TEST REPORT

Product	:	Intelligent Vehicle Network Gateway
Trade mark	:	TN-IVS-8000
Model/Type reference	:	TN-IVS-8000
Serial Number	:	N/A
Report Number	:	EED32I00216503
FCC ID	:	2AJDT-TNIVS8000
Date of Issue	:	Sep. 23, 2016
Test Standards	:	47 CFR Part 2(2015) 47 CFR Part 22 subpart H(2015) 47 CFR Part 24 subpart E(2015) 47 CFR Part 27 subpart C(2015)
Test result	:	PASS

Prepared for:

ZHEJIANG THIRD NET CO., LTD.
6th FL Building A, The Intelligence e Valley, No. 482 Qianmo Road, Binjiang District, Hangzhou, Zhejiang, china

Prepared by:

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Tested By:	Tom chen (Test Project)	Compiled by:	Kevin yang (Project Engineer)
Reviewed by:	Kevin Ian (Reviewer)	Approved by:	Sheek Luo (Lab supervisor)
Date:	Sep. 23, 2016		Check No.: 2402635644

2 Version

Version No.	Date	Description
00	Sep. 23, 2016	Original

3 Test Summary

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
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

WCDMA(Band IV)			
Test Item	**Test Requirement**	**Test method**	**Result**
Conducted output power	Part 2.1046(a) /Part 27.50(d)	TIA-603-D-2010&KDB 971168 D01v02r02	PASS
Effective Radiated Power of Transmitter(EIRP)	Part 2.1046(a) / Part 27.50(d)	TIA-603-D-2010 &KDB 971168 D01v02r02	PASS
peak-to-average ratio	Part 27.50(d)	KDB 971168 D01v02r02	PASS
99% &26dBOccupied Bandwidth	Part 2.1049(h)	Part 27.53(h) &KDB 971168 D01v02r02	PASS
Band Edge at antenna terminals	Part 2.1051/ Part 27.53(h)	Part 27.53(h) &KDB 971168 D01v02r02	PASS
Spurious emissions at antenna terminals	Part 2.1051/ Part 27.53(h)	TIA-603-D-2010 &KDB 971168 D01v02r02	PASS
Field strength of spurious radiation	Part 2.1053/ Part 27.53(h)	TIA-603-D-2010 &KDB 971168 D01v02r02	PASS
Frequency stability	Part 2.1055/Part 27.54	TIA-603-D-2010 &KDB 971168 D01v02r02	PASS

Tx: In this whole report Tx (or tx) means Transmitter.
Rx: In this whole report Rx (or rx) means Receiver.
RF: In this whole report RF means Radiated Frequency.
CH: In this whole report CH means channel.
Volt: In this whole report Volt means Voltage.
Temp: In this whole report Temp means Temperature.
Humid: In this whole report Humid means humidity.
Press: In this whole report Press means Pressure.
N/A: In this whole report not application
Remark:

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

4 Content

5 Test Requirement

5.1 Test setup

5.1.1 For Radiated Emissions test setup

Radiated Emissions setup:

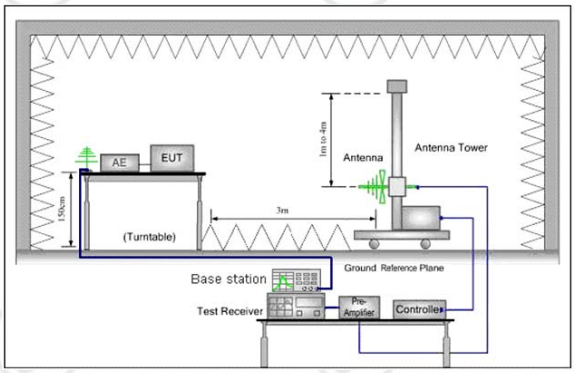


Figure 1.30MHz to 1GHz

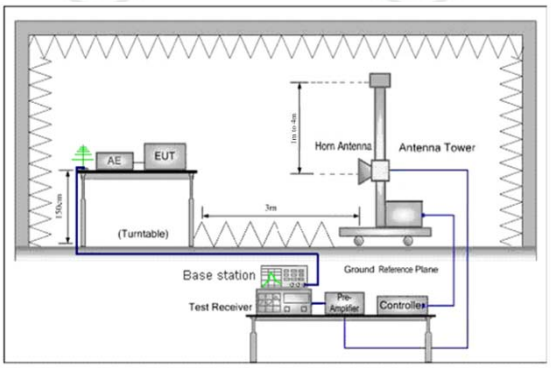


Figure 2. above 1GHz

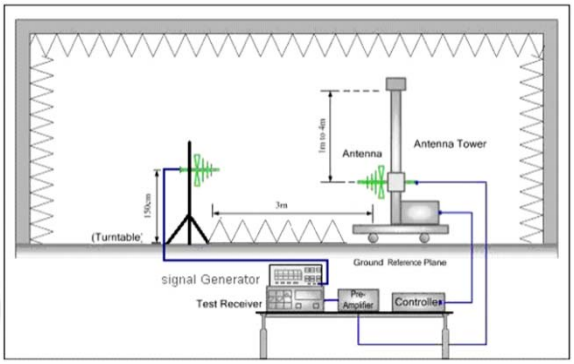


Figure 1. 30MHz to 1GHz

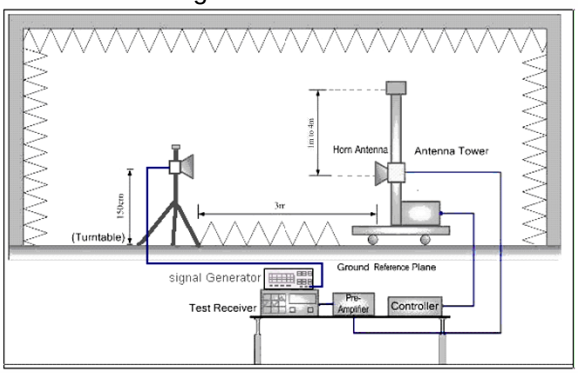


Figure 2. above 1GHz

5.2 Test Environment

Operating Environment:	
Temperature:	24°C
Humidity:	46% RH
Atmospheric Pressure:	1010mbar

5.3 Test Condition

Test channel:

Test Mode	Tx/Rx	RF Channel		
		Low(L)	Middle(M)	High(H)
WCDMA 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
WCDMA 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
WCDMA Band IV	Tx (1710 MHz ~1755 MHz)	Channel 1312	Channel 1413	Channel 1513
		1712.4MHz	1732.6MHz	1752.6MHz
	Rx (2110 MHz ~2155 MHz)	Channel 1537	Channel 1638	Channel 1738
		2112.4 MHz	2132.6 MHz	2152.6 MHz

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

band	Radiated	Conducted
WCDMA Band V	1)RMC 12.2Kbps Link	1)RMC 12.2Kbps Link
WCDMA Band II	1)RMC 12.2Kbps Link	1)RMC 12.2Kbps Link
WCDMA Band IV	1)RMC 12.2Kbps Link	1)RMC 12.2Kbps Link

Test mode:

Test Mode	Test Modes description
UMTS/TM1	WCDMA system, QPSK modulation

6 General Information

6.1 Client Information

Applicant:	ZHEJIANG THIRD NET CO., LTD.
Address of Applicant:	6th FL Building A, The Intelligence e Valley, No. 482 Qianmo Road, Binjiang District, Hangzhou, Zhejiang, china
Manufacturer:	ZHEJIANG THIRD NET CO., LTD.
Address of Manufacturer:	6th FL Building A, The Intelligence e Valley, No. 482 Qianmo Road, Binjiang District, Hangzhou, Zhejiang, china

6.2 General Description of EUT

Product Name:	Intelligent Vehicle Network Gateway
Model No.(EUT):	TN-IVS-8000
Trade Mark:	TN-IVS-8000
EUT Supports Radios application	GPS: 1575.42MHz Wlan 2.4GHz 802.11b/g/n(HT20&HT40) UMTS: Band II(1900MHz), Band IV(1700MHz), Band V(850MHz) WCDMA LTE: Band 2, Band 4, Band 5, Band 17
Power Supply:	DC 9-36V
Sample Received Date:	Aug. 01, 2016
Sample tested Date:	Aug. 01, 2016 to Sep. 19, 2016

6.3 Product Specification subjective to this standard

Frequency Band:	**WCDMA Band V:** Tx:826.40 -846.60MHz; Rx: 871.40 – 891.60MHz **WCDMA Band II:** Tx:1852.40 – 1907.60MHz; Rx:1932.40 – 1987.60MHz **WCDMA Band IV :** Tx:1712.4 – 1752.6 MHz; Rx:2112.4 – 2152.6MHz
Modulation Type:	WCDMA Mode with QPSK Modulation
Sample Type:	Fixed production
Antenna Type:	Temporary antenna
Antenna Gain:	WCDMA Band II: 1.5dBi, WCDMA Band V: 1dBi, WCDMA Band IV: 1.5dBi
Test Voltage:	DC 12V

6.4 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.	Certification	Supplied by
DC Source	QIEKESI	10209898	FCC DOC	CTI

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	7.9×10^{-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	9163-617	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 Subpart H – Cellular Radiotelephone Service
2	PART 24 (2015)	PART 24 – PERSONAL COMMUNICATIONS SERVICES Subpart E – Broadband PCS
3	PART 27 (2015)	PART 27 – MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES Subpart C – Technical Standards
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) Part 27.50(d)	TIA-603-D&KDB 971168 D01v02r02	Conducted output power	PASS	Appendix A)
Part 24.232(d) Part 27.50(d)	KDB 971168 D01v02r02	peak-to-average ratio	PASS	Appendix B)
Part 2.1049(h)	Part 22.917(b)/ Part 24.238(b)/ Part 27.53(h) &KDB 971168 D01v02r02	99% &26dBOccupied Bandwidth	PASS	Appendix C)
Part 2.1051/Part 22.917(a)/ Part 24.238(a) Part 27.53(h)	Part 22.917(b)/ Part 24.238(b)/ Part 27.53(h) &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) Part 27.53(h)	TIA-603-D &KDB 971168 D01v02r02	Spurious emissions at antenna terminals	PASS	Appendix E)
Part 2.1055/ Part 22.355/ Part 24.235 Part 27.54	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) Part 27.53(h)	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) Part 27.50(d)	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:	Mode: WCDMA Band V / WCDMA Band II / WCDMA Band IV Frequency: 824 – 849MHz / 1850 – 1910MHz / 1710 – 1755MHz Limit: 38.45dBm（ERP） / 33.01dBm（EIRP） / 30dBm（EIRP）
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
WCDMA850	UMTS/TM1	LCH	23.83	38.5	PASS
		MCH	23.70	38.5	PASS
		HCH	24.03	38.5	PASS

Test Band	Test Mode	Test Channel	Measured (dbm)	Limit (dbm)	Verdict
WCDMA1700	UMTS/TM1	LCH	23.99	30	PASS
		MCH	24.75	30	PASS
		HCH	24.53	30	PASS

Test Band	Test Mode	Test Channel	Measured (dbm)	Limit (dbm)	Verdict
WCDMA1900	UMTS/TM1	LCH	24.50	33	PASS
		MCH	24.60	33	PASS
		HCH	24.76	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: 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 (db)	Limit (db)	Verdict
WCDMA1700	UMTS/TM1	LCH	3.29	13	PASS
		MCH	3.47	13	PASS
		HCH	3.38	13	PASS

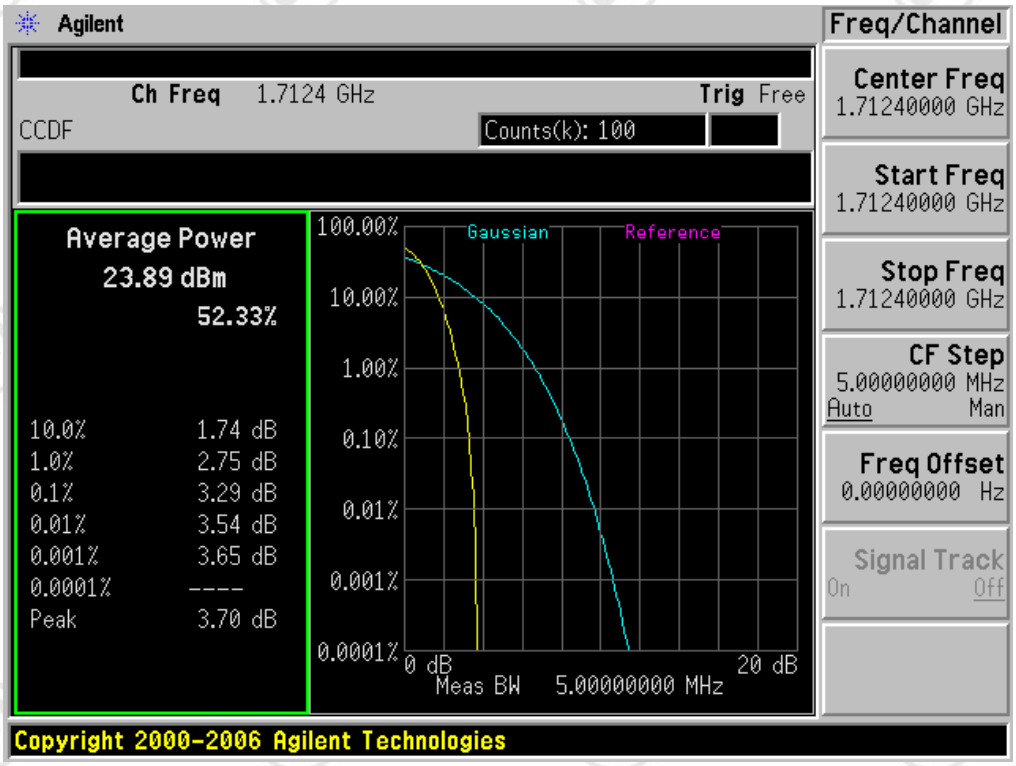
Test Band	Test Mode	Test Channel	Measured (db)	Limit (db)	Verdict
WCDMA1900	UMTS/TM1	LCH	3.19	13	PASS
		MCH	3.44	13	PASS
		HCH	3.42	13	PASS

For WCDMA

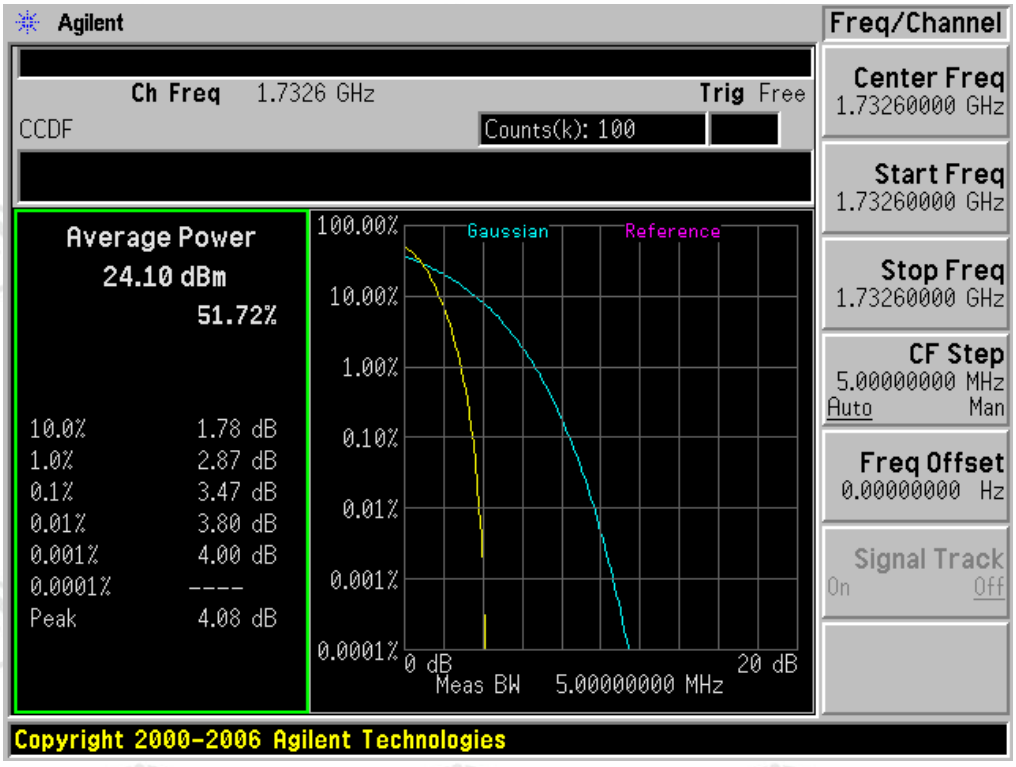
Test Band=WCDMA1700

Test Mode=UMTS/TM1

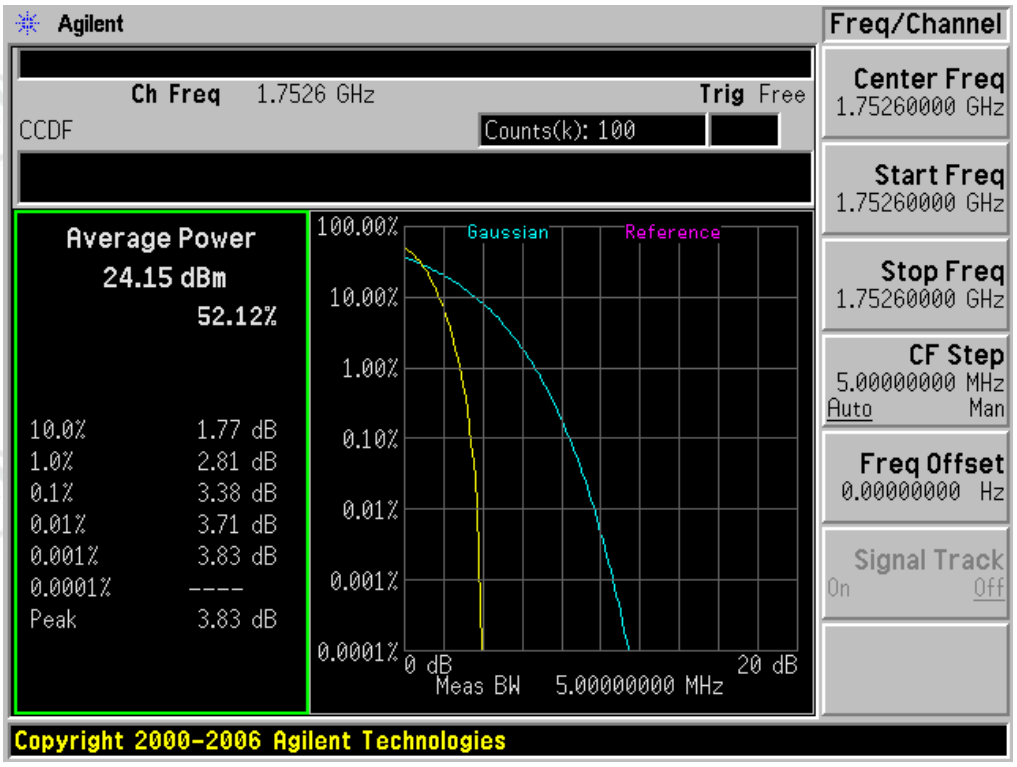
Test Channel=LCH



Test Channel=MCH



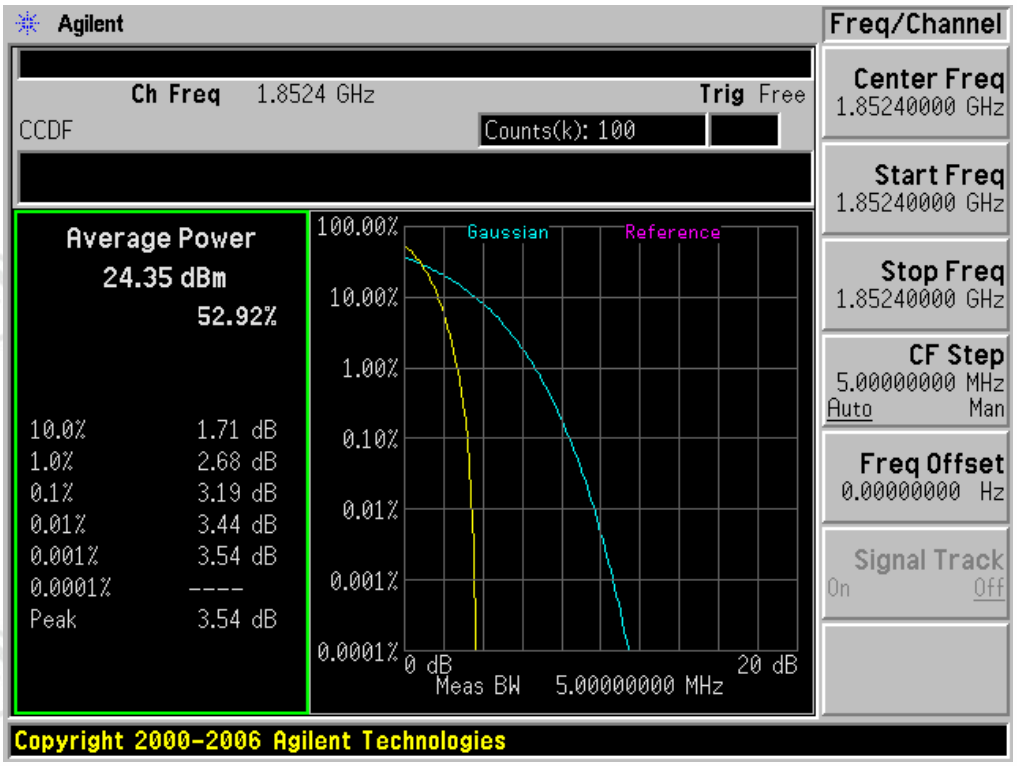
Test Channel=HCH



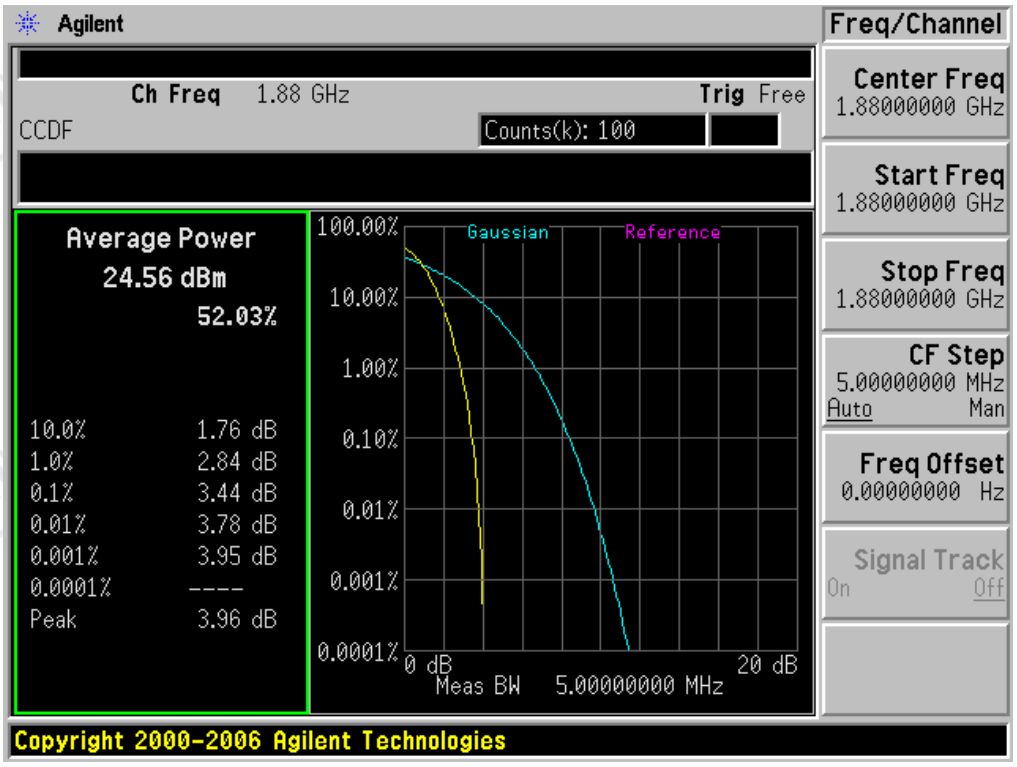
Test Band=WCDMA1900

Test Mode=UMTS/TM1

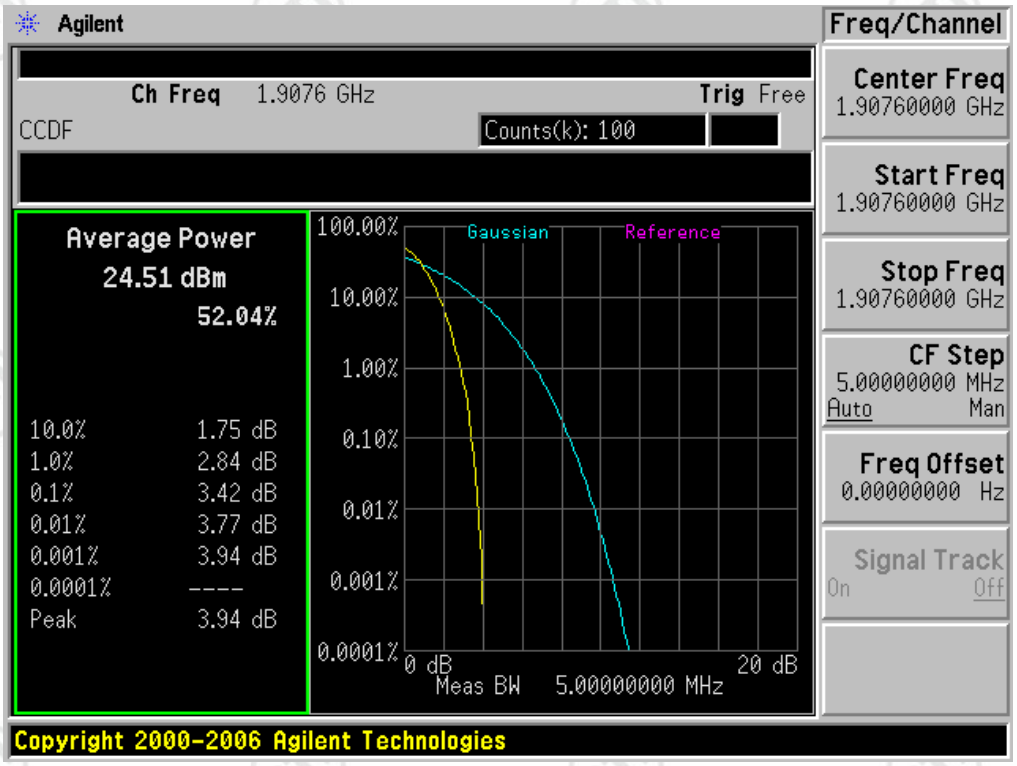
Test Channel=LCH



Test Channel=MCH



Test Channel=HCH



Appendix C): BandWidth

Test Requirement:	Part 2.1049(h)
Test Method:	Part 22.917(b)/Part 24.238(b)/ Part 27.53(h)
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
WCDMA850	UMTS/TM1	LCH	4152.4	4650	PASS
		MCH	4146.4	4645	PASS
		HCH	4161.2	4686	PASS

Test Band	Test Mode	Test Channel	Occupied Bandwidth (kHz)	Emission Bandwidth (kHz)	Verdict
WCDMA1700	UMTS/TM1	LCH	4160.7	4694	PASS
		MCH	4156.5	4688	PASS
		HCH	4164.6	4663	PASS

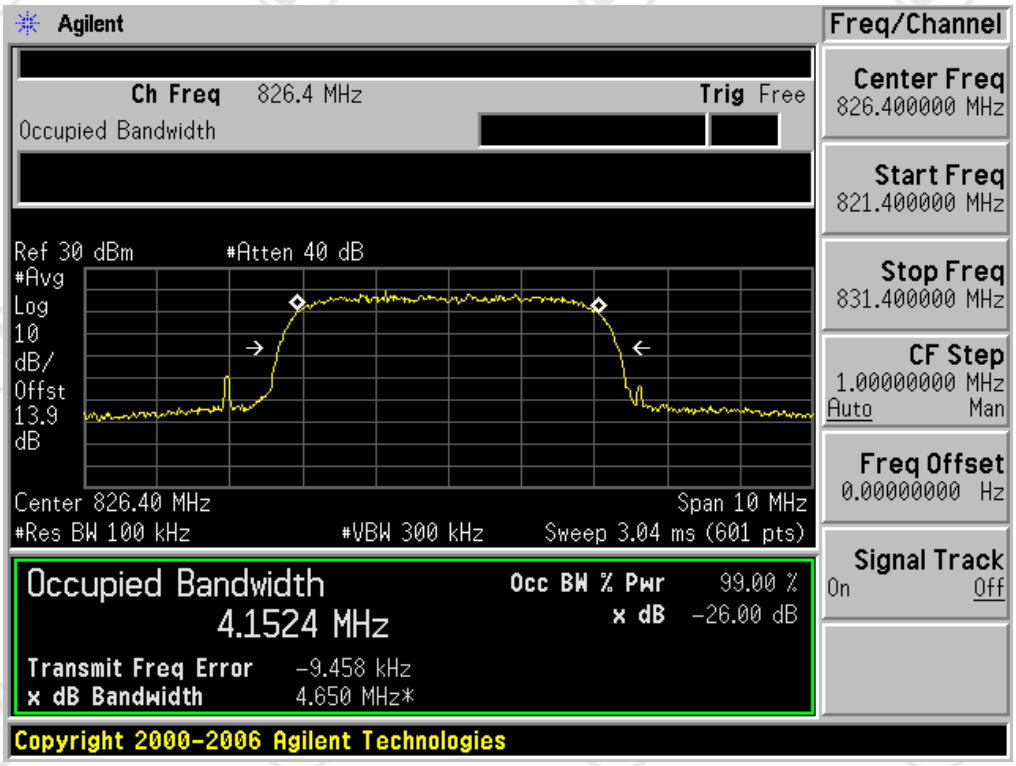
Test Band	Test Mode	Test Channel	Occupied Bandwidth (kHz)	Emission Bandwidth (kHz)	Verdict
WCDMA1900	UMTS/TM1	LCH	4160.9	4663	PASS
		MCH	4159.6	4684	PASS
		HCH	4178.9	4681	PASS

For WCDMA

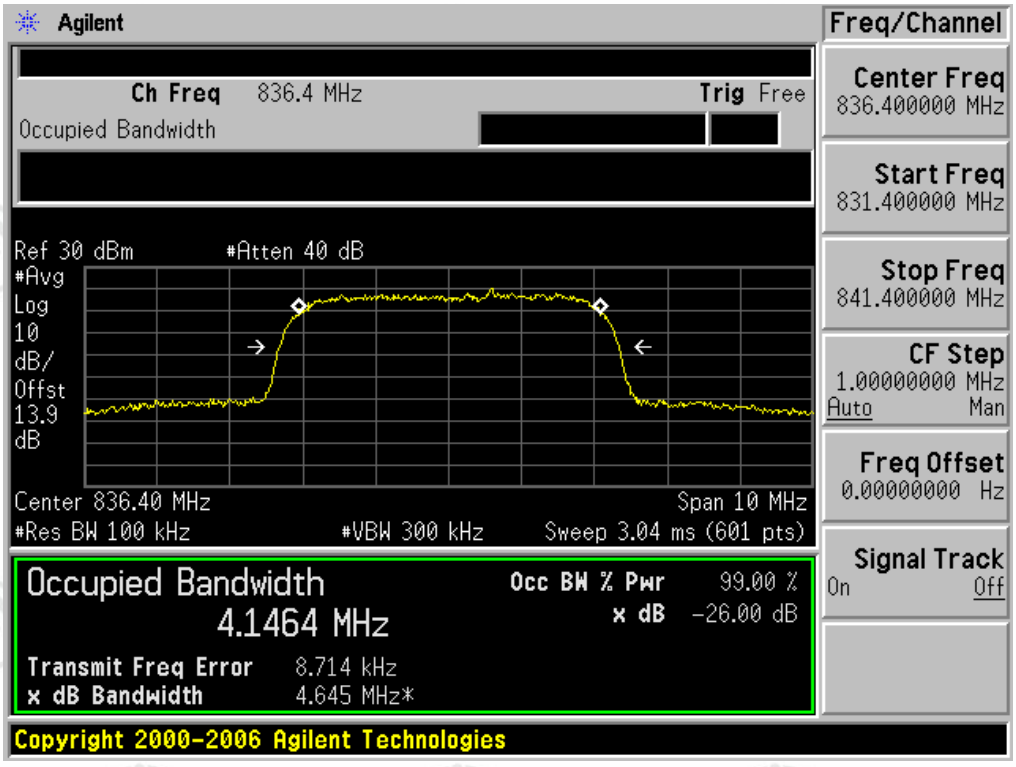
Test Band=WCDMA850

Test Mode=UMTS/TM1

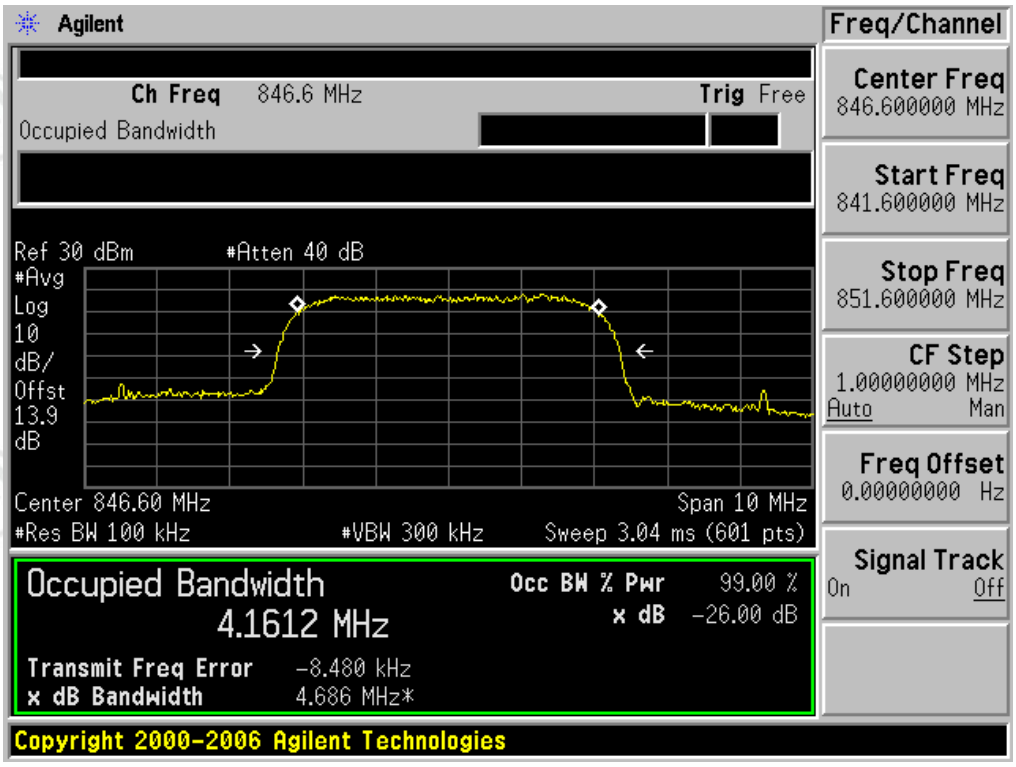
Test Channel=LCH



Test Channel=MCH



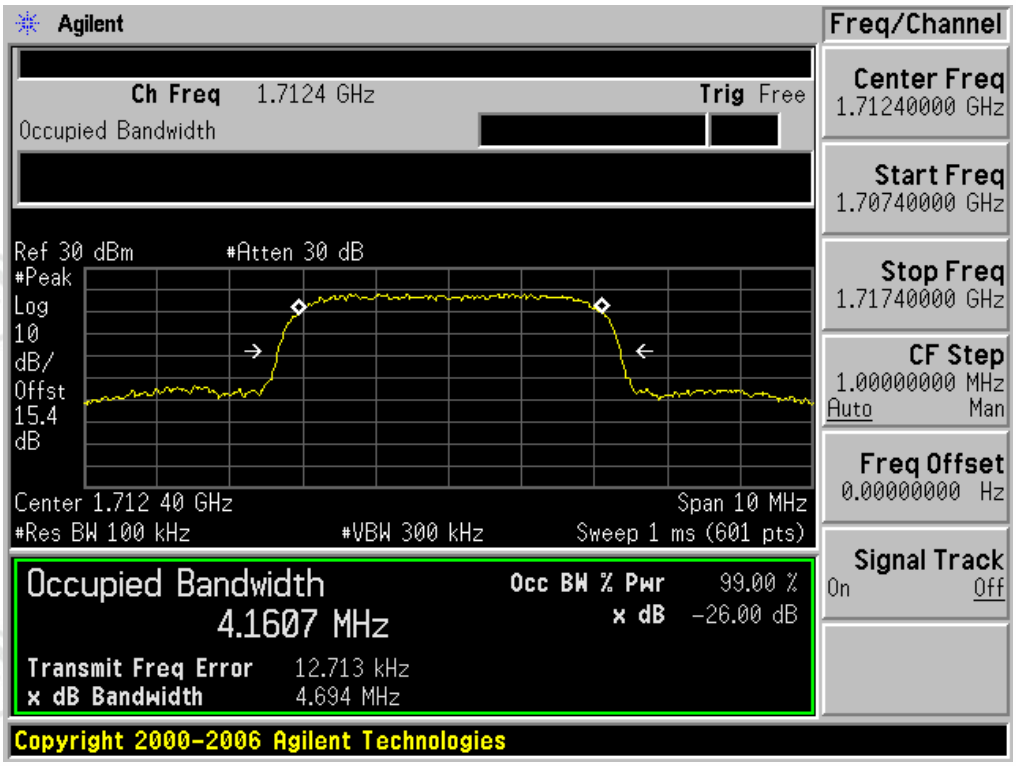
Test Channel=HCH



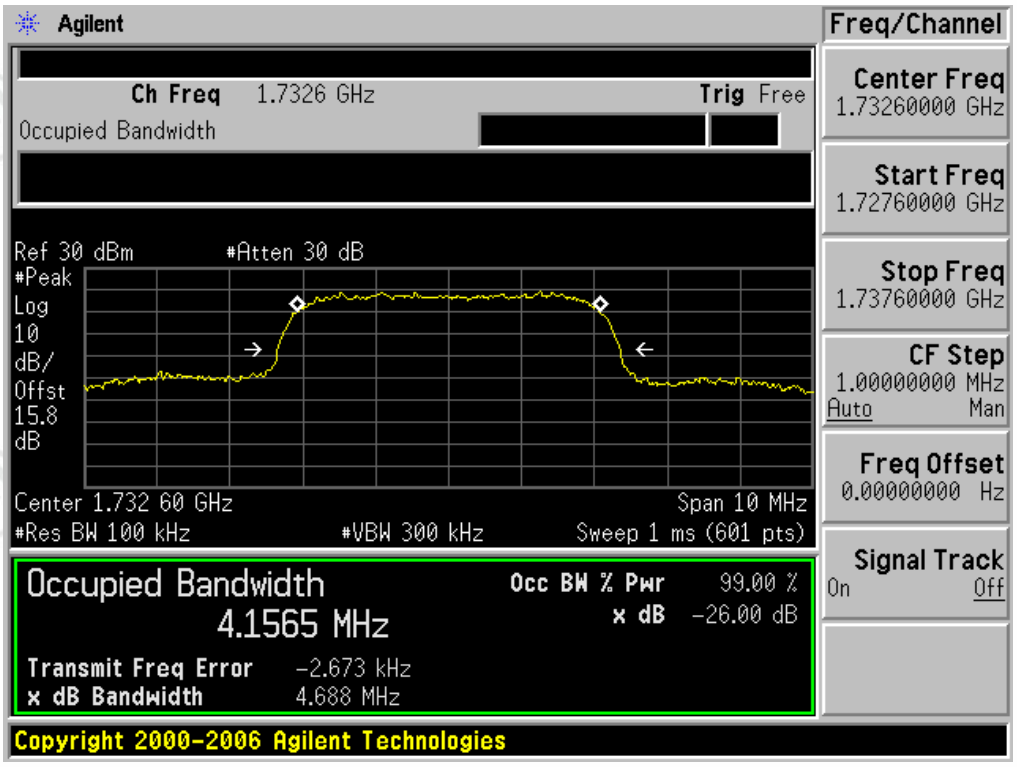
Test Band=WCDMA1700

Test Mode=UMTS/TM1

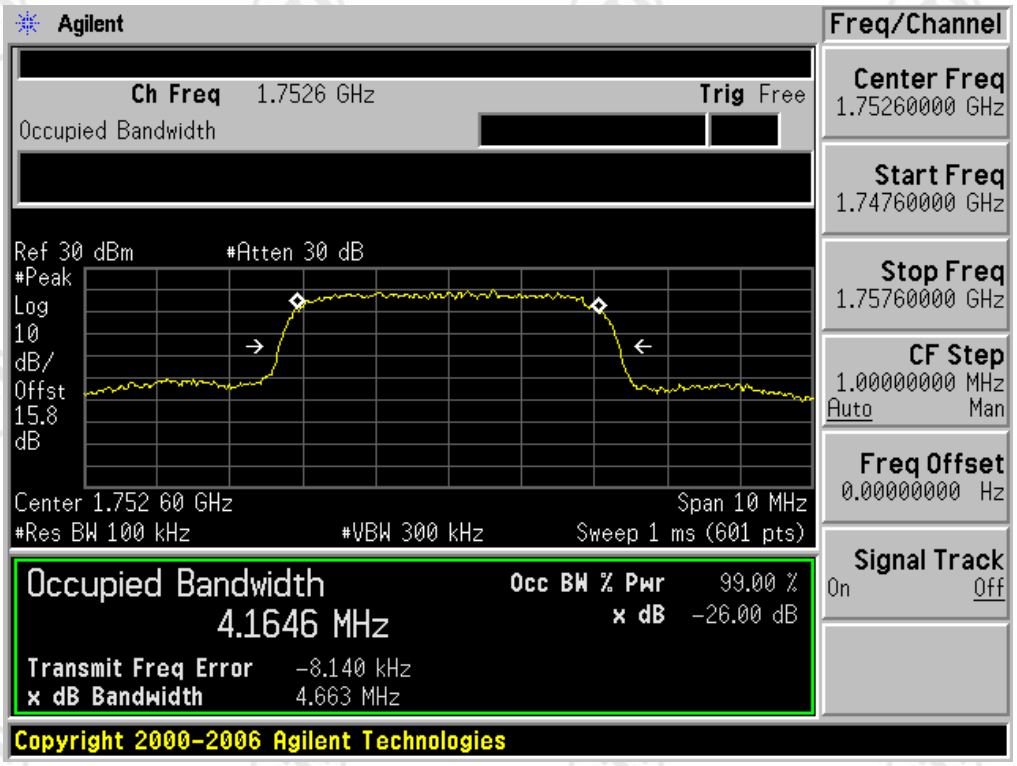
Test Channel=LCH



Test Channel=MCH



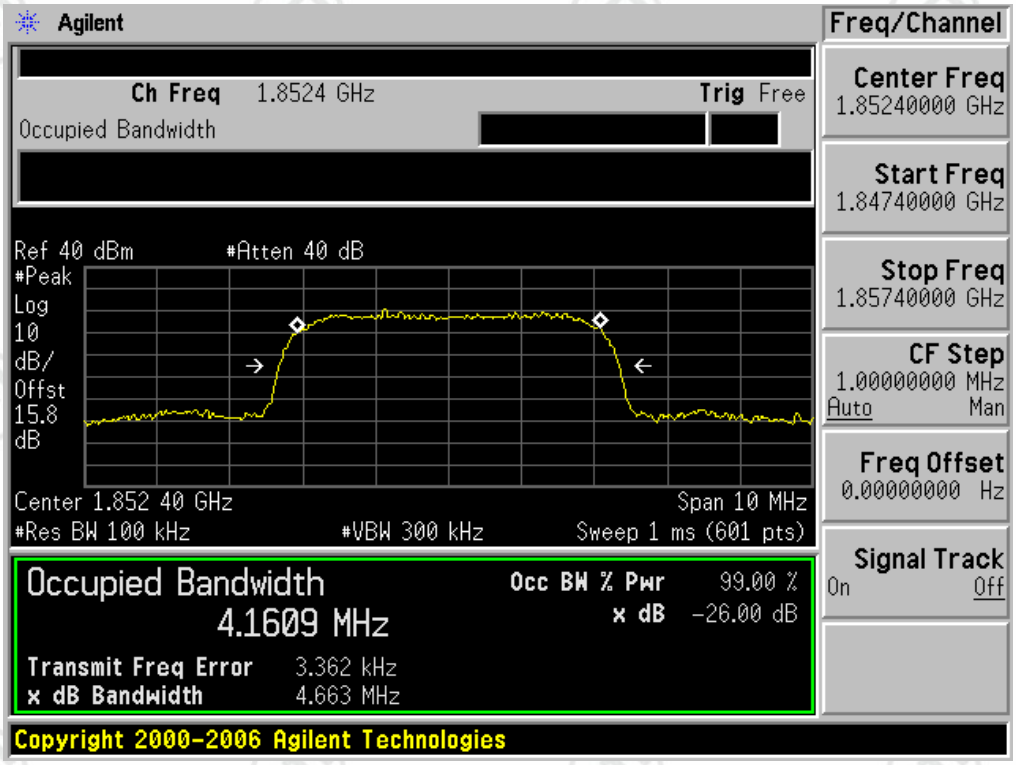
Test Channel=HCH



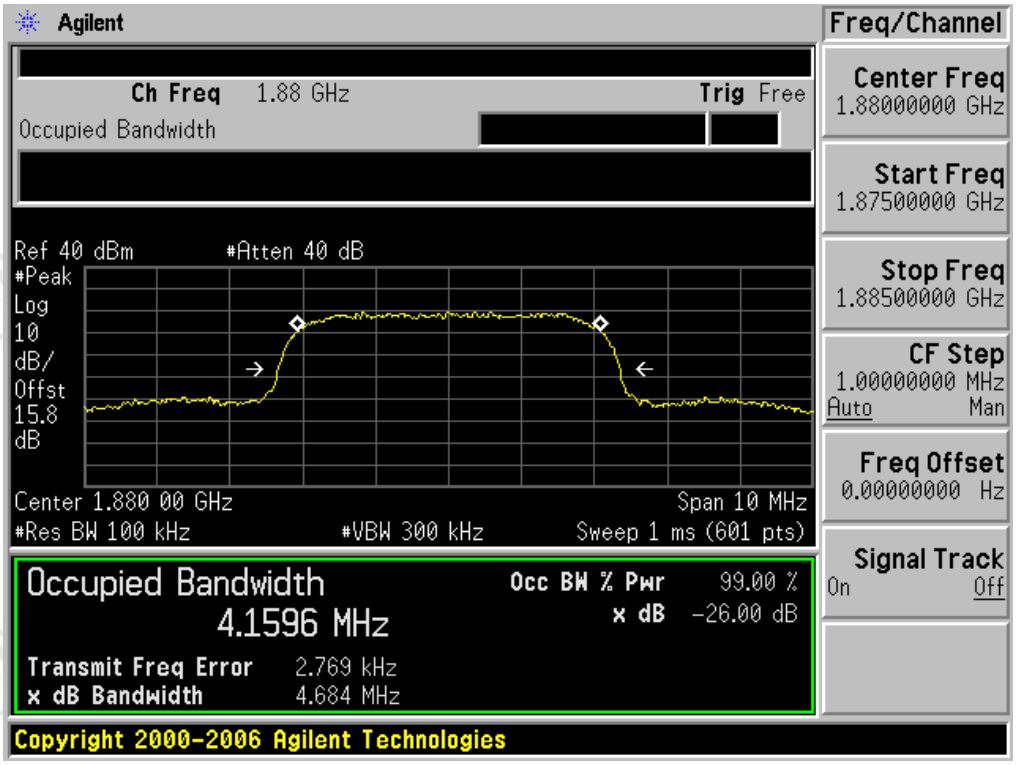
Test Band=WCDMA1900

Test Mode=UMTS/TM1

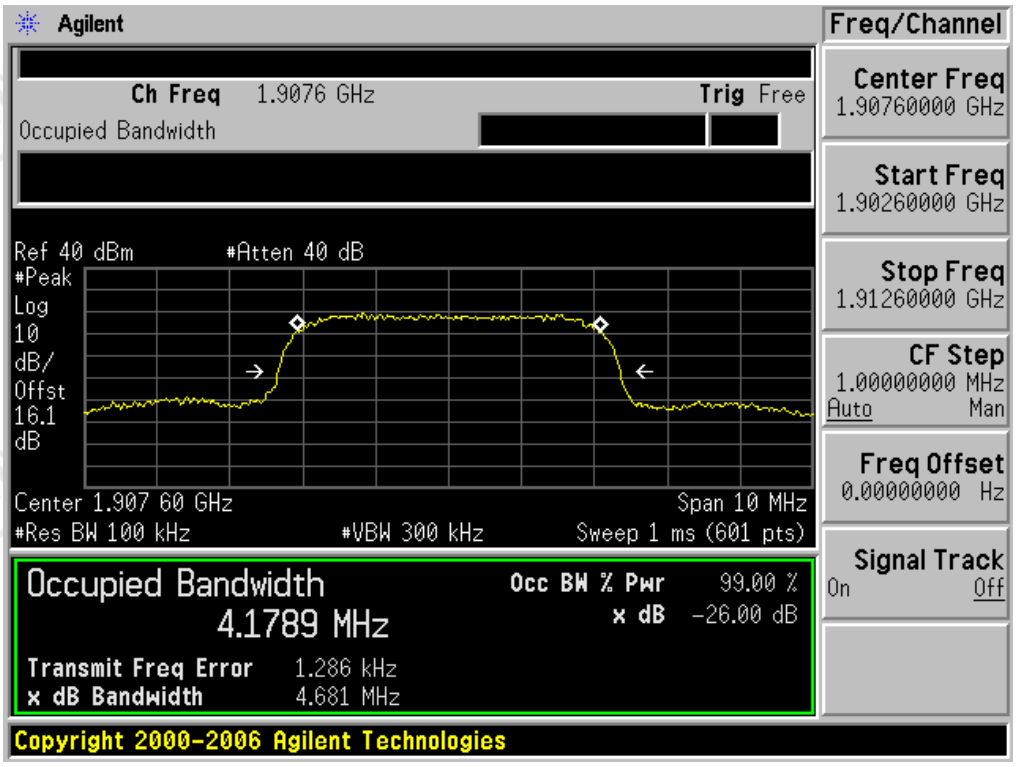
Test Channel=LCH



Test Channel=MCH



Test Channel=HCH



Appendix D): Band Edges Compliance

<table>
<tr><td>Test Requirement:</td><td>Part 2.1051</td></tr>
<tr><td>Test Method:</td><td>Part 22.917(b)/Part 24.238(b)/ Part 27.53(h)</td></tr>
<tr><td>Test Setup:</td><td>Refer to section 5 for details</td></tr>
<tr><td>Measurement Procedure:</td><td>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.</td></tr>
<tr><td>Limit:</td><td>
<table>
<tr><td>Operation Band</td><td>Frequency Range (MHz)</td><td>Limit</td></tr>
<tr><td>WCDMA 850</td><td>Below 824 and above 849</td><td>Attenuated at least 43+10log(P)</td></tr>
<tr><td>WCDMA 1900</td><td>Below 1850 and above 1910</td><td>Attenuated at least 43+10log(P)</td></tr>
<tr><td>WCDMA 1700</td><td>Below 1710 and above 1755</td><td>Attenuated at least 43+10log(P)</td></tr>
</table>
</td></tr>
<tr><td>Instruments Used:</td><td>Refer to section 7 for details</td></tr>
<tr><td>Test Results:</td><td>Pass</td></tr>
</table>

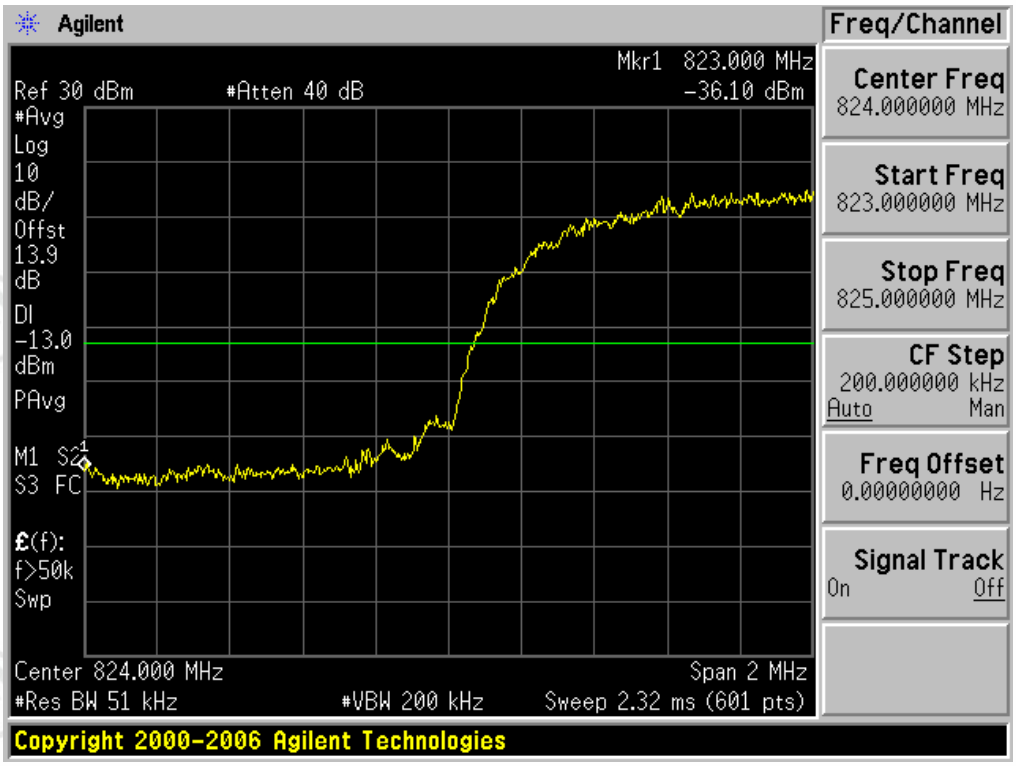
Test Graphs:

For WCDMA

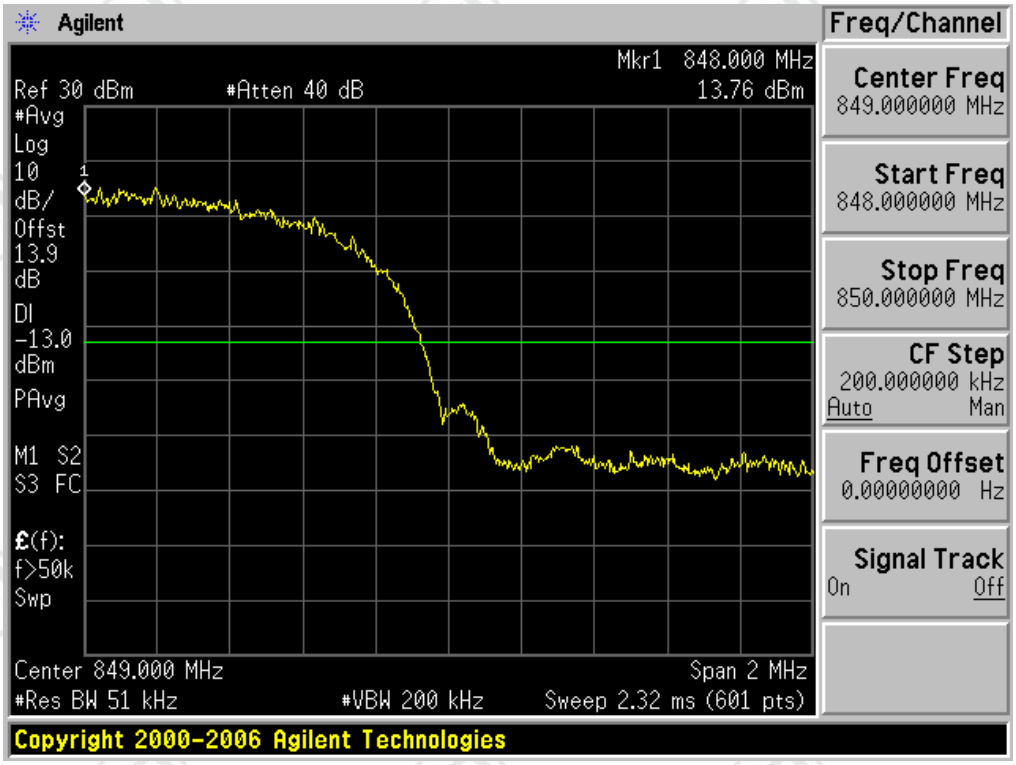
Test Band=WCDMA850

Test Mode=UMTS/TM1

Test Channel=LCH



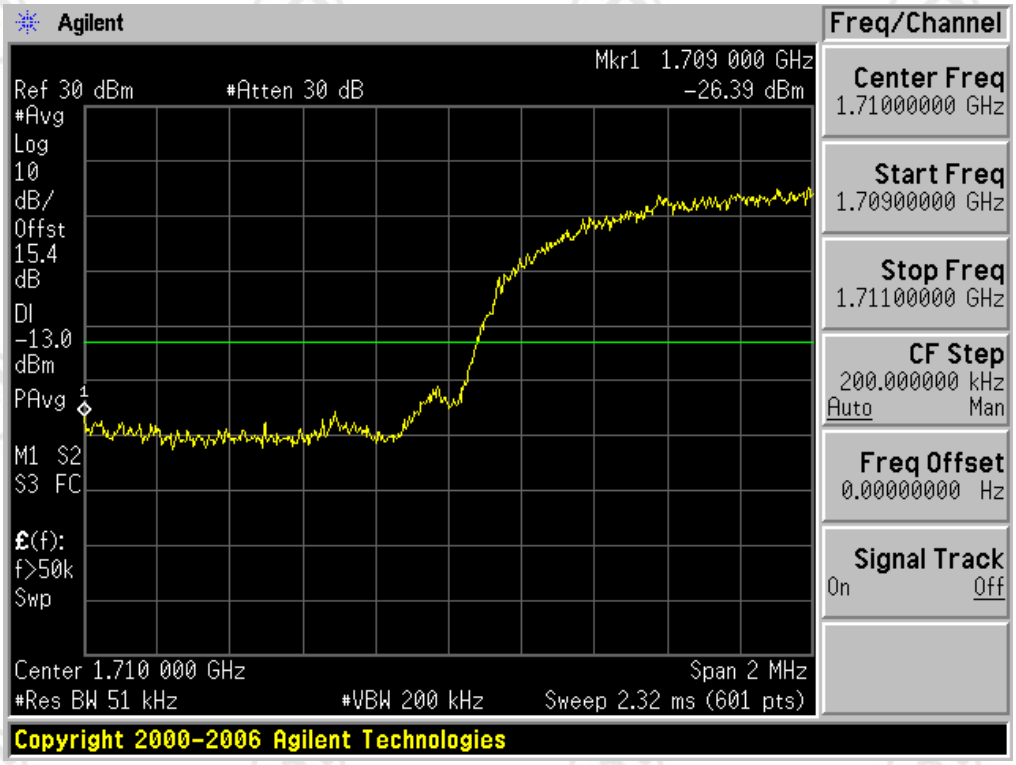
Test Channel=HCH



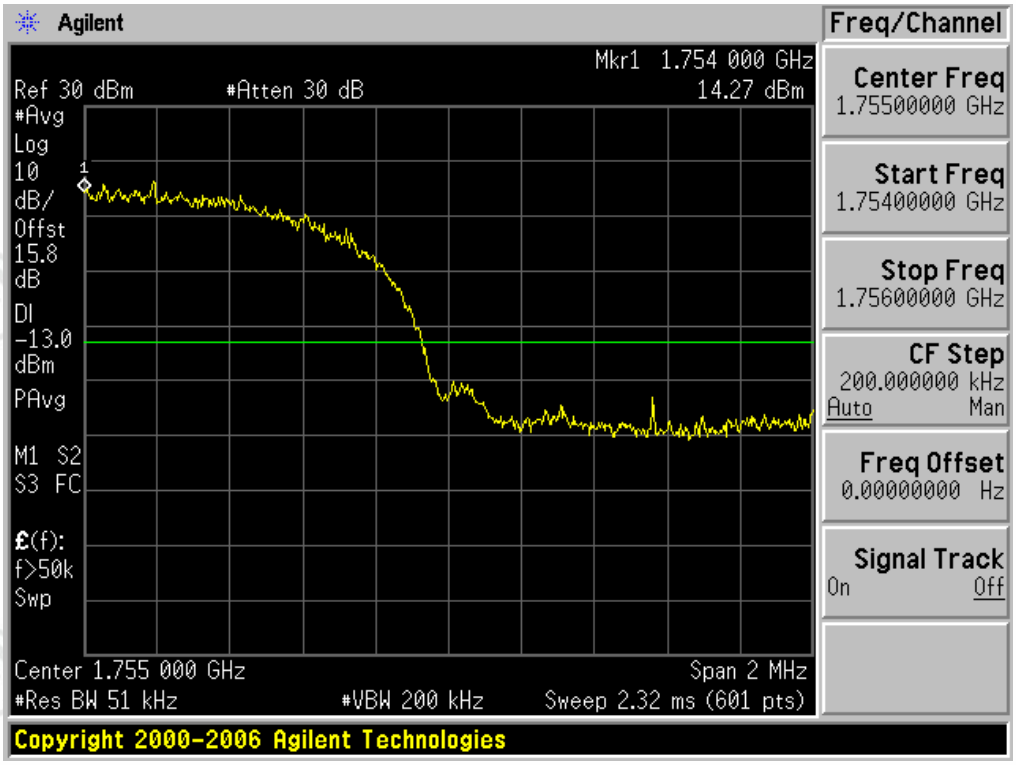
Test Band=WCDMA1700

Test Mode=UMTS/TM1

Test Channel=LCH



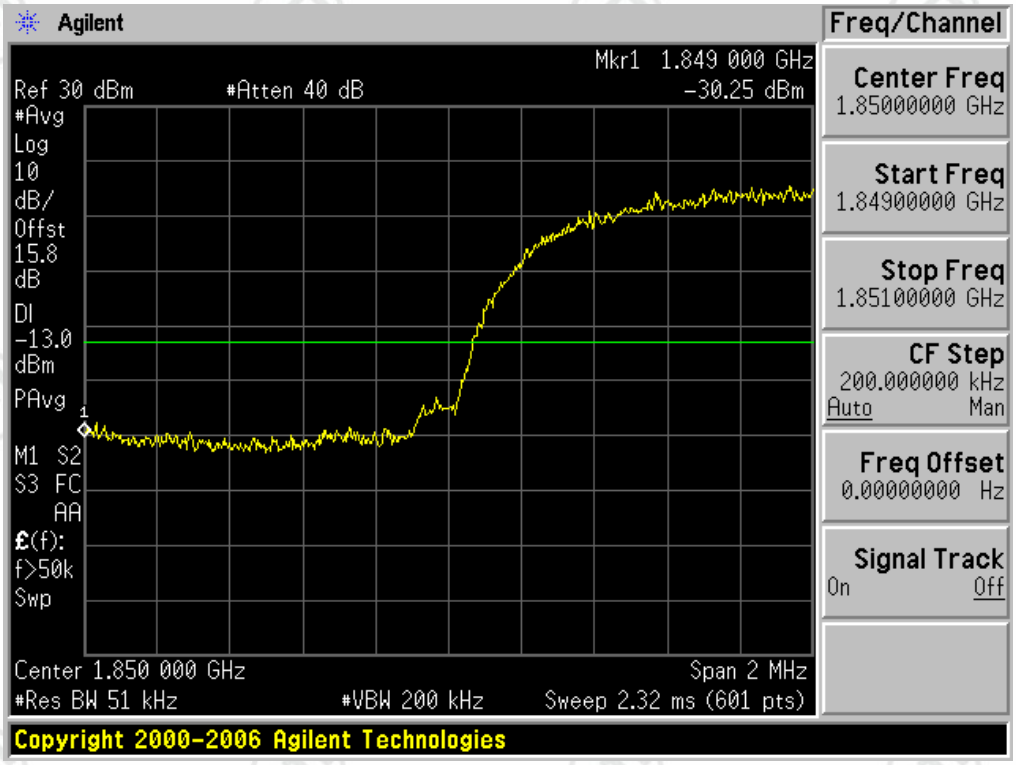
Test Channel=HCH



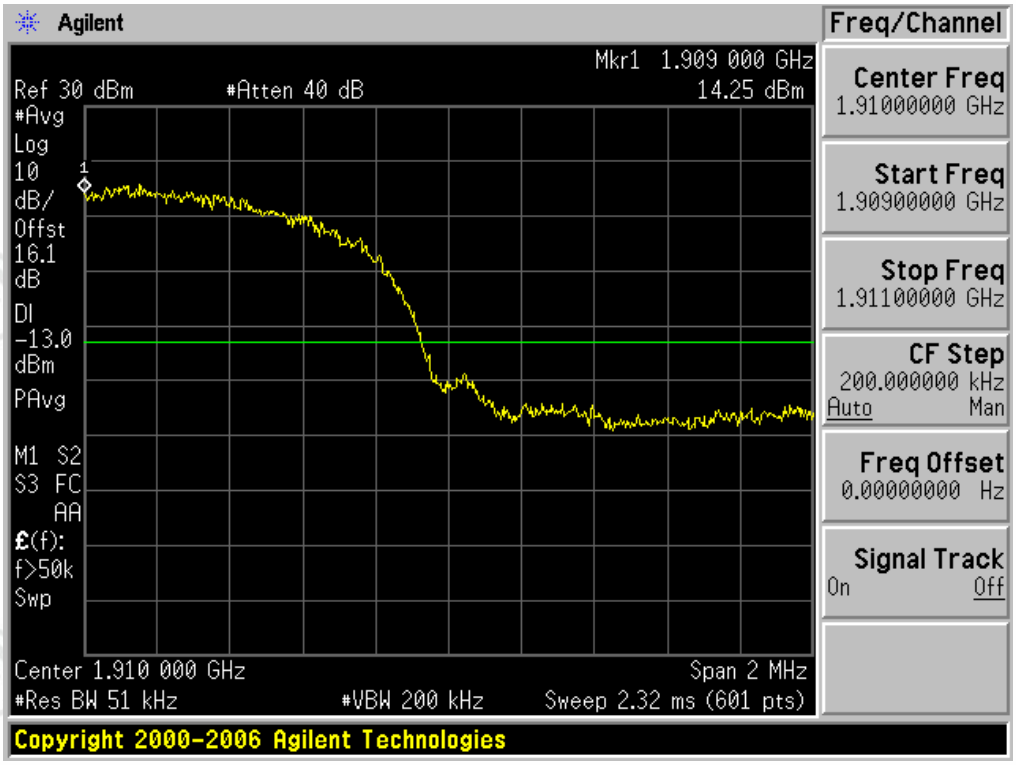
Test Band=WCDMA1900

Test Mode=UMTSTM1

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

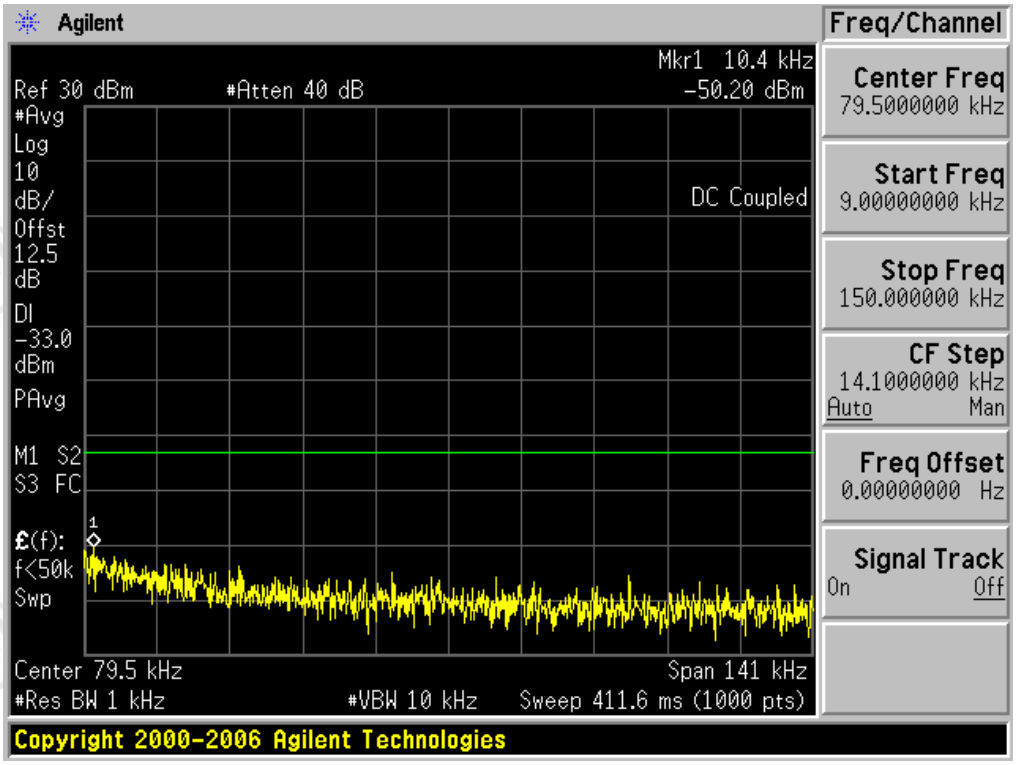
Test Graphs:

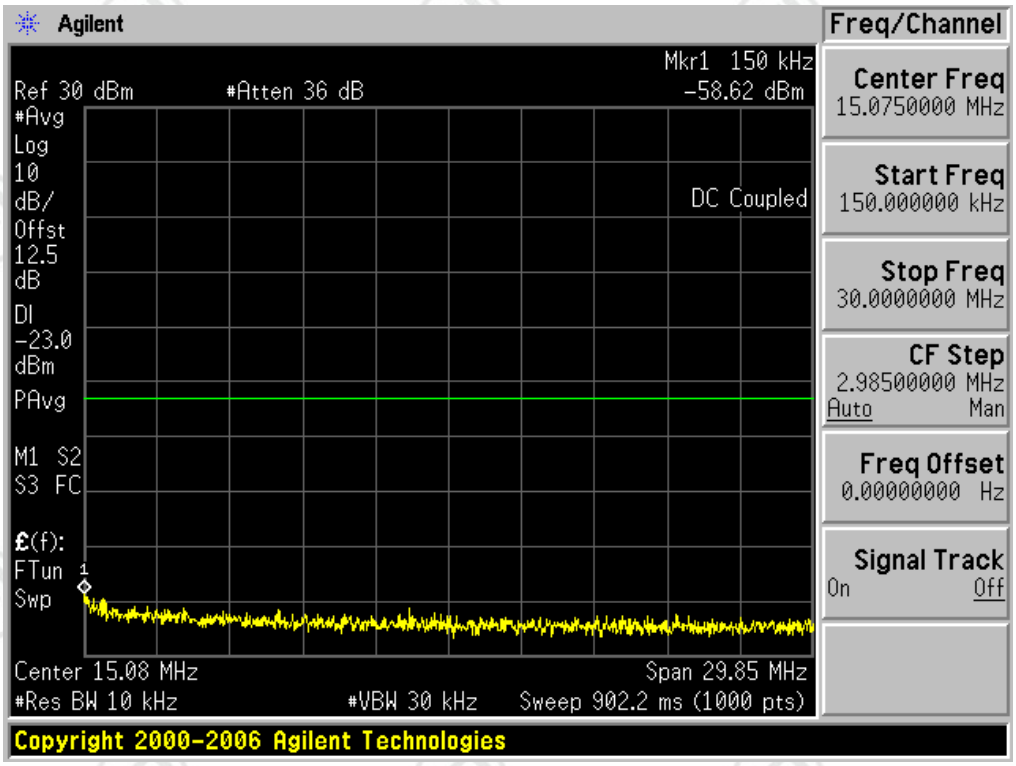
For WCDMA

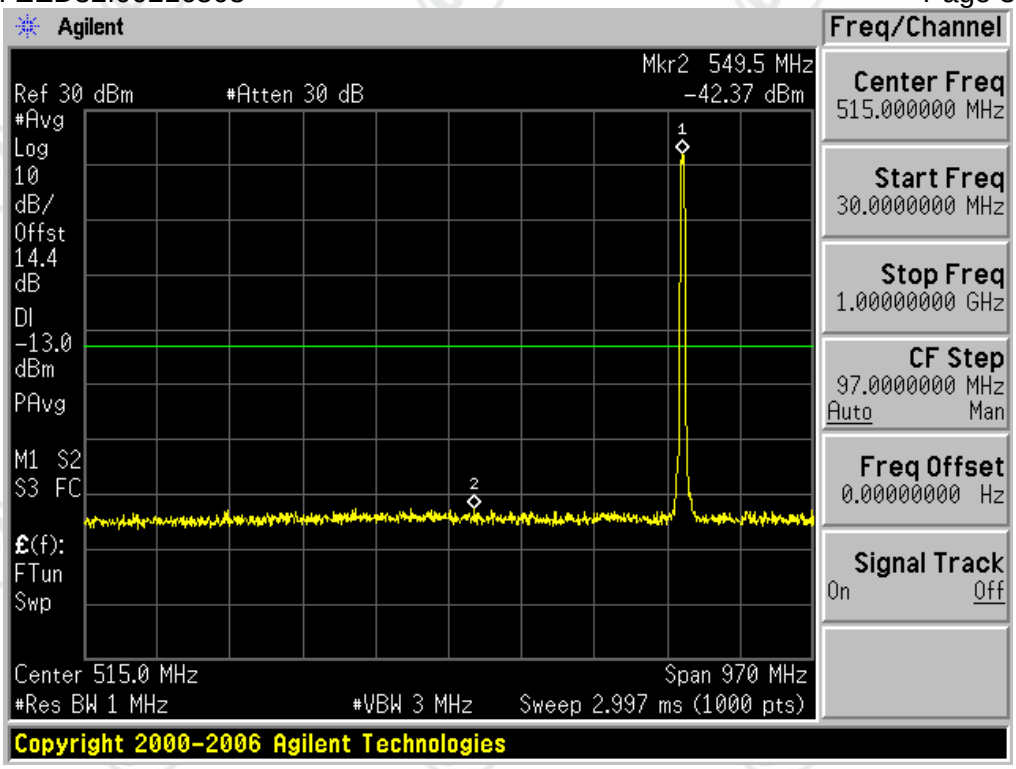
Test Band=WCDMA850

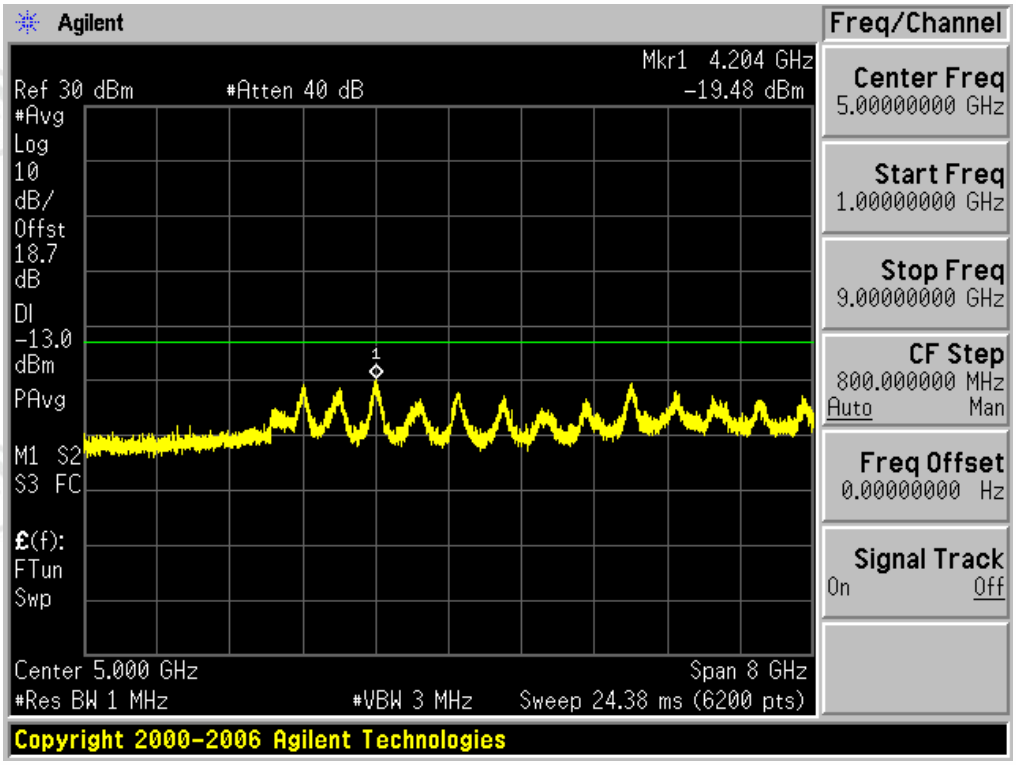
Test Mode=UMTS/TM1

Test Channel=LCH

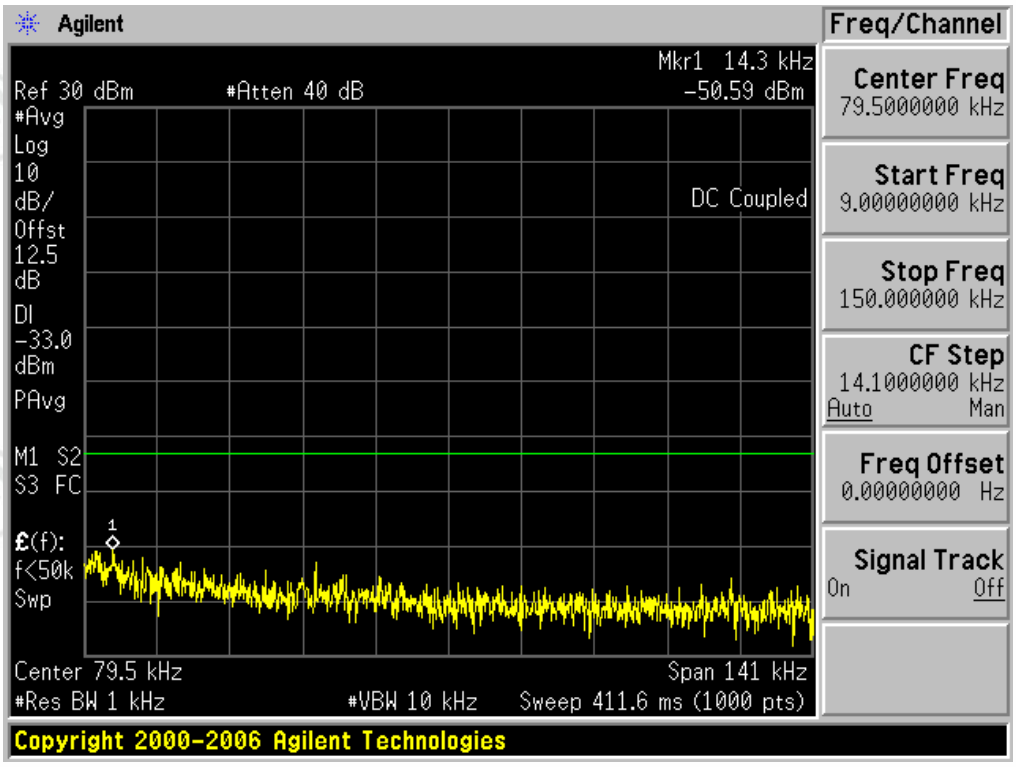


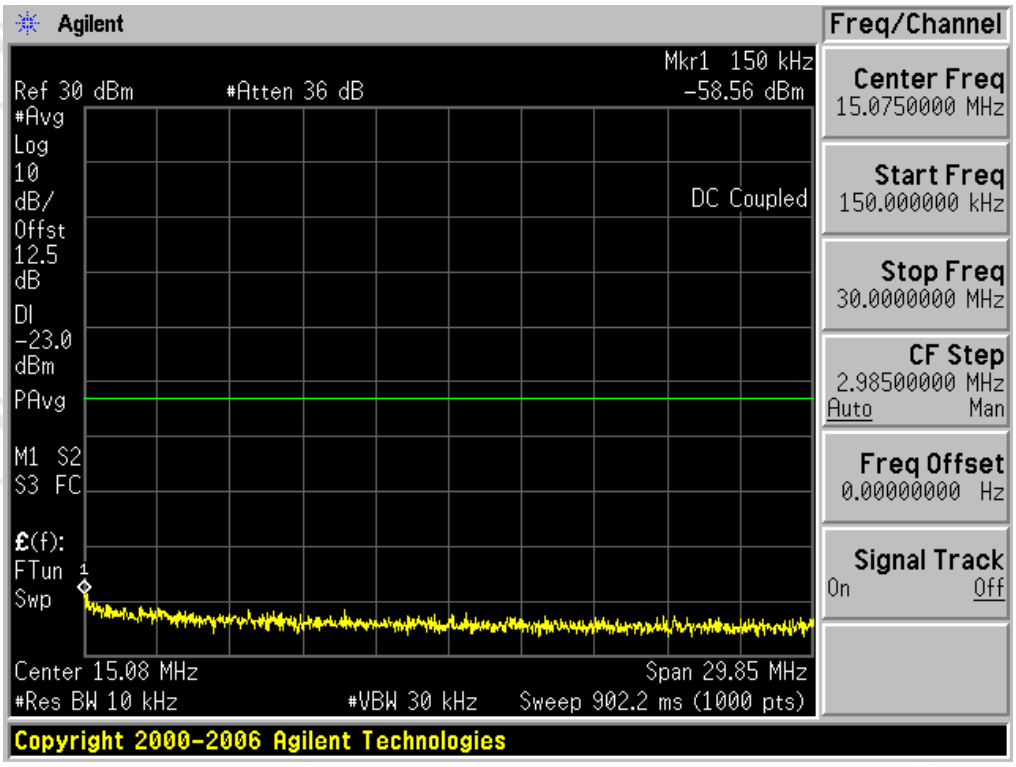


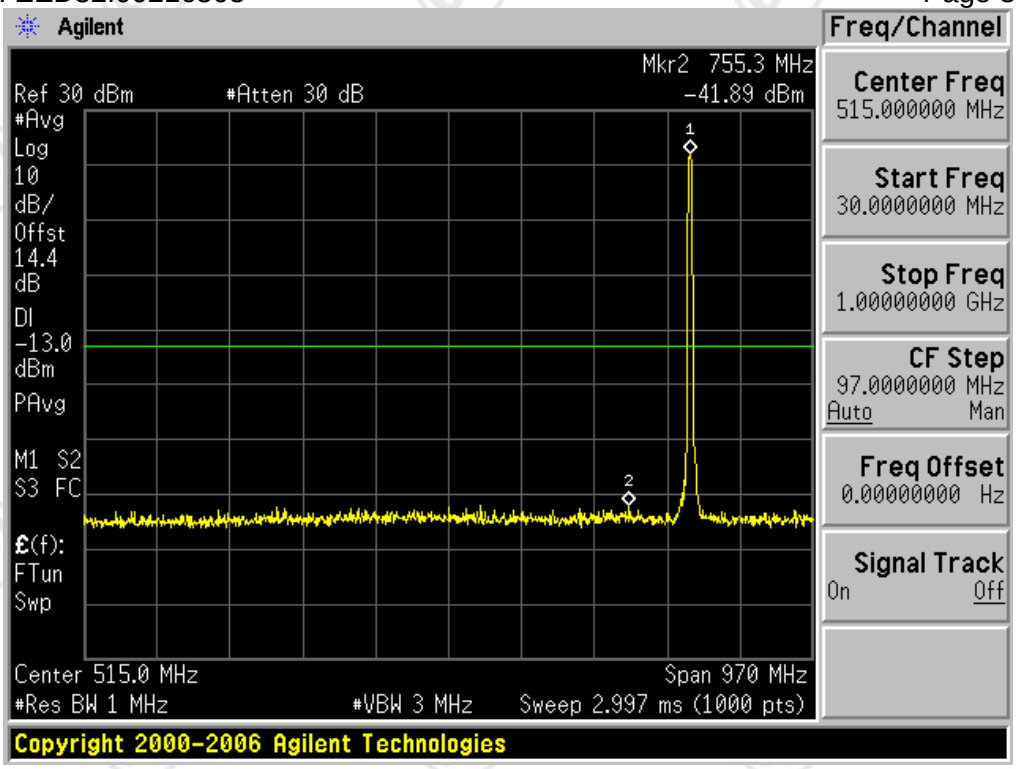

Agilent
Freq/Channel
Mkr2 549.5 MHz
Ref 30 dBm
#Atten 30 dB
-42.37 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

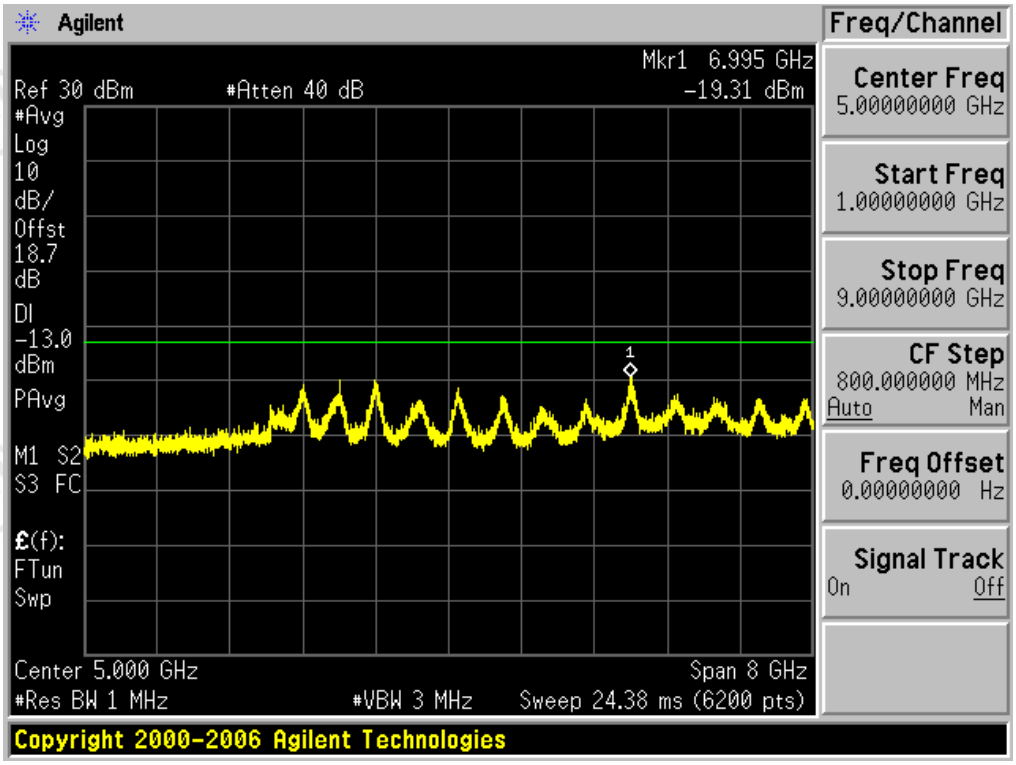

Agilent
Freq/Channel
Mkr1 4.204 GHz
Ref 30 dBm
#Atten 40 dB
-19.48 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.38 ms (6200 pts)
Copyright 2000-2006 Agilent Technologies

Test Channel=MCH

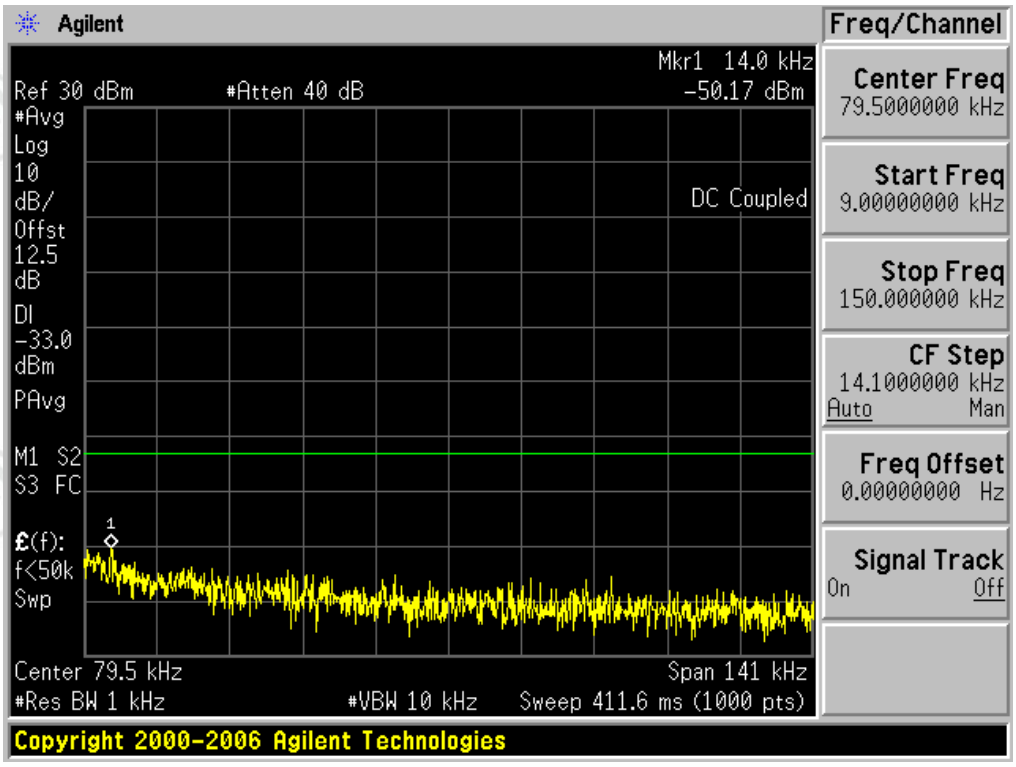


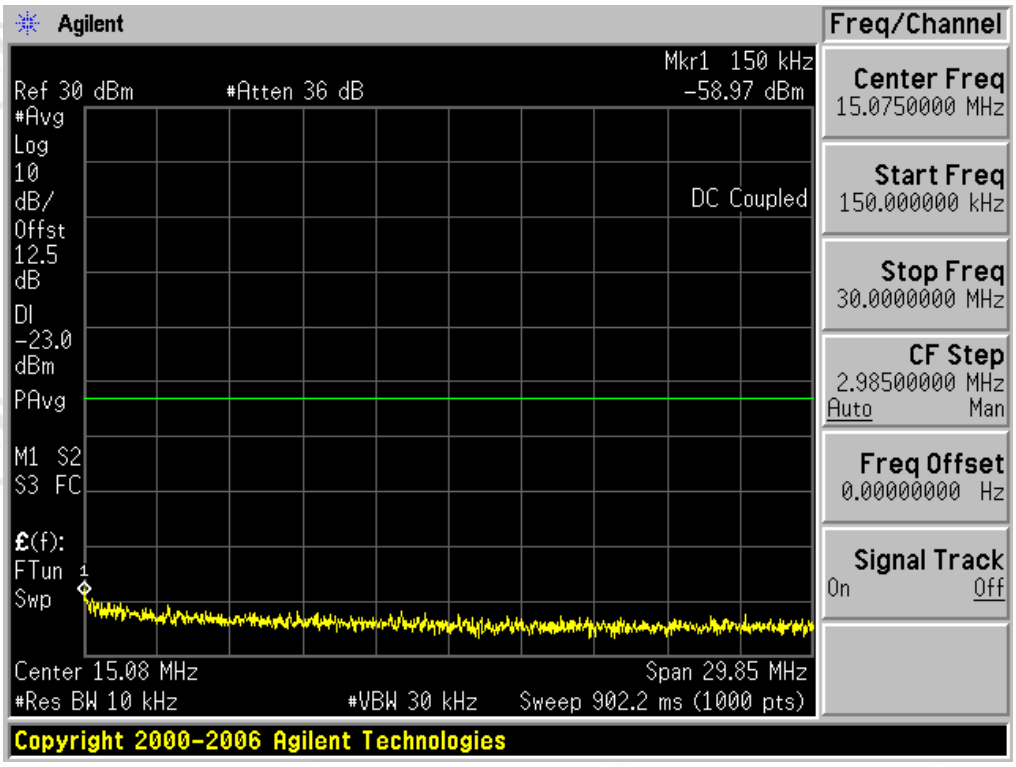


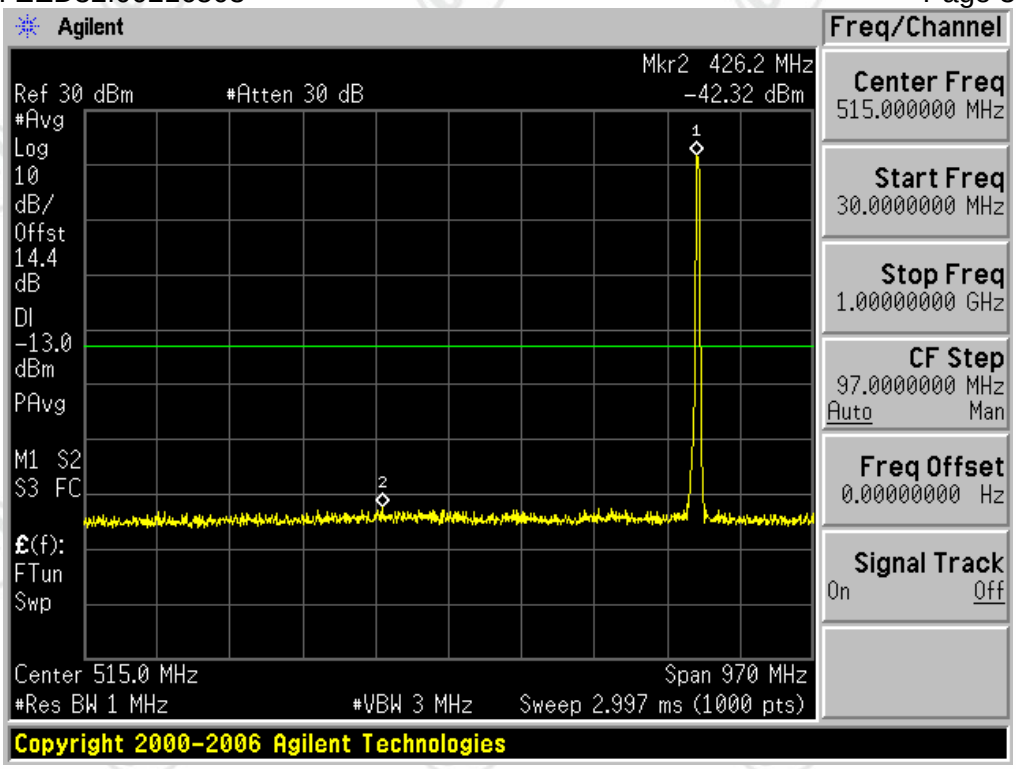

Agilent
Freq/Channel
Mkr2 755.3 MHz
Ref 30 dBm
#Atten 30 dB
-41.89 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

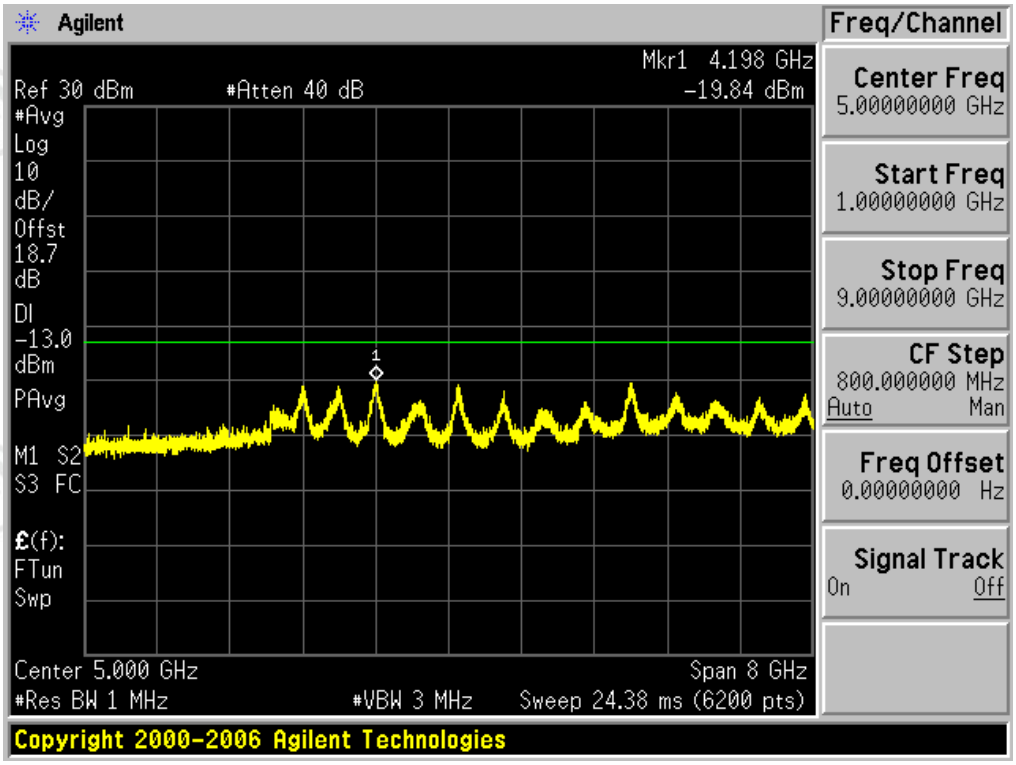

Agilent
Freq/Channel
Mkr1 6.995 GHz
Ref 30 dBm
#Atten 40 dB
-19.31 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.38 ms (6200 pts)
Copyright 2000-2006 Agilent Technologies

Test Channel=HCH





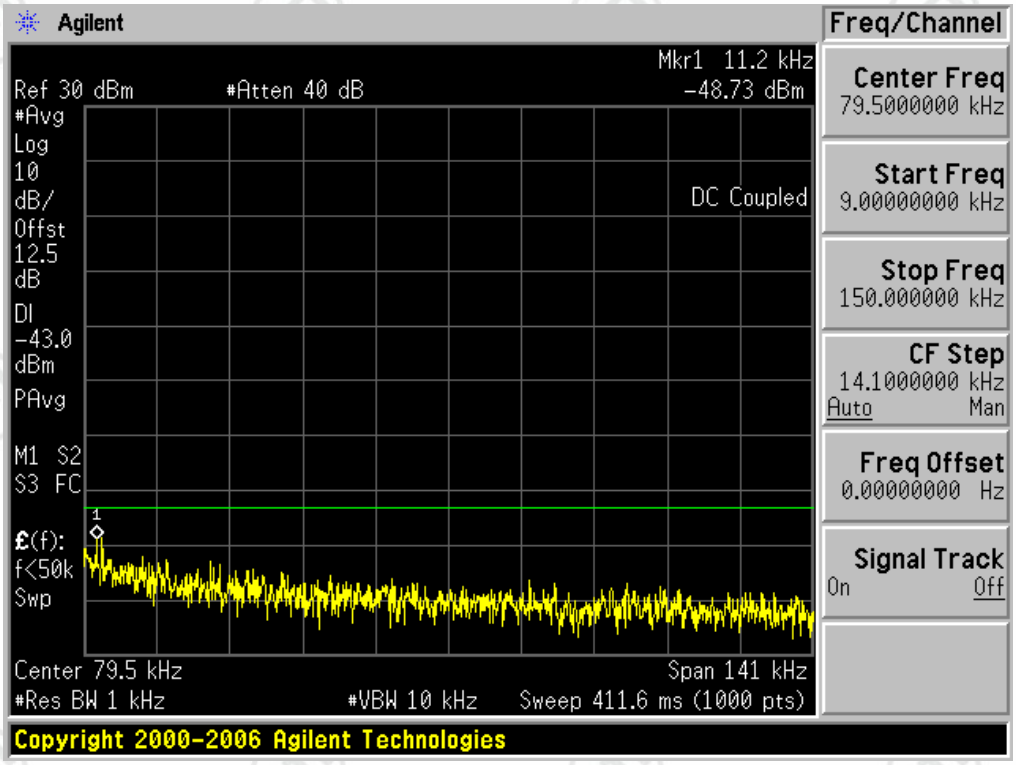

Agilent
Freq/Channel
Mkr2 426.2 MHz
Ref 30 dBm
#Atten 30 dB
-42.32 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

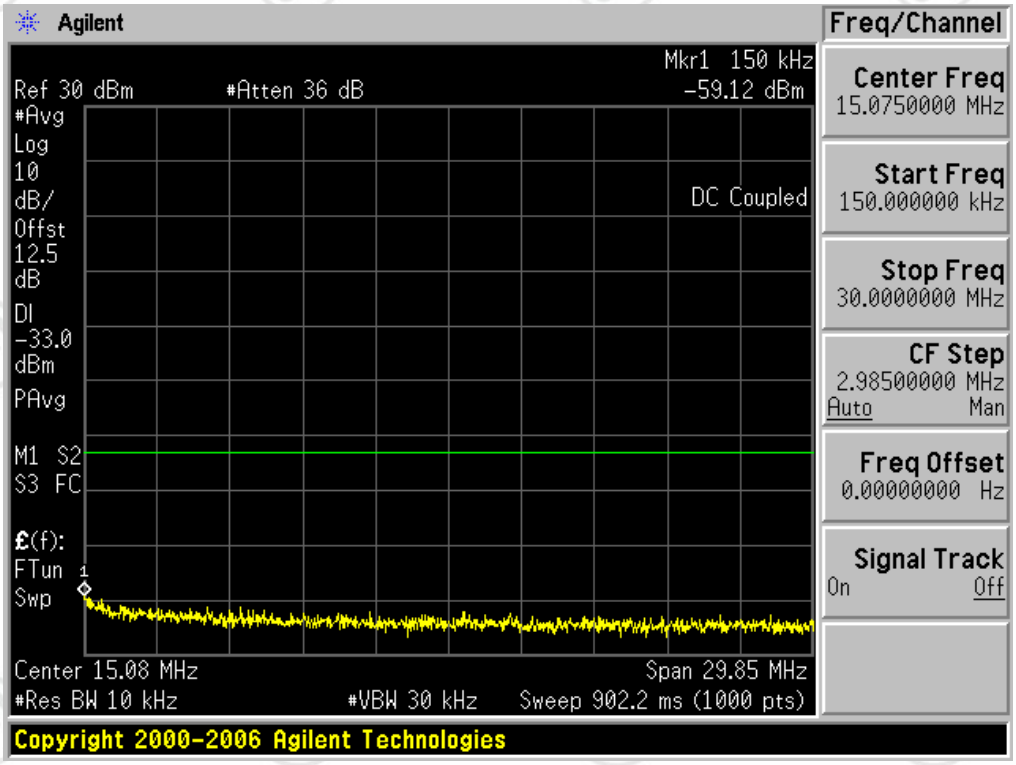

Agilent
Freq/Channel
Mkr1 4.198 GHz
Ref 30 dBm
#Atten 40 dB
-19.84 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.38 ms (6200 pts)
Copyright 2000-2006 Agilent Technologies

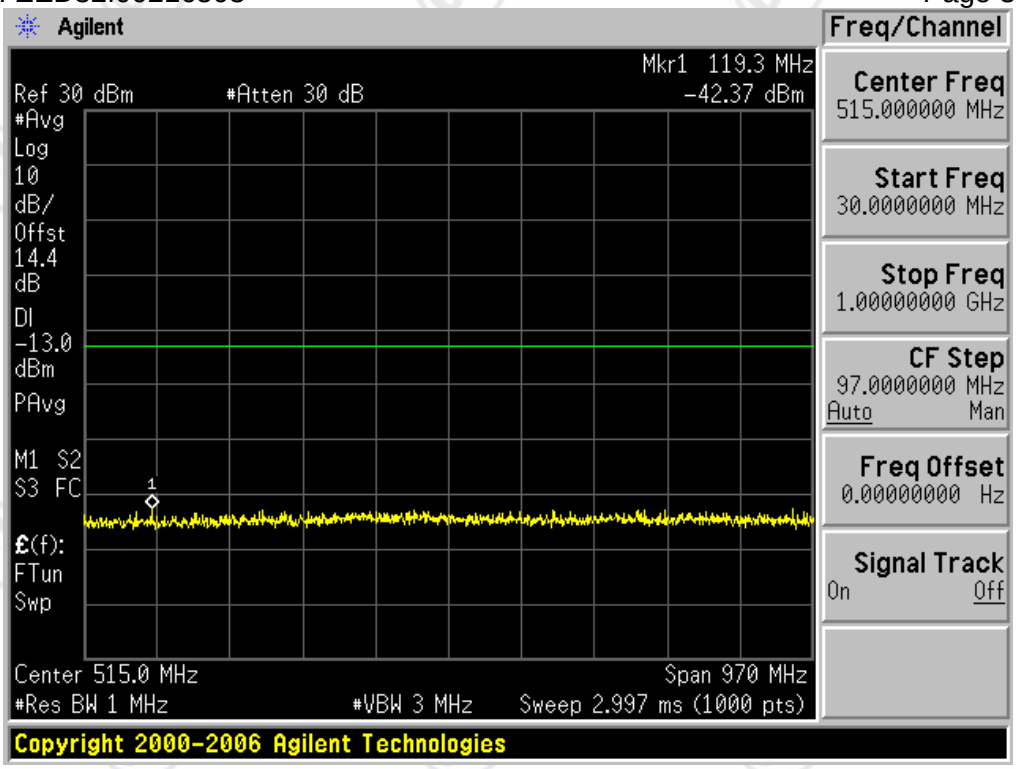
Test Band=WCDMA1700

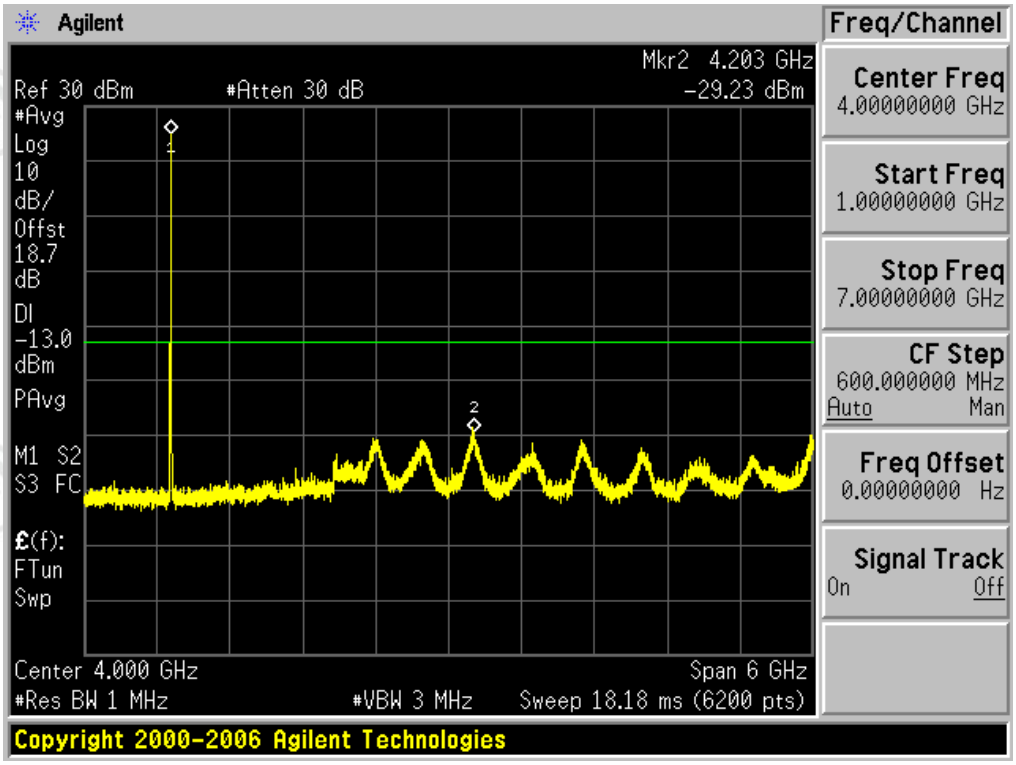
Test Mode=UMTS/TM1

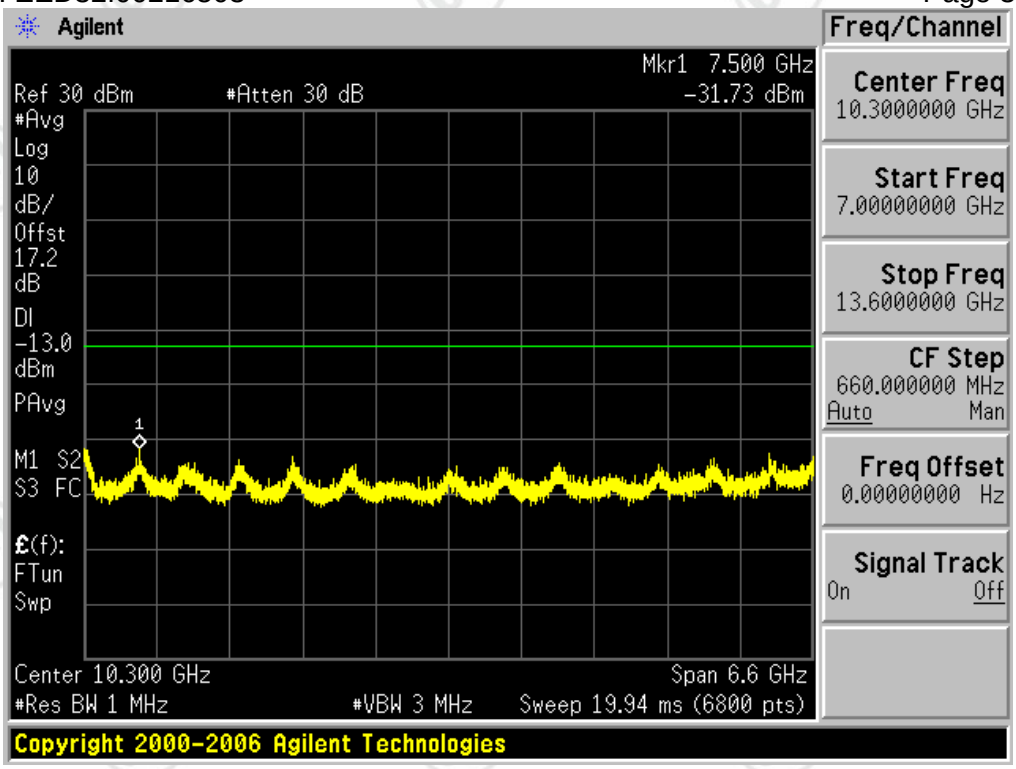
Test Channel=LCH

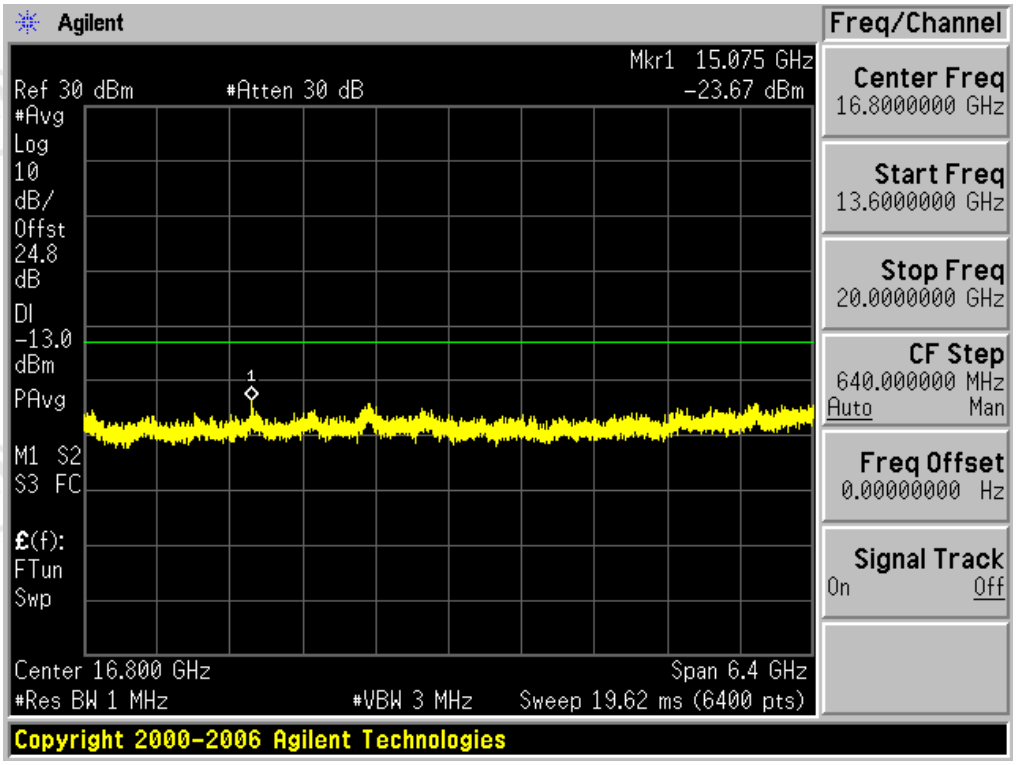




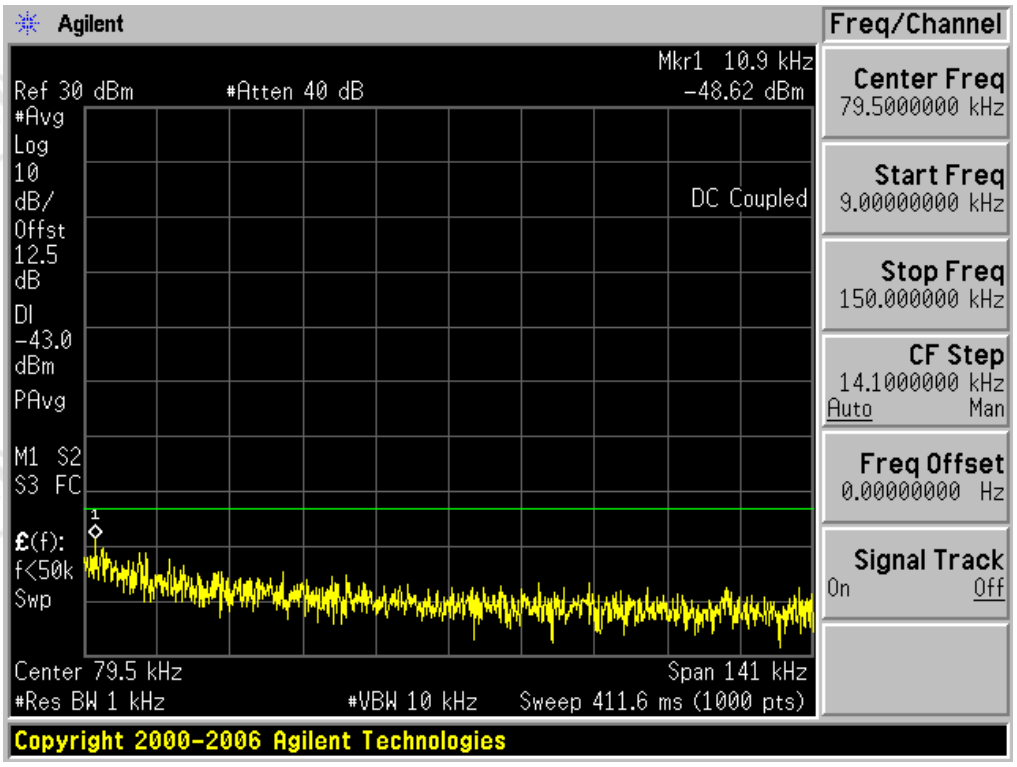

Agilent
Freq/Channel
Mkr1 119.3 MHz
Ref 30 dBm
#Atten 30 dB
-42.37 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

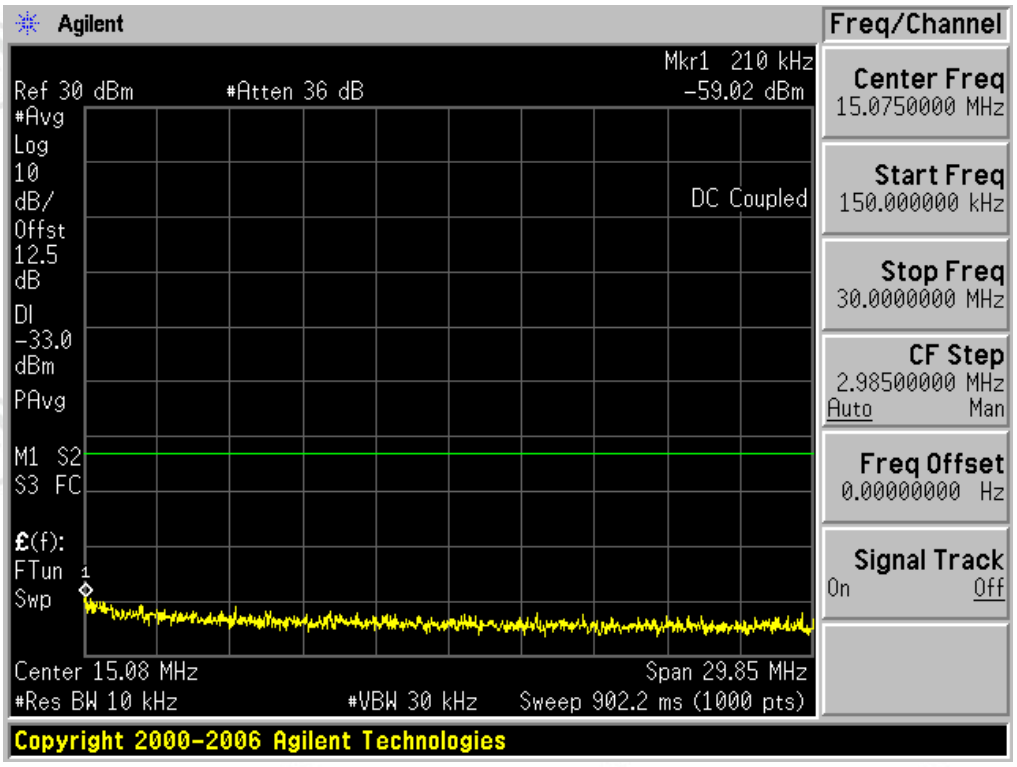

Agilent
Freq/Channel
Mkr2 4.203 GHz
Ref 30 dBm
#Atten 30 dB
-29.23 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

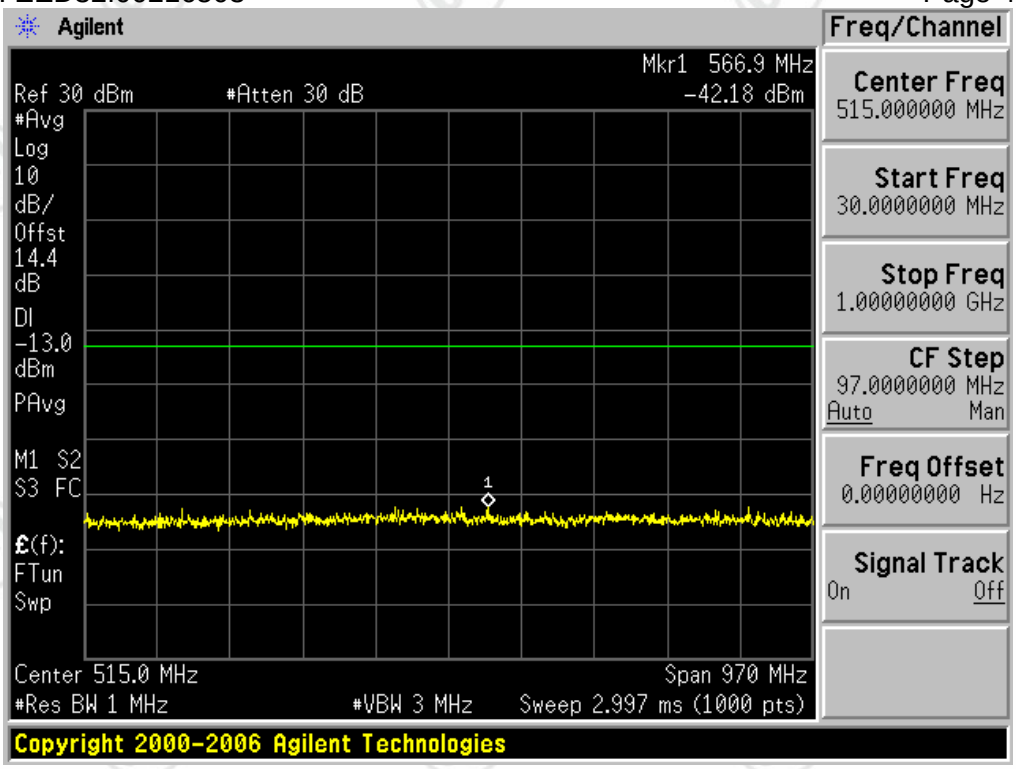

Agilent
Freq/Channel
Mkr1 7.500 GHz
Ref 30 dBm
#Atten 30 dB
-31.73 dBm
#Avg
Log
10
dB/
Offst
17.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

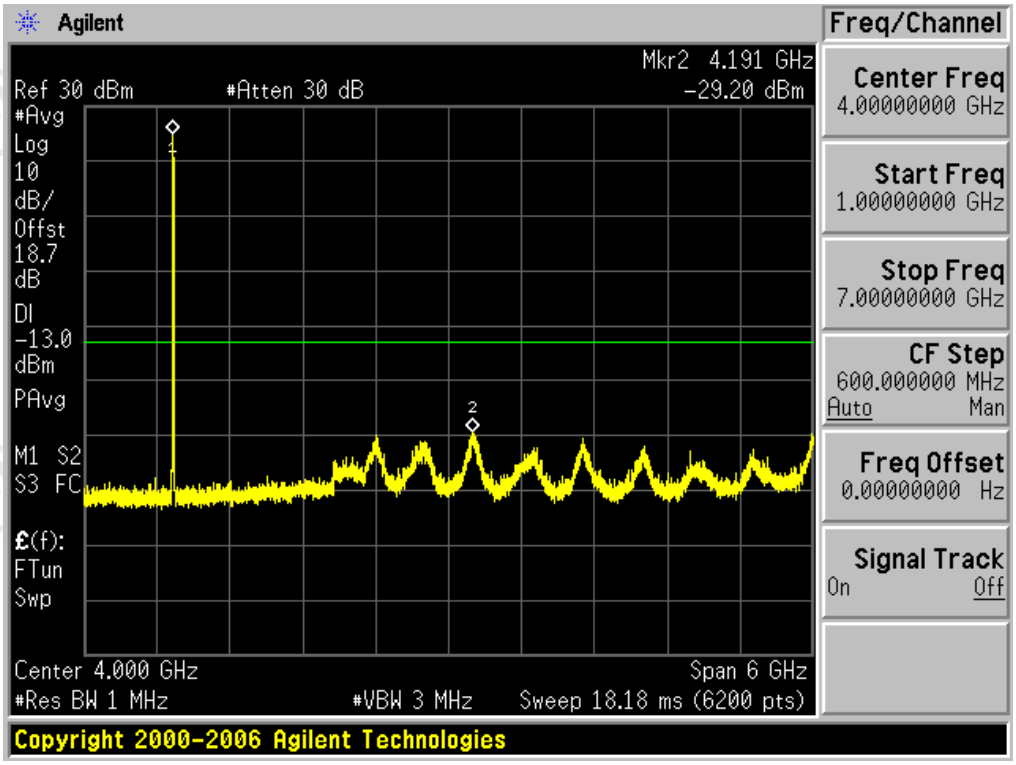

Agilent
Freq/Channel
Mkr1 15.075 GHz
Ref 30 dBm
#Atten 30 dB
-23.67 dBm
#Avg
Log
10
dB/
Offst
24.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

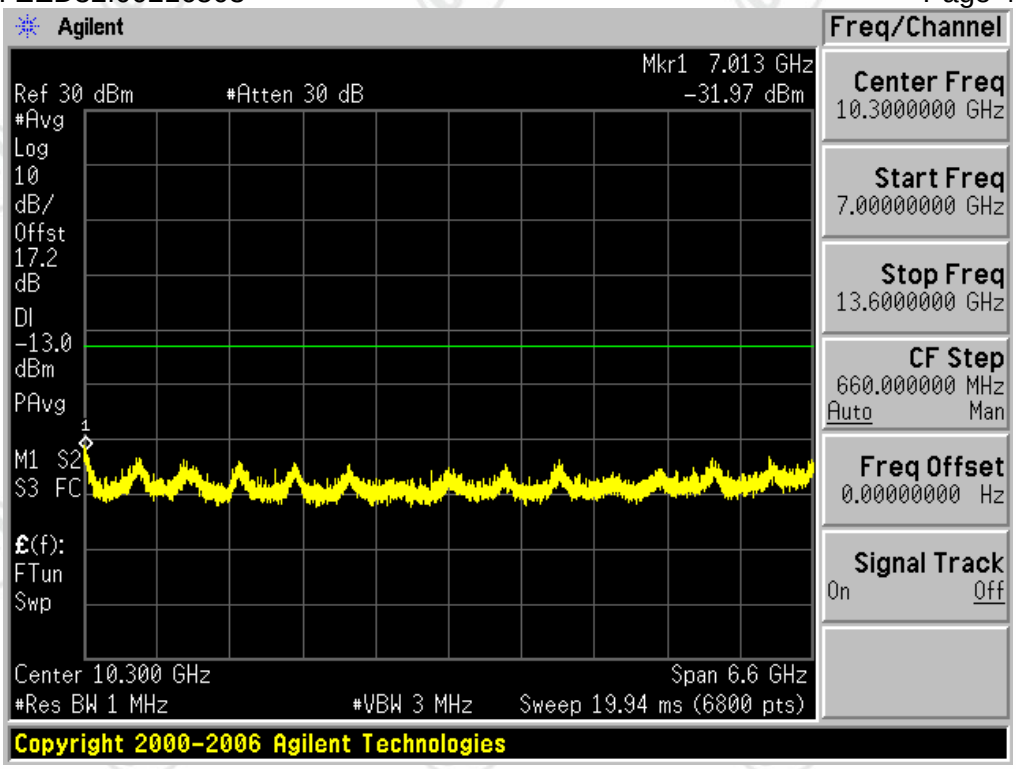
Test Channel=MCH

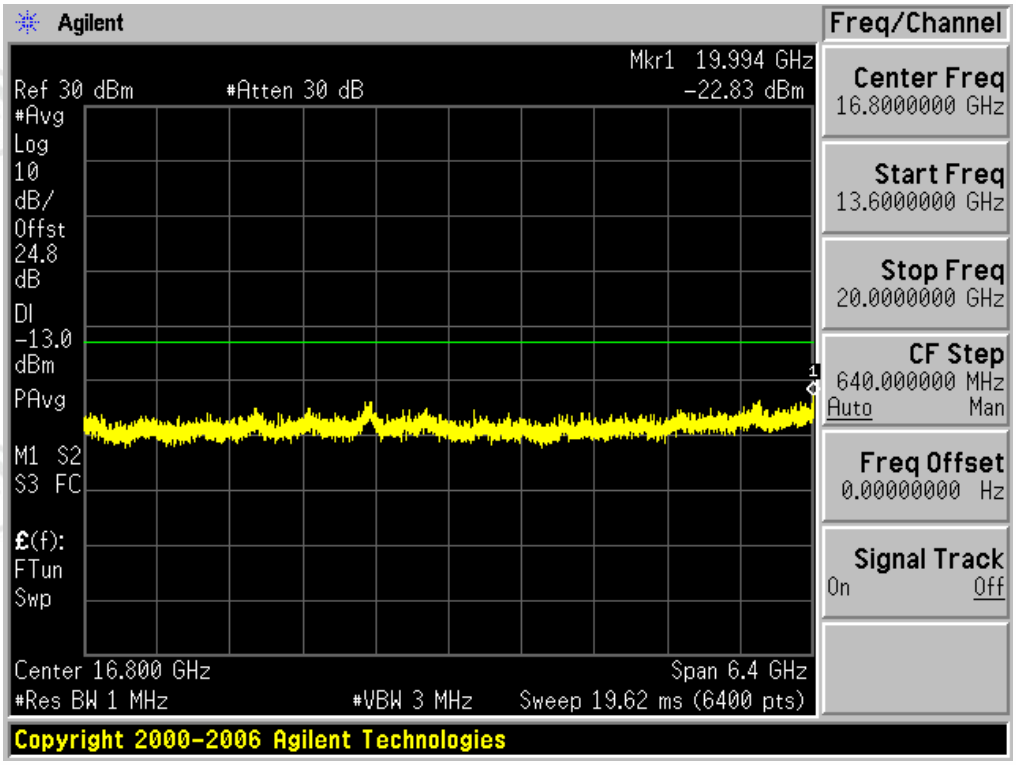




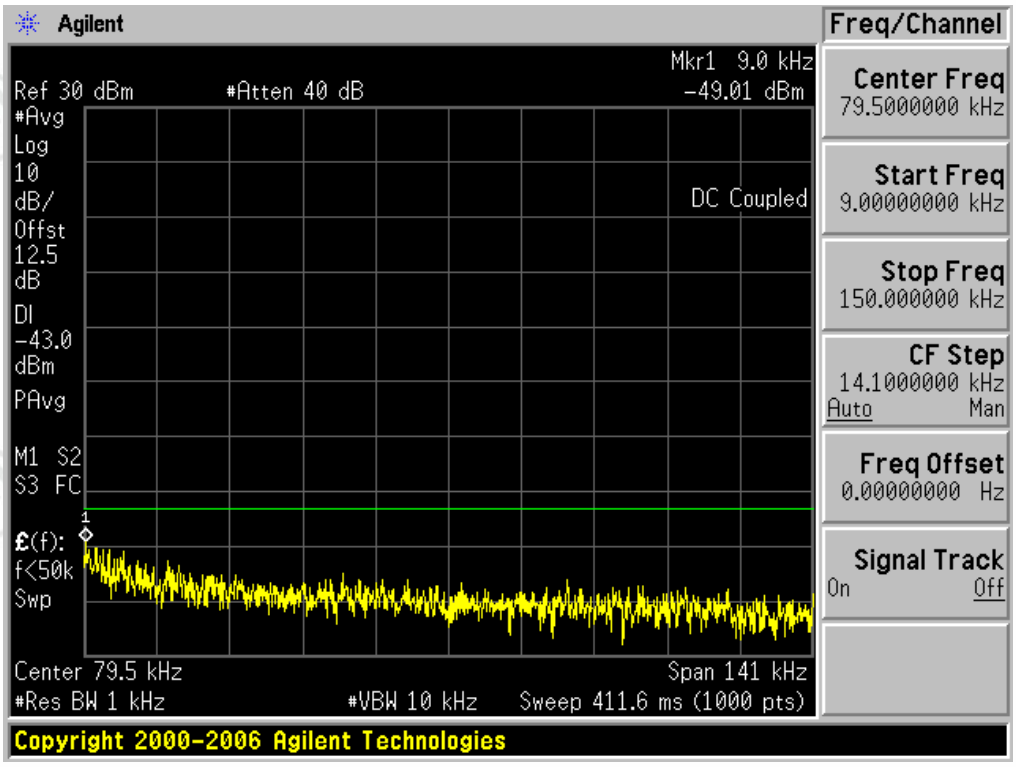

Agilent
Freq/Channel
Mkr1 566.9 MHz
Ref 30 dBm
#Atten 30 dB
-42.18 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

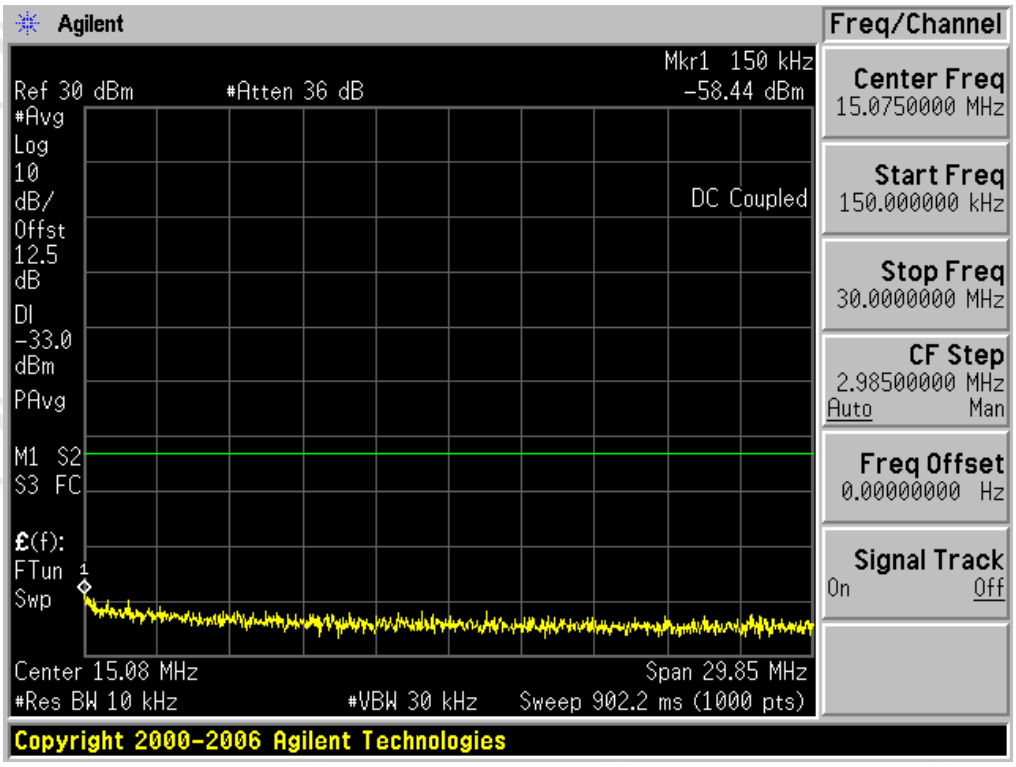

Agilent
Freq/Channel
Mkr2 4.191 GHz
Ref 30 dBm
#Atten 30 dB
-29.20 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

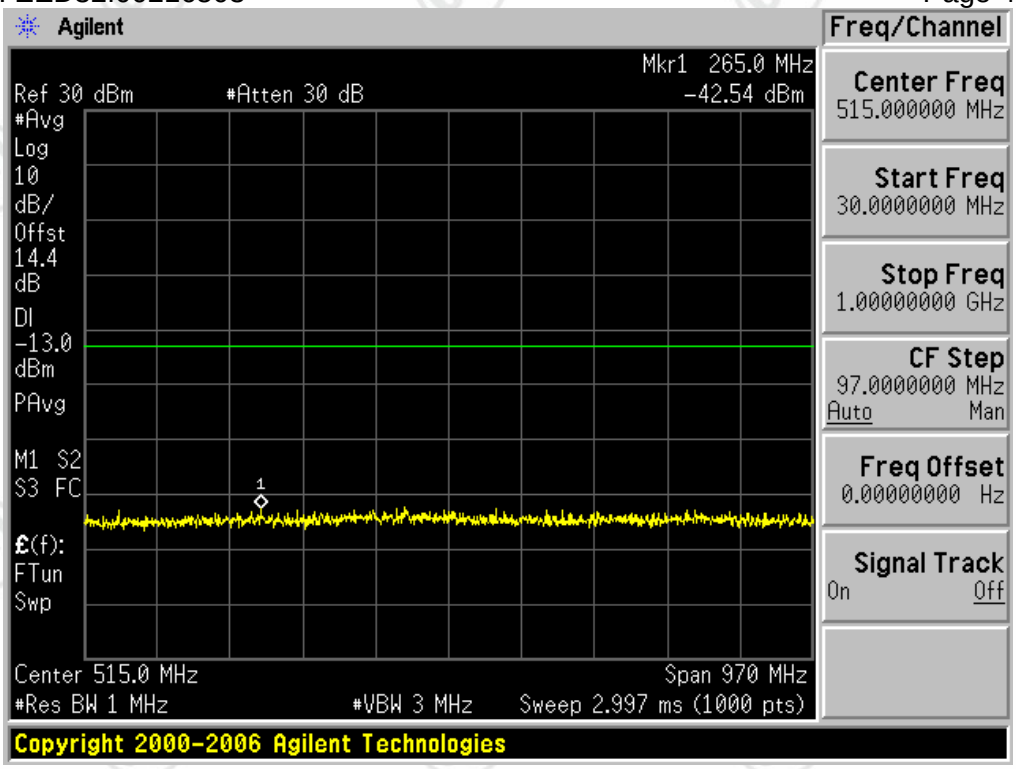

Agilent
Freq/Channel
Mkr1 7.013 GHz
Ref 30 dBm
#Atten 30 dB
-31.97 dBm
#Avg
Log
10
dB/
Offst
17.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

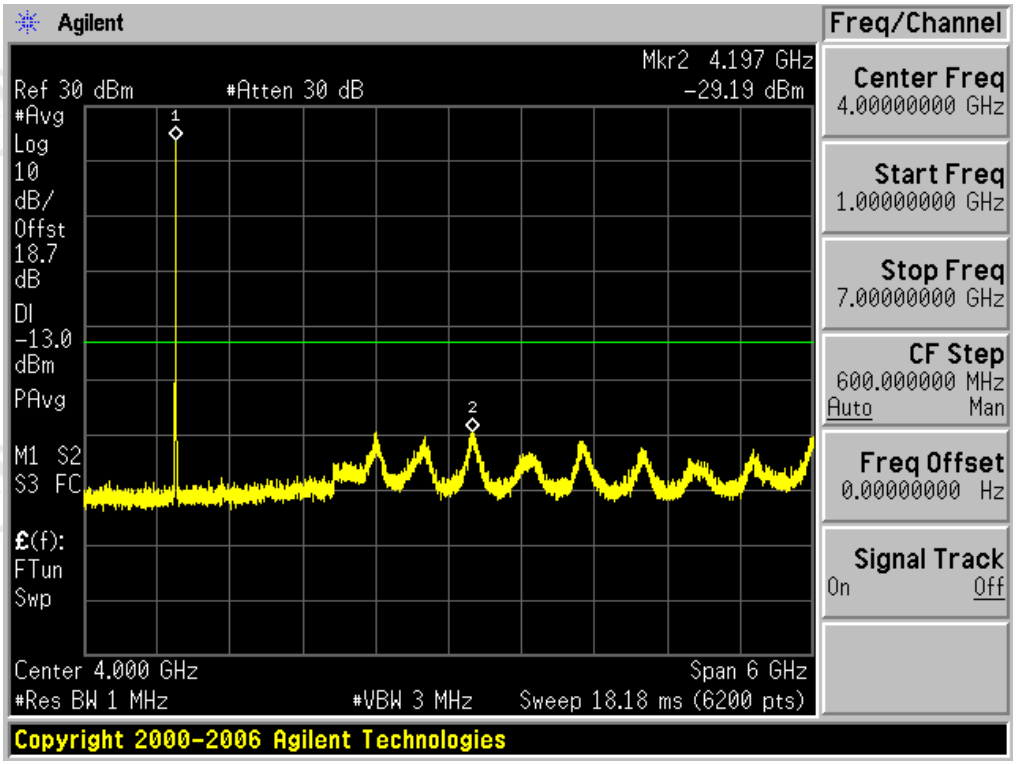

Agilent
Freq/Channel
Mkr1 19.994 GHz
Ref 30 dBm
#Atten 30 dB
-22.83 dBm
#Avg
Log
10
dB/
Offst
24.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

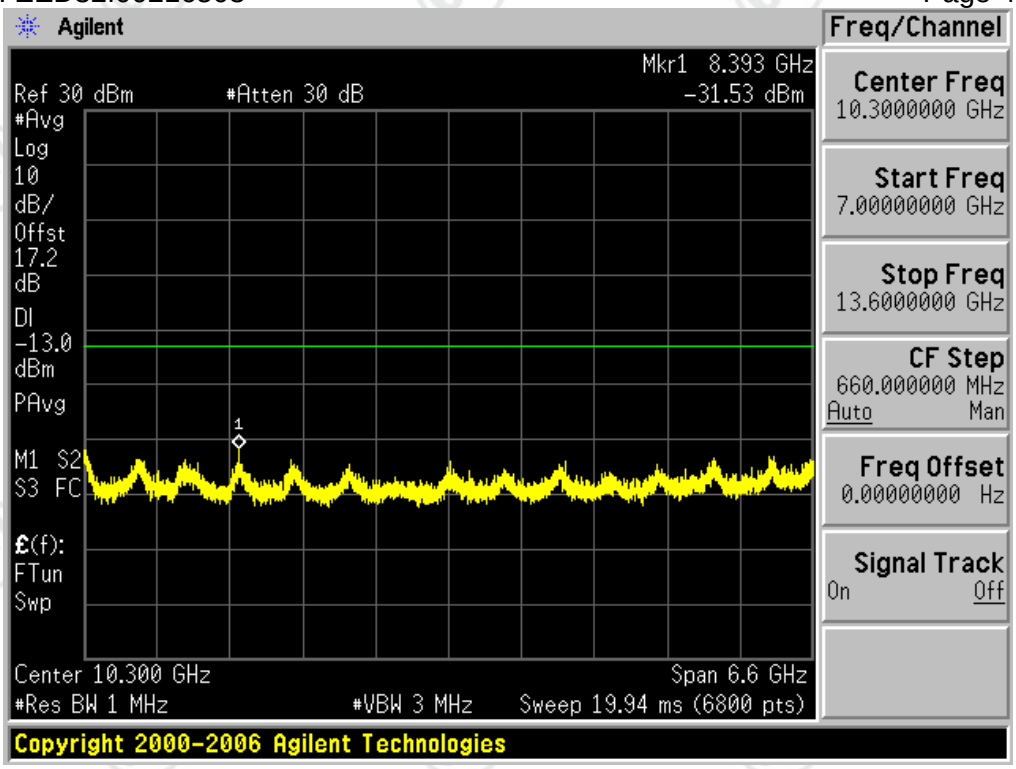
Test Channel=HCH

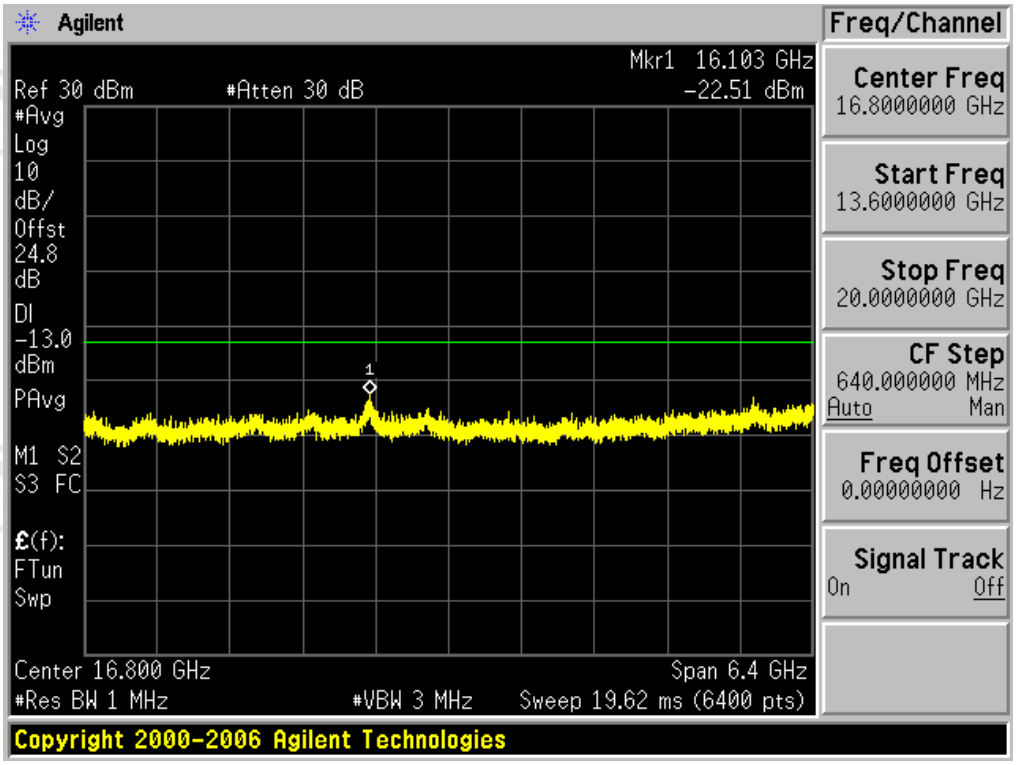





Agilent
Freq/Channel
Mkr1 265.0 MHz
Ref 30 dBm
#Atten 30 dB
-42.54 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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 4.197 GHz
Ref 30 dBm
#Atten 30 dB
-29.19 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

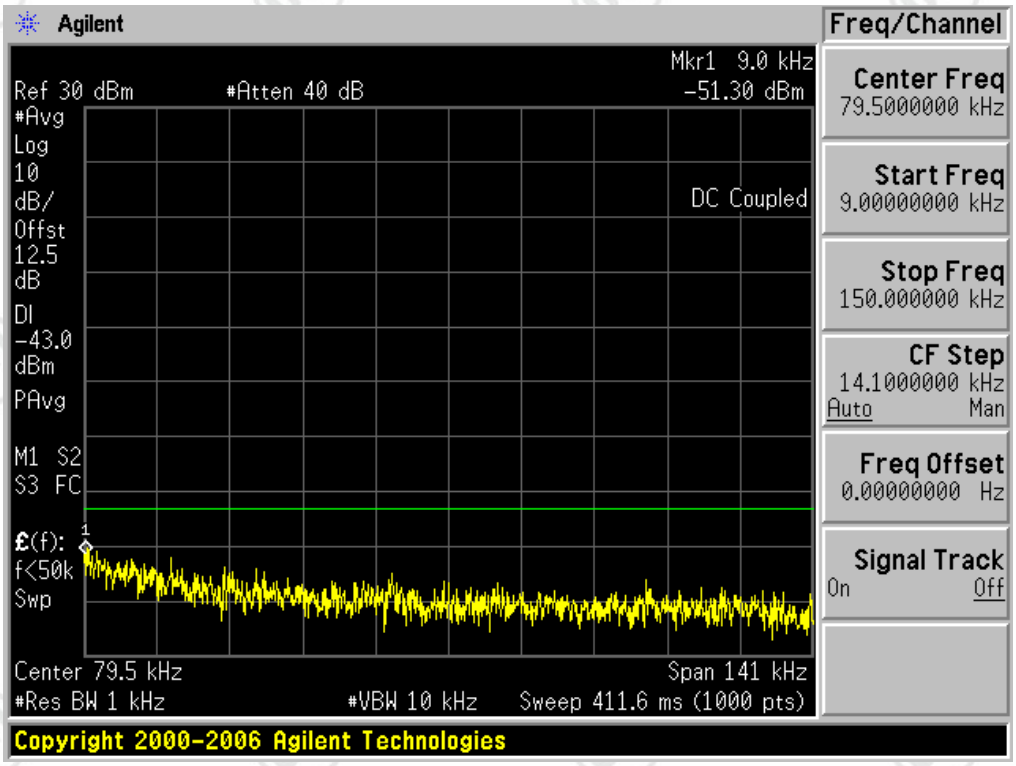

Agilent
Freq/Channel
Mkr1 8.393 GHz
Ref 30 dBm
#Atten 30 dB
-31.53 dBm
#Avg
Log
10
dB/
Offst
17.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

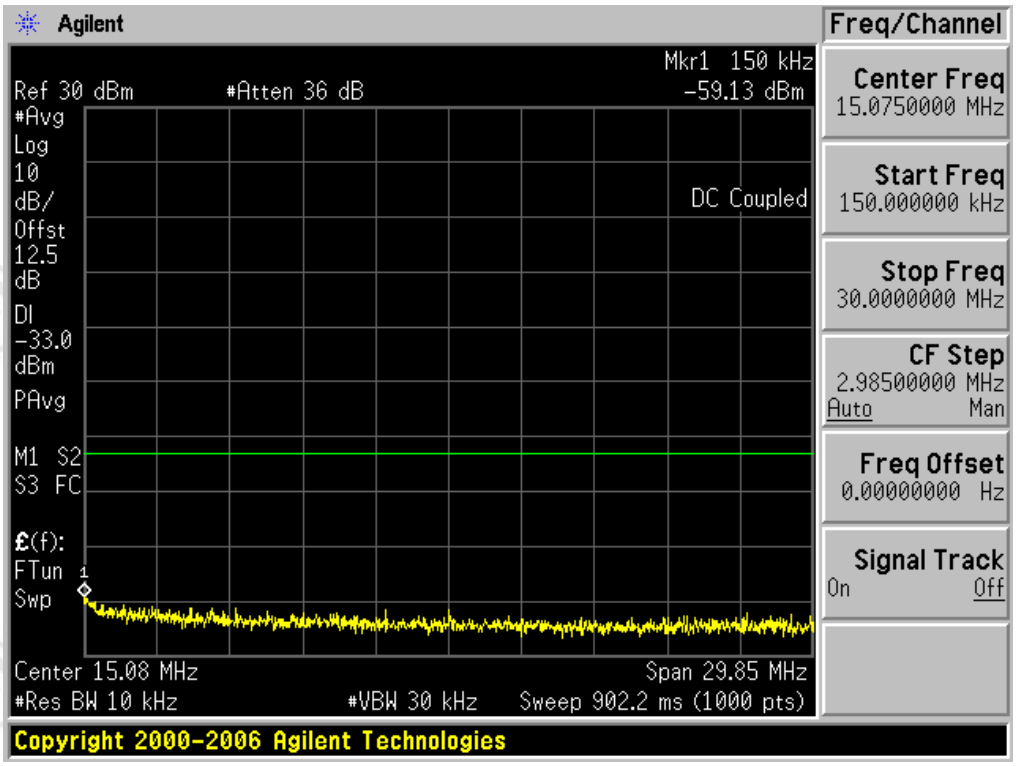

Agilent
Freq/Channel
Mkr1 16.103 GHz
Ref 30 dBm
#Atten 30 dB
-22.51 dBm
#Avg
Log
10
dB/
Offst
24.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

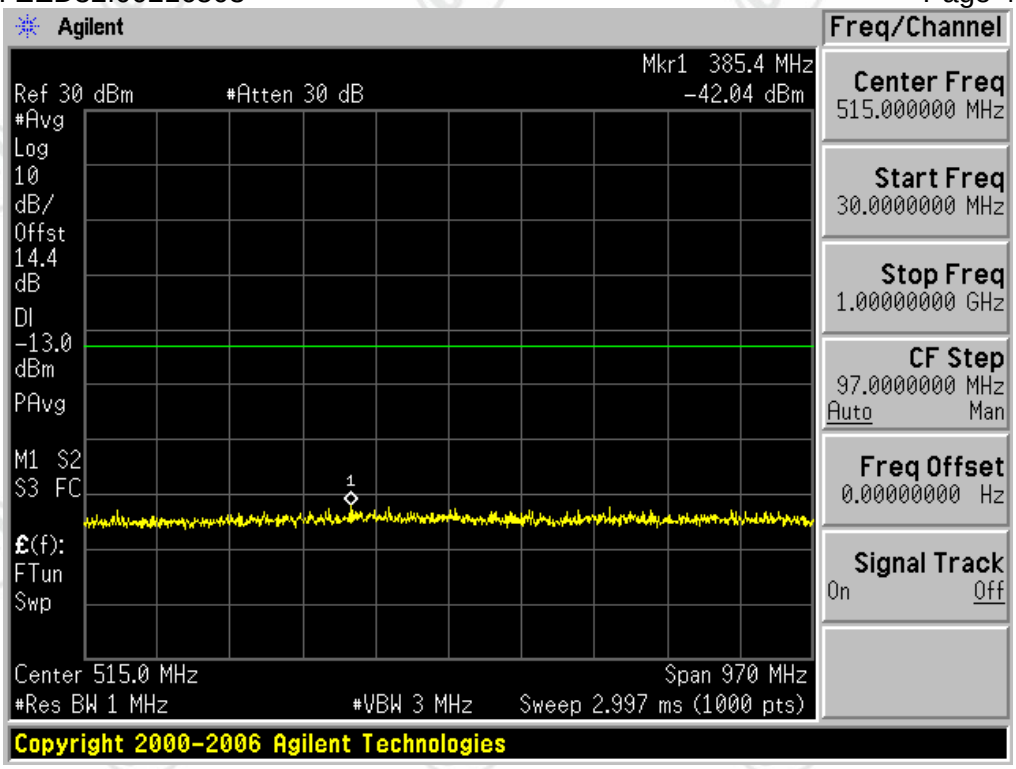
Test Band=WCDMA1900

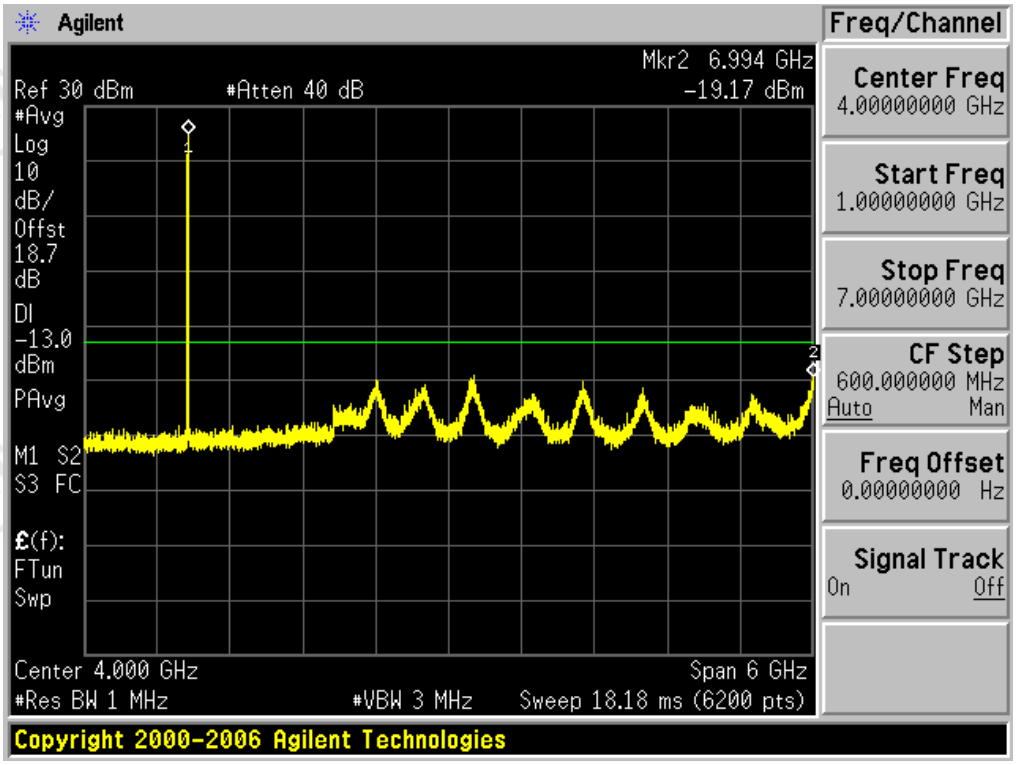
Test Mode=UMTS/TM1

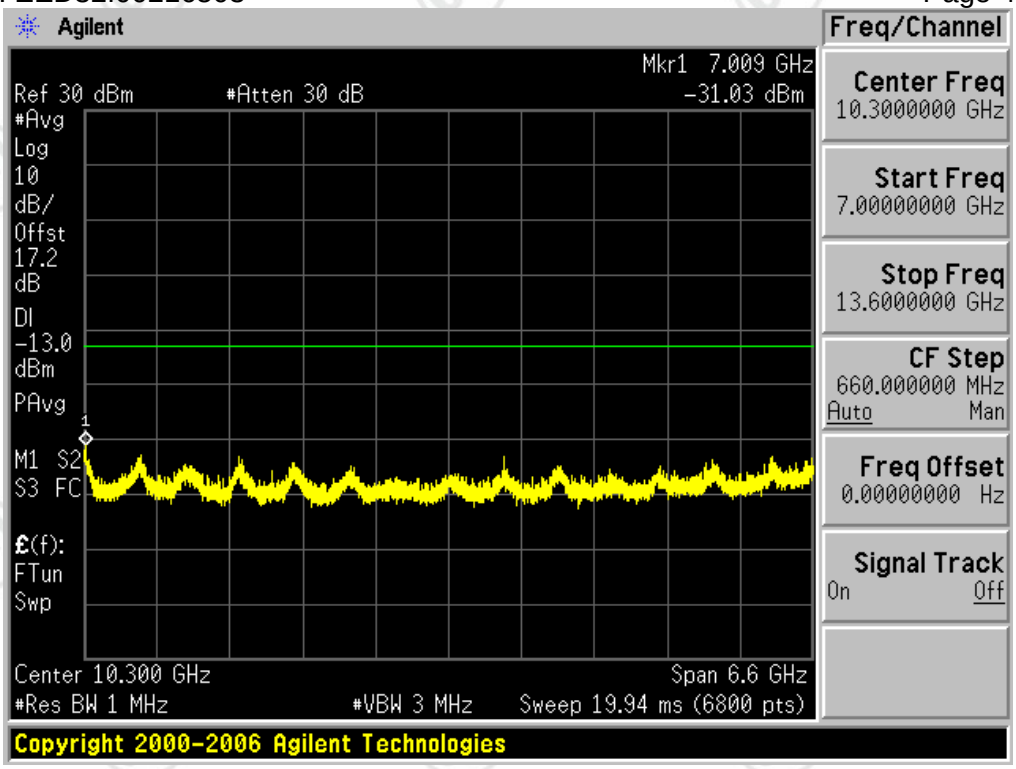
Test Channel=LCH

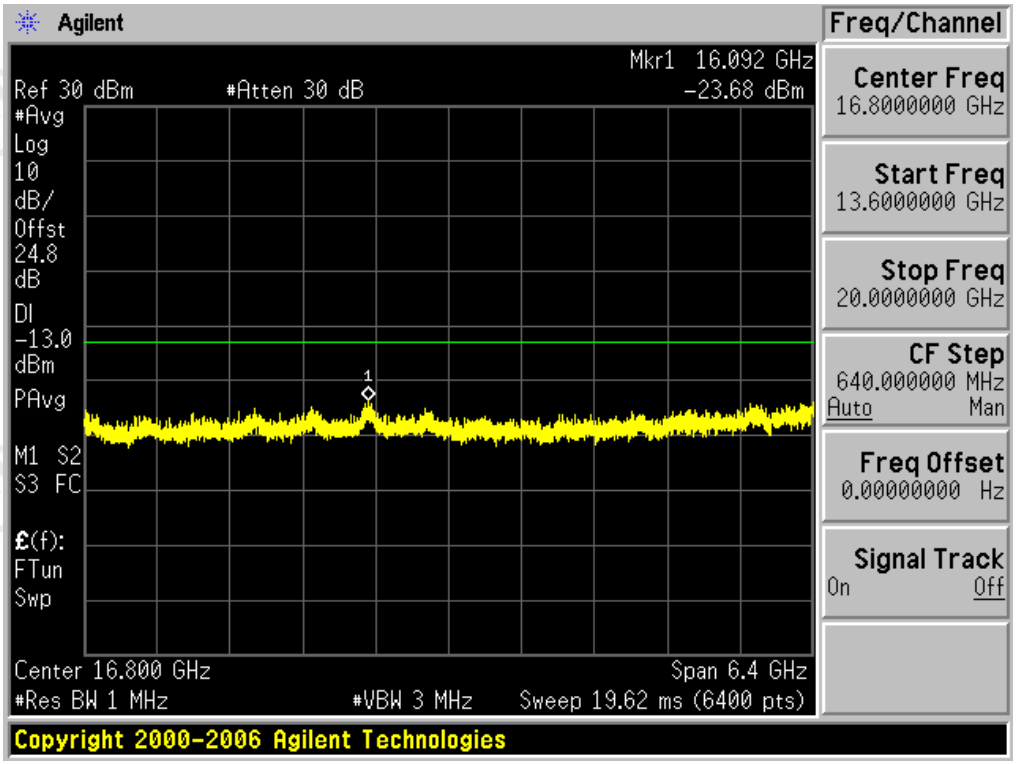




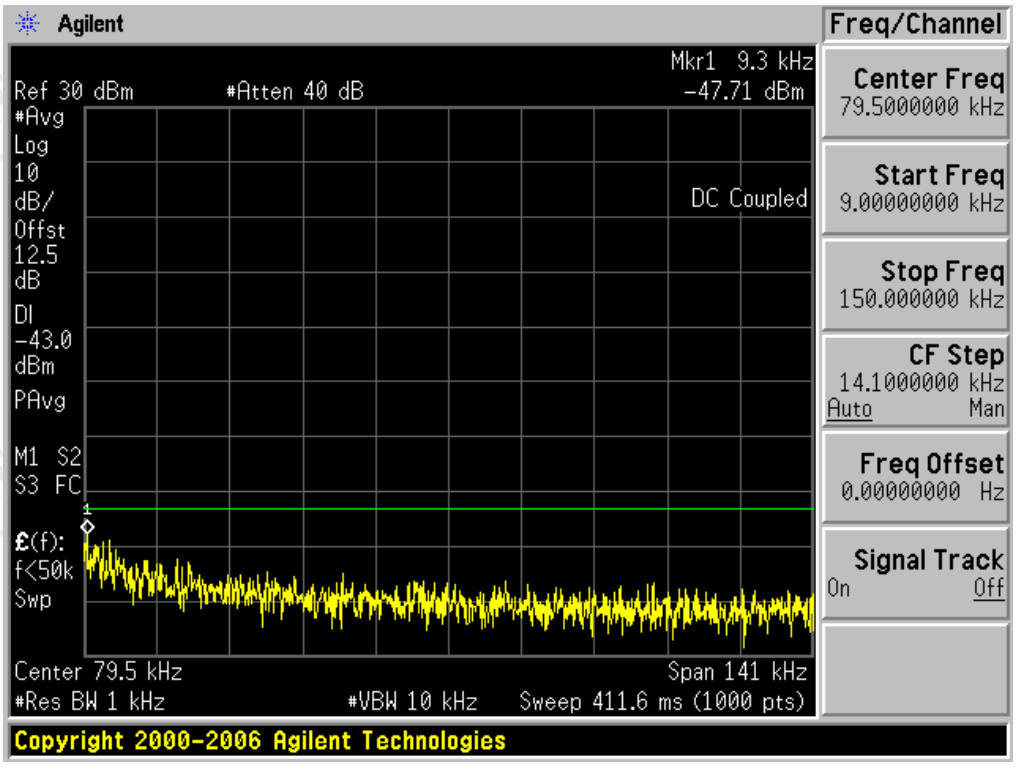

Agilent
Freq/Channel
Mkr1 385.4 MHz
Ref 30 dBm
#Atten 30 dB
-42.04 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

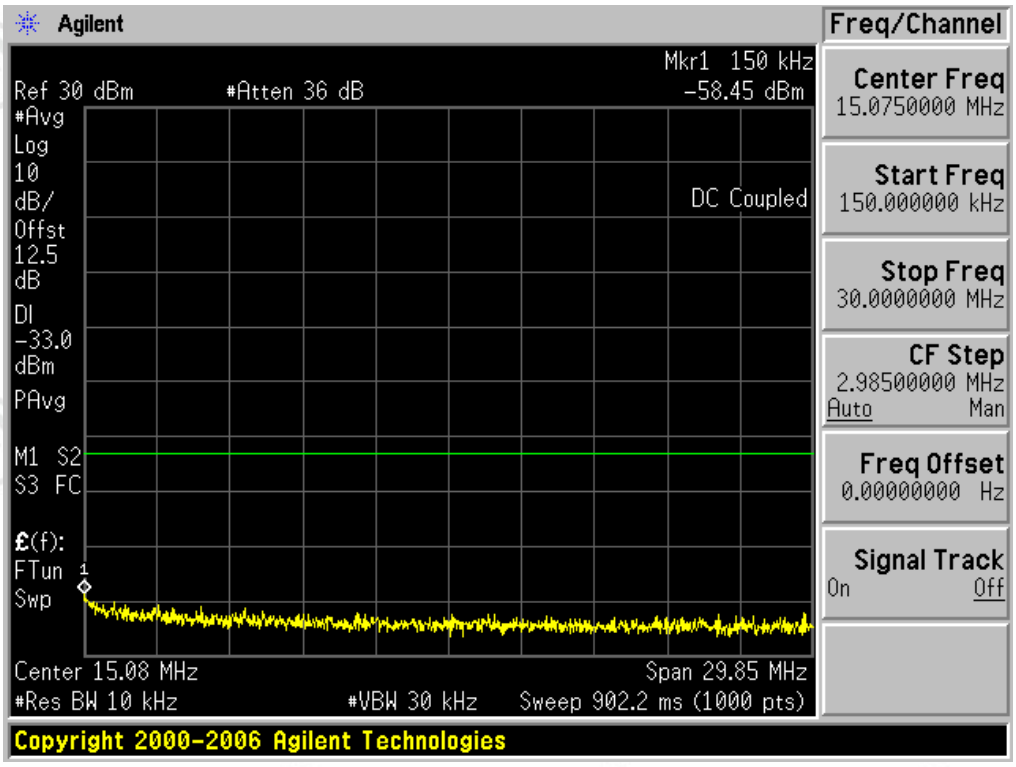

Agilent
Freq/Channel
Mkr2 6.994 GHz
Ref 30 dBm
#Atten 40 dB
-19.17 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

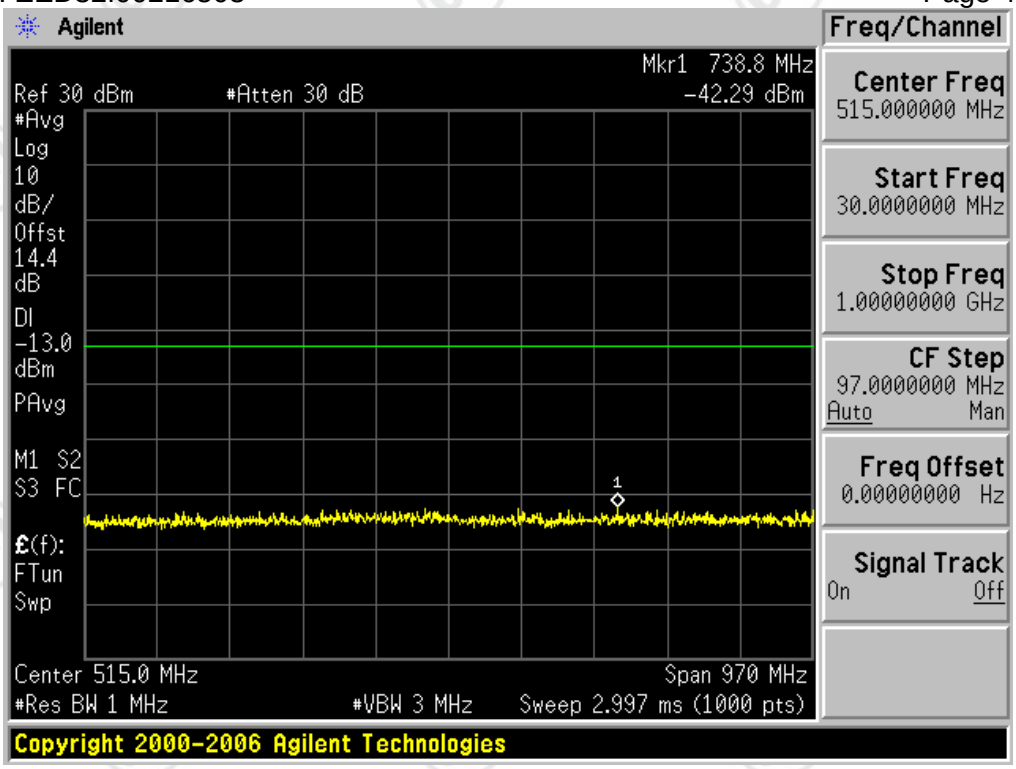

Agilent
Freq/Channel
Mkr1 7.009 GHz
Ref 30 dBm
#Atten 30 dB
-31.03 dBm
#Avg
Log
10
dB/
Offst
17.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

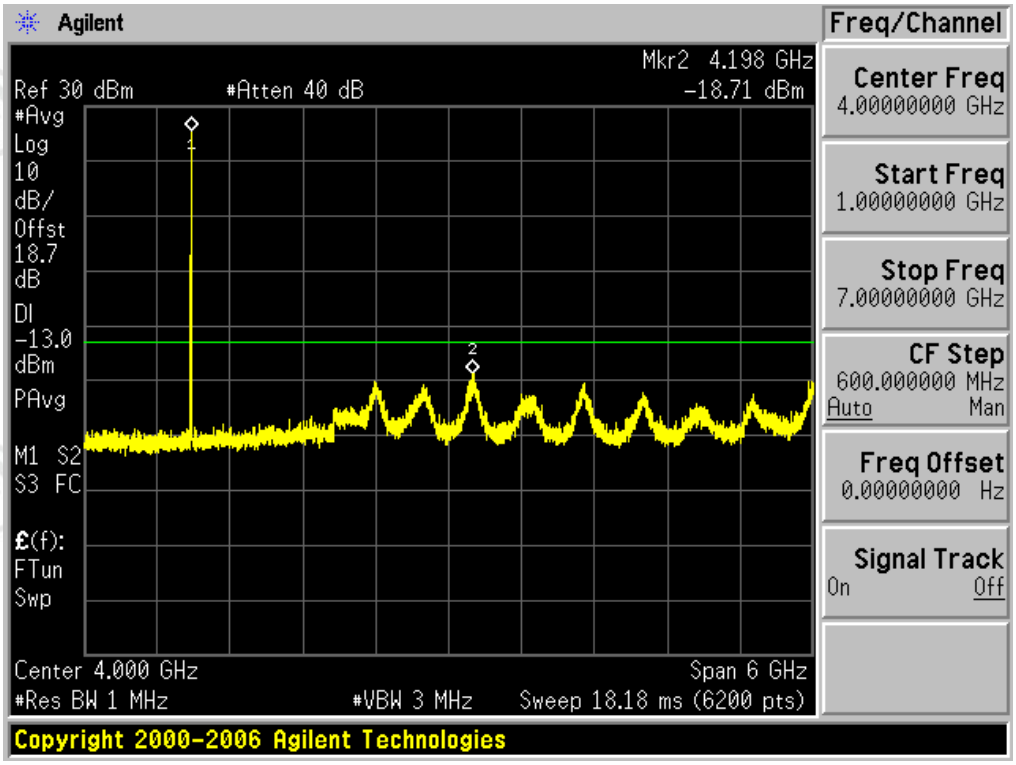

Agilent
Freq/Channel
Mkr1 16.092 GHz
Ref 30 dBm
#Atten 30 dB
-23.68 dBm
#Avg
Log
10
dB/
Offst
24.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

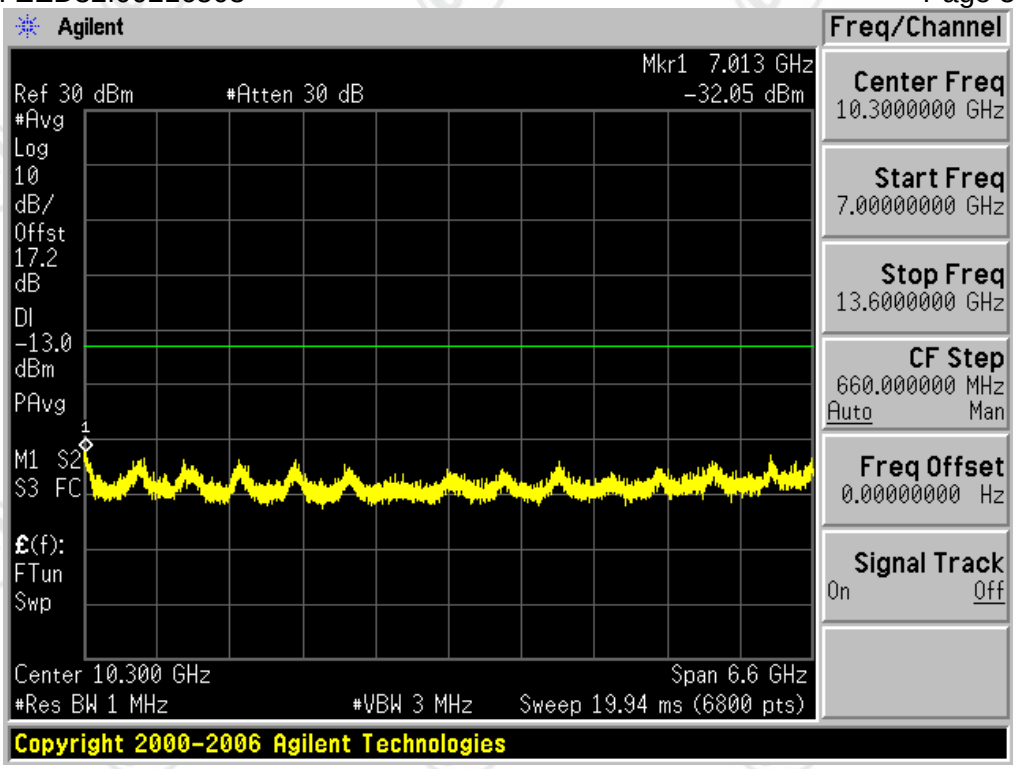
Test Channel=MCH

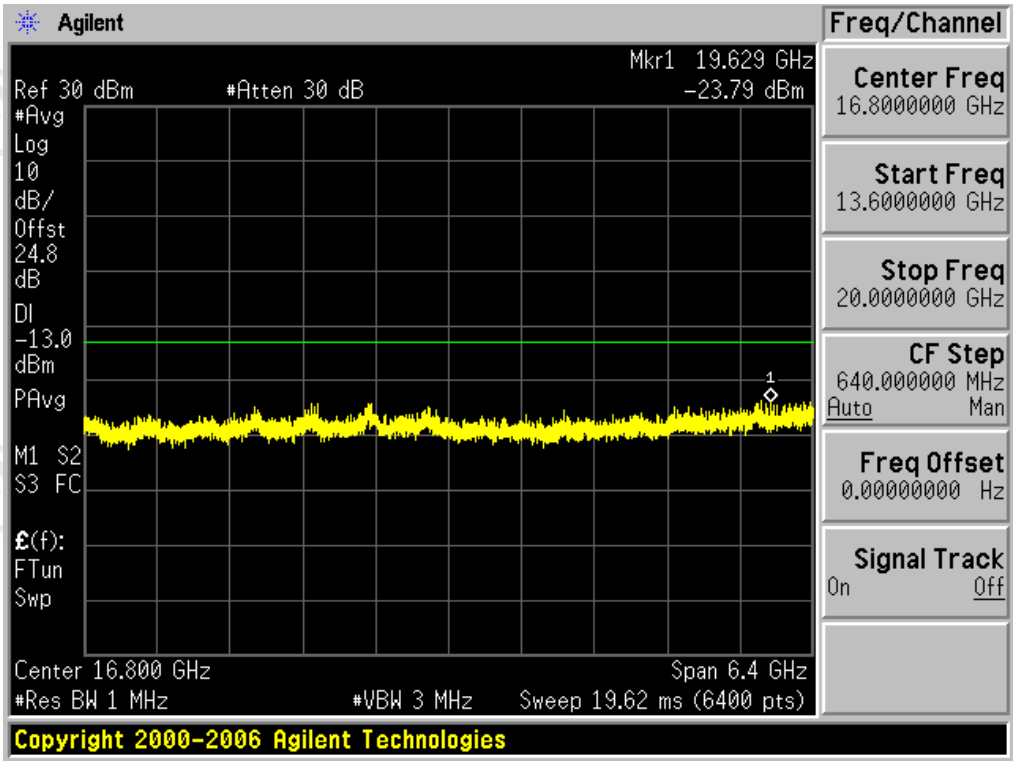




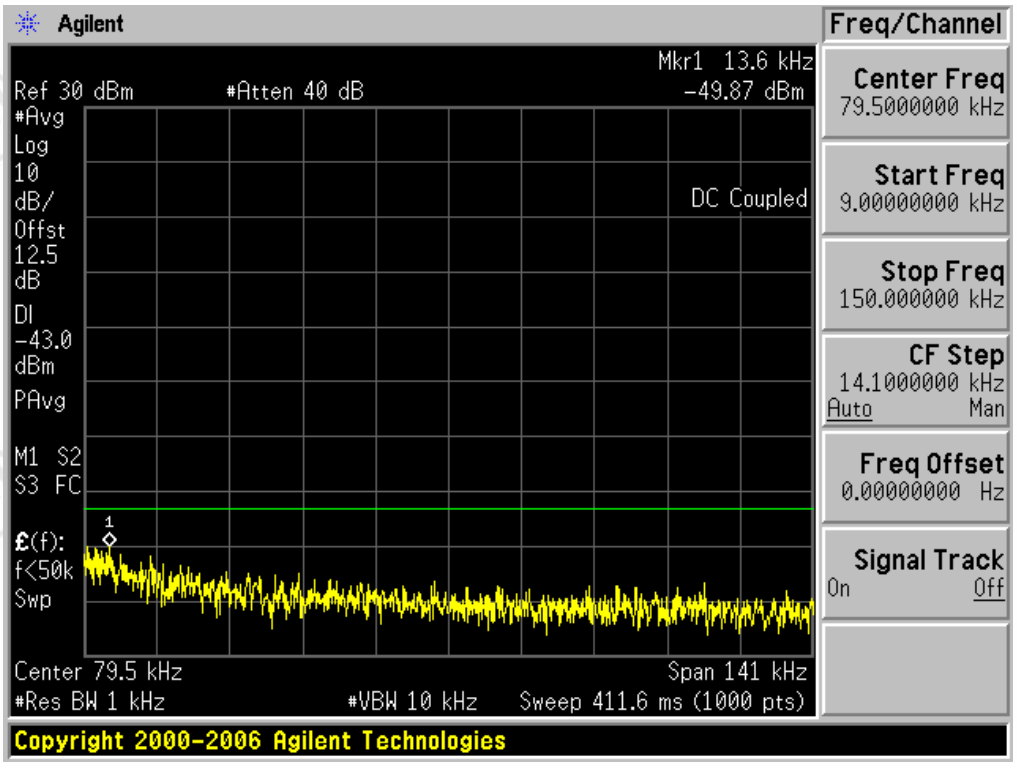

Agilent
Freq/Channel
Mkr1 738.8 MHz
Ref 30 dBm
#Atten 30 dB
-42.29 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

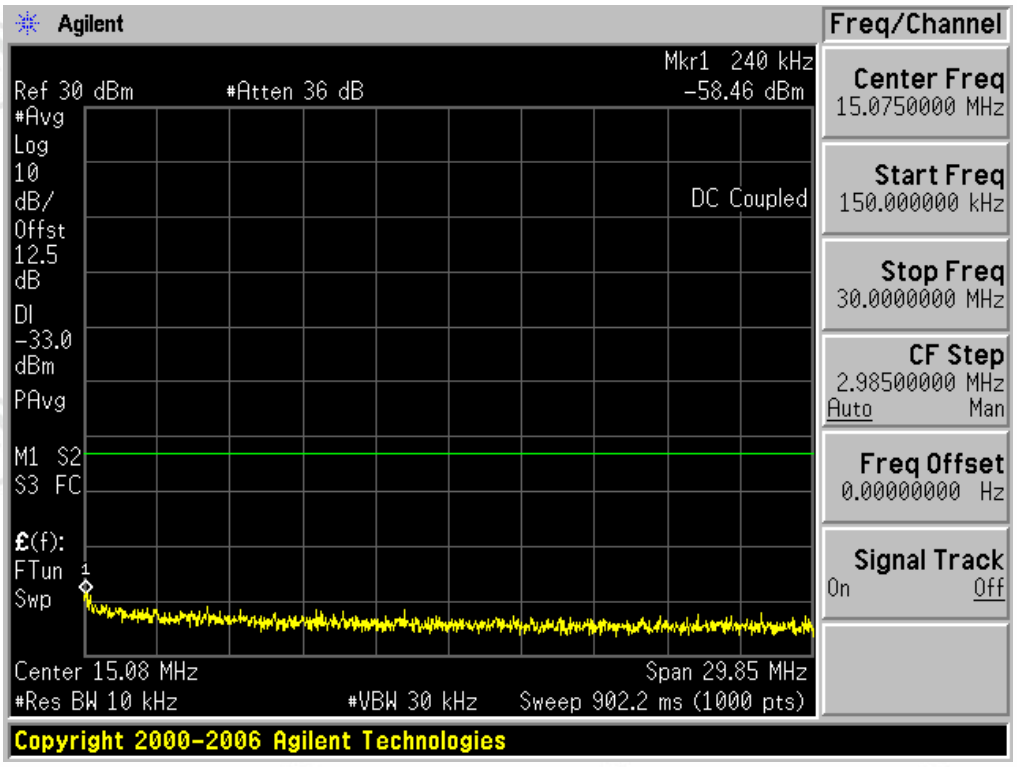

Agilent
Freq/Channel
Mkr2 4.198 GHz
Ref 30 dBm
#Atten 40 dB
-18.71 dBm
#Avg
Log
10
dB/
Offst
18.7
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

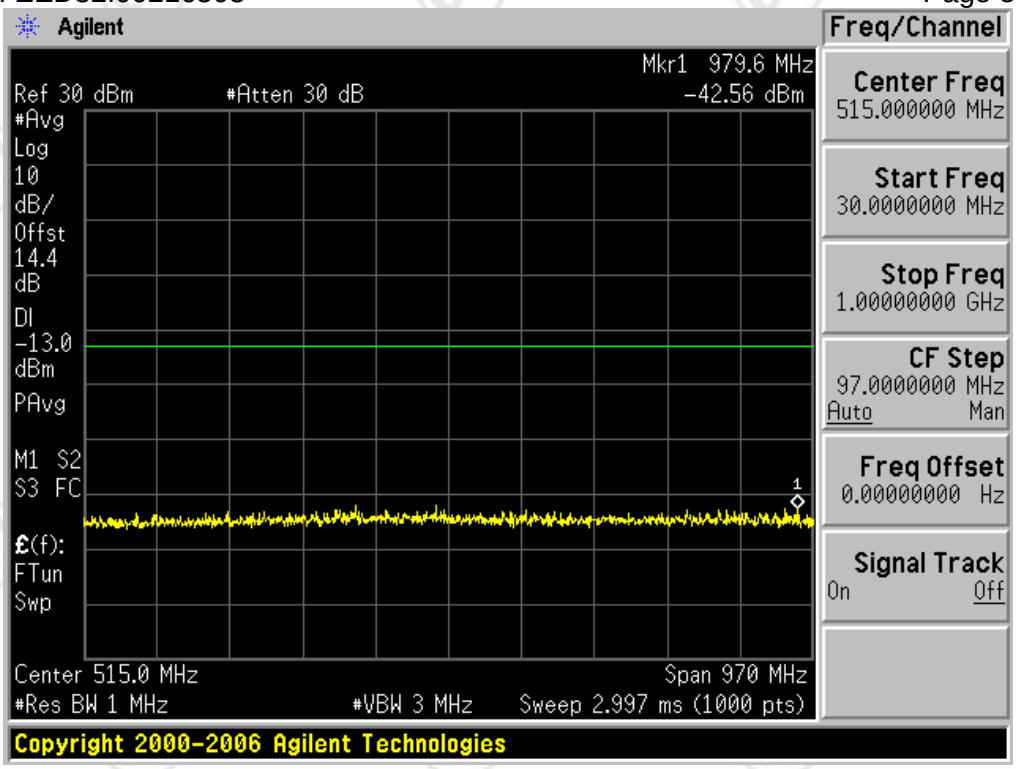

Agilent
Freq/Channel
Mkr1 7.013 GHz
Ref 30 dBm
#Atten 30 dB
-32.05 dBm
#Avg
Log
10
dB/
Offst
17.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

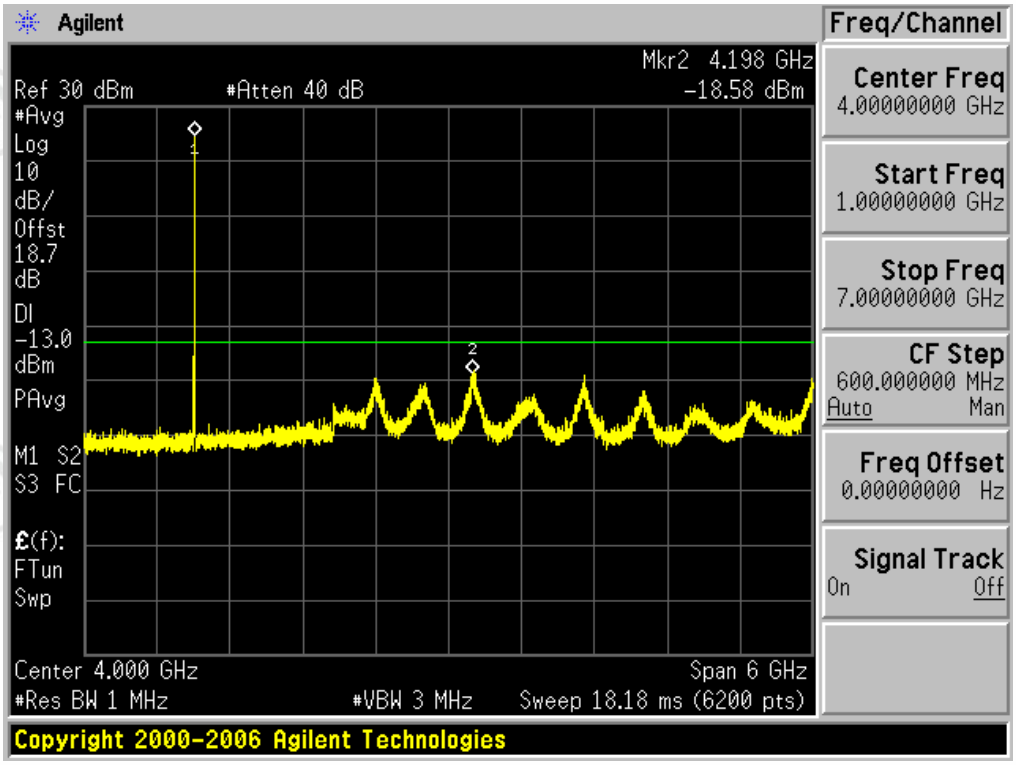

Agilent
Freq/Channel
Mkr1 19.629 GHz
Ref 30 dBm
#Atten 30 dB
-23.79 dBm
#Avg
Log
10
dB/
Offst
24.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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

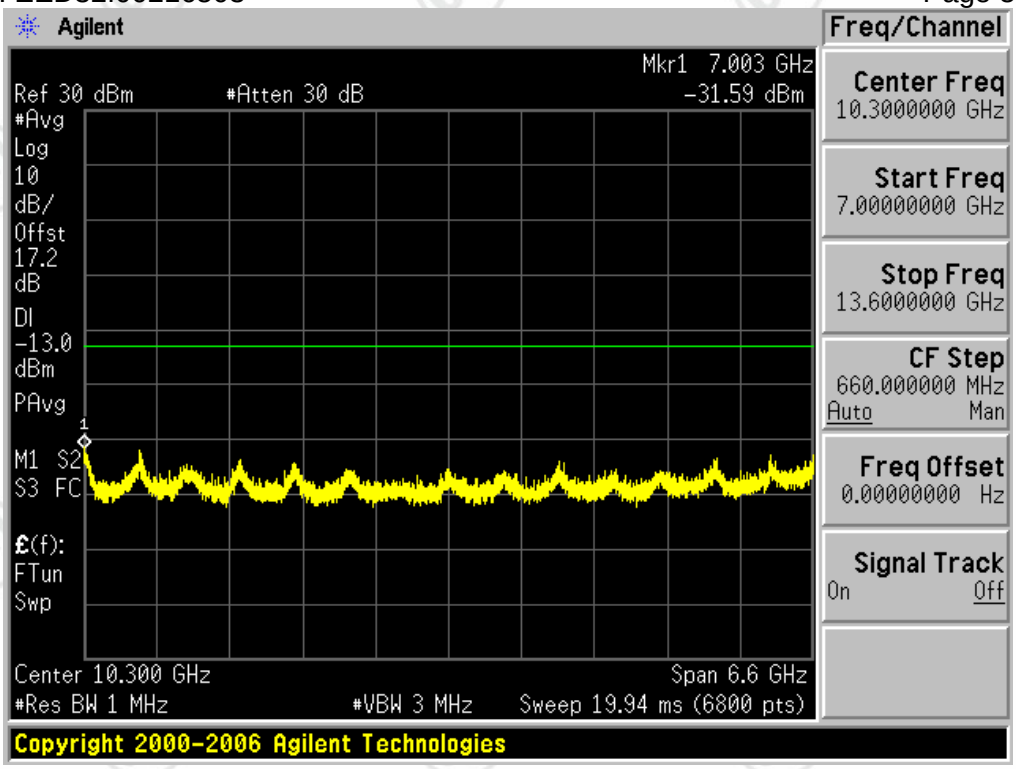
Test Channel=HCH

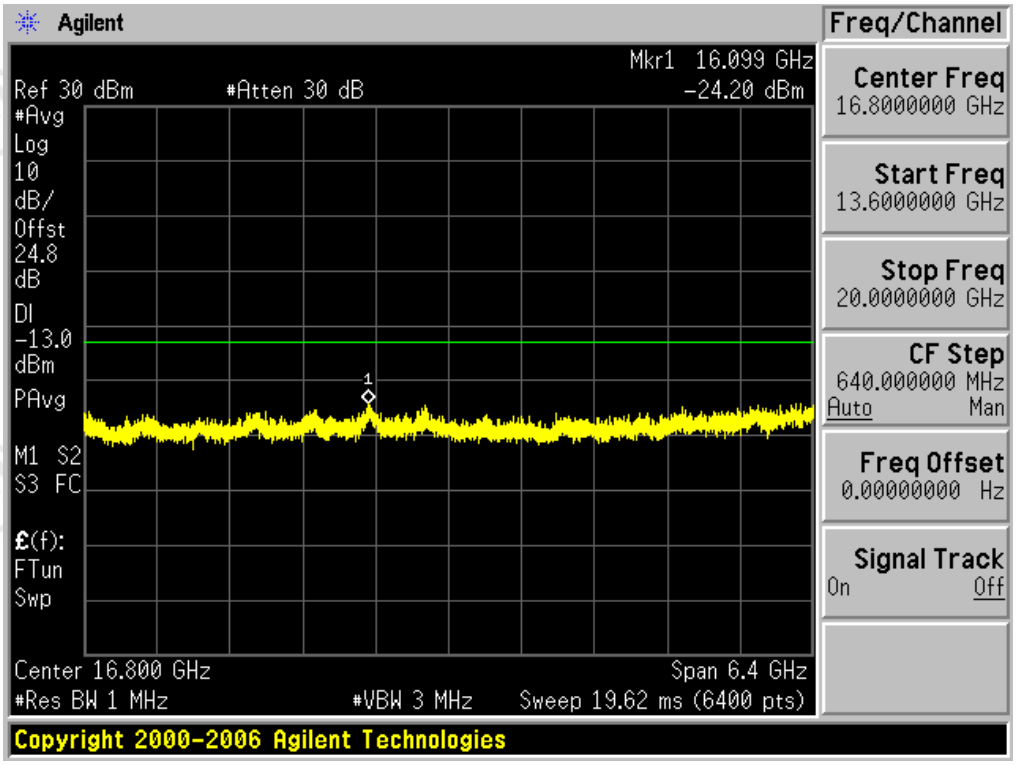





Agilent
Freq/Channel
Mkr1 979.6 MHz
Ref 30 dBm
#Atten 30 dB
-42.56 dBm
#Avg
Log
10
dB/
Offst
14.4
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FC
£(f):
FTun
Swp
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
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
-18.58 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 7.003 GHz
Ref 30 dBm
#Atten 30 dB
-31.59 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
-24.20 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) WCDMA 850: ±2.5ppm WCDMA 1900: --- WCDMA 1700: ---
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
WCDMA 850	TM1	LCH	TN	VL	-2.85	0.00	±2.5	PASS
			TN	VN	-1.74	0.00	±2.5	PASS
			TN	VH	-3.80	0.00	±2.5	PASS
		MCH	TN	VL	-3.48	0.00	±2.5	PASS
			TN	VN	-1.74	0.00	±2.5	PASS
			TN	VH	1.65	0.00	±2.5	PASS
		HCH	TN	VL	-0.78	0.00	±2.5	PASS
			TN	VN	-1.74	0.00	±2.5	PASS
			TN	VH	-1.27	0.00	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
WCDMA 1700	TM1	LCH	TN	VL	-18.88	-0.01	PASS
			TN	VN	-12.88	-0.01	PASS
			TN	VH	-12.56	-0.01	PASS
		MCH	TN	VL	4.49	0.00	PASS
			TN	VN	-12.88	0.00	PASS
			TN	VH	3.86	0.00	PASS
		HCH	TN	VL	-11.05	-0.01	PASS
			TN	VN	-12.88	0.00	PASS
			TN	VH	-7.57	0.00	PASS

Test Band	Test Mode	Test Channel	Test Temp.	Test Volt.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
WCDMA 1900	TM1	LCH	TN	VL	-11.89	-0.01	PASS
			TN	VN	-6.01	0.00	PASS
			TN	VH	-13.00	-0.01	PASS
		MCH	TN	VL	-6.50	0.00	PASS
			TN	VN	-6.01	0.00	PASS
			TN	VH	-5.36	0.00	PASS
		HCH	TN	VL	-12.10	-0.01	PASS
			TN	VN	-6.01	-0.01	PASS
			TN	VH	-7.55	0.00	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
WCDMA 850	TM1	LCH	VN	-30	0.06	0.00	±2.5	PASS
			VN	-20	0.15	0.00	±2.5	PASS
			VN	-10	2.78	0.00	±2.5	PASS
			VN	0	1.01	0.00	±2.5	PASS
			VN	10	-3.23	0.00	±2.5	PASS
			VN	20	1.60	0.00	±2.5	PASS
			VN	30	-0.50	0.00	±2.5	PASS
			VN	40	-0.24	0.00	±2.5	PASS
			VN	50	1.48	0.00	±2.5	PASS
WCDMA 850	TM1	MCH	VN	-30	0.08	0.00	±2.5	PASS
			VN	-20	2.21	0.00	±2.5	PASS
			VN	-10	-1.92	0.00	±2.5	PASS
			VN	0	0.34	0.00	±2.5	PASS
			VN	10	-1.69	0.00	±2.5	PASS
			VN	20	-1.89	0.00	±2.5	PASS
			VN	30	-1.04	0.00	±2.5	PASS
			VN	40	-3.02	0.00	±2.5	PASS
			VN	50	-0.35	0.00	±2.5	PASS
WCDMA 850	TM1	HCH	VN	-30	-4.23	0.00	±2.5	PASS
			VN	-20	1.07	0.00	±2.5	PASS
			VN	-10	0.70	0.00	±2.5	PASS
			VN	0	-2.40	0.00	±2.5	PASS
			VN	10	-1.77	0.00	±2.5	PASS
			VN	20	-1.25	0.00	±2.5	PASS
			VN	30	0.27	0.00	±2.5	PASS
			VN	40	-3.31	0.00	±2.5	PASS
			VN	50	-1.63	0.00	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
WCDMA 1700	TM1	LCH	VN	-30	-14.33	-0.01	PASS
			VN	-20	-8.18	0.00	PASS
			VN	-10	-10.25	-0.01	PASS
			VN	0	-5.72	0.00	PASS
			VN	10	-9.58	-0.01	PASS
			VN	20	-11.54	-0.01	PASS
			VN	30	-6.87	0.00	PASS
			VN	40	-5.17	0.00	PASS
			VN	50	-4.78	0.00	PASS
WCDMA 1700	TM1	MCH	VN	-30	6.87	0.00	PASS
			VN	-20	3.62	0.00	PASS
			VN	-10	0.96	0.00	PASS
			VN	0	4.58	0.00	PASS
			VN	10	-1.94	0.00	PASS
			VN	20	3.68	0.00	PASS
			VN	30	5.77	0.00	PASS
			VN	40	1.37	0.00	PASS
			VN	50	3.63	0.00	PASS
WCDMA 1700	TM1	HCH	VN	-30	-13.43	-0.01	PASS
			VN	-20	-11.63	-0.01	PASS
			VN	-10	-7.83	0.00	PASS
			VN	0	-7.81	0.00	PASS
			VN	10	-13.67	-0.01	PASS
			VN	20	-10.06	-0.01	PASS
			VN	30	-7.16	0.00	PASS
			VN	40	-7.68	0.00	PASS
			VN	50	-9.67	-0.01	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Verdict
WCDMA 1900	TM1	LCH	VN	-30	-9.98	-0.01	PASS
			VN	-20	-8.54	0.00	PASS
			VN	-10	-6.00	0.00	PASS
			VN	0	-6.68	0.00	PASS
			VN	10	-10.54	-0.01	PASS
			VN	20	-5.00	0.00	PASS
			VN	30	-3.85	0.00	PASS
			VN	40	-7.13	0.00	PASS
			VN	50	-7.84	0.00	PASS
WCDMA 1900	TM1	MCH	VN	-30	-6.35	0.00	PASS
			VN	-20	-8.21	0.00	PASS
			VN	-10	-8.38	0.00	PASS
			VN	0	-3.77	0.00	PASS
			VN	10	-10.09	-0.01	PASS
			VN	20	-9.41	-0.01	PASS
			VN	30	-7.69	0.00	PASS
			VN	40	-9.52	-0.01	PASS
			VN	50	-6.90	0.00	PASS
WCDMA 1900	TM1	HCH	VN	-30	-9.19	0.00	PASS
			VN	-20	-9.29	0.00	PASS
			VN	-10	-2.93	0.00	PASS
			VN	0	-9.16	0.00	PASS
			VN	10	-8.97	0.00	PASS
			VN	20	-9.66	-0.01	PASS
			VN	30	-13.35	-0.01	PASS
			VN	40	-9.93	-0.01	PASS
			VN	50	-5.36	0.00	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	WCDMA Band V	WCDMA Band II	WCDMA Band IV
Frequency	824 – 849MHz	1850 – 1910MHz	1710 – 1755MHz
Limit	38.45dBm （7W）	33.01dBm （2W）	30dBm （1W）

Measurement Data

WCDMA band V							
Channel/fc (MHz)	Height (cm)	Azimuth (deg)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
4132/ 826.4	150	154	18.1	38.45	-20.35	Pass	H
	200	313	20.2	38.45	-18.25	Pass	V
4182/ 836.6	150	215	18.52	38.45	-19.93	Pass	H
	200	270	19.56	38.45	-18.89	Pass	V
4233/ 846.6	150	226	17.69	38.45	-20.76	Pass	H
	150	226	20.09	38.45	-18.36	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	48	17.98	33.01	-15.03	Pass	H
	250	67	20.06	33.01	-12.95	Pass	V
9400/1880.0	150	203	15.28	33.01	-17.73	Pass	H
	150	270	21.1	33.01	-11.91	Pass	V
9538/1907.6	150	210	16.57	33.01	-16.44	Pass	H
	150	132	18.2	33.01	-14.81	Pass	V

WCDMA band IV							
Channel/fc (MHz)	Height (cm)	Azimuth (deg)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1312/1712.4	250	98	14.04	30.00	-18.97	Pass	H
	200	144	17.25	30.00	-15.76	Pass	V
1413/1732.6	150	305	14.38	30.00	-18.63	Pass	H
	200	172	22.14	30.00	-10.87	Pass	V
1513/1752.6	150	258	14.52	30.00	-18.49	Pass	H
	150	167	19.3	30.00	-13.71	Pass	V

Appendix H): Field strength of spurious radiation

<table>
<tr><td>Receiver Setup:</td><td>
<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>
</td></tr>
<tr><td>Measurement Procedure:</td><td>
1. Scan up to 10th harmonic, find the maximum radiation frequency to measure.
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.
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.
</td></tr>
<tr><td>Limit:</td><td>Attenuated at least 43+10log(P)</td></tr>
</table>

Test Data:

Above 1GHz

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.
1764.123	150	154	-44.19	-13	-31.19	Pass	H
2412.718	200	313	-35.72	-13	-22.72	Pass	H
3738.129	150	215	-49.32	-13	-36.32	Pass	H
6511.117	150	270	-45.38	-13	-32.38	Pass	H
9181.198	150	226	-44.25	-13	-31.25	Pass	H
12303.620	150	31	-43.28	-13	-30.28	Pass	H
1118.517	150	100	-56.22	-13	-43.22	Pass	V
1651.146	200	14	-45.22	-13	-32.22	Pass	V
2519.418	150	258	-47.43	-13	-34.43	Pass	V
3757.208	150	20	-49.11	-13	-36.11	Pass	V
6577.752	150	360	-45.60	-13	-32.60	Pass	V
9884.602	150	78	-45.42	-13	-32.42	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.
1764.123	150	36	-46.97	-13	-33.97	Pass	H
2412.718	150	10	-36.05	-13	-23.05	Pass	H
3747.656	150	251	-49.90	-13	-36.90	Pass	H
6396.125	100	360	-45.57	-13	-32.57	Pass	H
9181.198	150	78	-45.26	-13	-32.26	Pass	H
12303.620	150	14	-43.90	-13	-30.90	Pass	H
1346.929	150	251	-55.49	-13	-42.49	Pass	V
1672.296	150	20	-47.86	-13	-34.86	Pass	V
2519.418	150	360	-46.45	-13	-33.45	Pass	V
3757.208	250	78	-49.32	-13	-36.32	Pass	V
6396.125	150	200	-45.70	-13	-32.70	Pass	V
11312.310	150	46	-44.42	-13	-31.42	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.
1118.517	150	360	-56.49	-13	-43.49	Pass	H
1894.450	200	24	-52.53	-13	-39.53	Pass	H
2412.718	150	11	-44.85	-13	-31.85	Pass	H
3776.385	150	78	-50.24	-13	-37.24	Pass	H
6494.564	150	200	-45.84	-13	-32.84	Pass	H
10113.670	150	61	-44.52	-13	-31.52	Pass	H
1127.091	150	40	-57.35	-13	-44.35	Pass	V
1828.125	150	200	-56.57	-13	-43.57	Pass	V
2310.537	150	251	-52.59	-13	-39.59	Pass	V
4181.159	200	59	-50.16	-13	-37.16	Pass	V
6379.864	150	121	-47.27	-13	-34.27	Pass	V
10087.960	150	30	-45.79	-13	-32.79	Pass	V

WCDMA band IV 1312 channel/1712.4MHz(lowest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1135.731	150	116	-56.62	-13	-43.62	Pass	H
3738.129	150	20	-50.07	-13	-37.07	Pass	H
4617.550	150	147	-50.88	-13	-37.88	Pass	H
6527.712	150	59	-46.41	-13	-33.41	Pass	H
9834.406	200	200	-45.98	-13	-32.98	Pass	H
11933.470	150	360	-43.58	-13	-30.58	Pass	H
1350.362	150	70	-53.56	-13	-40.56	Pass	V
3419.491	150	89	-43.10	-13	-30.10	Pass	V
4433.263	150	24	-50.05	-13	-37.05	Pass	V
6363.645	150	100	-46.17	-13	-33.17	Pass	V
9181.198	150	21	-45.19	-13	-32.19	Pass	V
11872.880	150	56	-43.44	-13	-30.44	Pass	V

WCDMA band IV 1413 channel/1732.6MHz(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1350.362	150	85	-55.79	-13	-42.79	Pass	H
3757.208	150	200	-49.20	-13	-36.20	Pass	H
6363.645	150	360	-45.60	-13	-32.60	Pass	H
7941.185	150	71	-46.59	-13	-33.59	Pass	H
9834.406	250	42	-45.51	-13	-32.51	Pass	H
11842.690	150	100	-44.00	-13	-31.00	Pass	H
1346.929	150	56	-54.06	-13	-41.06	Pass	V
3463.291	250	78	-47.26	-13	-34.26	Pass	V
4617.550	150	22	-49.38	-13	-36.38	Pass	V
6527.712	150	51	-45.02	-13	-32.02	Pass	V
9134.575	150	36	-45.79	-13	-32.79	Pass	V
10696.210	150	70	-45.23	-13	-32.23	Pass	V

WCDMA band IV 1513 channel/1752.6MHz(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1118.517	150	336	-56.74	-13	-43.74	Pass	H
1510.402	150	349	-53.81	-13	-40.81	Pass	H
3728.625	150	151	-49.63	-13	-36.63	Pass	H
6511.117	250	20	-45.68	-13	-32.68	Pass	H
8637.084	150	47	-46.10	-13	-33.10	Pass	H
11842.690	150	100	-44.22	-13	-31.22	Pass	H
1204.210	150	84	-55.79	-13	-42.79	Pass	V
1346.929	150	360	-53.42	-13	-40.42	Pass	V
3507.652	200	45	-47.22	-13	-34.22	Pass	V
6396.125	200	210	-44.72	-13	-31.72	Pass	V
8002.061	150	20	-45.78	-13	-32.78	Pass	V
11140.850	150	75	-43.55	-13	-30.55	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.
1132.844	150	56	-56.82	-13	-43.82	Pass	H
1289.885	150	79	-56.26	-13	-43.26	Pass	H
3747.656	150	200	-49.23	-13	-36.23	Pass	H
6347.466	150	154	-45.14	-13	-32.14	Pass	H
8506.170	150	78	-45.52	-13	-32.52	Pass	H
11027.980	150	360	-43.46	-13	-30.46	Pass	H
1110.008	150	220	-55.70	-13	-42.70	Pass	V
1506.563	250	87	-52.92	-13	-39.92	Pass	V
3747.656	250	145	-49.66	-13	-36.66	Pass	V
6412.427	250	56	-45.41	-13	-32.41	Pass	V
9587.228	150	91	-45.29	-13	-32.29	Pass	V
12397.940	150	82	-42.09	-13	-29.09	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.
1165.013	150	205	-56.57	-13	-43.57	Pass	H
1613.749	150	360	-56.71	-13	-43.71	Pass	H
3757.208	150	178	-49.05	-13	-36.05	Pass	H
6331.329	150	20	-45.97	-13	-32.97	Pass	H
9859.472	100	151	-45.29	-13	-32.29	Pass	H
12334.980	150	69	-42.36	-13	-29.36	Pass	H
1350.362	250	200	-55.00	-13	-42.00	Pass	V
3747.656	150	147	-47.98	-13	-34.98	Pass	V
5325.007	150	20	-49.39	-13	-36.39	Pass	V
6511.117	150	58	-44.99	-13	-31.99	Pass	V
9228.060	250	210	-45.17	-13	-32.17	Pass	V
12272.34	161	360	-42.28	-13	-29.28	Pass	V

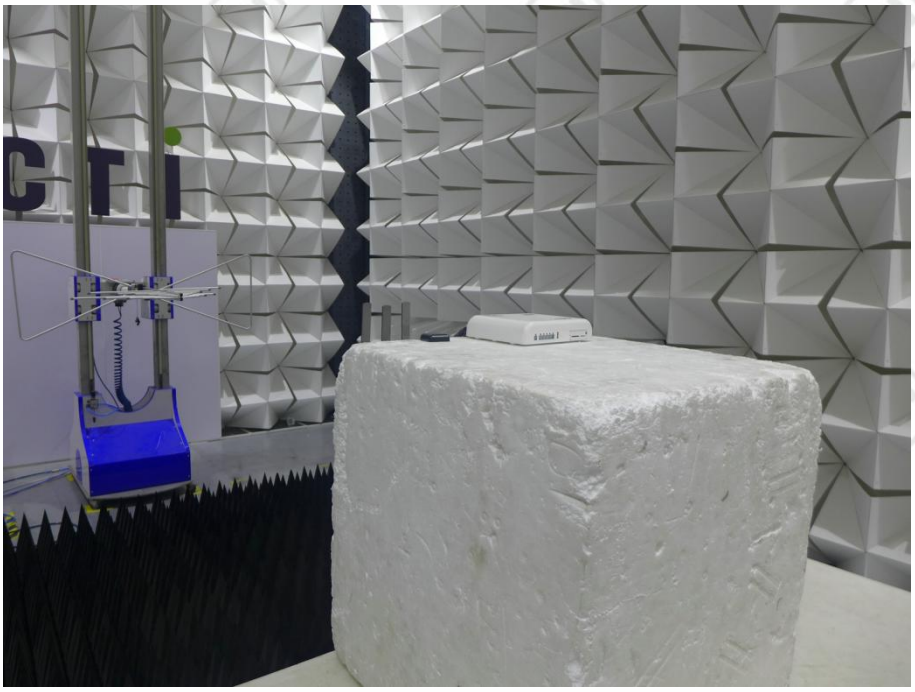
WCDMA band II 9538 channel/1907.6MHz(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1159.096	150	336	-57.19	-13	-44.19	Pass	H
1296.469	150	100	-57.15	-13	-44.15	Pass	H
3598.087	200	78	-49.78	-13	-36.78	Pass	H
6331.329	150	245	-45.51	-13	-32.51	Pass	H
9065.084	150	20	-44.62	-13	-31.62	Pass	H
12334.980	150	360	-42.50	-13	-29.50	Pass	H
1346.929	150	164	-54.89	-13	-41.89	Pass	V
3738.129	150	200	-48.82	-13	-35.82	Pass	V
4724.558	150	98	-49.26	-13	-36.26	Pass	V
6527.712	150	200	-45.67	-13	-32.67	Pass	V
9065.084	200	31	-45.20	-13	-32.20	Pass	V
12303.620	150	59	-42.22	-13	-29.22	Pass	V

Note:

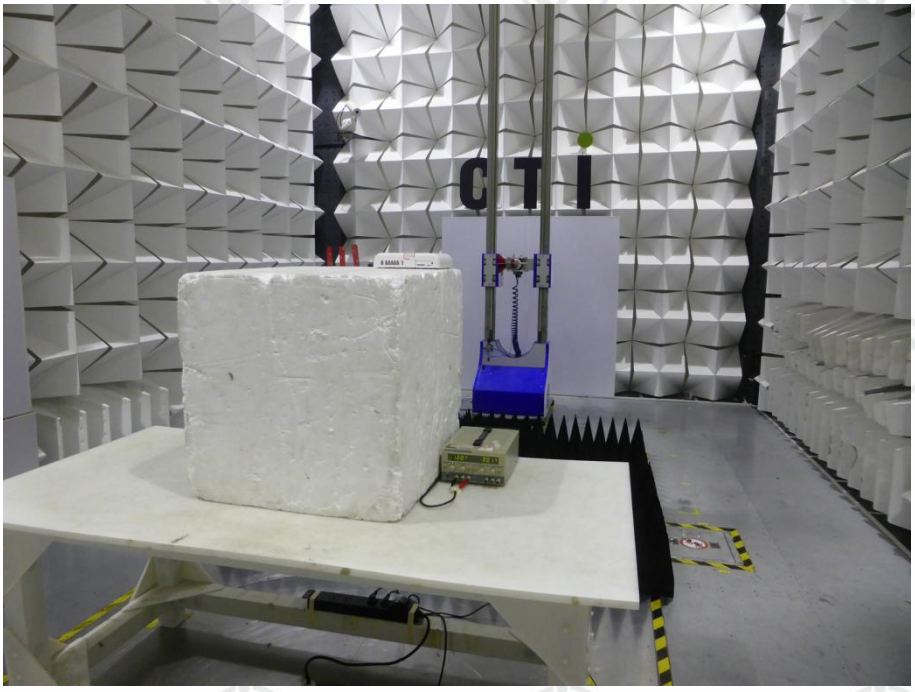
1) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 1GHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below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

PHOTOGRAPHS OF TEST SETUP

Test model No.: TN-IVS-8000



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



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

Annex A: Appendix A: PHOTOGRAPHS OF EUT Constructional Details

(Please See Appendix A)

*** End of Report ***