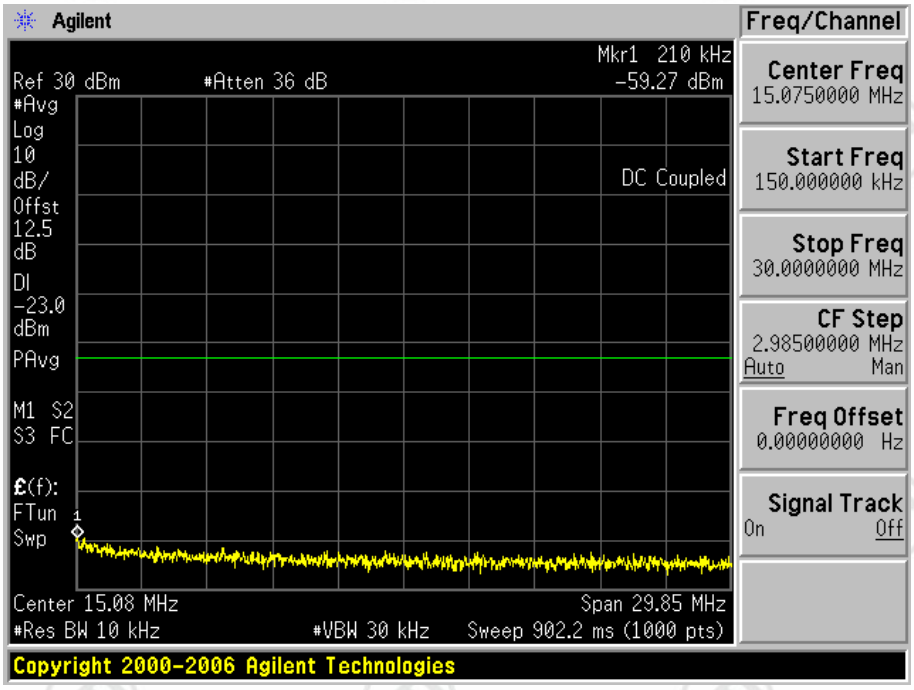



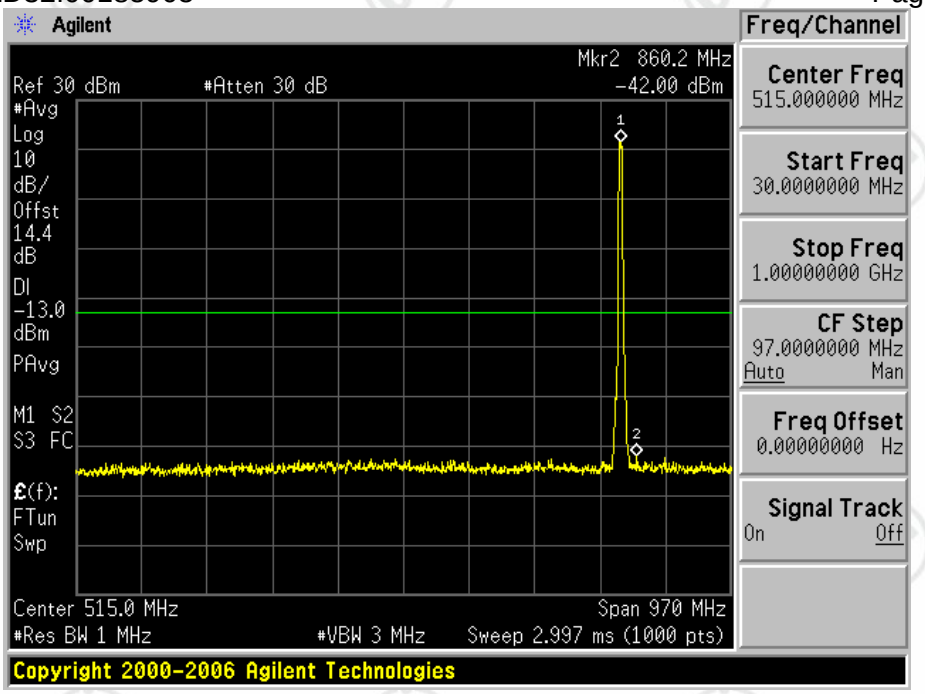

Agilent
Freq/Channel
Mkr2 502.9 MHz
Ref 30 dBm
#Atten 30 dB
-42.09 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

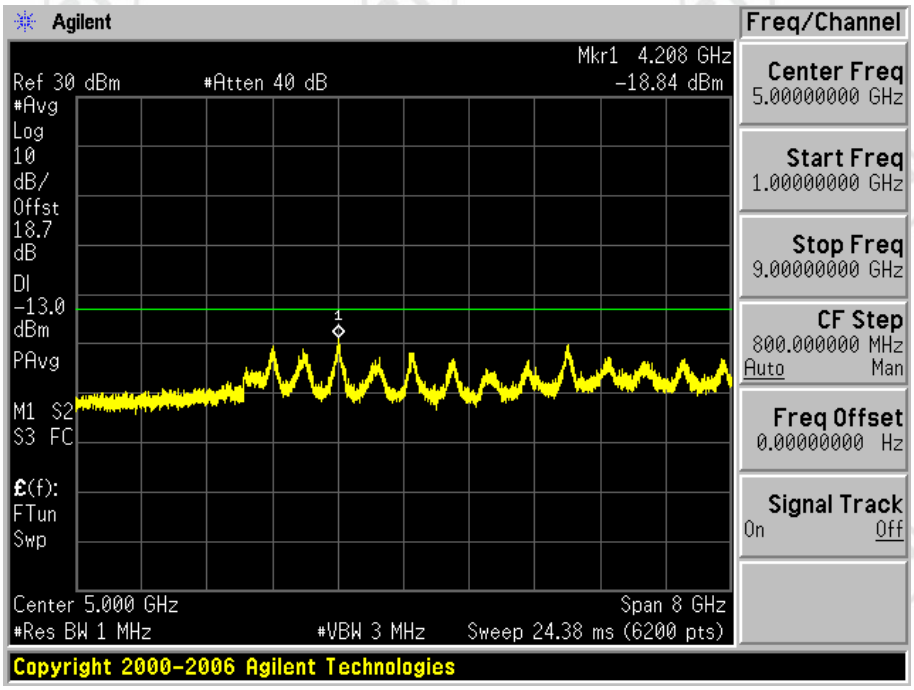

Agilent
Freq/Channel
Mkr1 7.001 GHz
Ref 30 dBm
#Atten 40 dB
-18.68 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.38 ms (6200 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

**Test Channel=MCH**

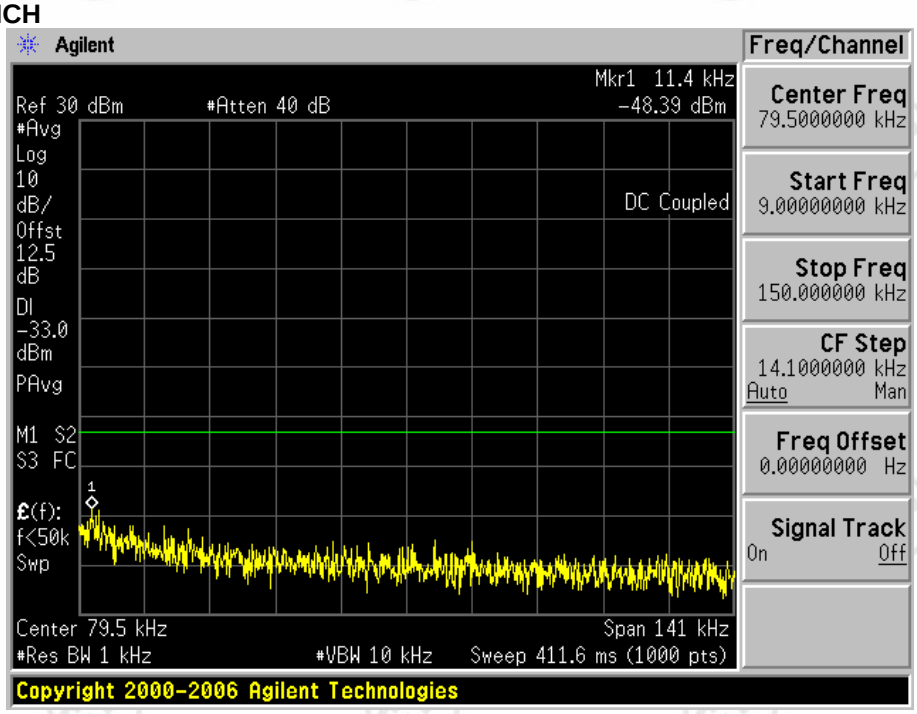


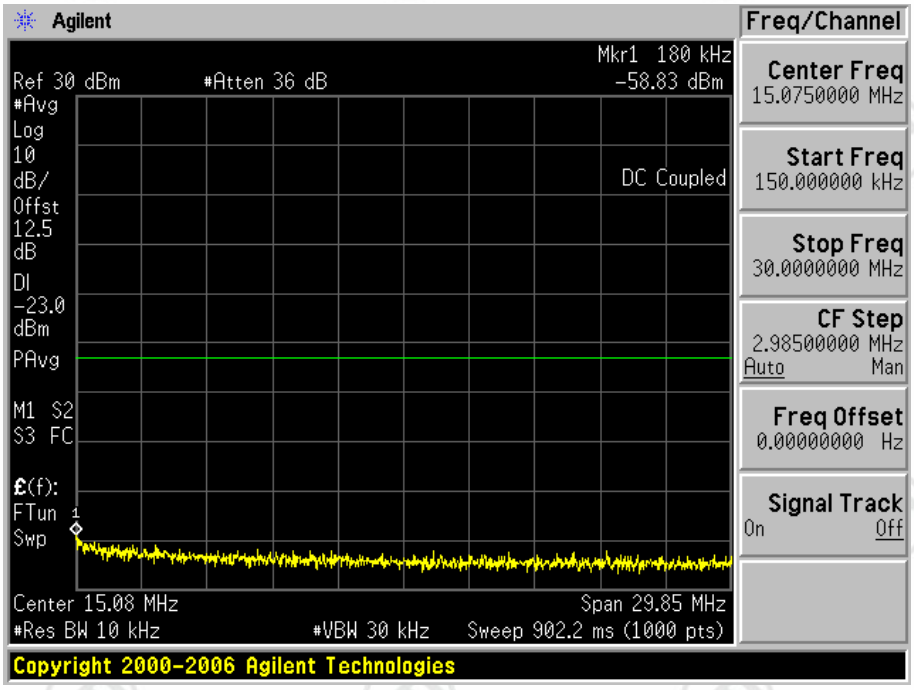



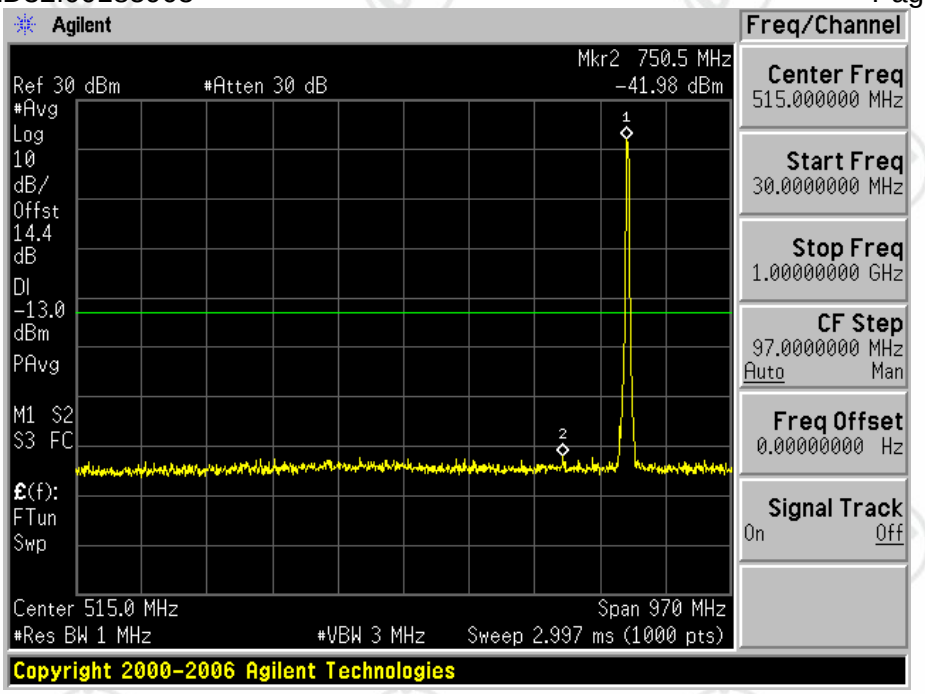

Agilent
Freq/Channel
Mkr2 860.2 MHz
Ref 30 dBm
#Atten 30 dB
-42.00 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

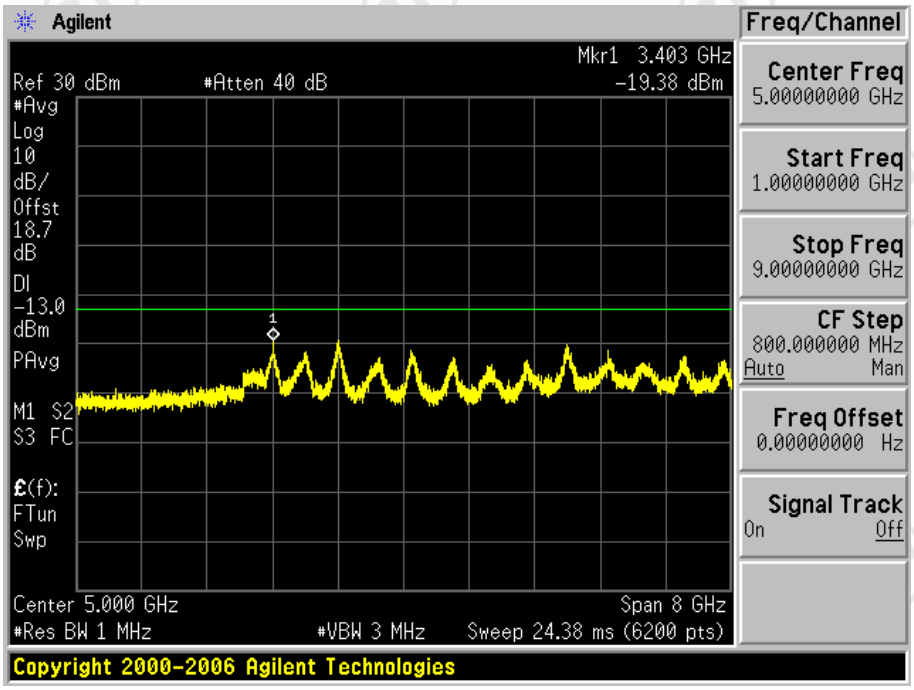

Agilent
Freq/Channel
Mkr1 4.208 GHz
Ref 30 dBm
#Atten 40 dB
-18.84 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.38 ms (6200 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

**Test Channel=HCH**



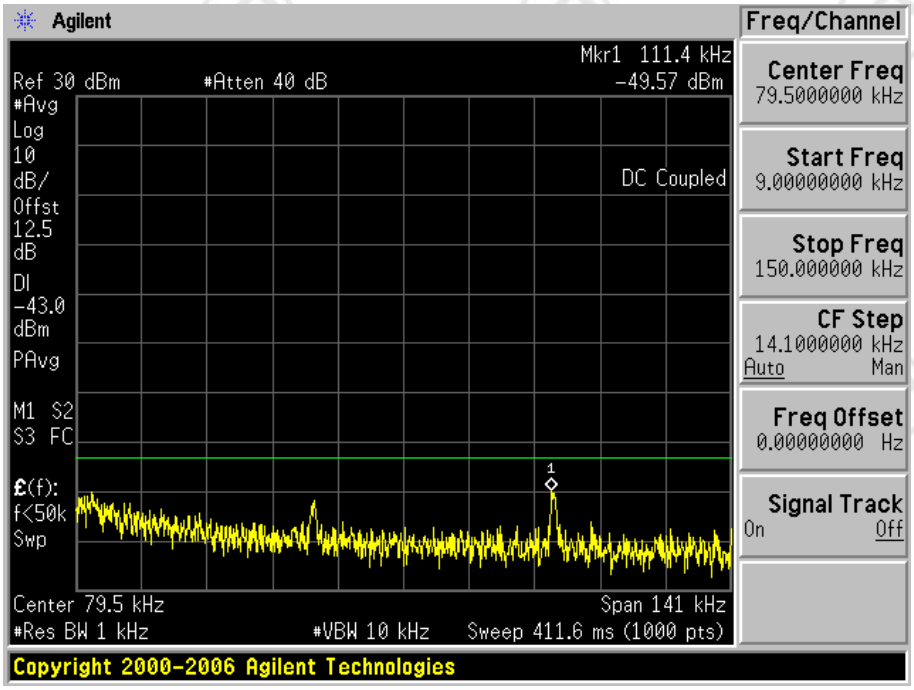

Agilent
Freq/Channel
Mkr2 750.5 MHz
Ref 30 dBm
#Atten 30 dB
-41.98 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

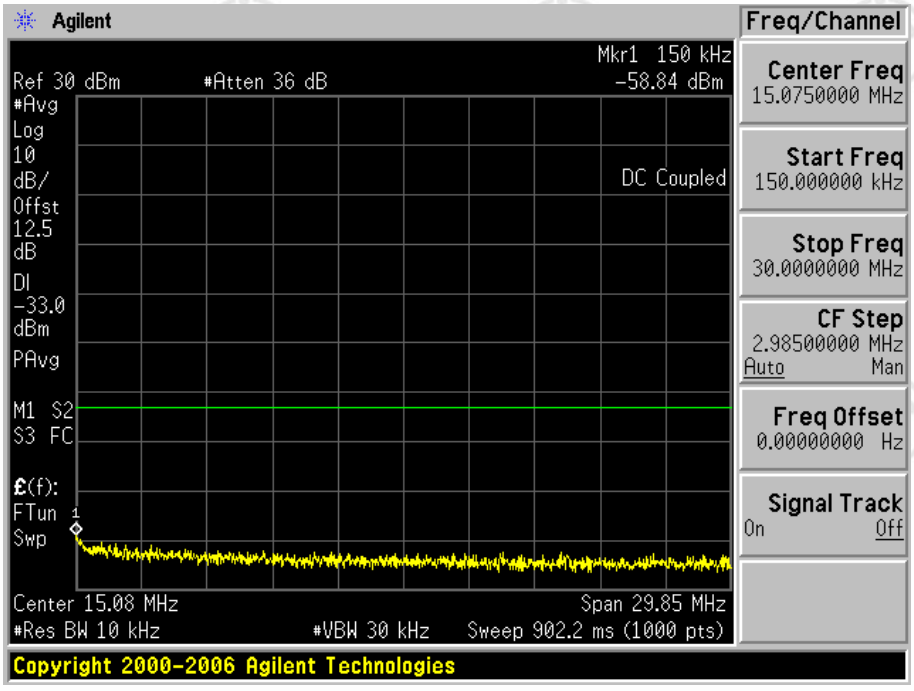

Agilent
Freq/Channel
Mkr1 3.403 GHz
Ref 30 dBm
#Atten 40 dB
-19.38 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.38 ms (6200 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

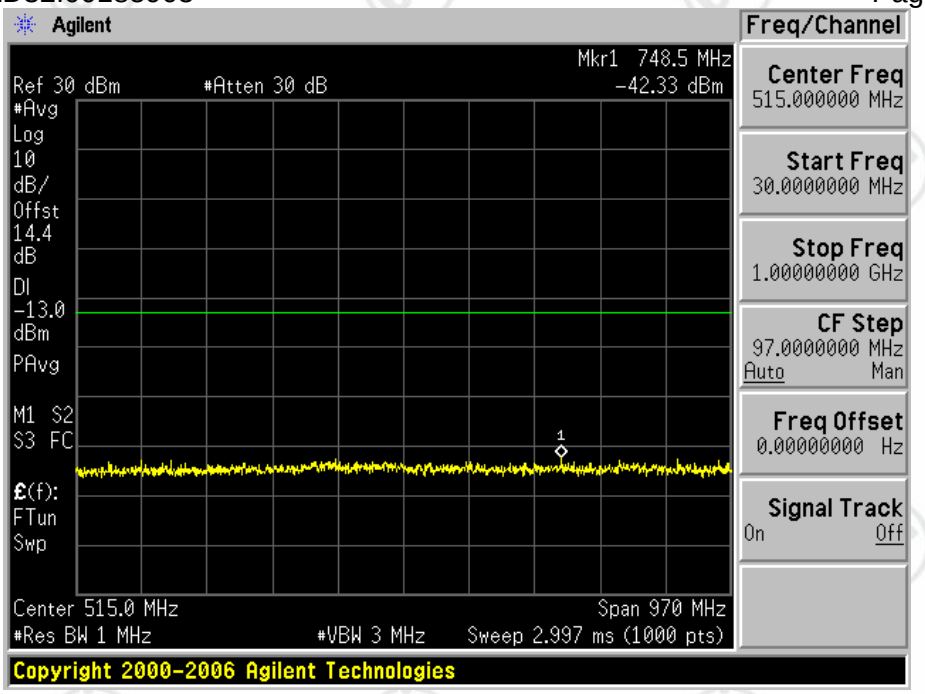
**Test Band=WCDMA1900**

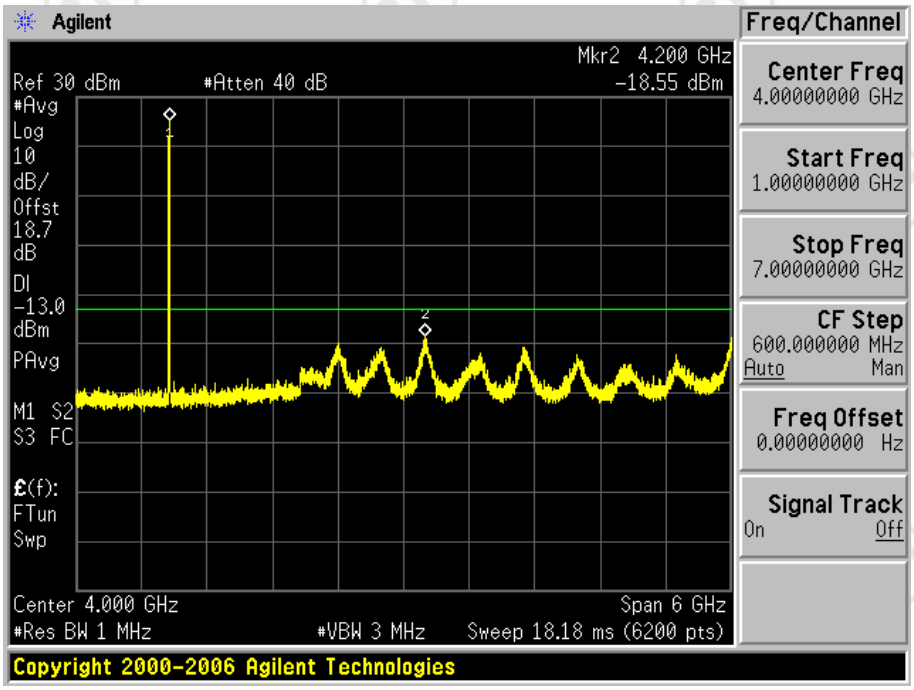
**Test Mode=UMTS/TM1**

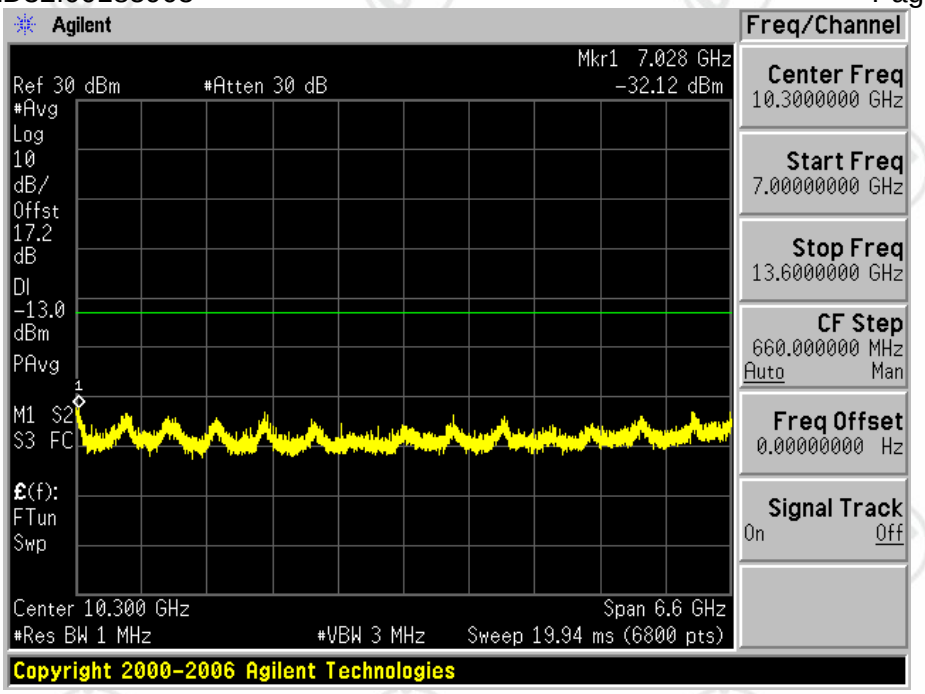
**Test Channel=LCH**

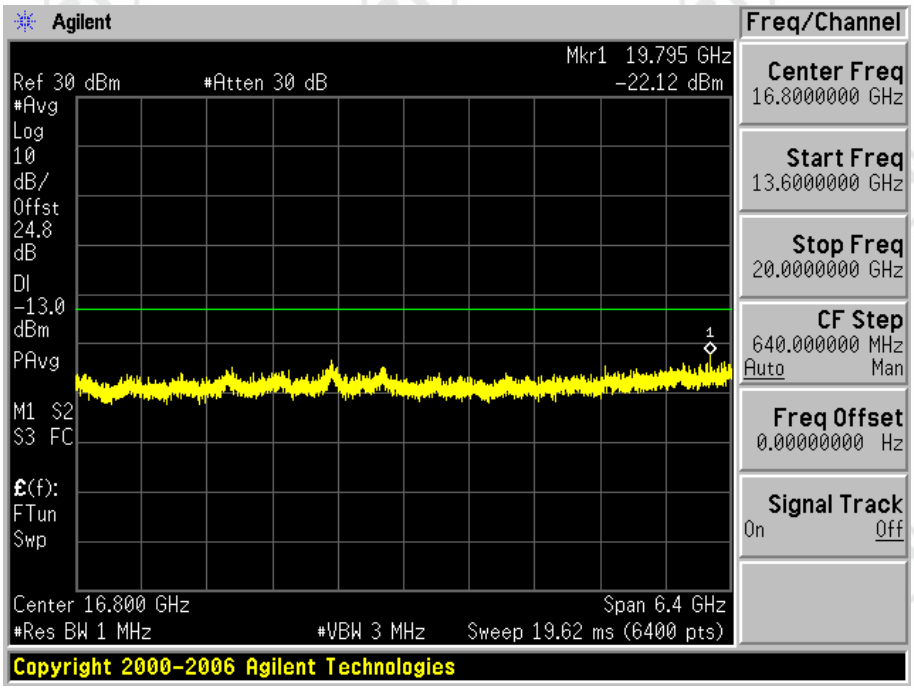


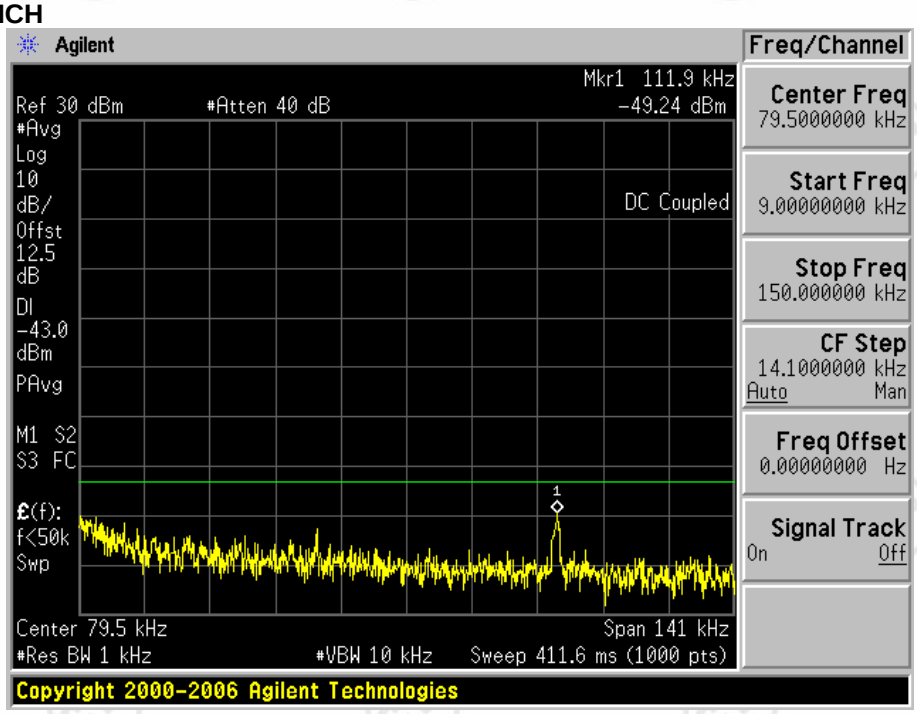

Agilent
Freq/Channel
Mkr1 748.5 MHz
Ref 30 dBm
#Atten 30 dB
-42.33 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

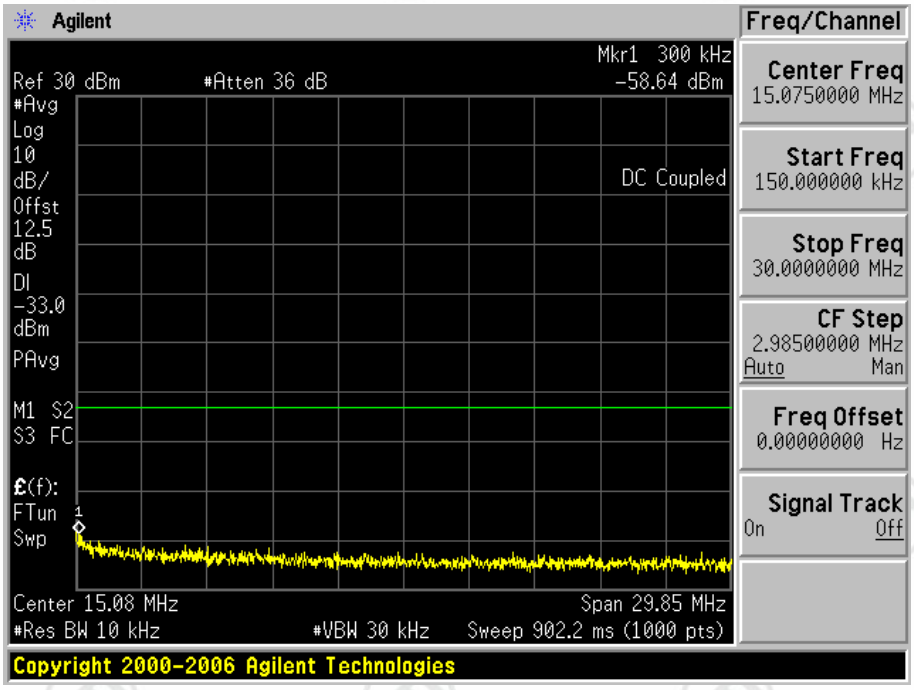

Agilent
Freq/Channel
Mkr2 4.200 GHz
Ref 30 dBm
#Atten 40 dB
-18.55 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

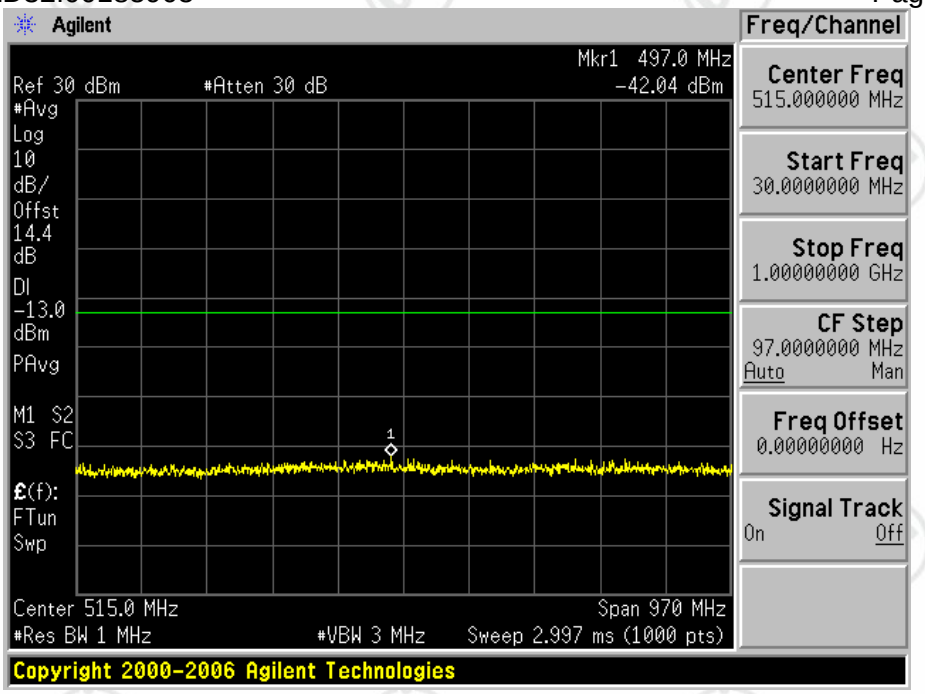

Agilent
Freq/Channel
Mkr1 7.028 GHz
Ref 30 dBm
#Atten 30 dB
-32.12 dBm
#Avg
Log
10
dB/
Offst
17.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Copyright 2000-2006 Agilent Technologies

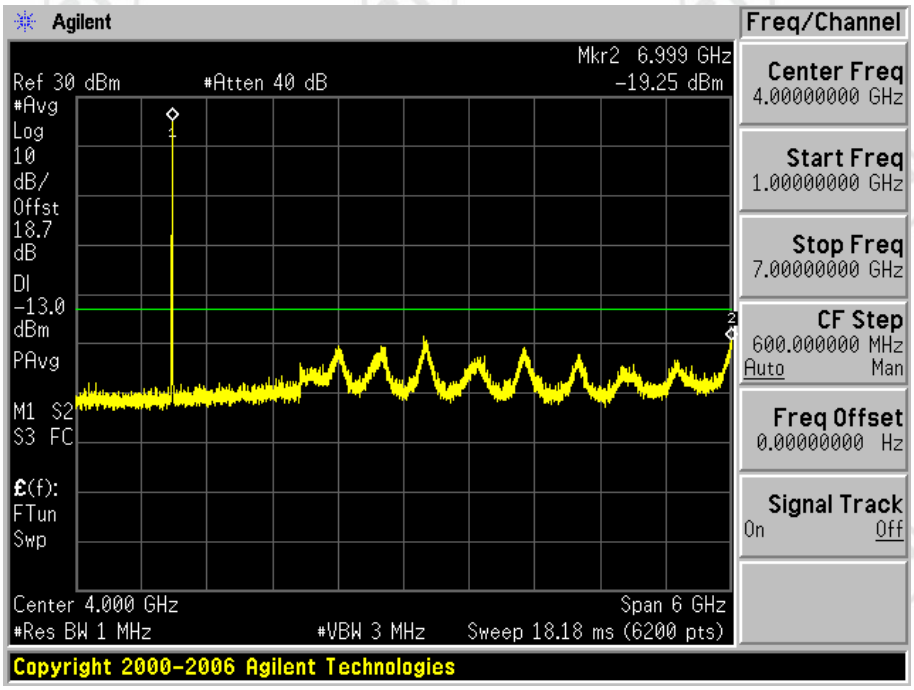

Agilent
Freq/Channel
Mkr1 19.795 GHz
Ref 30 dBm
#Atten 30 dB
-22.12 dBm
#Avg
Log
10
dB/
Offst
24.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Copyright 2000-2006 Agilent Technologies

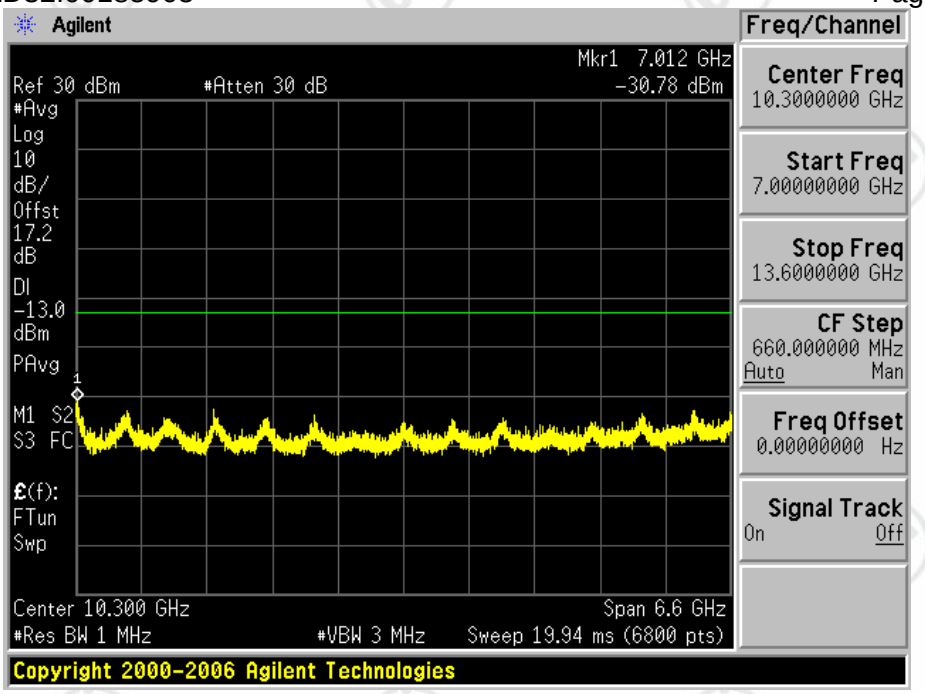
**Test Channel=MCH**

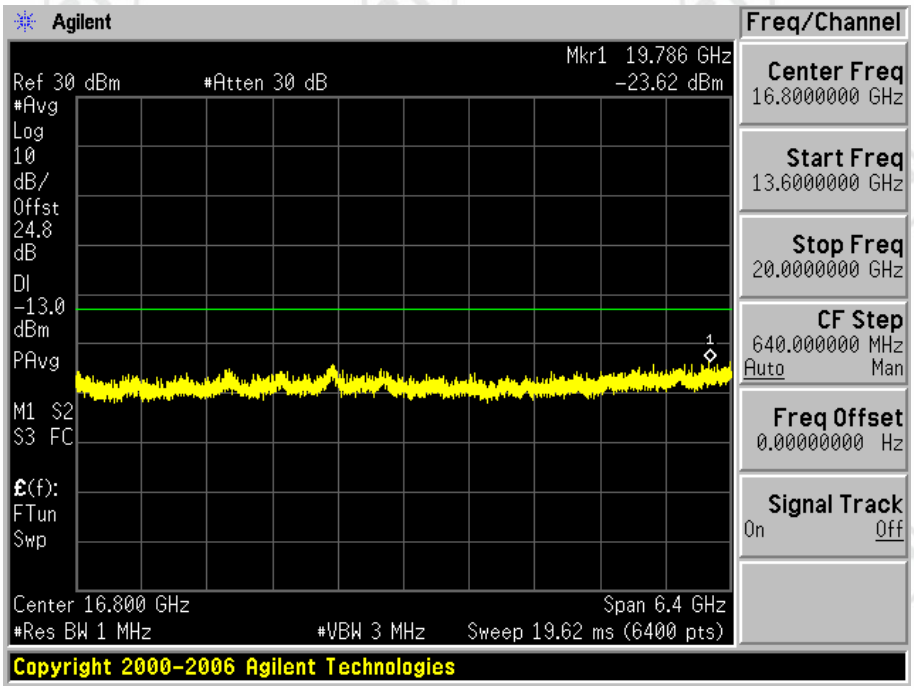


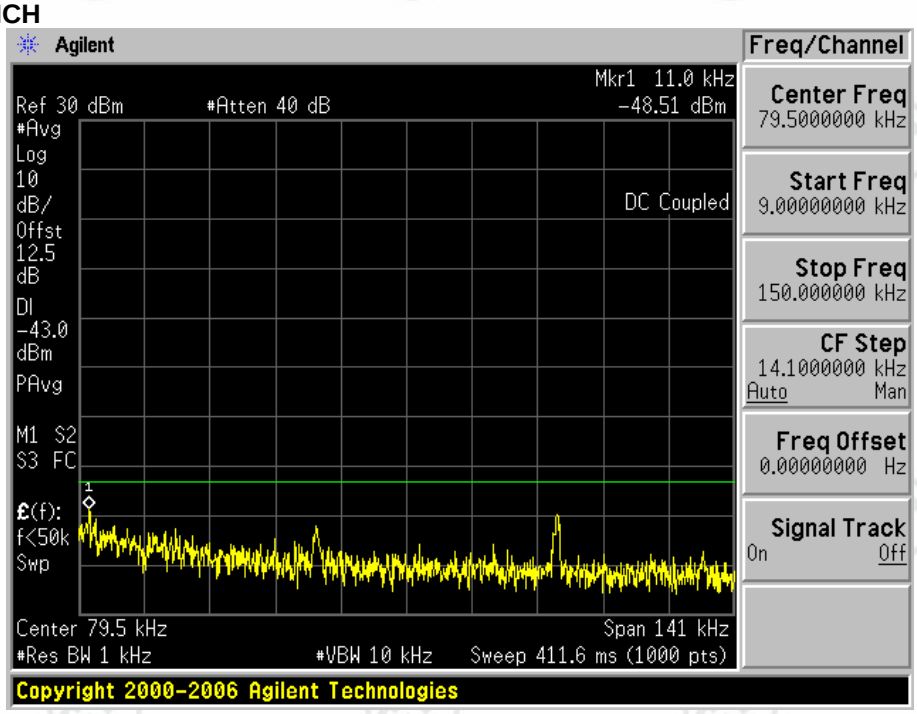

Agilent
Freq/Channel
Mkr1 497.0 MHz
Ref 30 dBm
#Atten 30 dB
-42.04 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

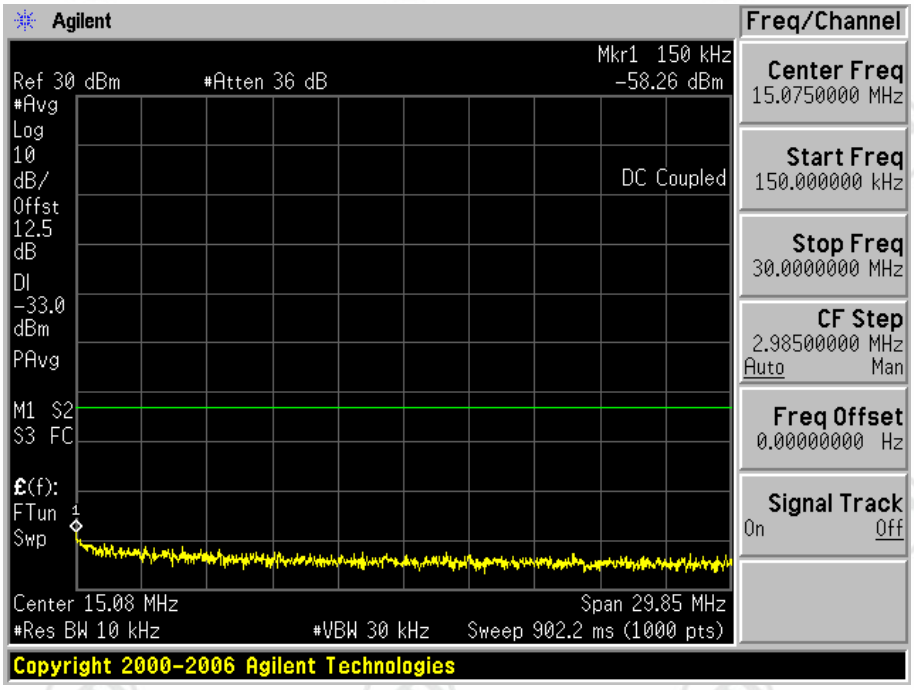

Agilent
Freq/Channel
Mkr2 6.999 GHz
Ref 30 dBm
#Atten 40 dB
-19.25 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

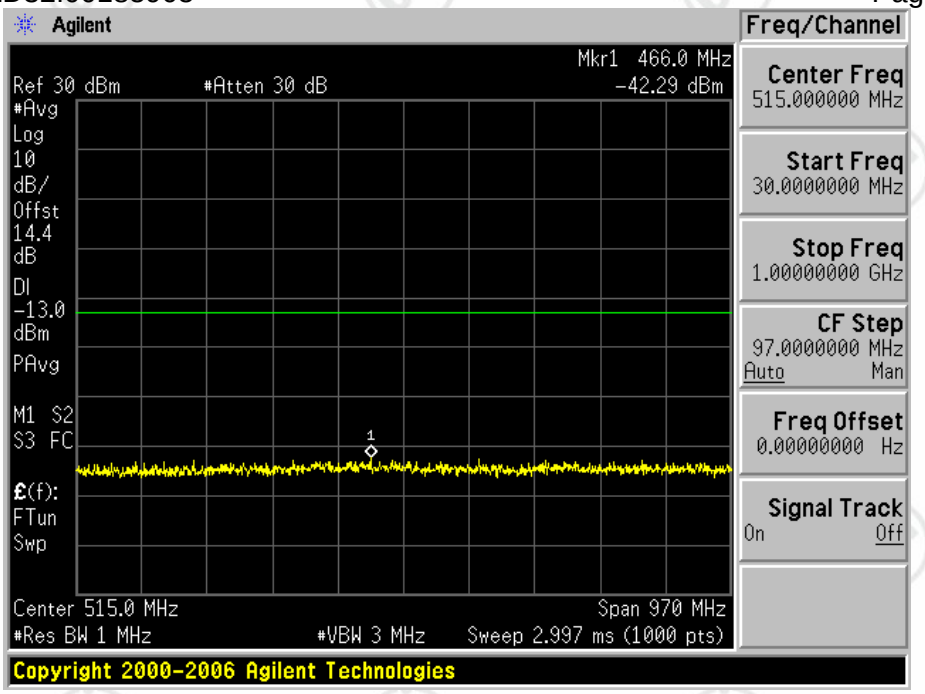

Agilent
Freq/Channel
Mkr1 7.012 GHz
Ref 30 dBm
#Atten 30 dB
-30.78 dBm
#Avg
Log
10
dB/
Offst
17.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Copyright 2000-2006 Agilent Technologies

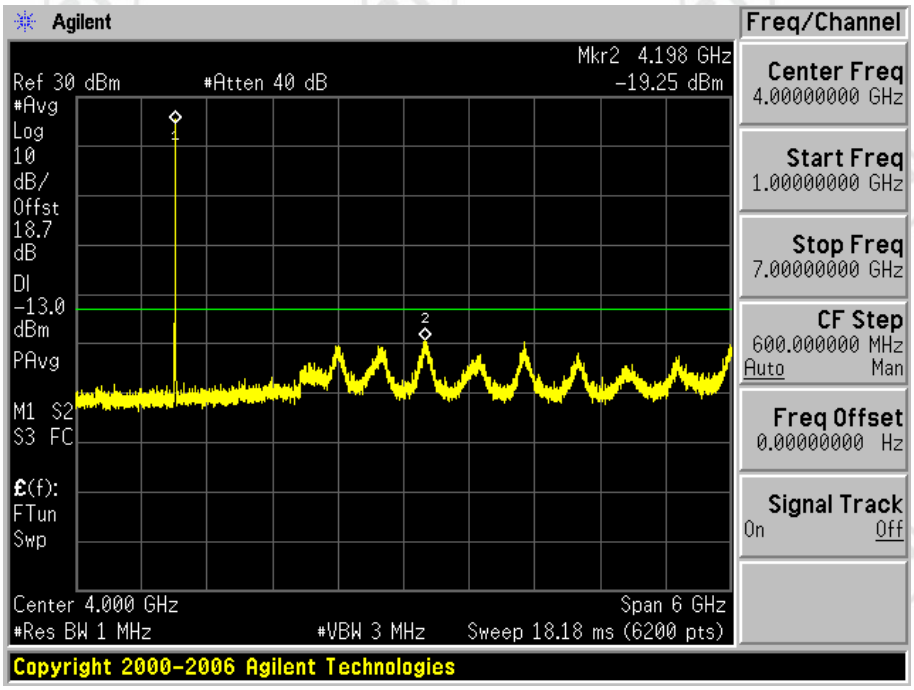

Agilent
Freq/Channel
Mkr1 19.786 GHz
Ref 30 dBm
#Atten 30 dB
-23.62 dBm
#Avg
Log
10
dB/
Offst
24.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Copyright 2000-2006 Agilent Technologies

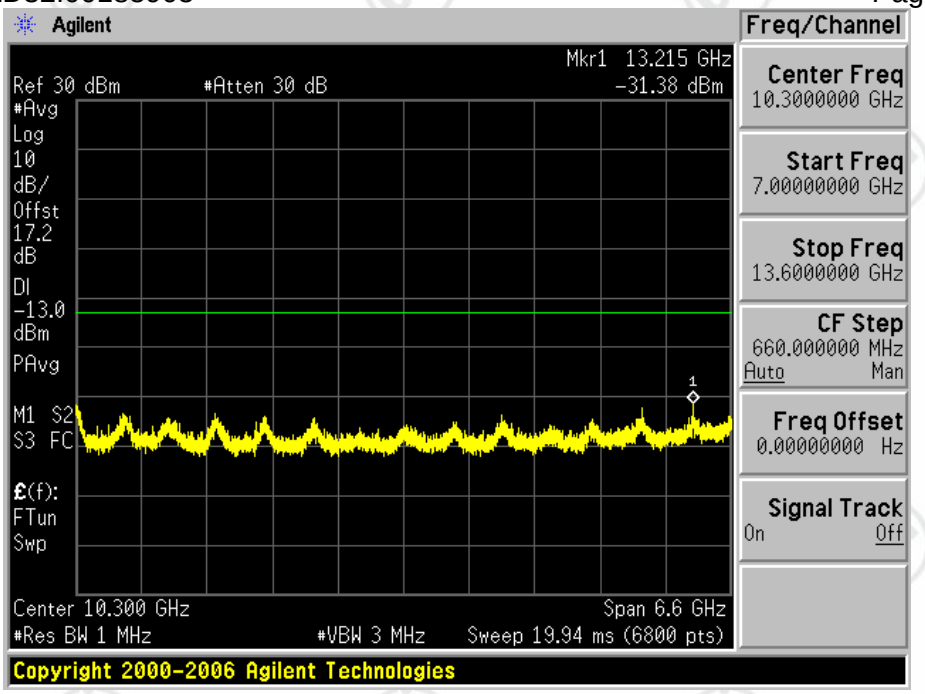
**Test Channel=HCH**

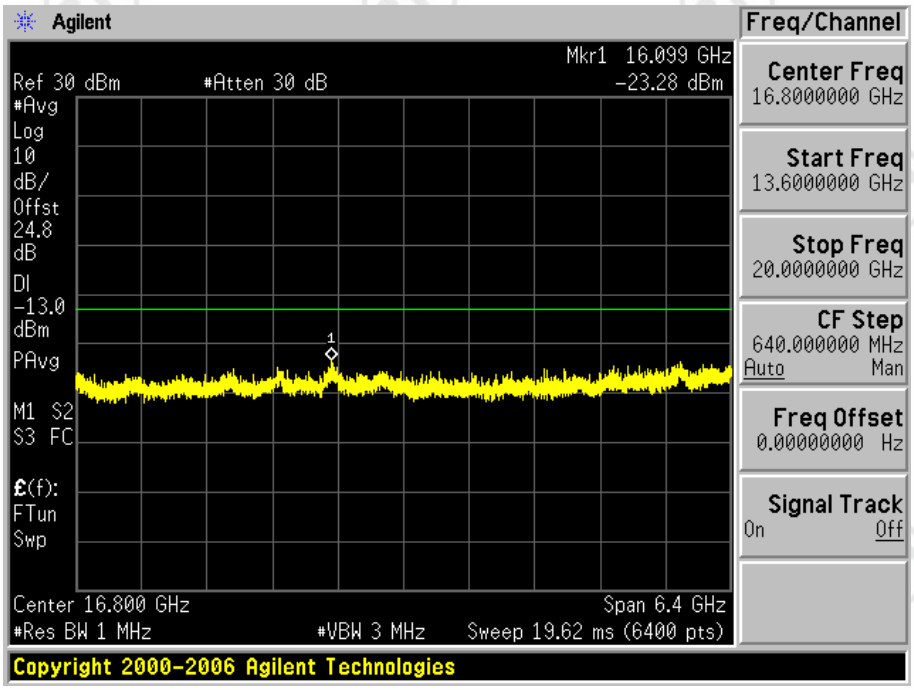



Agilent
Freq/Channel
Mkr1 466.0 MHz
Ref 30 dBm
#Atten 30 dB
-42.29 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Copyright 2000-2006 Agilent Technologies


Agilent
Freq/Channel
Mkr2 4.198 GHz
Ref 30 dBm
#Atten 40 dB
-19.25 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Copyright 2000-2006 Agilent Technologies

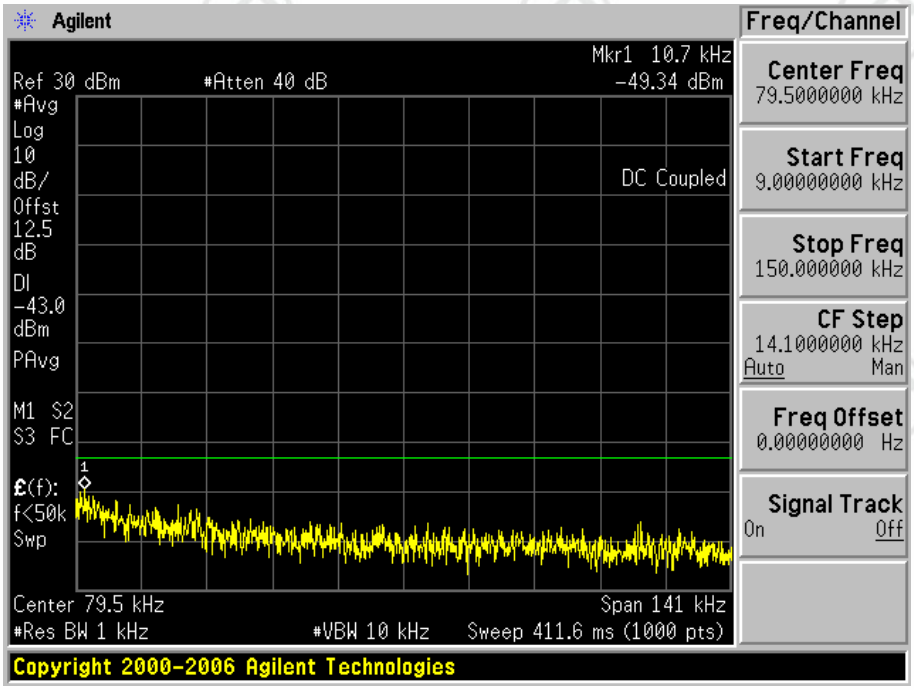

Agilent
Freq/Channel
Mkr1 13.215 GHz
Ref 30 dBm
#Atten 30 dB
-31.38 dBm
#Avg
Log
10
dB/
Offst
17.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Copyright 2000-2006 Agilent Technologies

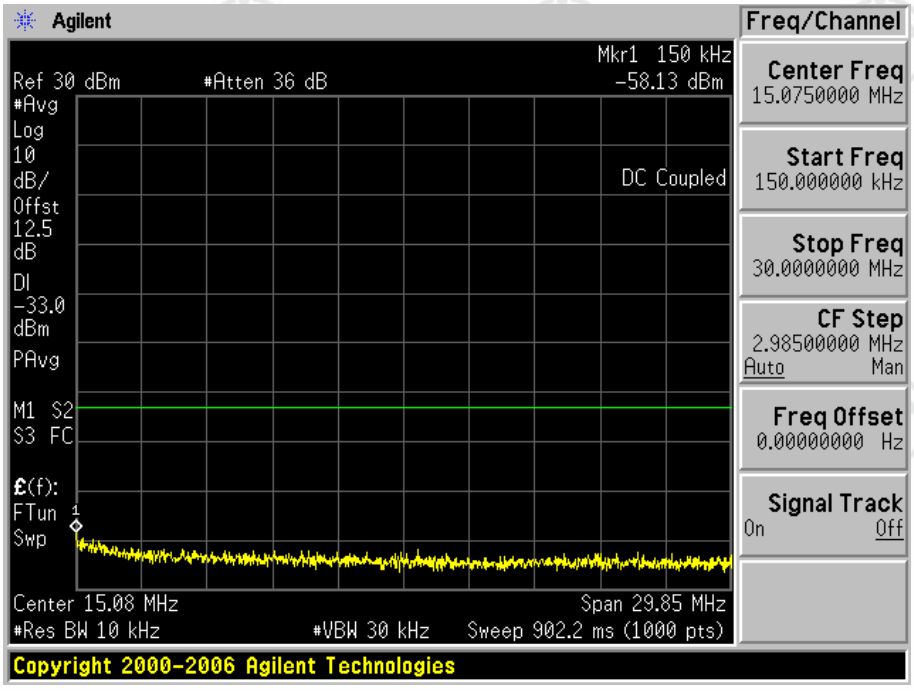

Agilent
Freq/Channel
Mkr1 16.099 GHz
Ref 30 dBm
#Atten 30 dB
-23.28 dBm
#Avg
Log
10
dB/
Offst
24.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Copyright 2000-2006 Agilent Technologies

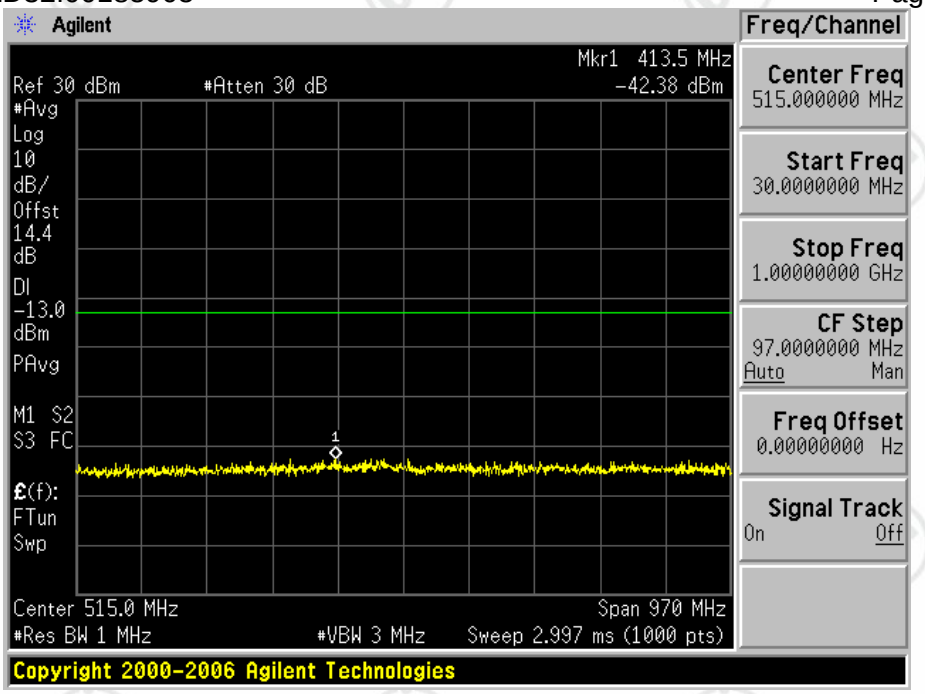
**Test Band=WCDMA1900**

**Test Mode=UMTS/TM2**

**Test Channel=LCH**




Agilent
Freq/Channel
Mkr1 413.5 MHz
Ref 30 dBm
#Atten 30 dB
-42.38 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
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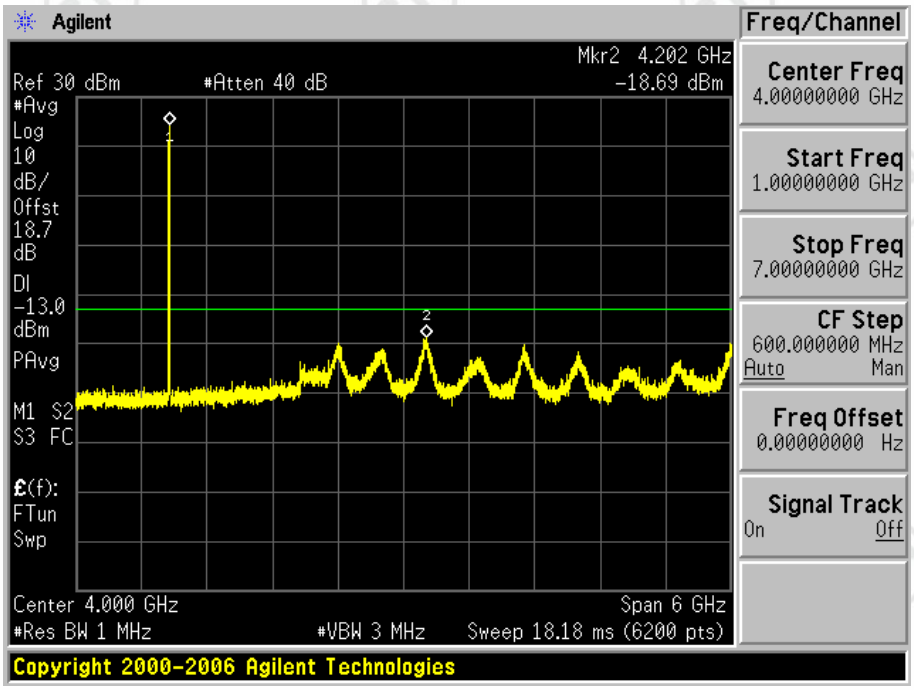
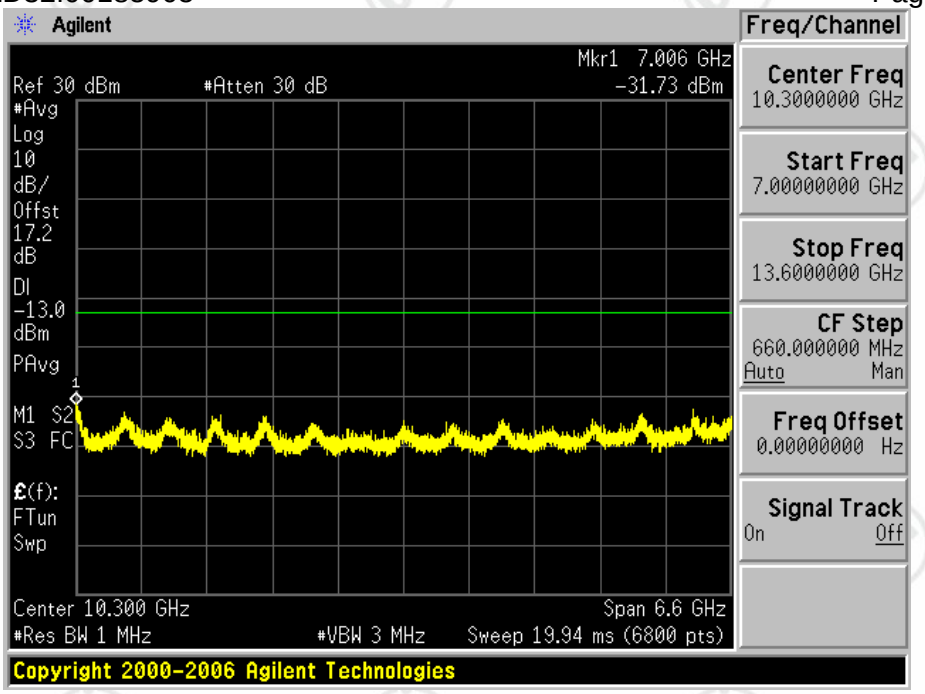
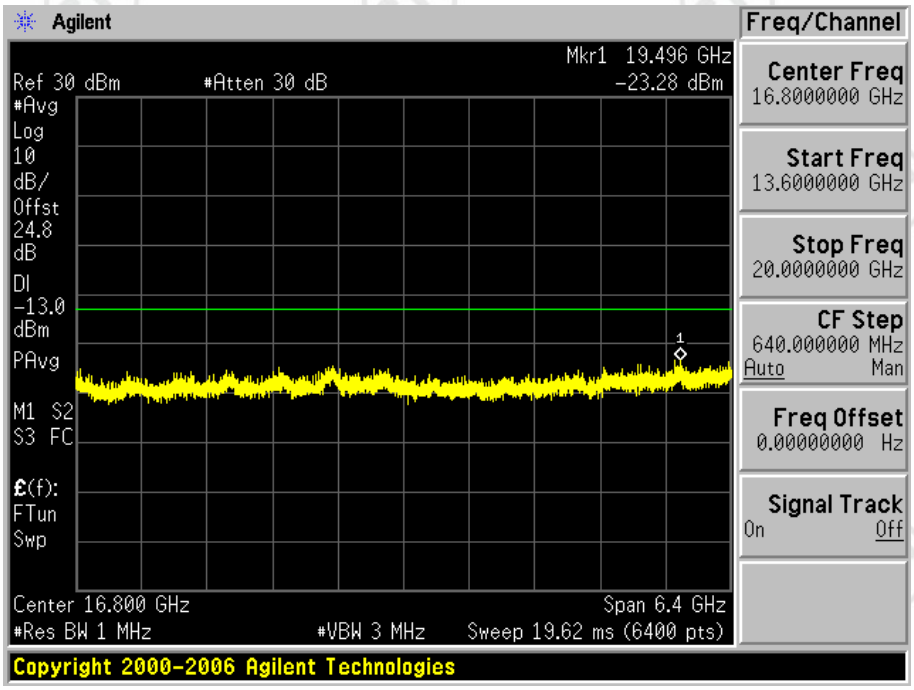

Agilent
Freq/Channel
Mkr2 4.202 GHz
Ref 30 dBm
#Atten 40 dB
-18.69 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies


Agilent
Freq/Channel
Mkr1 7.006 GHz
Ref 30 dBm
#Atten 30 dB
-31.73 dBm
#Avg
Log
10
dB/
Offst
17.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies


Agilent
Freq/Channel
Mkr1 19.496 GHz
Ref 30 dBm
#Atten 30 dB
-23.28 dBm
#Avg
Log
10
dB/
Offst
24.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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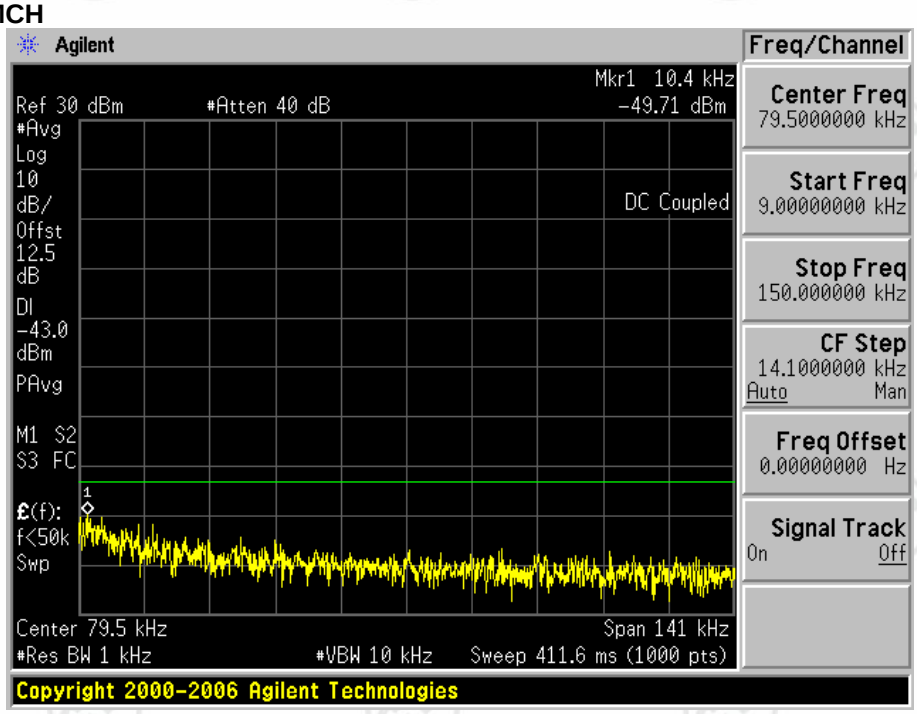
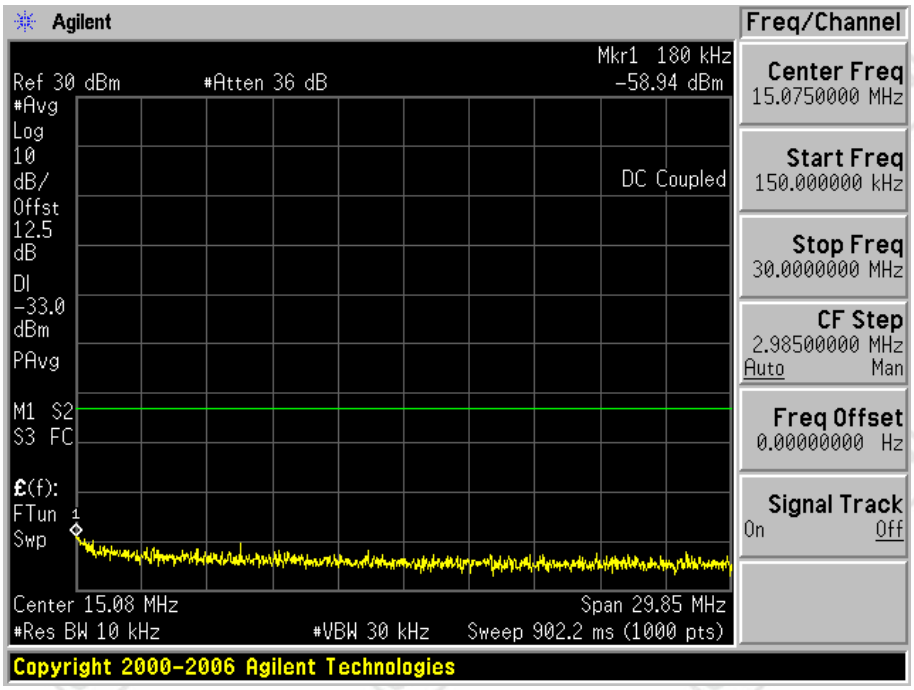
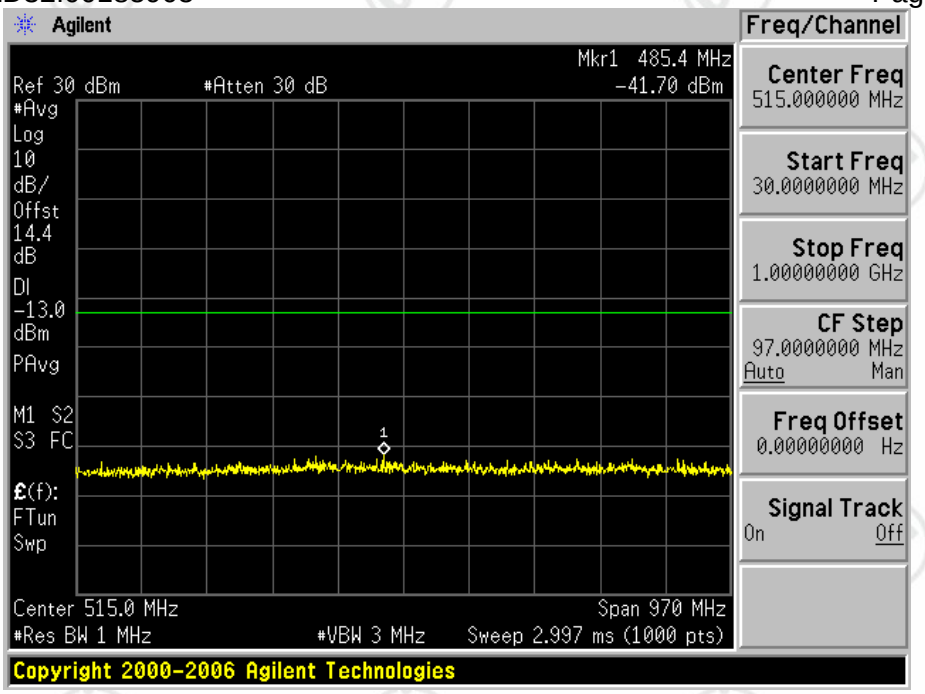
**Test Channel=MCH**




Agilent
Freq/Channel
Mkr1 485.4 MHz
Ref 30 dBm
#Atten 30 dB
-41.70 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
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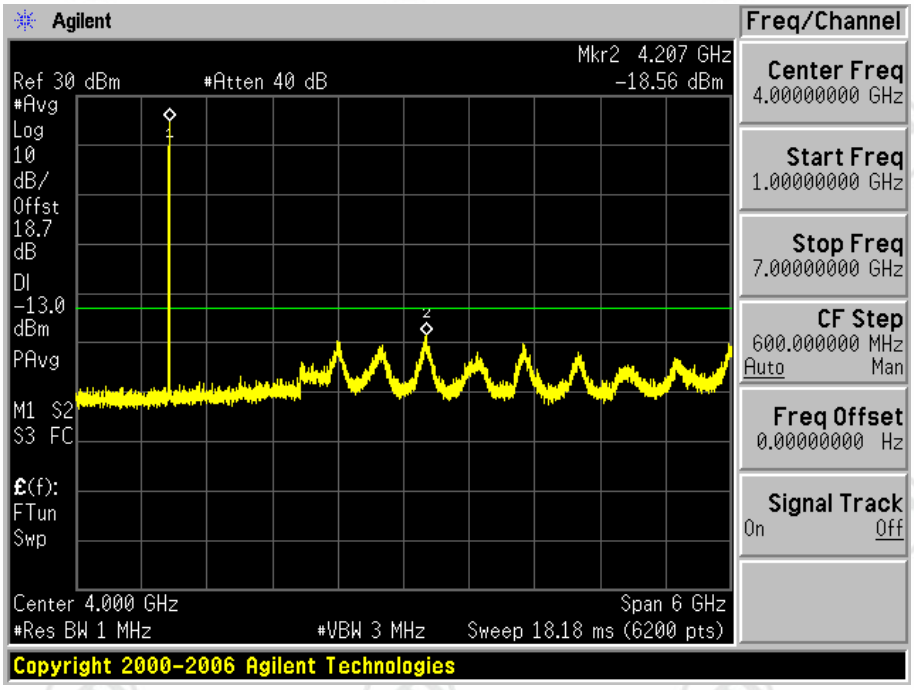
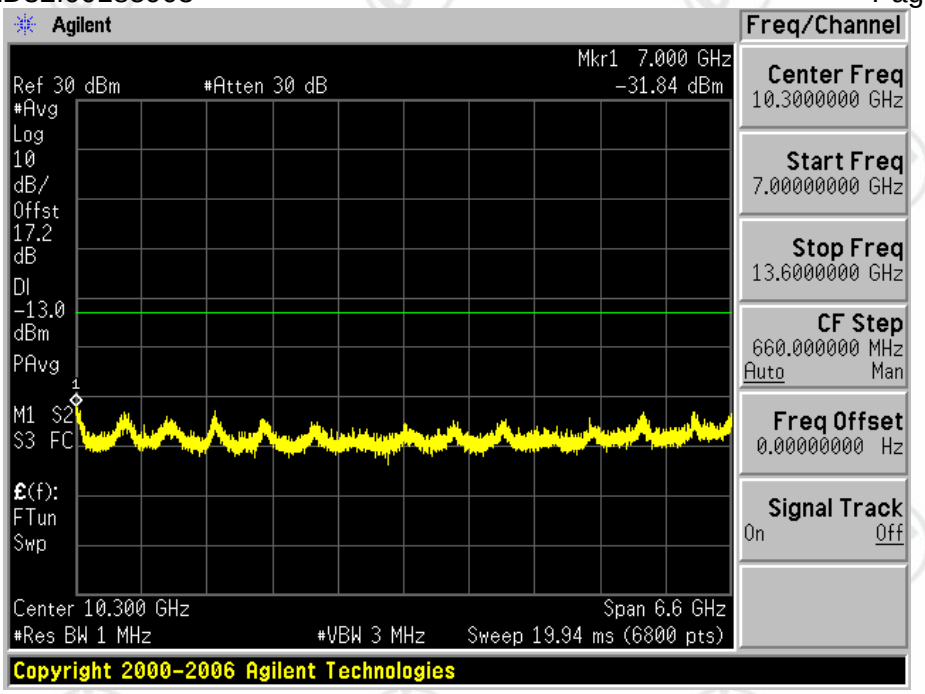
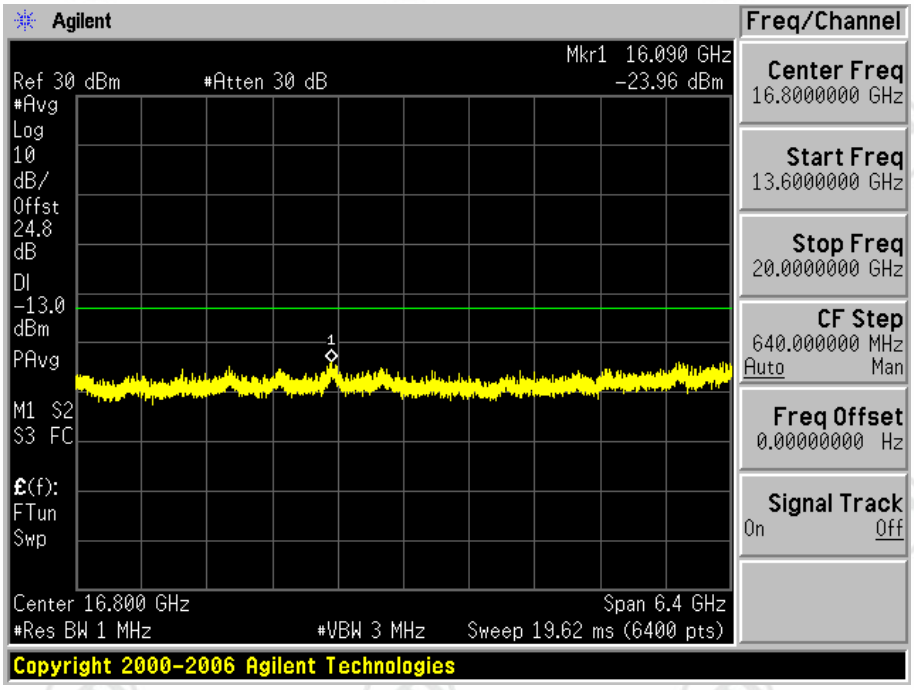
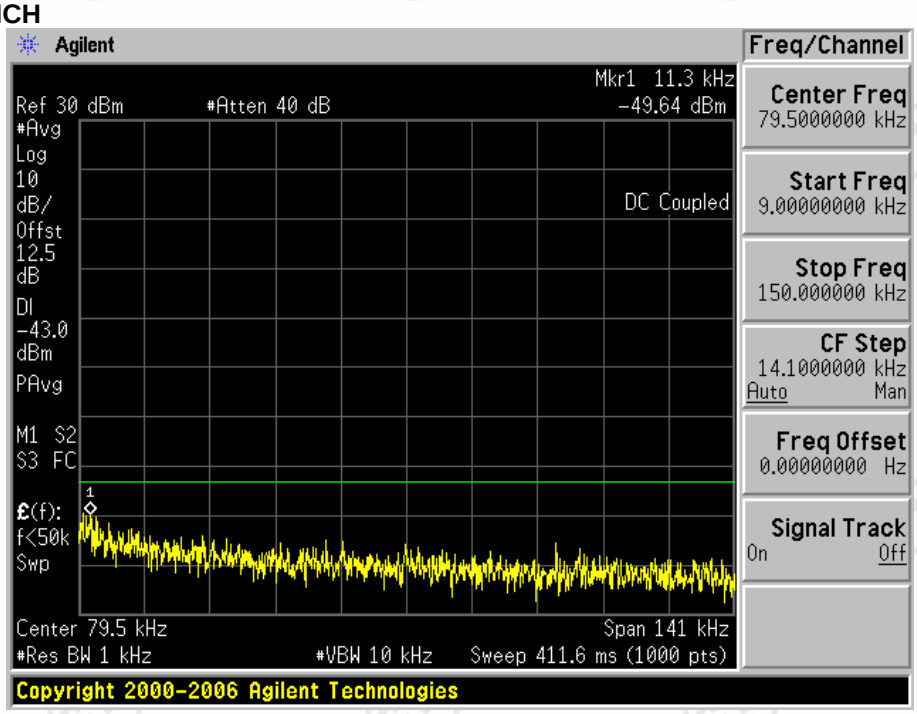
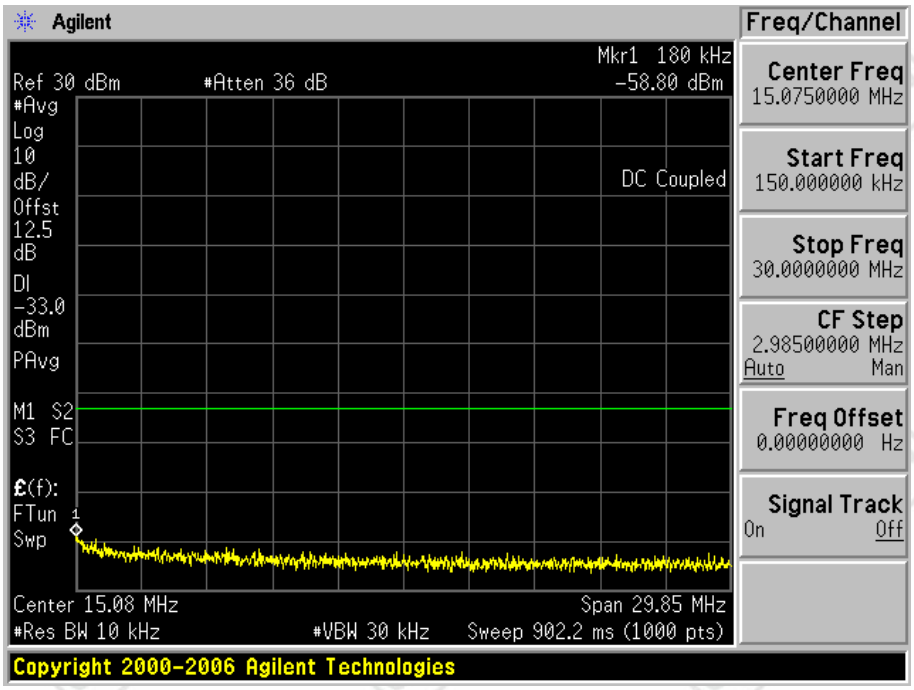

Agilent
Freq/Channel
Mkr2 4.207 GHz
Ref 30 dBm
#Atten 40 dB
-18.56 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Copyright 2000-2006 Agilent Technologies

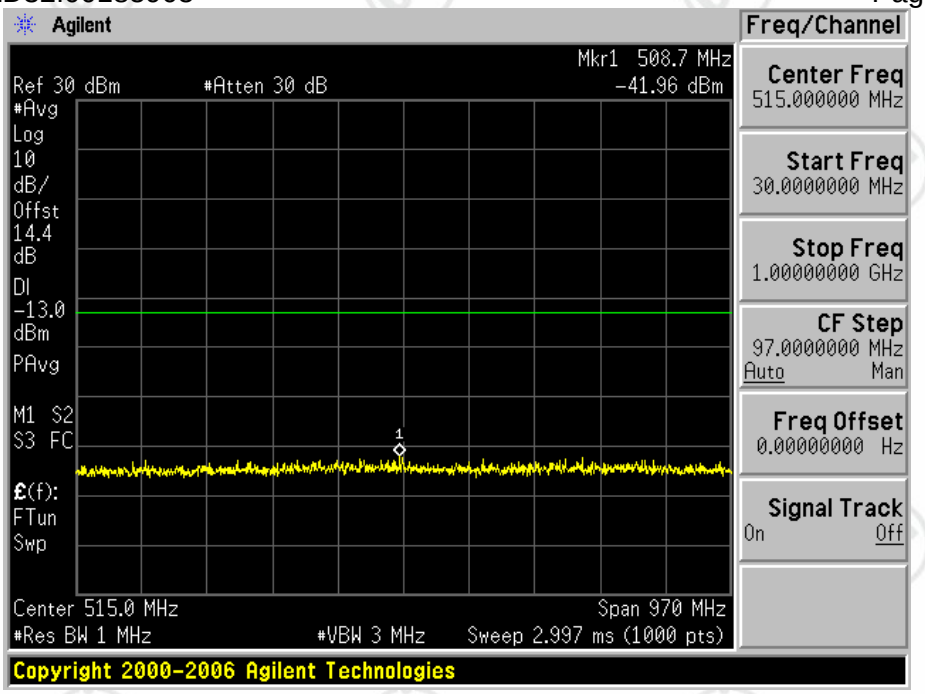

Agilent
Freq/Channel
Mkr1 7.000 GHz
Ref 30 dBm
#Atten 30 dB
-31.84 dBm
#Avg
Log
10
dB/
Offst
17.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Copyright 2000-2006 Agilent Technologies

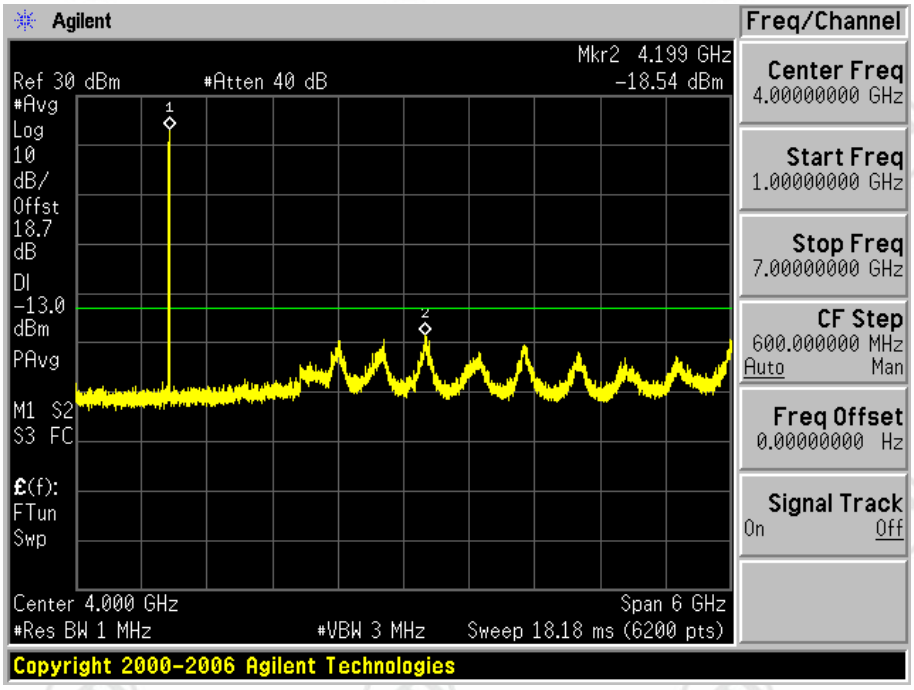

Agilent
Freq/Channel
Mkr1 16.090 GHz
Ref 30 dBm
#Atten 30 dB
-23.96 dBm
#Avg
Log
10
dB/
Offst
24.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Copyright 2000-2006 Agilent Technologies

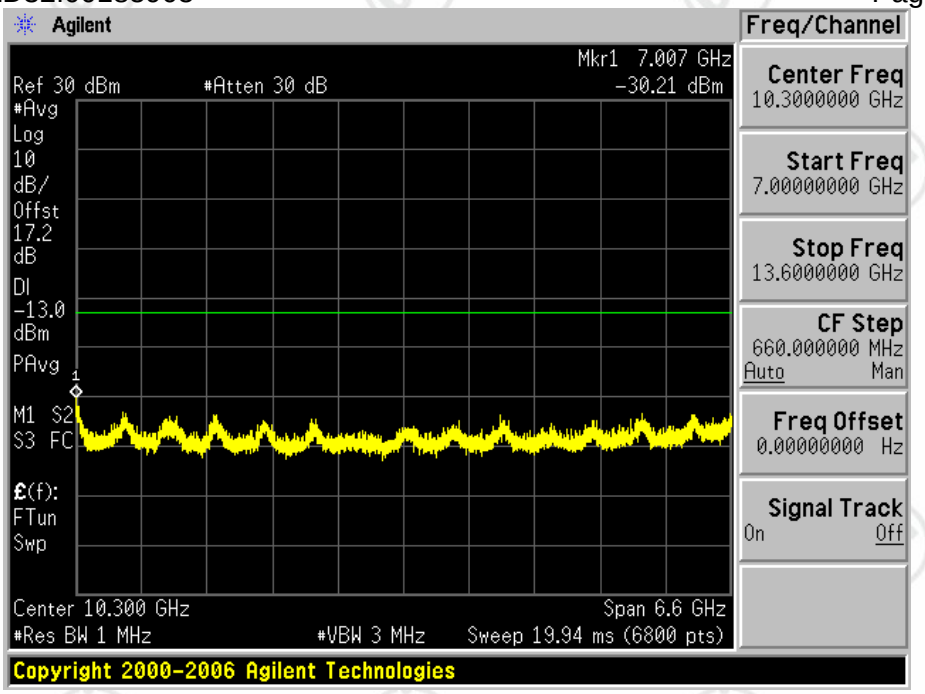
**Test Channel=HCH**

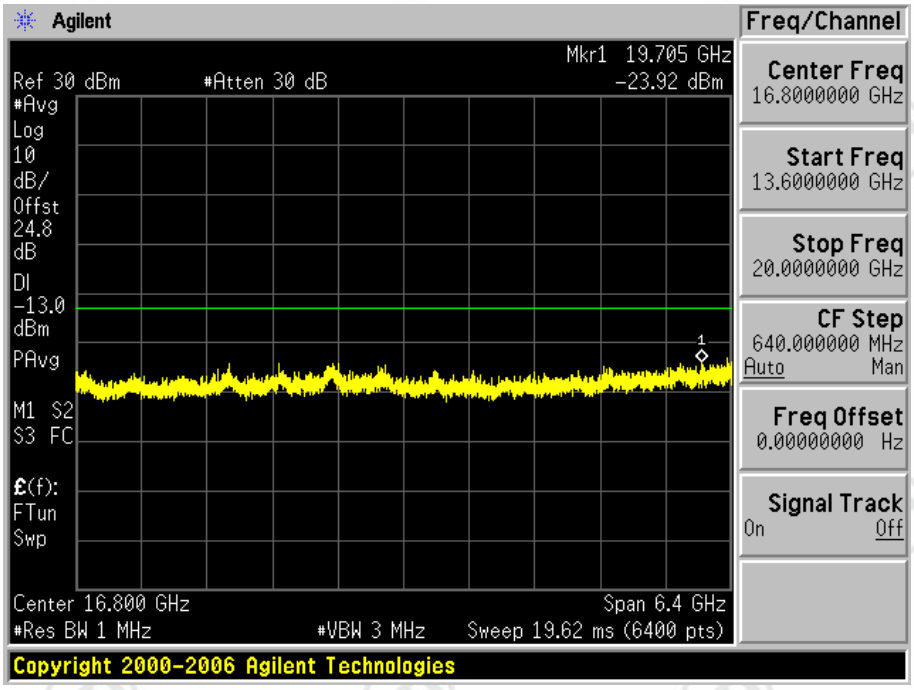



Agilent
Freq/Channel
Mkr1 508.7 MHz
Ref 30 dBm
#Atten 30 dB
-41.96 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Copyright 2000-2006 Agilent Technologies


Agilent
Freq/Channel
Mkr2 4.199 GHz
Ref 30 dBm
#Atten 40 dB
-18.54 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Copyright 2000-2006 Agilent Technologies


Agilent
Freq/Channel
Mkr1 7.007 GHz
Ref 30 dBm
#Atten 30 dB
-30.21 dBm
#Avg
Log
10
dB/
Offst
17.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Copyright 2000-2006 Agilent Technologies


Agilent
Freq/Channel
Mkr1 19.705 GHz
Ref 30 dBm
#Atten 30 dB
-23.92 dBm
#Avg
Log
10
dB/
Offst
24.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
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# Appendix F): Frequency Stability

| | |
|---|---|
| **Test Requirement:** | Part 2.1055 |
| **Test Method:** | TIA-603-D-2010 Clause 2.2.2 |
| **Test Setup:** | Refer to section 5 for details |
| **Measurement Procedure:** | The transmitter output was connected to a calibrated coaxial cable and a Base Station Simulator. The Base Station Simulator was set to force the EUT to its maximum power setting. The tests were performed at three frequencies (low channel and high channel).The EUT was place in the temperature chamber, the DC leads and RF output cable exited the chamber though an opening made for that purpose. After Operate the equipment in standby conditions for 15 minutes before proceeding. The temperature was varied from -30°C to +50°C at intervals of not more than 10°C The frequency stability was read from the base station at 25°C the input voltage was varied +/-15%, the frequency stability and input voltage was record. |
| **Instruments Used:** | Refer to section 7 for details |
| **Limit:** | Operation Band: Frequency stability Limit(ppm)<br>GSM/GPRS/EDGE/WCDMA 850: ±2.5ppm<br>GSM/GPRS/EDGE/WCDMA 1900: --- |
| **Test Results:** | Pass |

**Test Data:**

**Frequency Error vs. Voltage:**

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| GSM850 | TM1 | LCH | TN | VL | -7.10 | -0.01 | ±2.5 | PASS |
| | | | TN | VN | -3.42 | 0.00 | ±2.5 | PASS |
| | | | TN | VH | -2.84 | 0.00 | ±2.5 | PASS |
| | | MCH | TN | VL | 0.32 | 0.00 | ±2.5 | PASS |
| | | | TN | VN | -0.65 | 0.00 | ±2.5 | PASS |
| | | | TN | VH | 0.19 | 0.00 | ±2.5 | PASS |
| | | HCH | TN | VL | -0.45 | 0.00 | ±2.5 | PASS |
| | | | TN | VN | -0.77 | 0.00 | ±2.5 | PASS |
| | | | TN | VH | -0.32 | 0.00 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| GSM850 | TM2 | LCH | TN | VL | 3.23 | 0.00 | ±2.5 | PASS |
| | | | TN | VN | -3.36 | 0.00 | ±2.5 | PASS |
| | | | TN | VH | -2.97 | 0.00 | ±2.5 | PASS |
| | | MCH | TN | VL | -3.29 | 0.00 | ±2.5 | PASS |
| | | | TN | VN | -3.23 | 0.00 | ±2.5 | PASS |
| | | | TN | VH | -3.03 | 0.00 | ±2.5 | PASS |
| | | HCH | TN | VL | -3.10 | 0.00 | ±2.5 | PASS |
| | | | TN | VN | -4.46 | -0.01 | ±2.5 | PASS |
| | | | TN | VH | -4.33 | -0.01 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| GSM850 | TM3 | LCH | TN | VL | 5.10 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | -1.68 | 0.00 | ±2.5 | PASS |
| | | | TN | VH | 0.42 | 0.00 | ±2.5 | PASS |
| | | MCH | TN | VL | -0.32 | 0.00 | ±2.5 | PASS |
| | | | TN | VN | -0.16 | 0.00 | ±2.5 | PASS |
| | | | TN | VH | -1.19 | 0.00 | ±2.5 | PASS |
| | | HCH | TN | VL | -1.87 | 0.00 | ±2.5 | PASS |
| | | | TN | VN | -1.29 | 0.00 | ±2.5 | PASS |
| | | | TN | VH | -0.77 | 0.00 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| GSM1900 | TM1 | LCH | TN | VL | 20.99 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | 21.31 | 0.01 | ±2.5 | PASS |
| | | | TN | VH | 22.21 | 0.01 | ±2.5 | PASS |
| | | MCH | TN | VL | 21.83 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | 25.31 | 0.01 | ±2.5 | PASS |
| | | | TN | VH | 20.21 | 0.01 | ±2.5 | PASS |
| | | HCH | TN | VL | 25.31 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | 27.44 | 0.01 | ±2.5 | PASS |
| | | | TN | VH | 22.73 | 0.01 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| GSM1900 | TM2 | LCH | TN | VL | 17.24 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | 21.37 | 0.01 | ±2.5 | PASS |
| | | | TN | VH | 16.53 | 0.01 | ±2.5 | PASS |
| | | MCH | TN | VL | 18.79 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | 14.53 | 0.01 | ±2.5 | PASS |
| | | | TN | VH | 18.92 | 0.01 | ±2.5 | PASS |
| | | HCH | TN | VL | 19.44 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | 18.14 | 0.01 | ±2.5 | PASS |
| | | | TN | VH | 20.79 | 0.01 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| GSM1900 | TM3 | LCH | TN | VL | 12.33 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | 17.27 | 0.01 | ±2.5 | PASS |
| | | | TN | VH | 19.34 | 0.01 | ±2.5 | PASS |
| | | MCH | TN | VL | 22.37 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | 19.24 | 0.01 | ±2.5 | PASS |
| | | | TN | VH | 23.12 | 0.01 | ±2.5 | PASS |
| | | HCH | TN | VL | 23.12 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | 24.92 | 0.01 | ±2.5 | PASS |
| | | | TN | VH | 24.31 | 0.01 | ±2.5 | PASS |

**Frequency Error vs. Temperature:**

| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| GSM850 | TM1 | LCH | VN | -30 | -2.00 | 0.00 | ±2.5 | PASS |
| | | | VN | -20 | -2.13 | 0.00 | ±2.5 | PASS |
| | | | VN | -10 | -0.77 | 0.00 | ±2.5 | PASS |
| | | | VN | 0 | 1.94 | 0.00 | ±2.5 | PASS |
| | | | VN | 10 | -3.68 | 0.00 | ±2.5 | PASS |
| | | | VN | 20 | -0.45 | 0.00 | ±2.5 | PASS |
| | | | VN | 30 | -2.20 | 0.00 | ±2.5 | PASS |
| | | | VN | 40 | -4.46 | -0.01 | ±2.5 | PASS |
| | | | VN | 50 | -3.75 | 0.00 | ±2.5 | PASS |
| GSM850 | TM1 | MCH | VN | -30 | -1.36 | 0.00 | ±2.5 | PASS |
| | | | VN | -20 | 0.58 | 0.00 | ±2.5 | PASS |
| | | | VN | -10 | 0.77 | 0.00 | ±2.5 | PASS |
| | | | VN | 0 | -0.19 | 0.00 | ±2.5 | PASS |
| | | | VN | 10 | 0.26 | 0.00 | ±2.5 | PASS |
| | | | VN | 20 | -0.65 | 0.00 | ±2.5 | PASS |
| | | | VN | 30 | 1.23 | 0.00 | ±2.5 | PASS |
| | | | VN | 40 | -1.29 | 0.00 | ±2.5 | PASS |
| | | | VN | 50 | 1.49 | 0.00 | ±2.5 | PASS |
| GSM850 | TM1 | HCH | VN | -30 | -0.45 | 0.00 | ±2.5 | PASS |
| | | | VN | -20 | -2.07 | 0.00 | ±2.5 | PASS |
| | | | VN | -10 | 0.45 | 0.00 | ±2.5 | PASS |
| | | | VN | 0 | -1.81 | 0.00 | ±2.5 | PASS |
| | | | VN | 10 | -2.78 | 0.00 | ±2.5 | PASS |
| | | | VN | 20 | -1.16 | 0.00 | ±2.5 | PASS |
| | | | VN | 30 | -3.55 | 0.00 | ±2.5 | PASS |
| | | | VN | 40 | -2.00 | 0.00 | ±2.5 | PASS |
| | | | VN | 50 | -2.97 | 0.00 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| GSM850 | TM2 | LCH | VN | -30 | -1.42 | 0.00 | ±2.5 | PASS |
| | | | VN | -20 | -2.07 | 0.00 | ±2.5 | PASS |
| | | | VN | -10 | 4.00 | 0.00 | ±2.5 | PASS |
| | | | VN | 0 | 2.84 | 0.00 | ±2.5 | PASS |
| | | | VN | 10 | 0.52 | 0.00 | ±2.5 | PASS |
| | | | VN | 20 | -0.45 | 0.00 | ±2.5 | PASS |
| | | | VN | 30 | -8.14 | -0.01 | ±2.5 | PASS |
| | | | VN | 40 | -3.42 | 0.00 | ±2.5 | PASS |
| | | | VN | 50 | -6.65 | -0.01 | ±2.5 | PASS |
| GSM850 | TM2 | MCH | VN | -30 | -2.07 | 0.00 | ±2.5 | PASS |
| | | | VN | -20 | -1.03 | 0.00 | ±2.5 | PASS |
| | | | VN | -10 | -4.07 | 0.00 | ±2.5 | PASS |
| | | | VN | 0 | -6.72 | -0.01 | ±2.5 | PASS |
| | | | VN | 10 | -2.45 | 0.00 | ±2.5 | PASS |
| | | | VN | 20 | -6.91 | -0.01 | ±2.5 | PASS |
| | | | VN | 30 | -3.75 | 0.00 | ±2.5 | PASS |
| | | | VN | 40 | -7.75 | -0.01 | ±2.5 | PASS |
| | | | VN | 50 | -5.75 | -0.01 | ±2.5 | PASS |
| GSM850 | TM2 | HCH | VN | -30 | -0.06 | 0.00 | ±2.5 | PASS |
| | | | VN | -20 | -5.23 | -0.01 | ±2.5 | PASS |
| | | | VN | -10 | -11.36 | -0.01 | ±2.5 | PASS |
| | | | VN | 0 | -6.97 | -0.01 | ±2.5 | PASS |
| | | | VN | 10 | -8.91 | -0.01 | ±2.5 | PASS |
| | | | VN | 20 | -3.49 | 0.00 | ±2.5 | PASS |
| | | | VN | 30 | -6.59 | -0.01 | ±2.5 | PASS |
| | | | VN | 40 | -5.55 | -0.01 | ±2.5 | PASS |
| | | | VN | 50 | -12.59 | -0.01 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| GSM850 | TM3 | LCH | VN | -30 | 11.14 | 0.01 | ±2.5 | PASS |
| | | | VN | -20 | 5.17 | 0.01 | ±2.5 | PASS |
| | | | VN | -10 | 3.91 | 0.00 | ±2.5 | PASS |
| | | | VN | 0 | 2.87 | 0.00 | ±2.5 | PASS |
| | | | VN | 10 | 3.62 | 0.00 | ±2.5 | PASS |
| | | | VN | 20 | 1.94 | 0.00 | ±2.5 | PASS |
| | | | VN | 30 | -2.78 | 0.00 | ±2.5 | PASS |
| | | | VN | 40 | -1.71 | 0.00 | ±2.5 | PASS |
| | | | VN | 50 | -2.39 | 0.00 | ±2.5 | PASS |
| GSM850 | TM3 | MCH | VN | -30 | -0.74 | 0.00 | ±2.5 | PASS |
| | | | VN | -20 | -4.33 | -0.01 | ±2.5 | PASS |
| | | | VN | -10 | 5.71 | 0.01 | ±2.5 | PASS |
| | | | VN | 0 | 1.52 | 0.00 | ±2.5 | PASS |
| | | | VN | 10 | 0.39 | 0.00 | ±2.5 | PASS |
| | | | VN | 20 | -1.58 | 0.00 | ±2.5 | PASS |
| | | | VN | 30 | 0.36 | 0.00 | ±2.5 | PASS |
| | | | VN | 40 | -4.58 | -0.01 | ±2.5 | PASS |
| | | | VN | 50 | -2.16 | 0.00 | ±2.5 | PASS |
| GSM850 | TM3 | HCH | VN | -30 | -3.71 | 0.00 | ±2.5 | PASS |
| | | | VN | -20 | -2.91 | 0.00 | ±2.5 | PASS |
| | | | VN | -10 | -1.87 | 0.00 | ±2.5 | PASS |
| | | | VN | 0 | -0.52 | 0.00 | ±2.5 | PASS |
| | | | VN | 10 | 0.48 | 0.00 | ±2.5 | PASS |
| | | | VN | 20 | 1.94 | 0.00 | ±2.5 | PASS |
| | | | VN | 30 | 3.42 | 0.00 | ±2.5 | PASS |
| | | | VN | 40 | -1.90 | 0.00 | ±2.5 | PASS |
| | | | VN | 50 | -0.39 | 0.00 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| GSM1900 | TM1 | LCH | VN | -30 | 21.63 | 0.01 | ±2.5 | PASS |
| | | | VN | -20 | 24.41 | 0.01 | ±2.5 | PASS |
| | | | VN | -10 | 21.44 | 0.01 | ±2.5 | PASS |
| | | | VN | 0 | 24.09 | 0.01 | ±2.5 | PASS |
| | | | VN | 10 | 23.12 | 0.01 | ±2.5 | PASS |
| | | | VN | 20 | 22.47 | 0.01 | ±2.5 | PASS |
| | | | VN | 30 | 23.31 | 0.01 | ±2.5 | PASS |
| | | | VN | 40 | 23.18 | 0.01 | ±2.5 | PASS |
| | | | VN | 50 | 23.76 | 0.01 | ±2.5 | PASS |
| GSM1900 | TM1 | MCH | VN | -30 | 20.86 | 0.01 | ±2.5 | PASS |
| | | | VN | -20 | 22.60 | 0.01 | ±2.5 | PASS |
| | | | VN | -10 | 21.11 | 0.01 | ±2.5 | PASS |
| | | | VN | 0 | 23.96 | 0.01 | ±2.5 | PASS |
| | | | VN | 10 | 20.92 | 0.01 | ±2.5 | PASS |
| | | | VN | 20 | 22.47 | 0.01 | ±2.5 | PASS |
| | | | VN | 30 | 20.40 | 0.01 | ±2.5 | PASS |
| | | | VN | 40 | 23.37 | 0.01 | ±2.5 | PASS |
| | | | VN | 50 | 20.40 | 0.01 | ±2.5 | PASS |
| GSM1900 | TM1 | HCH | VN | -30 | 25.57 | 0.01 | ±2.5 | PASS |
| | | | VN | -20 | 25.44 | 0.01 | ±2.5 | PASS |
| | | | VN | -10 | 25.44 | 0.01 | ±2.5 | PASS |
| | | | VN | 0 | 25.31 | 0.01 | ±2.5 | PASS |
| | | | VN | 10 | 25.18 | 0.01 | ±2.5 | PASS |
| | | | VN | 20 | 25.96 | 0.01 | ±2.5 | PASS |
| | | | VN | 30 | 25.96 | 0.01 | ±2.5 | PASS |
| | | | VN | 40 | 24.86 | 0.01 | ±2.5 | PASS |
| | | | VN | 50 | 25.89 | 0.01 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| GSM1900 | TM2 | LCH | VN | -30 | 17.24 | 0.01 | ±2.5 | PASS |
| | | | VN | -20 | 7.10 | 0.00 | ±2.5 | PASS |
| | | | VN | -10 | -2.58 | 0.00 | ±2.5 | PASS |
| | | | VN | 0 | 12.33 | 0.01 | ±2.5 | PASS |
| | | | VN | 10 | 12.40 | 0.01 | ±2.5 | PASS |
| | | | VN | 20 | 3.68 | 0.00 | ±2.5 | PASS |
| | | | VN | 30 | -2.78 | 0.00 | ±2.5 | PASS |
| | | | VN | 40 | 16.98 | 0.01 | ±2.5 | PASS |
| | | | VN | 50 | 14.33 | 0.01 | ±2.5 | PASS |
| GSM1900 | TM2 | MCH | VN | -30 | 20.53 | 0.01 | ±2.5 | PASS |
| | | | VN | -20 | 10.98 | 0.01 | ±2.5 | PASS |
| | | | VN | -10 | 12.59 | 0.01 | ±2.5 | PASS |
| | | | VN | 0 | 14.85 | 0.01 | ±2.5 | PASS |
| | | | VN | 10 | 20.21 | 0.01 | ±2.5 | PASS |
| | | | VN | 20 | 7.88 | 0.00 | ±2.5 | PASS |
| | | | VN | 30 | 12.98 | 0.01 | ±2.5 | PASS |
| | | | VN | 40 | 21.05 | 0.01 | ±2.5 | PASS |
| | | | VN | 50 | 10.46 | 0.01 | ±2.5 | PASS |
| GSM1900 | TM2 | HCH | VN | -30 | 22.02 | 0.01 | ±2.5 | PASS |
| | | | VN | -20 | 12.59 | 0.01 | ±2.5 | PASS |
| | | | VN | -10 | 20.47 | 0.01 | ±2.5 | PASS |
| | | | VN | 0 | 11.75 | 0.01 | ±2.5 | PASS |
| | | | VN | 10 | 23.25 | 0.01 | ±2.5 | PASS |
| | | | VN | 20 | 16.53 | 0.01 | ±2.5 | PASS |
| | | | VN | 30 | 10.27 | 0.01 | ±2.5 | PASS |
| | | | VN | 40 | 20.02 | 0.01 | ±2.5 | PASS |
| | | | VN | 50 | 13.50 | 0.01 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| GSM1900 | TM3 | LCH | VN | -30 | 5.65 | 0.00 | ±2.5 | PASS |
| | | | VN | -20 | 9.20 | 0.00 | ±2.5 | PASS |
| | | | VN | -10 | 12.24 | 0.01 | ±2.5 | PASS |
| | | | VN | 0 | 18.89 | 0.01 | ±2.5 | PASS |
| | | | VN | 10 | 12.01 | 0.01 | ±2.5 | PASS |
| | | | VN | 20 | 13.14 | 0.01 | ±2.5 | PASS |
| | | | VN | 30 | 19.89 | 0.01 | ±2.5 | PASS |
| | | | VN | 40 | 11.11 | 0.01 | ±2.5 | PASS |
| | | | VN | 50 | 23.44 | 0.01 | ±2.5 | PASS |
| GSM1900 | TM3 | MCH | VN | -30 | 24.96 | 0.01 | ±2.5 | PASS |
| | | | VN | -20 | 25.02 | 0.01 | ±2.5 | PASS |
| | | | VN | -10 | 25.76 | 0.01 | ±2.5 | PASS |
| | | | VN | 0 | 11.59 | 0.01 | ±2.5 | PASS |
| | | | VN | 10 | 14.85 | 0.01 | ±2.5 | PASS |
| | | | VN | 20 | 17.50 | 0.01 | ±2.5 | PASS |
| | | | VN | 30 | 23.86 | 0.01 | ±2.5 | PASS |
| | | | VN | 40 | 12.46 | 0.01 | ±2.5 | PASS |
| | | | VN | 50 | 18.85 | 0.01 | ±2.5 | PASS |
| GSM1900 | TM3 | HCH | VN | -30 | 26.96 | 0.01 | ±2.5 | PASS |
| | | | VN | -20 | 21.21 | 0.01 | ±2.5 | PASS |
| | | | VN | -10 | 28.80 | 0.02 | ±2.5 | PASS |
| | | | VN | 0 | 19.92 | 0.01 | ±2.5 | PASS |
| | | | VN | 10 | 30.12 | 0.02 | ±2.5 | PASS |
| | | | VN | 20 | 21.44 | 0.01 | ±2.5 | PASS |
| | | | VN | 30 | 28.99 | 0.02 | ±2.5 | PASS |
| | | | VN | 40 | 21.76 | 0.01 | ±2.5 | PASS |
| | | | VN | 50 | 31.54 | 0.02 | ±2.5 | PASS |

**Frequency Error vs. Voltage:**

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| WCDMA850 | TM1 | LCH | TN | VL | 9.70 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | 9.84 | 0.01 | ±2.5 | PASS |
| | | | TN | VH | 5.08 | 0.01 | ±2.5 | PASS |
| | | MCH | TN | VL | 10.89 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | 9.84 | 0.01 | ±2.5 | PASS |
| | | | TN | VH | 12.07 | 0.01 | ±2.5 | PASS |
| | | HCH | TN | VL | 11.95 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | 9.84 | 0.01 | ±2.5 | PASS |
| | | | TN | VH | 6.76 | 0.01 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| WCDMA850 | TM2 | LCH | TN | VL | 4.82 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | -72.92 | 0.09 | ±2.5 | PASS |
| | | | TN | VH | -56.00 | 0.07 | ±2.5 | PASS |
| | | MCH | TN | VL | 51.57 | 0.06 | ±2.5 | PASS |
| | | | TN | VN | -136.31 | 0.16 | ±2.5 | PASS |
| | | | TN | VH | 80.69 | 0.10 | ±2.5 | PASS |
| | | HCH | TN | VL | 12.95 | 0.02 | ±2.5 | PASS |
| | | | TN | VN | 25.38 | 0.03 | ±2.5 | PASS |
| | | | TN | VH | -83.91 | 0.01 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| WCDMA1900 | TM1 | LCH | TN | VL | 27.80 | 0.02 | ±2.5 | PASS |
| | | | TN | VN | 36.48 | 0.02 | ±2.5 | PASS |
| | | | TN | VH | 22.29 | 0.01 | ±2.5 | PASS |
| | | MCH | TN | VL | 29.80 | 0.02 | ±2.5 | PASS |
| | | | TN | VN | 36.48 | 0.02 | ±2.5 | PASS |
| | | | TN | VH | 33.37 | 0.02 | ±2.5 | PASS |
| | | HCH | TN | VL | 37.46 | 0.02 | ±2.5 | PASS |
| | | | TN | VN | 36.48 | 0.02 | ±2.5 | PASS |
| | | | TN | VH | 28.44 | 0.01 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Temp. | Test Volt. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| WCDMA1900 | TM2 | LCH | TN | VL | -38.36 | 0.02 | ±2.5 | PASS |
| | | | TN | VN | 19.06 | 0.01 | ±2.5 | PASS |
| | | | TN | VH | -66.45 | 0.03 | ±2.5 | PASS |
| | | MCH | TN | VL | -20.78 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | -34.62 | 0.01 | ±2.5 | PASS |
| | | | TN | VH | 5.49 | 0.00 | ±2.5 | PASS |
| | | HCH | TN | VL | -33.75 | 0.01 | ±2.5 | PASS |
| | | | TN | VN | 16.17 | 0.00 | ±2.5 | PASS |
| | | | TN | VH | 46.33 | 0.02 | ±2.5 | PASS |

**Frequency Error vs. Temperature:**

| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| WCDMA850 | TM1 | LCH | VN | -30 | 6.50 | 0.01 | ±2.5 | PASS |
| | | | VN | -20 | 10.76 | 0.01 | ±2.5 | PASS |
| | | | VN | -10 | 5.86 | 0.01 | ±2.5 | PASS |
| | | | VN | 0 | 9.69 | 0.01 | ±2.5 | PASS |
| | | | VN | 10 | 12.13 | 0.01 | ±2.5 | PASS |
| | | | VN | 20 | 6.96 | 0.01 | ±2.5 | PASS |
| | | | VN | 30 | 9.28 | 0.01 | ±2.5 | PASS |
| | | | VN | 40 | 12.68 | 0.02 | ±2.5 | PASS |
| | | | VN | 50 | 10.07 | 0.01 | ±2.5 | PASS |
| WCDMA850 | TM1 | MCH | VN | -30 | 10.27 | 0.01 | ±2.5 | PASS |
| | | | VN | -20 | 13.29 | 0.02 | ±2.5 | PASS |
| | | | VN | -10 | 11.17 | 0.01 | ±2.5 | PASS |
| | | | VN | 0 | 11.05 | 0.01 | ±2.5 | PASS |
| | | | VN | 10 | 10.10 | 0.01 | ±2.5 | PASS |
| | | | VN | 20 | 11.67 | 0.01 | ±2.5 | PASS |
| | | | VN | 30 | 9.61 | 0.01 | ±2.5 | PASS |
| | | | VN | 40 | 13.58 | 0.02 | ±2.5 | PASS |
| | | | VN | 50 | 11.87 | 0.01 | ±2.5 | PASS |
| WCDMA850 | TM1 | HCH | VN | -30 | 12.13 | 0.01 | ±2.5 | PASS |
| | | | VN | -20 | 14.01 | 0.02 | ±2.5 | PASS |
| | | | VN | -10 | 13.53 | 0.02 | ±2.5 | PASS |
| | | | VN | 0 | 7.19 | 0.01 | ±2.5 | PASS |
| | | | VN | 10 | 13.96 | 0.02 | ±2.5 | PASS |
| | | | VN | 20 | 11.72 | 0.01 | ±2.5 | PASS |
| | | | VN | 30 | 10.85 | 0.01 | ±2.5 | PASS |
| | | | VN | 40 | 13.43 | 0.02 | ±2.5 | PASS |
| | | | VN | 50 | 11.96 | 0.01 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| WCDMA850 | TM2 | LCH | VN | -30 | -8.79 | 0.01 | ±2.5 | PASS |
| | | | VN | -20 | 18.19 | 0.02 | ±2.5 | PASS |
| | | | VN | -10 | 58.17 | 0.07 | ±2.5 | PASS |
| | | | VN | 0 | 16.46 | 0.02 | ±2.5 | PASS |
| | | | VN | 10 | 90.50 | 0.11 | ±2.5 | PASS |
| | | | VN | 20 | -71.00 | 0.09 | ±2.5 | PASS |
| | | | VN | 30 | 7.52 | 0.01 | ±2.5 | PASS |
| | | | VN | 40 | -124.33 | 0.15 | ±2.5 | PASS |
| | | | VN | 50 | 81.50 | 0.10 | ±2.5 | PASS |
| WCDMA850 | TM2 | MCH | VN | -30 | -132.06 | 0.15 | ±2.5 | PASS |
| | | | VN | -20 | 65.06 | 0.08 | ±2.5 | PASS |
| | | | VN | -10 | -8.97 | 0.01 | ±2.5 | PASS |
| | | | VN | 0 | -28.31 | 0.03 | ±2.5 | PASS |
| | | | VN | 10 | 59.42 | 0.07 | ±2.5 | PASS |
| | | | VN | 20 | 37.58 | 0.04 | ±2.5 | PASS |
| | | | VN | 30 | 27.97 | 0.03 | ±2.5 | PASS |
| | | | VN | 40 | 66.07 | 0.08 | ±2.5 | PASS |
| | | | VN | 50 | -39.67 | 0.05 | ±2.5 | PASS |
| WCDMA850 | TM2 | HCH | VN | -30 | -38.42 | 0.04 | ±2.5 | PASS |
| | | | VN | -20 | -117.34 | 0.13 | ±2.5 | PASS |
| | | | VN | -10 | 149.75 | 0.17 | ±2.5 | PASS |
| | | | VN | 0 | 57.97 | 0.06 | ±2.5 | PASS |
| | | | VN | 10 | 1.86 | 0.00 | ±2.5 | PASS |
| | | | VN | 20 | 0.12 | 0.00 | ±2.5 | PASS |
| | | | VN | 30 | -102.81 | 0.12 | ±2.5 | PASS |
| | | | VN | 40 | -23.12 | 0.02 | ±2.5 | PASS |
| | | | VN | 50 | -49.16 | 0.05 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| WCDMA1900 | TM1 | LCH | VN | -30 | 28.09 | 0.02 | ±2.5 | PASS |
| | | | VN | -20 | 29.88 | 0.02 | ±2.5 | PASS |
| | | | VN | -10 | 25.24 | 0.01 | ±2.5 | PASS |
| | | | VN | 0 | 21.42 | 0.01 | ±2.5 | PASS |
| | | | VN | 10 | 24.00 | 0.01 | ±2.5 | PASS |
| | | | VN | 20 | 27.92 | 0.02 | ±2.5 | PASS |
| | | | VN | 30 | 36.00 | 0.02 | ±2.5 | PASS |
| | | | VN | 40 | 27.44 | 0.01 | ±2.5 | PASS |
| | | | VN | 50 | 33.37 | 0.02 | ±2.5 | PASS |
| WCDMA1900 | TM1 | MCH | VN | -30 | 32.35 | 0.02 | ±2.5 | PASS |
| | | | VN | -20 | 32.46 | 0.02 | ±2.5 | PASS |
| | | | VN | -10 | 34.52 | 0.02 | ±2.5 | PASS |
| | | | VN | 0 | 30.55 | 0.02 | ±2.5 | PASS |
| | | | VN | 10 | 35.00 | 0.02 | ±2.5 | PASS |
| | | | VN | 20 | 31.19 | 0.02 | ±2.5 | PASS |
| | | | VN | 30 | 36.41 | 0.02 | ±2.5 | PASS |
| | | | VN | 40 | 32.76 | 0.02 | ±2.5 | PASS |
| | | | VN | 50 | 28.26 | 0.02 | ±2.5 | PASS |
| WCDMA1900 | TM1 | HCH | VN | -30 | 34.06 | 0.02 | ±2.5 | PASS |
| | | | VN | -20 | 37.16 | 0.02 | ±2.5 | PASS |
| | | | VN | -10 | 40.33 | 0.02 | ±2.5 | PASS |
| | | | VN | 0 | 34.27 | 0.02 | ±2.5 | PASS |
| | | | VN | 10 | 30.73 | 0.02 | ±2.5 | PASS |
| | | | VN | 20 | 34.06 | 0.02 | ±2.5 | PASS |
| | | | VN | 30 | 36.99 | 0.02 | ±2.5 | PASS |
| | | | VN | 40 | 40.76 | 0.02 | ±2.5 | PASS |
| | | | VN | 50 | 40.48 | 0.02 | ±2.5 | PASS |

| Test Band | Test Mode | Test Channel | Test Volt. | Test Temp. | Freq.Error (Hz) | Freq.vs.rated (ppm) | Limit (ppm) | Verdict |
|---|---|---|---|---|---|---|---|---|
| WCDMA1900 | TM2 | LCH | VN | -30 | -26.57 | 0.01 | ±2.5 | PASS |
| | | | VN | -20 | 47.73 | 0.02 | ±2.5 | PASS |
| | | | VN | -10 | -8.24 | 0.00 | ±2.5 | PASS |
| | | | VN | 0 | -24.28 | 0.01 | ±2.5 | PASS |
| | | | VN | 10 | 101.85 | 0.05 | ±2.5 | PASS |
| | | | VN | 20 | -51.10 | 0.02 | ±2.5 | PASS |
| | | | VN | 30 | 60.56 | 0.03 | ±2.5 | PASS |
| | | | VN | 40 | -48.63 | 0.02 | ±2.5 | PASS |
| | | | VN | 50 | -35.23 | 0.02 | ±2.5 | PASS |
| WCDMA1900 | TM2 | MCH | VN | -30 | -49.16 | 0.02 | ±2.5 | PASS |
| | | | VN | -20 | 28.40 | 0.01 | ±2.5 | PASS |
| | | | VN | -10 | -98.08 | 0.05 | ±2.5 | PASS |
| | | | VN | 0 | -39.61 | 0.02 | ±2.5 | PASS |
| | | | VN | 10 | -96.31 | 0.05 | ±2.5 | PASS |
| | | | VN | 20 | -55.39 | 0.03 | ±2.5 | PASS |
| | | | VN | 30 | -57.05 | 0.03 | ±2.5 | PASS |
| | | | VN | 40 | 37.45 | 0.02 | ±2.5 | PASS |
| | | | VN | 50 | 47.82 | 0.02 | ±2.5 | PASS |
| WCDMA1900 | TM2 | HCH | VN | -30 | -52.08 | 0.02 | ±2.5 | PASS |
| | | | VN | -20 | -57.36 | 0.03 | ±2.5 | PASS |
| | | | VN | -10 | 2.72 | 0.00 | ±2.5 | PASS |
| | | | VN | 0 | 5.49 | 0.00 | ±2.5 | PASS |
| | | | VN | 10 | 35.13 | 0.01 | ±2.5 | PASS |
| | | | VN | 20 | -59.25 | 0.03 | ±2.5 | PASS |
| | | | VN | 30 | -16.89 | 0.01 | ±2.5 | PASS |
| | | | VN | 40 | 25.31 | 0.01 | ±2.5 | PASS |
| | | | VN | 50 | 53.15 | 0.02 | ±2.5 | PASS |

# Appendix G): Effective Radiated Power of Transmitter (ERP/EIRP)

**Receiver Setup:**

| Frequency | Detector | RBW | VBW | Remark |
|---|---|---|---|---|
| 30MHz-1GHz | peak | 120kHz | 300kHz | Peak |
| Above 1GHz | Peak | 1MHz | 3MHz | Peak |

**Measurement Procedure:**

Test procedure as below:

1) The EUT was powered ON and placed on a 1.5m hight table at a 3 meter fully Anechoic Chamber. The antenna of the transmitter was extended to its maximum length. modulation mode and the measuring receiver shall be tuned to the frequency of the transmitter under test.
2) The EUT was set 3 meters(above 18GHz the distance is 1 meter) away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
3) The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made.
4) Steps 1) to 3) were performed with the EUT and the receive antenna in both vertical and horizontal polarization.
5) The transmitter was then removed and replaced with another antenna. The center of the antenna was approximately at the same location as the center of the transmitter.
6) A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. With both the substitution and the receive antennas horizontally polarized, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusted until the measured field strength level in step 3) is obtained for this set of conditions.
7) The output power into the substitution antenna was then measured.
8) Steps 6) and 7)were repeated with both antennas polarized.
9) Calculate power in dBm by the following formula:

ERP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBd)
EIRP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBi)
EIRP=ERP+2.15dB

where:

Pg is the generator output power into the substitution antenna.

10) Test the EUT in the lowest channel, the middle channel the Highest channel
11) The radiation measurements are performed in X, Y, Z axis positioning for EUT operation mode,And found the X axis positioning which it is worse case.
12) Repeat above procedures until all frequencies measured was complete.

**Limit:**

| Mode | GSM 850/WCDMA/HSDPA /HSUPA Band V | GSM 1900/WCDMA/HSDPA /HSUPA Band II |
|---|---|---|
| Frequency | 824 – 849MHz | 1850 – 1910MHz |
| Limit | 38.45dBm（7W） | 33.01dBm（2W） |

**Measurement Data**

| GSM 850 (Voice) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel/fc (MHz) | Height (cm) | Azimuth (deg) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 128/824.2 | 150 | 102 | 22.26 | 38.45 | -16.19 | Pass | H |
| | 150 | 84 | 27.56 | 38.45 | -10.89 | Pass | V |
| 190/836.6 | 150 | 121 | 22.96 | 38.45 | -15.49 | Pass | H |
| | 150 | 216 | 27.09 | 38.45 | -11.36 | Pass | V |
| 251/848.8 | 150 | 10 | 21.08 | 38.45 | -17.37 | Pass | H |
| | 150 | 341 | 26.41 | 38.45 | -12.04 | Pass | V |

| GPRS 850 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel/fc (MHz) | Height (cm) | Azimuth (deg) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 128/824.2 | 150 | 183 | 13.66 | 38.45 | -24.79 | Pass | H |
| | 150 | 6 | 18.6 | 38.45 | -19.85 | Pass | V |
| 190/836.6 | 150 | 124 | 14.09 | 38.45 | -24.36 | Pass | H |
| | 150 | 76 | 17.62 | 38.45 | -20.83 | Pass | V |
| 251/848.8 | 150 | 182 | 12.04 | 38.45 | -26.41 | Pass | H |
| | 150 | 109 | 12.26 | 38.45 | -26.19 | Pass | V |

| EDGE 850 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel/fc (MHz) | Height (cm) | Azimuth (deg) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 128/824.2 | 150 | 215 | 13.45 | 38.45 | -25.00 | Pass | H |
| | 150 | 31 | 18.03 | 38.45 | -20.42 | Pass | V |
| 190/836.6 | 150 | 65 | 13.51 | 38.45 | -24.94 | Pass | H |
| | 150 | 10 | 16.86 | 38.45 | -21.59 | Pass | V |
| 251/848.8 | 150 | 63 | 15.64 | 38.45 | -22.81 | Pass | H |
| | 150 | 343 | 15.78 | 38.45 | -22.67 | Pass | V |

| WCDMA band V | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel/fc (MHz) | Height (cm) | Azimuth (deg) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 4132/ 826.4 | 150 | 62 | 19.51 | 38.45 | -18.94 | Pass | H |
| | 150 | 249 | 21.13 | 38.45 | -17.32 | Pass | V |
| 4182/ 836.6 | 150 | 179 | 16.29 | 38.45 | -22.16 | Pass | H |
| | 150 | 97 | 18.27 | 38.45 | -20.18 | Pass | V |
| 4233/ 846.6 | 150 | 108 | 14.72 | 38.45 | -23.73 | Pass | H |
| | 150 | 113 | 17.94 | 38.45 | -20.51 | Pass | V |

| HSDPA band V | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel/fc (MHz) | Height (cm) | Azimuth (deg) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 4132/ 826.4 | 150 | 35 | 17.66 | 38.45 | -20.79 | Pass | H |
| | 150 | 120 | 21.16 | 38.45 | -17.29 | Pass | V |
| 4182/ 836.6 | 150 | 251 | 17.12 | 38.45 | -21.33 | Pass | H |
| | 150 | 240 | 19.16 | 38.45 | -19.29 | Pass | V |
| 4233/ 846.6 | 150 | 302 | 15.41 | 38.45 | -23.04 | Pass | H |
| | 150 | 275 | 18.18 | 38.45 | -20.27 | Pass | V |

| GSM 1900 (Voice) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel/fc (MHz) | Height (cm) | Azimuth (deg) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 512/1850.2 | 150 | 39 | 25.86 | 33.01 | -7.15 | Pass | H |
| | 150 | 167 | 25.41 | 33.01 | -7.60 | Pass | V |
| 661/1880.0 | 150 | 85 | 25.87 | 33.01 | -7.14 | Pass | H |
| | 150 | 215 | 25.1 | 33.01 | -7.91 | Pass | V |
| 810/1909.8 | 150 | 272 | 24.37 | 33.01 | -8.64 | Pass | H |
| | 150 | 39 | 25.4 | 33.01 | -7.61 | Pass | V |

| GPRS 1900 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel/fc (MHz) | Height (cm) | Azimuth (deg) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 512/1850.2 | 150 | 309 | 25.88 | 33.01 | -7.13 | Pass | H |
| | 150 | 360 | 22.1 | 33.01 | -10.91 | Pass | V |
| 661/1880.0 | 150 | 70 | 23.66 | 33.01 | -9.35 | Pass | H |
| | 150 | 62 | 23.43 | 33.01 | -9.58 | Pass | V |
| 810/1909.8 | 150 | 95 | 23.56 | 33.01 | -9.45 | Pass | H |
| | 150 | 95 | 21.8 | 33.01 | -11.21 | Pass | V |

| EDGE1900 | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel/fc (MHz) | Height (cm) | Azimuth (deg) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 512/1850.2 | 150 | 332 | 25.77 | 33.01 | -7.24 | Pass | H |
| | 150 | 169 | 21.57 | 33.01 | -11.44 | Pass | V |
| 661/1880.0 | 150 | 132 | 23.43 | 33.01 | -9.58 | Pass | H |
| | 150 | 272 | 22.99 | 33.01 | -10.02 | Pass | V |
| 810/1909.8 | 150 | 61 | 23.06 | 33.01 | -9.95 | Pass | H |
| | 150 | 30 | 24.15 | 33.01 | -8.86 | Pass | V |

| WCDMA band II | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel/fc (MHz) | Height (cm) | Azimuth (deg) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 9262/1852.4 | 150 | 61 | 19.51 | 33.01 | -13.50 | Pass | H |
| | 150 | 332 | 13.92 | 33.01 | -19.09 | Pass | V |
| 9400/1880.0 | 150 | 95 | 19.48 | 33.01 | -13.53 | Pass | H |
| | 150 | 286 | 19.48 | 33.01 | -13.53 | Pass | V |
| 9538/1907.6 | 150 | 320 | 20.35 | 33.01 | -12.66 | Pass | H |
| | 150 | 249 | 17.66 | 33.01 | -15.35 | Pass | V |

| HSDPA band II | | | | | | | |
|---|---|---|---|---|---|---|---|
| Channel/fc (MHz) | Height (cm) | Azimuth (deg) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 9262/1852.4 | 150 | 84 | 17.81 | 33.01 | -15.2 | Pass | H |
| | 150 | 35 | 18.11 | 33.01 | -14.9 | Pass | V |
| 9400/1880.0 | 150 | 127 | 18.23 | 33.01 | -14.78 | Pass | H |
| | 150 | 245 | 17.24 | 33.01 | -15.77 | Pass | V |
| 9538/1907.6 | 150 | 320 | 18.14 | 33.01 | -14.87 | Pass | H |
| | 150 | 198 | 18.39 | 33.01 | -14.62 | Pass | V |

# Appendix H): Field strength of spurious radiation

| | |
|---|---|
| Receiver Setup: | <table><tr><th>Frequency</th><th>Detector</th><th>RBW</th><th>VBW</th><th>Remark</th></tr><tr><td>0.009MHz-30MHz</td><td>Peak</td><td>10kHz</td><td>30kHz</td><td>Peak</td></tr><tr><td>30MHz-1GHz</td><td>Peak</td><td>120kHz</td><td>300kHz</td><td>Peak</td></tr><tr><td>Above 1GHz</td><td>Peak</td><td>1MHz</td><td>3MHz</td><td>Peak</td></tr></table> |
| Measurement Procedure: | 1. Scan up to 10th harmonic, find the maximum radiation frequency to measure.<br>2. The technique used to find the Spurious Emissions of the transmitter was the antenna substitution method. Substitution method was performed to determine the actual ERP/EIRP emission levels of the EUT.<br>Test procedure as below:<br>1) The EUT was powered ON and placed on a 1.5m hight table at a 3 meter fully Anechoic Chamber. The antenna of the transmitter was extended to its maximum length. modulation mode and the measuring receiver shall be tuned to the frequency of the transmitter under test.<br>2) The EUT was set 3 meters(above 18GHz the distance is 1 meter) away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.<br>3) The disturbance of the transmitter was maximized on the test receiver display by raising and lowering from 1m to 4m the receive antenna and by rotating through 360° the turntable. After the fundamental emission was maximized, a field strength measurement was made.<br>4) Steps 1) to 3) were performed with the EUT and the receive antenna in both vertical and horizontal polarization.<br>5) The transmitter was then removed and replaced with another antenna. The center of the antenna was approximately at the same location as the center of the transmitter.<br>6) A signal at the disturbance was fed to the substitution antenna by means of a non-radiating cable. With both the substitution and the receive antennas horizontally polarized, the receive antenna was raised and lowered to obtain a maximum reading at the test receiver. The level of the signal generator was adjusted until the measured field strength level in step 3) is obtained for this set of conditions.<br>7) The output power into the substitution antenna was then measured.<br>8) Steps 6) and 7)were repeated with both antennas polarized.<br>9) Calculate power in dBm by the following formula:<br>ERP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBd)<br>EIRP(dBm) = Pg(dBm) – cable loss (dB) + antenna gain (dBi)<br>EIRP=ERP+2.15dB<br>where:<br>Pg is the generator output power into the substitution antenna.<br>10) Test the EUT in the lowest channel, the middle channel the Highest channel<br>11) The radiation measurements are performed in X, Y, Z axis positioning for EUT operation mode,And found the X axis positioning which it is worse case.<br>12) Repeat above procedures until all frequencies measured was complete. |
| Limit: | Attenuated at least 43+10log(P) |

**Test Data:**

| GSM 850 128channel/824.2MHz(lowest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1646.948 | 150 | 32 | -38.62 | -13 | -25.62 | Pass | H |
| 2474.923 | 150 | 100 | -32.54 | -13 | -19.54 | Pass | H |
| 4117.785 | 150 | 360 | -44.40 | -13 | -31.40 | Pass | H |
| 7432.622 | 150 | 79 | -38.97 | -13 | -25.97 | Pass | H |
| 10374.420 | 150 | 247 | -44.13 | -13 | -31.13 | Pass | H |
| 11872.880 | 150 | 254 | -43.02 | -13 | -30.02 | Pass | H |
| 1646.948 | 150 | 100 | -30.43 | -13 | -17.43 | Pass | V |
| 2468.631 | 150 | 246 | -38.14 | -13 | -25.14 | Pass | V |
| 4388.352 | 150 | 10 | -47.26 | -13 | -34.26 | Pass | V |
| 6594.518 | 150 | 154 | -40.60 | -13 | -27.60 | Pass | V |
| 9322.501 | 150 | 187 | -44.49 | -13 | -31.49 | Pass | V |
| 11370.050 | 150 | 10 | -43.94 | -13 | -30.94 | Pass | V |

| GSM 850 190channel/836.6MHz(middle channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1110.008 | 150 | 315 | -56.89 | -13 | -43.89 | Pass | H |
| 1672.296 | 150 | 10 | -39.37 | -13 | -26.37 | Pass | H |
| 2506.624 | 150 | 245 | -39.20 | -13 | -26.20 | Pass | H |
| 5022.194 | 150 | 100 | -47.78 | -13 | -34.78 | Pass | H |
| 7527.826 | 150 | 110 | -46.11 | -13 | -33.11 | Pass | H |
| 10374.420 | 150 | 79 | -44.48 | -13 | -31.48 | Pass | H |
| 1672.296 | 150 | 360 | -30.01 | -13 | -17.01 | Pass | V |
| 2506.624 | 150 | 70 | -28.76 | -13 | -15.76 | Pass | V |
| 3350.560 | 150 | 47 | -44.08 | -13 | -31.08 | Pass | V |
| 5574.673 | 150 | 10 | -48.03 | -13 | -35.03 | Pass | V |
| 7527.826 | 150 | 100 | -37.50 | -13 | -24.50 | Pass | V |
| 11140.850 | 150 | 164 | -43.64 | -13 | -30.64 | Pass | V |

| GSM 850 251channel/848.8MHz(highest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1698.033 | 150 | 10 | -42.43 | -13 | -29.43 | Pass | H |
| 2545.202 | 150 | 360 | -36.70 | -13 | -23.70 | Pass | H |
| 5099.487 | 150 | 70 | -43.57 | -13 | -30.57 | Pass | H |
| 6799.064 | 150 | 89 | -45.20 | -13 | -32.20 | Pass | H |
| 9884.602 | 150 | 254 | -45.06 | -13 | -32.06 | Pass | H |
| 11872.880 | 150 | 142 | -43.29 | -13 | -30.29 | Pass | H |
| 1228.984 | 150 | 100 | -56.25 | -13 | -43.25 | Pass | V |
| 1698.033 | 150 | 20 | -29.24 | -13 | -16.24 | Pass | V |
| 2545.202 | 150 | 36 | -35.63 | -13 | -22.63 | Pass | V |
| 5099.487 | 150 | 47 | -42.41 | -13 | -29.41 | Pass | V |
| 6799.064 | 150 | 100 | -42.69 | -13 | -29.69 | Pass | V |
| 11169.240 | 150 | 97 | -43.70 | -13 | -30.70 | Pass | V |

| GPRS 850 128channel/824.2MHz(lowest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1646.948 | 150 | 14 | -44.61 | -13 | -31.61 | Pass | H |
| 2474.923 | 150 | 124 | -43.78 | -13 | -30.78 | Pass | H |
| 4605.811 | 150 | 360 | -49.46 | -13 | -36.46 | Pass | H |
| 7432.622 | 150 | 359 | -44.87 | -13 | -31.87 | Pass | H |
| 9465.979 | 150 | 147 | -45.57 | -13 | -32.57 | Pass | H |
| 11633.540 | 150 | 124 | -43.69 | -13 | -30.69 | Pass | H |
| 1646.948 | 150 | 78 | -44.97 | -13 | -31.97 | Pass | V |
| 2474.923 | 150 | 99 | -40.45 | -13 | -27.45 | Pass | V |
| 4202.500 | 150 | 147 | -48.47 | -13 | -35.47 | Pass | V |
| 7432.622 | 150 | 154 | -41.87 | -13 | -28.87 | Pass | V |
| 10348.050 | 150 | 167 | -44.32 | -13 | -31.32 | Pass | V |
| 12303.620 | 150 | 347 | -42.05 | -13 | -29.05 | Pass | V |

| GPRS 850 190channel/836.6MHz(middle channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1672.296 | 150 | 226 | -46.04 | -13 | -33.04 | Pass | H |
| 2506.624 | 150 | 21 | -50.83 | -13 | -37.83 | Pass | H |
| 3607.257 | 150 | 360 | -49.06 | -13 | -36.06 | Pass | H |
| 4724.558 | 150 | 70 | -48.43 | -13 | -35.43 | Pass | H |
| 6331.329 | 150 | 148 | -44.74 | -13 | -31.74 | Pass | H |
| 10560.940 | 150 | 97 | -44.13 | -13 | -31.13 | Pass | H |
| 1672.296 | 150 | 27 | -37.47 | -13 | -24.47 | Pass | V |
| 2506.624 | 150 | 100 | -42.15 | -13 | -29.15 | Pass | V |
| 3350.560 | 150 | 359 | -46.85 | -13 | -33.85 | Pass | V |
| 4736.600 | 150 | 20 | -48.25 | -13 | -35.25 | Pass | V |
| 6527.712 | 150 | 147 | -44.83 | -13 | -31.83 | Pass | V |
| 10087.960 | 150 | 100 | -44.34 | -13 | -31.34 | Pass | V |

| GPRS 850 251channel/848.8MHz(highest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1698.033 | 150 | 351 | -44.52 | -13 | -31.52 | Pass | H |
| 2545.202 | 150 | 200 | -47.95 | -13 | -34.95 | Pass | H |
| 4223.950 | 150 | 316 | -49.23 | -13 | -36.23 | Pass | H |
| 6511.117 | 150 | 100 | -45.93 | -13 | -32.93 | Pass | H |
| 9784.466 | 150 | 79 | -45.39 | -13 | -32.39 | Pass | H |
| 11963.890 | 150 | 10 | -43.67 | -13 | -30.67 | Pass | H |
| 1698.033 | 150 | 47 | -34.88 | -13 | -21.88 | Pass | V |
| 2545.202 | 150 | 100 | -42.19 | -13 | -29.19 | Pass | V |
| 5099.487 | 150 | 360 | -47.80 | -13 | -34.80 | Pass | V |
| 6799.064 | 150 | 70 | -45.17 | -13 | -32.17 | Pass | V |
| 10036.730 | 150 | 27 | -45.33 | -13 | -32.33 | Pass | V |
| 11140.850 | 150 | 210 | -43.37 | -13 | -30.37 | Pass | V |

| EDGE 850 128channel/824.2MHz(lowest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1646.948 | 150 | 356 | -42.61 | -13 | -29.61 | Pass | H |
| 2474.923 | 150 | 147 | -45.63 | -13 | -32.63 | Pass | H |
| 3766.785 | 150 | 97 | -48.91 | -13 | -35.91 | Pass | H |
| 4946.072 | 150 | 100 | -46.90 | -13 | -33.90 | Pass | H |
| 7413.726 | 150 | 110 | -43.74 | -13 | -30.74 | Pass | H |
| 11169.240 | 150 | 57 | -44.12 | -13 | -31.12 | Pass | H |
| 1646.948 | 150 | 248 | -33.81 | -13 | -20.81 | Pass | V |
| 2468.631 | 150 | 220 | -36.14 | -13 | -23.14 | Pass | V |
| 4410.750 | 150 | 10 | -47.90 | -13 | -34.90 | Pass | V |
| 7432.622 | 150 | 100 | -39.92 | -13 | -26.92 | Pass | V |
| 10087.960 | 150 | 38 | -43.55 | -13 | -30.55 | Pass | V |
| 12303.620 | 150 | 360 | -43.22 | -13 | -30.22 | Pass | V |

| EDGE 850 190channel/836.6MHz(middle channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1129.964 | 150 | 352 | -56.61 | -13 | -43.61 | Pass | H |
| 1672.296 | 150 | 167 | -43.79 | -13 | -30.79 | Pass | H |
| 2506.624 | 150 | 91 | -48.29 | -13 | -35.29 | Pass | H |
| 3766.785 | 150 | 211 | -49.03 | -13 | -36.03 | Pass | H |
| 6494.564 | 150 | 100 | -46.28 | -13 | -33.28 | Pass | H |
| 9228.060 | 150 | 360 | -44.38 | -13 | -31.38 | Pass | H |
| 1672.296 | 150 | 79 | -44.40 | -13 | -31.40 | Pass | V |
| 2506.624 | 150 | 70 | -44.26 | -13 | -31.26 | Pass | V |
| 4444.562 | 150 | 254 | -48.93 | -13 | -35.93 | Pass | V |
| 6511.117 | 150 | 100 | -45.94 | -13 | -32.94 | Pass | V |
| 7527.826 | 150 | 10 | -44.42 | -13 | -31.42 | Pass | V |
| 11197.710 | 150 | 78 | -44.31 | -13 | -31.31 | Pass | V |

| EDGE 850 251channel/848.8MHz(highest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1213.441 | 150 | 331 | -57.87 | -13 | -44.87 | Pass | H |
| 1698.033 | 150 | 100 | -35.88 | -13 | -22.88 | Pass | H |
| 2545.202 | 150 | 261 | -40.19 | -13 | -27.19 | Pass | H |
| 3634.910 | 150 | 20 | -49.87 | -13 | -36.87 | Pass | H |
| 5910.798 | 150 | 31 | -46.50 | -13 | -33.50 | Pass | H |
| 8615.126 | 150 | 200 | -46.34 | -13 | -33.34 | Pass | H |
| 1273.572 | 150 | 37 | -57.42 | -13 | -44.42 | Pass | V |
| 1698.033 | 150 | 100 | -45.52 | -13 | -32.52 | Pass | V |
| 2545.202 | 150 | 69 | -48.95 | -13 | -35.95 | Pass | V |
| 3747.656 | 150 | 147 | -48.97 | -13 | -35.97 | Pass | V |
| 4895.965 | 150 | 100 | -49.54 | -13 | -36.54 | Pass | V |
| 7508.688 | 150 | 359 | -46.39 | -13 | -33.39 | Pass | V |

| GSM 1900 512channel/1850.2MHz(lowest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1129.964 | 150 | 61 | -56.77 | -13 | -43.77 | Pass | H |
| 2927.691 | 150 | 100 | -52.21 | -13 | -39.21 | Pass | H |
| 3700.260 | 150 | 360 | -39.93 | -13 | -26.93 | Pass | H |
| 5546.364 | 150 | 79 | -43.59 | -13 | -30.59 | Pass | H |
| 9204.600 | 150 | 254 | -45.04 | -13 | -32.04 | Pass | H |
| 11842.690 | 150 | 279 | -44.67 | -13 | -31.67 | Pass | H |
| 1213.441 | 150 | 61 | -56.97 | -13 | -43.97 | Pass | V |
| 2768.242 | 150 | 100 | -52.05 | -13 | -39.05 | Pass | V |
| 3700.260 | 150 | 110 | -40.80 | -13 | -27.80 | Pass | V |
| 6331.329 | 150 | 245 | -45.51 | -13 | -32.51 | Pass | V |
| 9134.575 | 150 | 289 | -45.51 | -13 | -32.51 | Pass | V |
| 11457.210 | 150 | 91 | -44.29 | -13 | -31.29 | Pass | V |

| GSM 1900 661channel/1880MHz(middle channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1222.743 | 150 | 54 | -57.92 | -13 | -44.92 | Pass | H |
| 2726.283 | 150 | 147 | -52.22 | -13 | -39.22 | Pass | H |
| 3757.208 | 150 | 100 | -37.97 | -13 | -24.97 | Pass | H |
| 6511.117 | 150 | 20 | -45.71 | -13 | -32.71 | Pass | H |
| 10139.450 | 150 | 360 | -45.26 | -13 | -32.26 | Pass | H |
| 12588.750 | 150 | 79 | -44.20 | -13 | -31.20 | Pass | H |
| 1144.437 | 150 | 70 | -57.84 | -13 | -44.84 | Pass | V |
| 2418.867 | 150 | 360 | -49.75 | -13 | -36.75 | Pass | V |
| 3757.208 | 150 | 161 | -32.36 | -13 | -19.36 | Pass | V |
| 6511.117 | 150 | 200 | -45.62 | -13 | -32.62 | Pass | V |
| 9228.060 | 150 | 79 | -45.34 | -13 | -32.34 | Pass | V |
| 11872.880 | 150 | 64 | -44.57 | -13 | -31.57 | Pass | V |

| GSM 1900 810channel/1909.8MHz(highest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1204.210 | 150 | 360 | -56.73 | -13 | -43.73 | Pass | H |
| 2456.095 | 150 | 79 | -52.86 | -13 | -39.86 | Pass | H |
| 3824.757 | 150 | 100 | -39.90 | -13 | -26.90 | Pass | H |
| 6511.117 | 150 | 284 | -45.32 | -13 | -32.32 | Pass | H |
| 9228.060 | 150 | 100 | -45.54 | -13 | -32.54 | Pass | H |
| 11933.470 | 150 | 147 | -43.49 | -13 | -30.49 | Pass | H |
| 1357.254 | 150 | 120 | -57.17 | -13 | -44.17 | Pass | V |
| 2740.198 | 150 | 39 | -51.86 | -13 | -38.86 | Pass | V |
| 3824.757 | 150 | 100 | -33.29 | -13 | -20.29 | Pass | V |
| 6561.030 | 150 | 90 | -44.60 | -13 | -31.60 | Pass | V |
| 8506.170 | 150 | 84 | -45.90 | -13 | -32.90 | Pass | V |
| 10062.310 | 150 | 61 | -44.98 | -13 | -31.98 | Pass | V |

| GPRS1900 512channel/1850.2MHz(lowest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1110.008 | 150 | 360 | -57.14 | -13 | -44.14 | Pass | H |
| 2558.193 | 150 | 121 | -52.06 | -13 | -39.06 | Pass | H |
| 3700.260 | 150 | 110 | -40.00 | -13 | -27.00 | Pass | H |
| 6527.712 | 150 | 11 | -45.42 | -13 | -32.42 | Pass | H |
| 8659.098 | 150 | 169 | -45.60 | -13 | -32.60 | Pass | H |
| 11399.030 | 150 | 64 | -44.12 | -13 | -31.12 | Pass | H |
| 1112.837 | 150 | 278 | -56.91 | -13 | -43.91 | Pass | V |
| 1510.402 | 150 | 200 | -56.01 | -13 | -43.01 | Pass | V |
| 3700.260 | 150 | 220 | -38.68 | -13 | -25.68 | Pass | V |
| 5560.500 | 150 | 360 | -46.82 | -13 | -33.82 | Pass | V |
| 8615.126 | 149 | 359 | -46.29 | -13 | -33.29 | Pass | V |
| 11872.880 | 150 | 341 | -44.05 | -13 | -31.05 | Pass | V |

| GPRS1900 661channel/1880MHz(middle channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1210.356 | 150 | 39 | -56.91 | -13 | -43.91 | Pass | H |
| 2927.691 | 150 | 360 | -52.54 | -13 | -39.54 | Pass | H |
| 3757.208 | 150 | 70 | -38.36 | -13 | -25.36 | Pass | H |
| 6527.712 | 150 | 61 | -45.24 | -13 | -32.24 | Pass | H |
| 9181.198 | 150 | 359 | -44.96 | -13 | -31.96 | Pass | H |
| 12241.140 | 150 | 241 | -43.50 | -13 | -30.50 | Pass | H |
| 1112.837 | 150 | 289 | -56.77 | -13 | -43.77 | Pass | V |
| 2425.032 | 150 | 10 | -51.52 | -13 | -38.52 | Pass | V |
| 3757.208 | 150 | 100 | -33.84 | -13 | -20.84 | Pass | V |
| 6544.350 | 150 | 110 | -45.19 | -13 | -32.19 | Pass | V |
| 9204.600 | 149 | 79 | -44.36 | -13 | -31.36 | Pass | V |
| 11872.880 | 150 | 64 | -43.85 | -13 | -30.85 | Pass | V |

| GPRS1900 810channel/1909.8MHz(highest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1115.673 | 150 | 79 | -57.63 | -13 | -44.63 | Pass | H |
| 2630.837 | 150 | 146 | -52.36 | -13 | -39.36 | Pass | H |
| 4288.958 | 150 | 100 | -50.14 | -13 | -37.14 | Pass | H |
| 5574.673 | 150 | 255 | -49.98 | -13 | -36.98 | Pass | H |
| 9370.083 | 150 | 10 | -46.02 | -13 | -33.02 | Pass | H |
| 11663.190 | 150 | 360 | -43.86 | -13 | -30.86 | Pass | H |
| 1195.049 | 150 | 79 | -57.60 | -13 | -44.60 | Pass | V |
| 2698.665 | 150 | 51 | -51.81 | -13 | -38.81 | Pass | V |
| 3824.757 | 150 | 200 | -29.93 | -13 | -16.93 | Pass | V |
| 6283.164 | 150 | 249 | -46.84 | -13 | -33.84 | Pass | V |
| 8637.084 | 149 | 78 | -45.35 | -13 | -32.35 | Pass | V |
| 11056.090 | 150 | 100 | -43.90 | -13 | -30.90 | Pass | V |

| EDGE1900 512channel/1850.2MHz(lowest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1127.091 | 150 | 10 | -57.73 | -13 | -44.73 | Pass | H |
| 1663.803 | 150 | 179 | -54.92 | -13 | -41.92 | Pass | H |
| 3824.757 | 150 | 141 | -33.59 | -13 | -20.59 | Pass | H |
| 5732.974 | 150 | 200 | -47.12 | -13 | -34.12 | Pass | H |
| 9088.188 | 150 | 201 | -45.98 | -13 | -32.98 | Pass | H |
| 11084.270 | 150 | 360 | -43.96 | -13 | -30.96 | Pass | H |
| 1127.091 | 150 | 70 | -57.23 | -13 | -44.23 | Pass | V |
| 1668.044 | 150 | 89 | -55.93 | -13 | -42.93 | Pass | V |
| 3824.757 | 150 | 100 | -28.62 | -13 | -15.62 | Pass | V |
| 6363.645 | 150 | 211 | -45.24 | -13 | -32.24 | Pass | V |
| 8527.851 | 150 | 64 | -45.98 | -13 | -32.98 | Pass | V |
| 11084.270 | 150 | 278 | -44.77 | -13 | -31.77 | Pass | V |

| EDGE1900 661channel/1880MHz(middle channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1192.011 | 150 | 81 | -56.10 | -13 | -43.10 | Pass | H |
| 1663.803 | 150 | 64 | -54.62 | -13 | -41.62 | Pass | H |
| 3757.208 | 150 | 79 | -32.24 | -13 | -19.24 | Pass | H |
| 6544.350 | 150 | 100 | -45.85 | -13 | -32.85 | Pass | H |
| 9441.913 | 150 | 360 | -45.24 | -13 | -32.24 | Pass | H |
| 12303.620 | 150 | 70 | -43.70 | -13 | -30.70 | Pass | H |
| 1374.639 | 150 | 10 | -56.95 | -13 | -43.95 | Pass | V |
| 2698.665 | 150 | 61 | -52.02 | -13 | -39.02 | Pass | V |
| 3757.208 | 150 | 104 | -39.91 | -13 | -26.91 | Pass | V |
| 6544.350 | 150 | 110 | -46.15 | -13 | -33.15 | Pass | V |
| 9204.600 | 150 | 101 | -44.00 | -13 | -31.00 | Pass | V |
| 11903.140 | 150 | 360 | -43.51 | -13 | -30.51 | Pass | V |

| EDGE1900 810channel/1909.8MHz(highest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1374.639 | 150 | 316 | -58.20 | -13 | -45.20 | Pass | H |
| 2905.419 | 150 | 70 | -52.51 | -13 | -39.51 | Pass | H |
| 3824.757 | 150 | 81 | -31.42 | -13 | -18.42 | Pass | H |
| 6561.030 | 150 | 226 | -45.59 | -13 | -32.59 | Pass | H |
| 8615.126 | 150 | 210 | -45.58 | -13 | -32.58 | Pass | H |
| 10805.680 | 150 | 101 | -44.34 | -13 | -31.34 | Pass | H |
| 1225.860 | 150 | 79 | -57.44 | -13 | -44.44 | Pass | V |
| 2875.986 | 150 | 100 | -53.84 | -13 | -40.84 | Pass | V |
| 3824.757 | 150 | 360 | -32.73 | -13 | -19.73 | Pass | V |
| 6544.350 | 150 | 70 | -45.46 | -13 | -32.46 | Pass | V |
| 8593.224 | 150 | 89 | -46.01 | -13 | -33.01 | Pass | V |
| 11226.250 | 150 | 100 | -44.65 | -13 | -31.65 | Pass | V |

| WCDMA band V 4132 channel/826.4MHz(lowest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1659.574 | 150 | 38 | -55.58 | -13 | -42.58 | Pass | H |
| 2322.330 | 150 | 161 | -52.47 | -13 | -39.47 | Pass | H |
| 3607.257 | 150 | 79 | -50.69 | -13 | -37.69 | Pass | H |
| 6396.125 | 150 | 271 | -45.91 | -13 | -32.91 | Pass | H |
| 7981.717 | 150 | 345 | -46.19 | -13 | -33.19 | Pass | H |
| 10087.960 | 150 | 161 | -46.54 | -13 | -33.54 | Pass | H |
| 1663.803 | 150 | 332 | -49.49 | -13 | -36.49 | Pass | V |
| 2519.418 | 150 | 100 | -50.24 | -13 | -37.24 | Pass | V |
| 4213.211 | 150 | 147 | -50.17 | -13 | -37.17 | Pass | V |
| 6331.329 | 150 | 10 | -46.02 | -13 | -33.02 | Pass | V |
| 9490.104 | 150 | 360 | -45.78 | -13 | -32.78 | Pass | V |
| 11084.270 | 150 | 14 | -45.27 | -13 | -32.27 | Pass | V |

| WCDMA band V 4182 channel/836.4MHz(middle channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1663.803 | 150 | 352 | -55.35 | -13 | -42.35 | Pass | H |
| 2637.542 | 150 | 164 | -53.57 | -13 | -40.57 | Pass | H |
| 3776.385 | 150 | 79 | -51.00 | -13 | -38.00 | Pass | H |
| 6544.350 | 150 | 100 | -45.72 | -13 | -32.72 | Pass | H |
| 9065.084 | 150 | 258 | -46.90 | -13 | -33.90 | Pass | H |
| 12178.980 | 150 | 76 | -45.57 | -13 | -32.57 | Pass | H |
| 1663.803 | 150 | 360 | -55.11 | -13 | -42.11 | Pass | V |
| 2487.555 | 150 | 124 | -52.43 | -13 | -39.43 | Pass | V |
| 3598.087 | 150 | 10 | -50.61 | -13 | -37.61 | Pass | V |
| 6511.117 | 150 | 360 | -47.08 | -13 | -34.08 | Pass | V |
| 9611.663 | 150 | 70 | -46.11 | -13 | -33.11 | Pass | V |
| 12334.980 | 150 | 281 | -45.88 | -13 | -32.88 | Pass | V |

| WCDMA band V 4233 channel/846.6MHz(highest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1659.574 | 150 | 332 | -53.39 | -13 | -40.39 | Pass | H |
| 2310.537 | 150 | 161 | -53.12 | -13 | -40.12 | Pass | H |
| 3757.208 | 150 | 316 | -51.56 | -13 | -38.56 | Pass | H |
| 6363.645 | 150 | 100 | -46.22 | -13 | -33.22 | Pass | H |
| 8747.716 | 150 | 24 | -47.41 | -13 | -34.41 | Pass | H |
| 11994.38 | 150 | 144 | -46.27 | -13 | -33.27 | Pass | H |
| 1663.803 | 150 | 179 | -55.72 | -13 | -42.72 | Pass | V |
| 2519.418 | 150 | 10 | -53.37 | -13 | -40.37 | Pass | V |
| 3607.257 | 150 | 46 | -50.83 | -13 | -37.83 | Pass | V |
| 6611.326 | 150 | 147 | -46.58 | -13 | -33.58 | Pass | V |
| 8022.456 | 150 | 100 | -46.83 | -13 | -33.83 | Pass | V |
| 11112.520 | 150 | 50 | -47.23 | -13 | -34.23 | Pass | V |

| HSDPA band V 4132 channel/826.4MHz(lowest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1663.803 | 150 | 159 | -54.28 | -13 | -41.28 | Pass | H |
| 2334.183 | 150 | 170 | -53.96 | -13 | -40.96 | Pass | H |
| 3436.944 | 150 | 160 | -51.21 | -13 | -38.21 | Pass | H |
| 6379.864 | 150 | 100 | -46.65 | -13 | -33.65 | Pass | H |
| 8571.377 | 150 | 360 | -46.88 | -13 | -33.88 | Pass | H |
| 11341.140 | 150 | 79 | -46.84 | -13 | -33.84 | Pass | H |
| 1663.803 | 150 | 247 | -54.86 | -13 | -41.86 | Pass | V |
| 2328.249 | 150 | 220 | -54.20 | -13 | -41.20 | Pass | V |
| 3607.257 | 150 | 200 | -51.33 | -13 | -38.33 | Pass | V |
| 6363.645 | 150 | 21 | -46.58 | -13 | -33.58 | Pass | V |
| 9181.198 | 150 | 156 | -47.02 | -13 | -34.02 | Pass | V |
| 11370.050 | 150 | 100 | -46.20 | -13 | -33.20 | Pass | V |

| HSDPA band V 4182 channel/836.4MHz(middle channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1663.803 | 150 | 39 | -55.31 | -13 | -42.31 | Pass | H |
| 2334.183 | 150 | 161 | -52.78 | -13 | -39.78 | Pass | H |
| 3747.656 | 150 | 78 | -50.90 | -13 | -37.90 | Pass | H |
| 6461.583 | 150 | 351 | -46.79 | -13 | -33.79 | Pass | H |
| 9157.857 | 150 | 349 | -45.94 | -13 | -32.94 | Pass | H |
| 12272.340 | 150 | 217 | -45.98 | -13 | -32.98 | Pass | H |
| 1668.044 | 150 | 100 | -54.61 | -13 | -41.61 | Pass | V |
| 2500.251 | 150 | 145 | -53.36 | -13 | -40.36 | Pass | V |
| 3757.208 | 150 | 360 | -49.47 | -13 | -36.47 | Pass | V |
| 6428.771 | 150 | 54 | -46.24 | -13 | -33.24 | Pass | V |
| 9134.575 | 150 | 100 | -47.29 | -13 | -34.29 | Pass | V |
| 12272.340 | 150 | 246 | -45.39 | -13 | -32.39 | Pass | V |

| HSDPA band V 4233channel/846.6MHz(highest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1668.044 | 150 | 326 | -55.65 | -13 | -42.65 | Pass | H |
| 2740.198 | 150 | 100 | -52.58 | -13 | -39.58 | Pass | H |
| 4055.371 | 150 | 172 | -51.23 | -13 | -38.23 | Pass | H |
| 6379.864 | 150 | 98 | -46.53 | -13 | -33.53 | Pass | H |
| 8571.377 | 150 | 47 | -46.27 | -13 | -33.27 | Pass | H |
| 10087.960 | 150 | 100 | -46.82 | -13 | -33.82 | Pass | H |
| 1101.563 | 150 | 284 | -57.37 | -13 | -44.37 | Pass | V |
| 1668.044 | 150 | 100 | -54.61 | -13 | -41.61 | Pass | V |
| 2747.183 | 150 | 61 | -53.72 | -13 | -40.72 | Pass | V |
| 5365.828 | 150 | 360 | -51.05 | -13 | -38.05 | Pass | V |
| 8002.061 | 150 | 79 | -47.49 | -13 | -34.49 | Pass | V |
| 11197.710 | 150 | 56 | -46.93 | -13 | -33.93 | Pass | V |

| WCDMA band II 9262 channel/1852.4MHz(lowest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1289.885 | 150 | 351 | -57.76 | -13 | -44.76 | Pass | H |
| 2927.691 | 150 | 200 | -52.59 | -13 | -39.59 | Pass | H |
| 3709.691 | 150 | 217 | -47.93 | -13 | -34.93 | Pass | H |
| 6331.329 | 150 | 96 | -47.21 | -13 | -34.21 | Pass | H |
| 8681.168 | 150 | 100 | -46.53 | -13 | -33.53 | Pass | H |
| 11226.250 | 150 | 351 | -45.91 | -13 | -32.91 | Pass | H |
| 1210.356 | 150 | 70 | -57.25 | -13 | -44.25 | Pass | V |
| 1510.402 | 150 | 151 | -57.29 | -13 | -44.29 | Pass | V |
| 3709.691 | 150 | 100 | -42.99 | -13 | -29.99 | Pass | V |
| 6577.752 | 150 | 21 | -45.65 | -13 | -32.65 | Pass | V |
| 8462.975 | 150 | 10 | -46.07 | -13 | -33.07 | Pass | V |
| 11197.710 | 150 | 360 | -44.91 | -13 | -31.91 | Pass | V |

| WCDMA band II 9400 channel/1880MHz(middle channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1204.210 | 150 | 91 | -57.44 | -13 | -44.44 | Pass | H |
| 1659.574 | 150 | 100 | -58.09 | -13 | -45.09 | Pass | H |
| 3757.208 | 150 | 360 | -46.29 | -13 | -33.29 | Pass | H |
| 6511.117 | 150 | 351 | -45.75 | -13 | -32.75 | Pass | H |
| 9465.979 | 150 | 359 | -45.93 | -13 | -32.93 | Pass | H |
| 11457.210 | 150 | 240 | -45.29 | -13 | -32.29 | Pass | H |
| 1144.437 | 150 | 100 | -58.60 | -13 | -45.60 | Pass | V |
| 1605.554 | 150 | 248 | -57.59 | -13 | -44.59 | Pass | V |
| 3766.785 | 150 | 358 | -44.88 | -13 | -31.88 | Pass | V |
| 6363.645 | 150 | 70 | -46.91 | -13 | -33.91 | Pass | V |
| 9204.600 | 150 | 154 | -46.57 | -13 | -33.57 | Pass | V |
| 10641.890 | 150 | 100 | -46.77 | -13 | -33.77 | Pass | V |

| WCDMA band II 9538 channel/1907.6MHz(highest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1162.051 | 150 | 331 | -58.47 | -13 | -45.47 | Pass | H |
| 1581.218 | 150 | 100 | -58.03 | -13 | -45.03 | Pass | H |
| 3815.033 | 150 | 147 | -47.21 | -13 | -34.21 | Pass | H |
| 6363.645 | 150 | 154 | -45.73 | -13 | -32.73 | Pass | H |
| 9204.600 | 150 | 121 | -45.87 | -13 | -32.87 | Pass | H |
| 11341.140 | 150 | 76 | -46.26 | -13 | -33.26 | Pass | H |
| 1147.354 | 150 | 49 | -58.01 | -13 | -45.01 | Pass | V |
| 1374.639 | 150 | 100 | -58.73 | -13 | -45.73 | Pass | V |
| 3815.033 | 150 | 67 | -43.59 | -13 | -30.59 | Pass | V |
| 6511.117 | 150 | 100 | -46.32 | -13 | -33.32 | Pass | V |
| 8615.126 | 150 | 360 | -47.29 | -13 | -34.29 | Pass | V |
| 10139.450 | 150 | 40 | -46.47 | -13 | -33.47 | Pass | V |

| HSDPA band II 9262 channel/1852.4MHz(lowest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1188.980 | 150 | 61 | -58.19 | -13 | -45.19 | Pass | H |
| 1663.803 | 150 | 200 | -56.49 | -13 | -43.49 | Pass | H |
| 3815.033 | 150 | 157 | -45.40 | -13 | -32.40 | Pass | H |
| 6527.712 | 150 | 241 | -47.14 | -13 | -34.14 | Pass | H |
| 9134.575 | 150 | 100 | -46.77 | -13 | -33.77 | Pass | H |
| 12303.620 | 150 | 169 | -45.25 | -13 | -32.25 | Pass | H |
| 1276.818 | 150 | 254 | -56.67 | -13 | -43.67 | Pass | V |
| 2519.418 | 150 | 26 | -49.16 | -13 | -36.16 | Pass | V |
| 3815.033 | 150 | 100 | -41.53 | -13 | -28.53 | Pass | V |
| 6511.117 | 150 | 332 | -44.13 | -13 | -31.13 | Pass | V |
| 9042.038 | 150 | 159 | -45.66 | -13 | -32.66 | Pass | V |
| 11903.140 | 150 | 100 | -44.52 | -13 | -31.52 | Pass | V |

| HSDPA band II 9400 channel/1880MHz(middle channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1112.837 | 150 | 151 | -58.91 | -13 | -45.91 | Pass | H |
| 1388.708 | 150 | 79 | -58.38 | -13 | -45.38 | Pass | H |
| 3766.785 | 150 | 360 | -48.68 | -13 | -35.68 | Pass | H |
| 6445.156 | 150 | 200 | -46.06 | -13 | -33.06 | Pass | H |
| 9157.857 | 150 | 157 | -47.09 | -13 | -34.09 | Pass | H |
| 12303.620 | 150 | 149 | -46.18 | -13 | -33.18 | Pass | H |
| 1323.141 | 150 | 217 | -56.77 | -13 | -43.77 | Pass | V |
| 3757.208 | 150 | 360 | -41.82 | -13 | -28.82 | Pass | V |
| 6527.712 | 150 | 100 | -44.51 | -13 | -31.51 | Pass | V |
| 8002.061 | 150 | 243 | -46.19 | -13 | -33.19 | Pass | V |
| 9710.030 | 150 | 100 | -45.96 | -13 | -32.96 | Pass | V |
| 11872.880 | 150 | 100 | -44.91 | -13 | -31.91 | Pass | V |

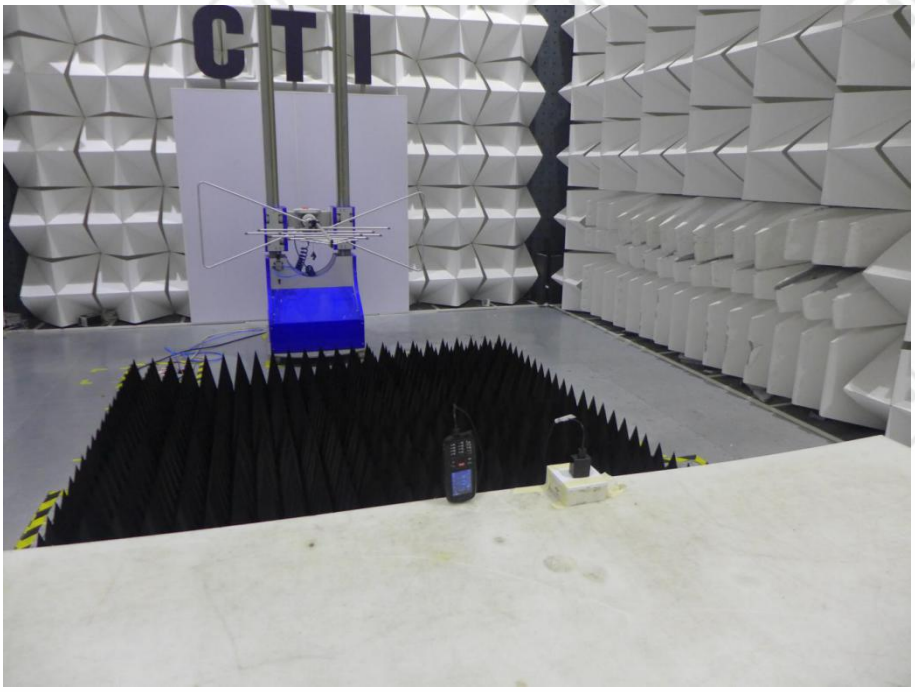
| HSDPA band II 9538 channel/1907.6MHz(highest channel) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Frequency (MHz) | Height (cm) | Azimuth (deg) | Spurious Emission Level (dBm) | Limit (dBm) | Over Limit (dB) | Result | Antenna Polaxis. |
| 1192.011 | 150 | 37 | -58.58 | -13 | -45.58 | Pass | H |
| 3184.250 | 150 | 60 | -52.17 | -13 | -39.17 | Pass | H |
| 3815.033 | 150 | 360 | -49.28 | -13 | -36.28 | Pass | H |
| 6511.117 | 150 | 79 | -46.76 | -13 | -33.76 | Pass | H |
| 9065.084 | 150 | 151 | -47.36 | -13 | -34.36 | Pass | H |
| 12334.980 | 150 | 247 | -45.91 | -13 | -32.91 | Pass | H |
| 1124.226 | 150 | 291 | -57.70 | -13 | -44.70 | Pass | V |
| 2733.232 | 150 | 200 | -53.48 | -13 | -40.48 | Pass | V |
| 3815.033 | 150 | 147 | -48.19 | -13 | -35.19 | Pass | V |
| 6511.117 | 150 | 10 | -45.70 | -13 | -32.70 | Pass | V |
| 9111.353 | 150 | 36 | -46.79 | -13 | -33.79 | Pass | V |
| 11933.470 | 150 | 111 | -45.41 | -13 | -32.41 | Pass | V |

Note:

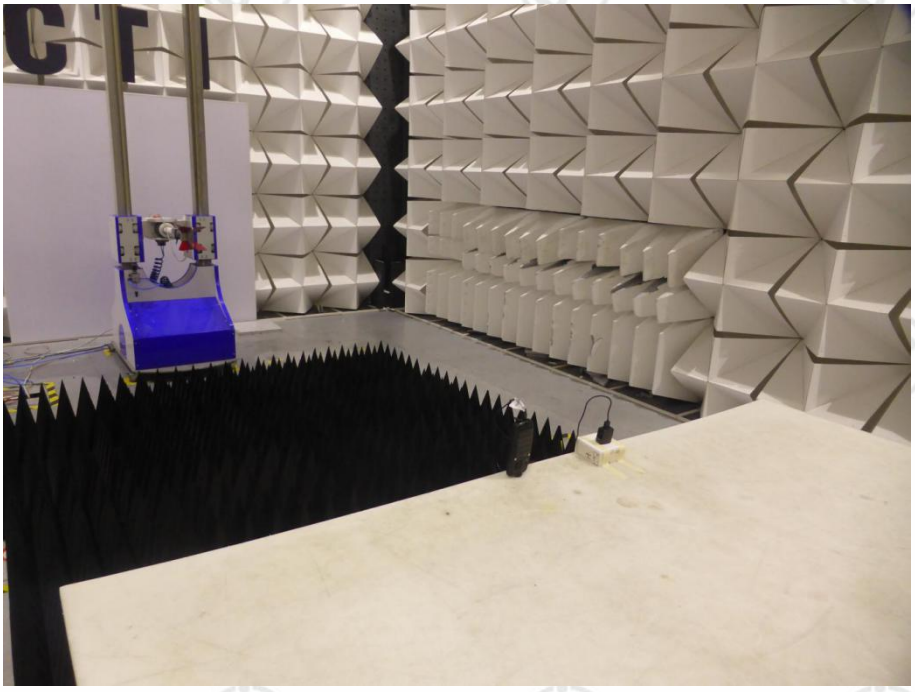
1) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

# PHOTOGRAPHS OF TEST SETUP

Test mode No.: RG310



**Radiated spurious emission Test Setup-1(Below 1GHz)**



**Radiated spurious emission Test Setup-2(Above 1GHz)**

# PHOTOGRAPHS OF EUT Constructional Details

Test mode No.: RG310


View of Product-1


View of Product-2

View of Product-3

View of Product-4

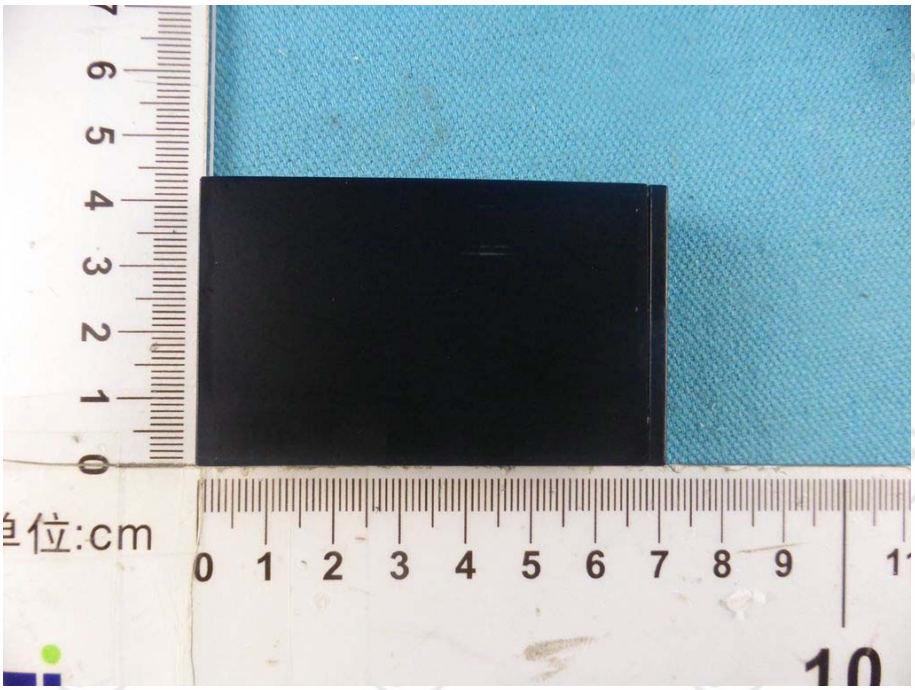
View of Product-5

View of Product-6

View of Product-7

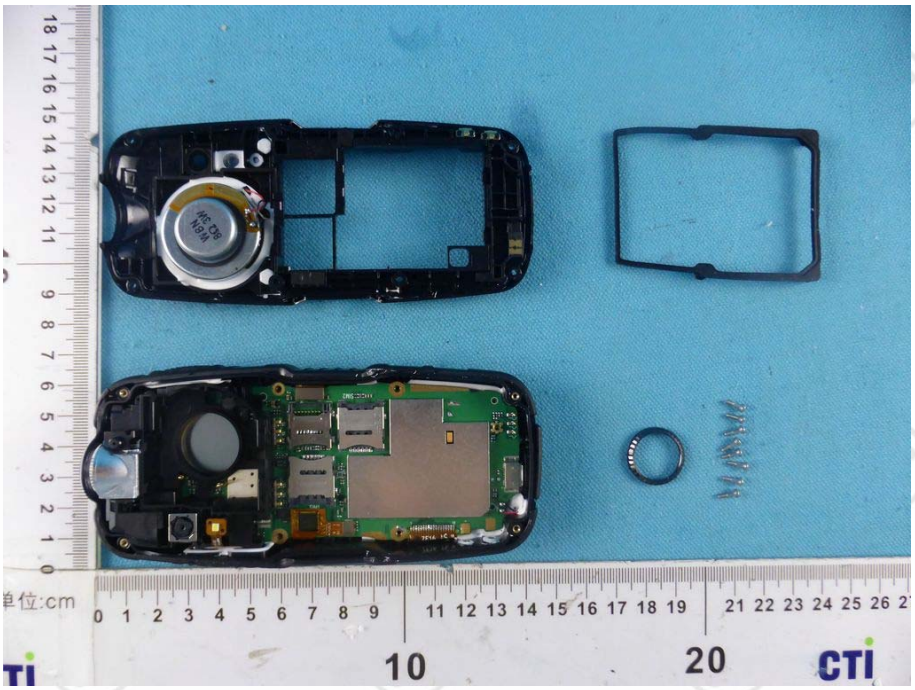
View of Product-8


View of Product-9




View of Product-10

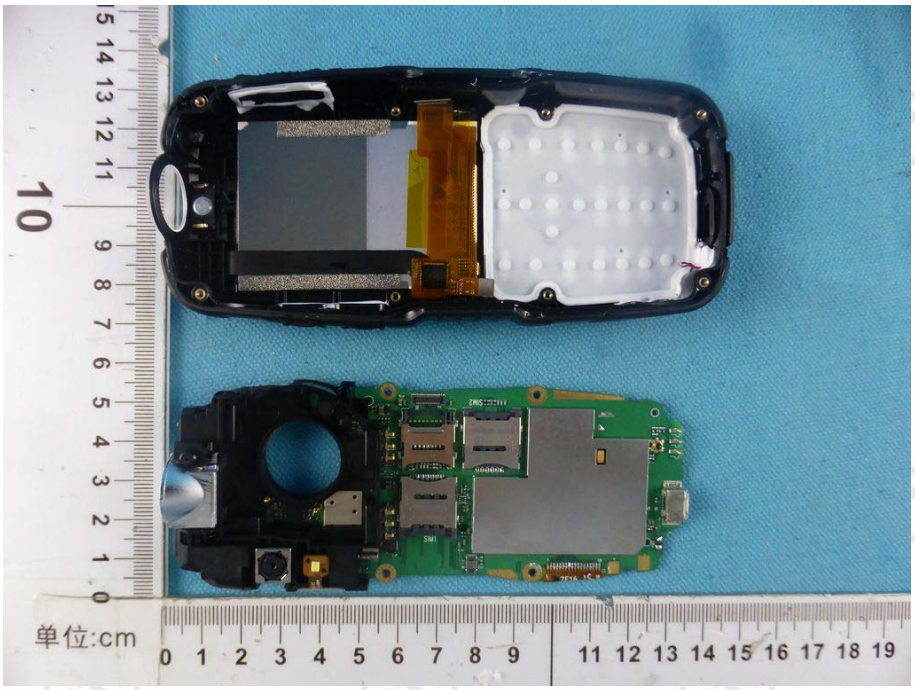
View of Product-11



View of Product-12

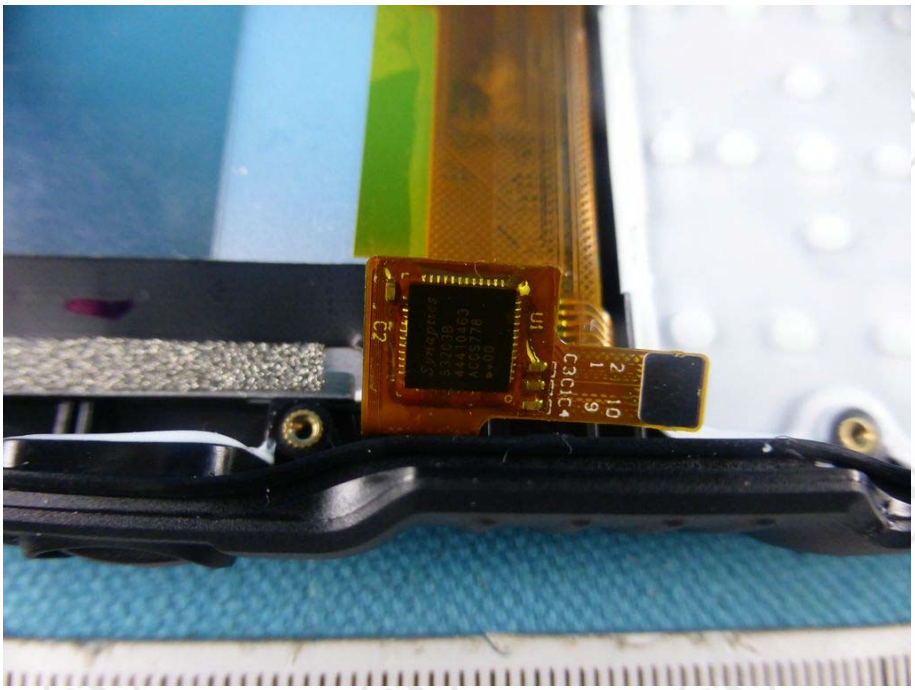
View of Product-13

View of Product-14

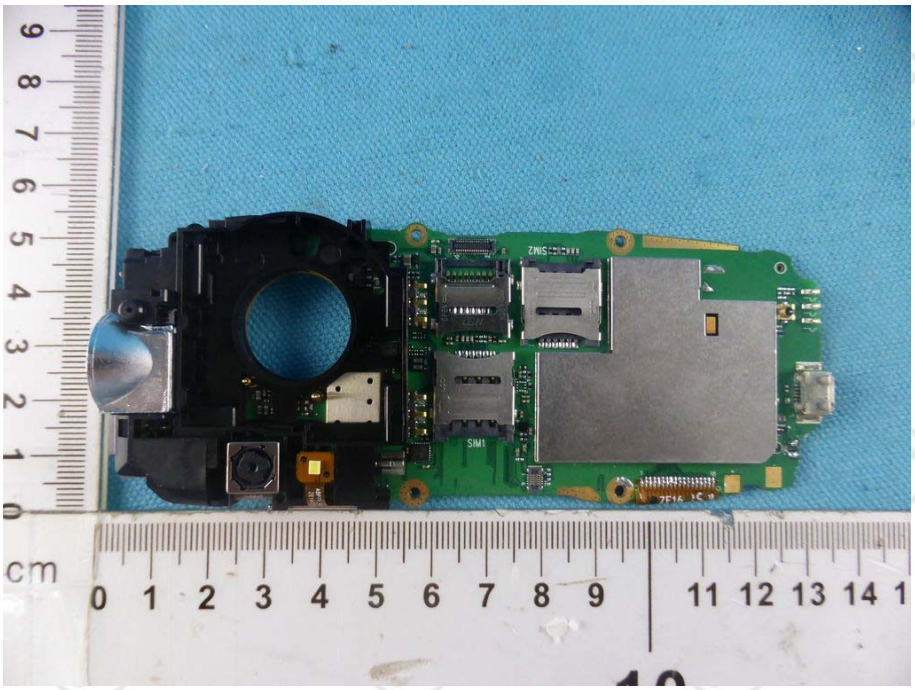



View of Product-15

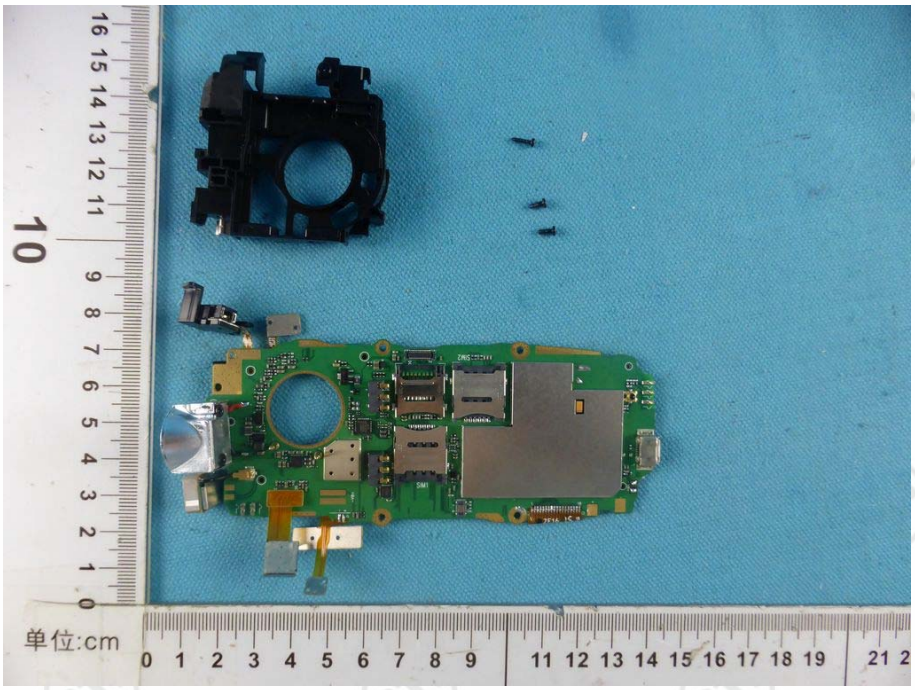

View of Product-16



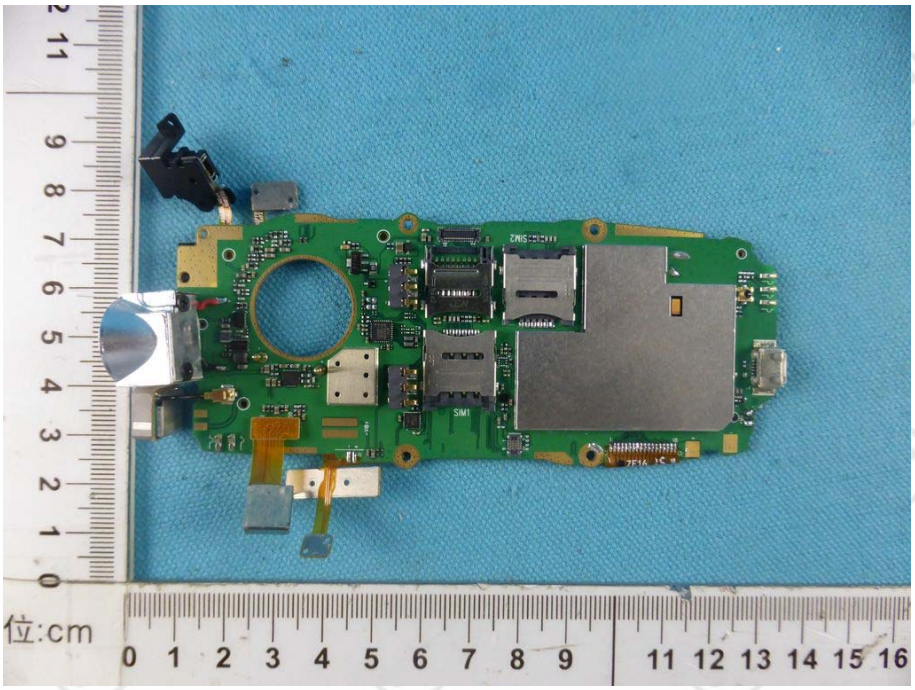
View of Product-17



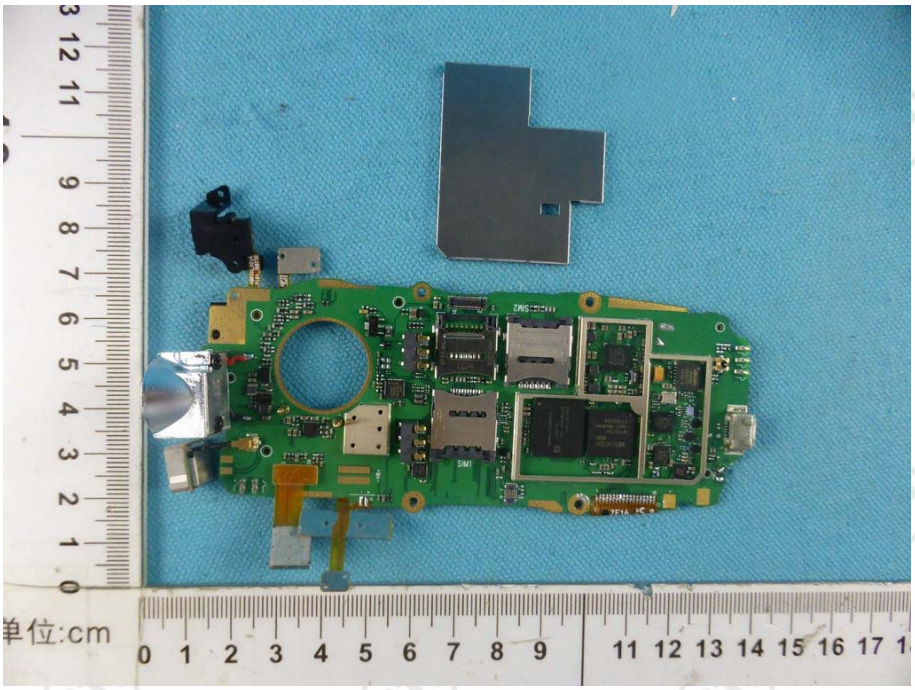

View of Product-18



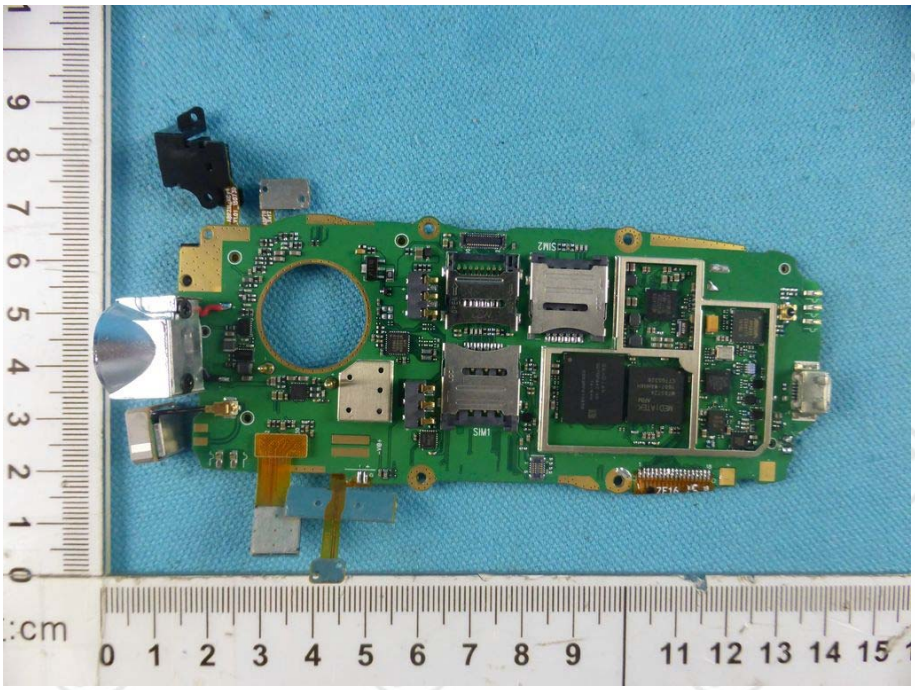

View of Product-19



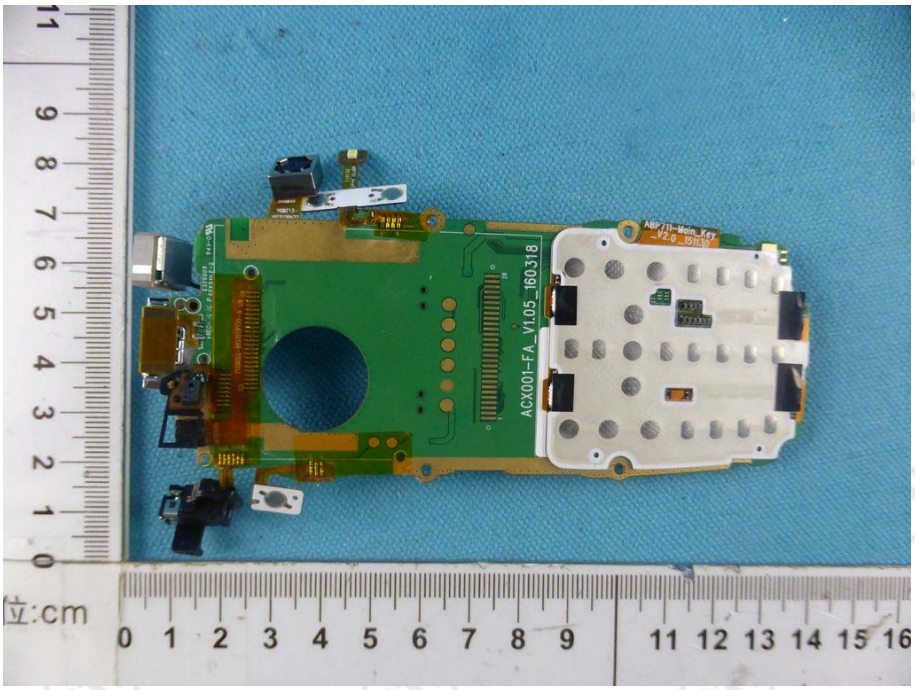

View of Product-20



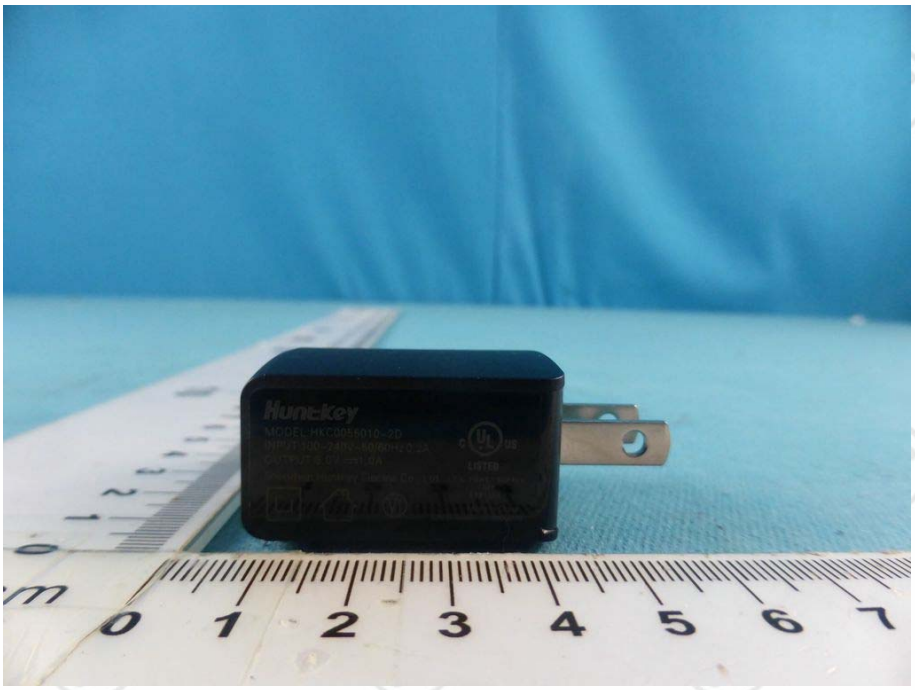

View of Product-21



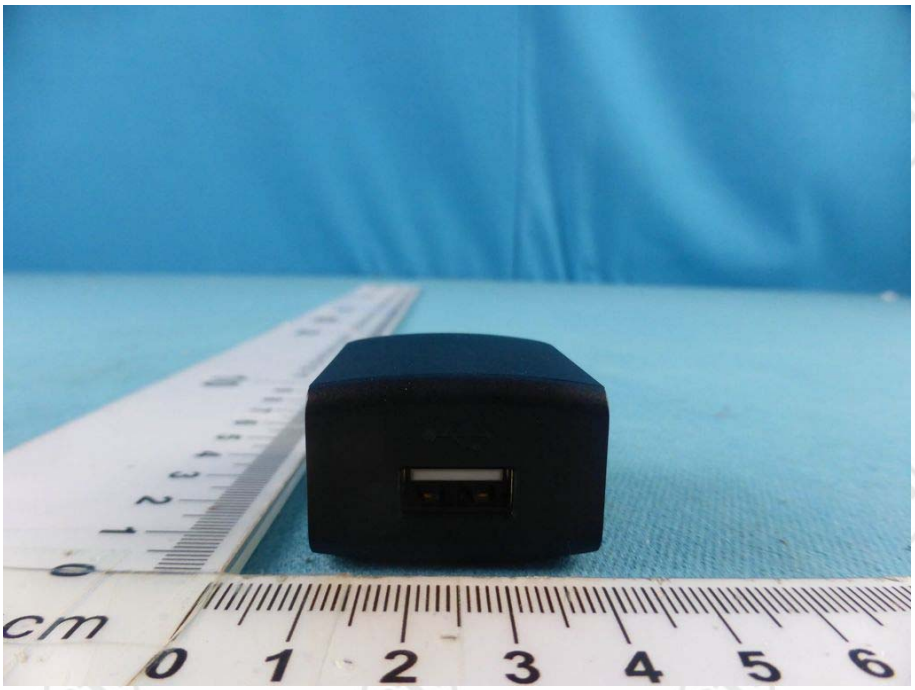
View of Product-22



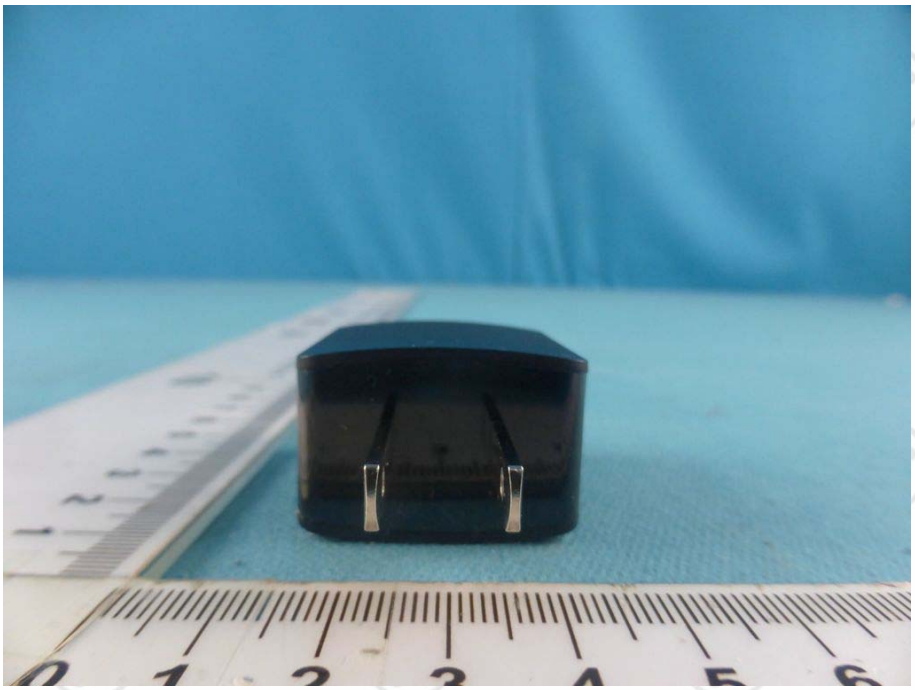

View of Product-23



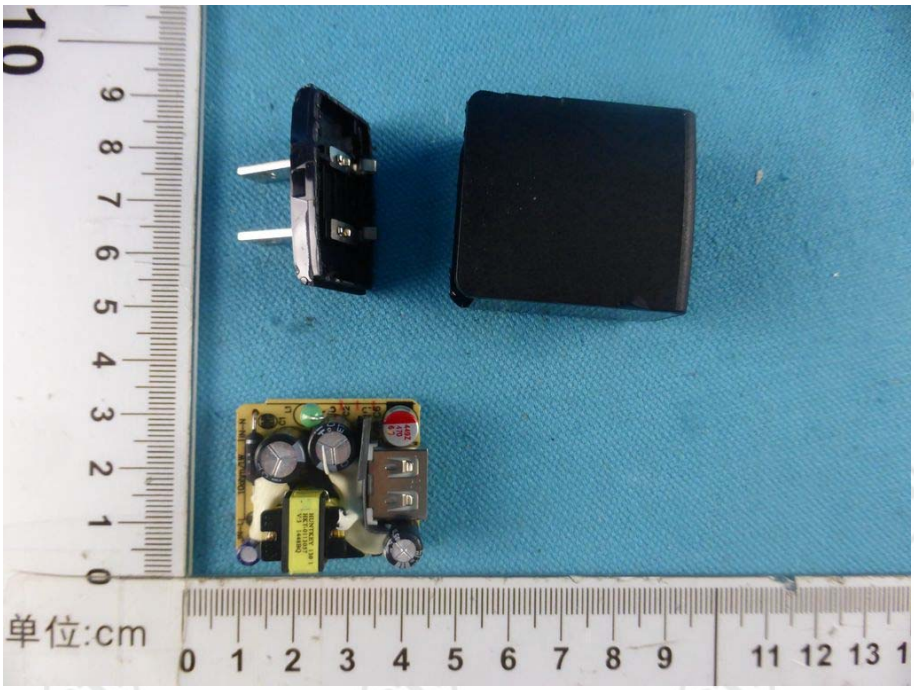

View of Product-24



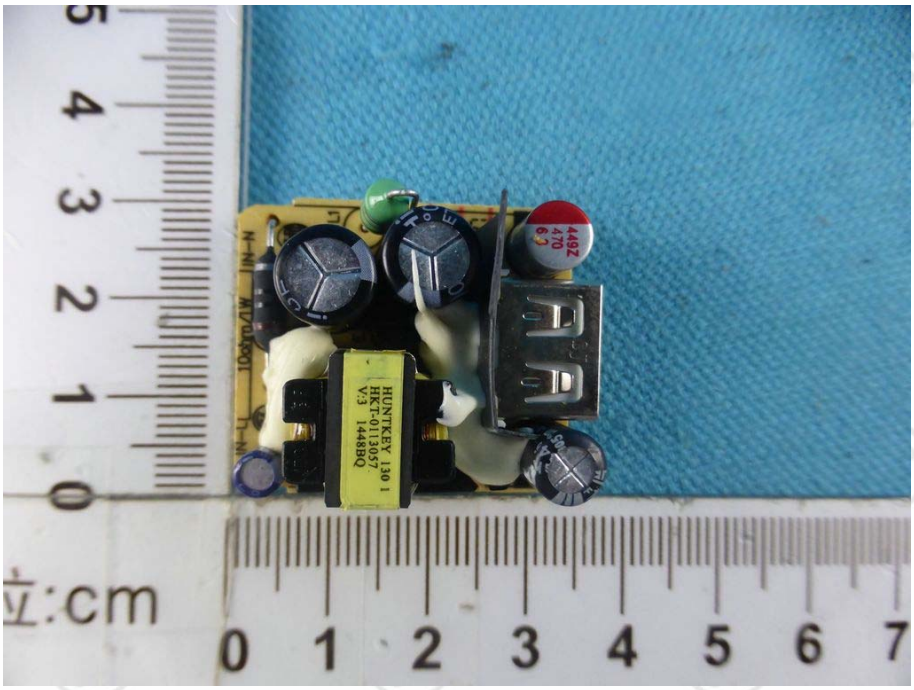
View of Product-25



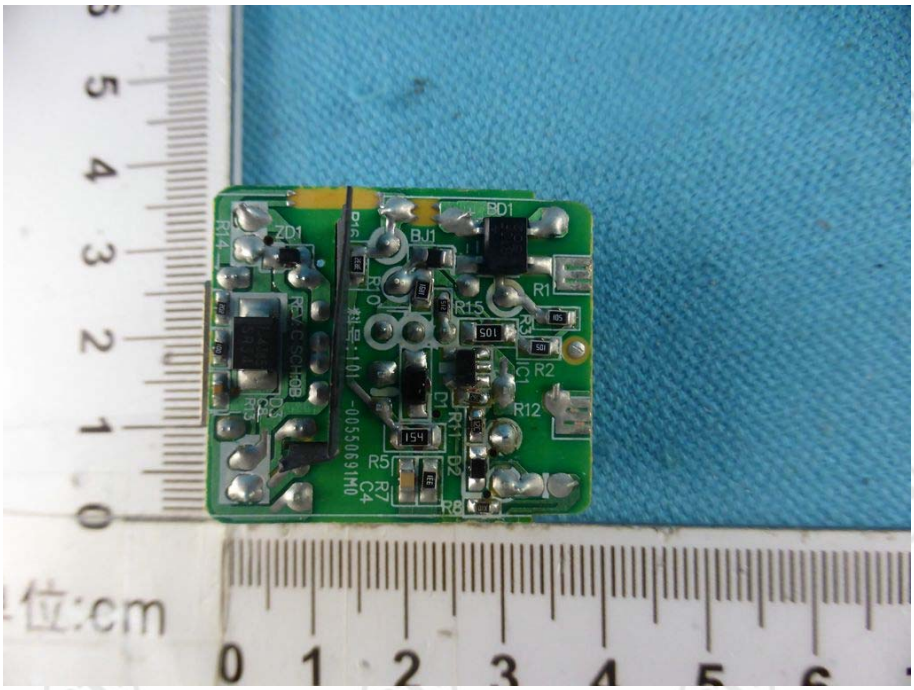
View of Product-26




View of Product-27




View of Product-28




View of Product-29

*** End of Report ***

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