TEST REPORT

Product	:	3G smart phone
Trade mark	:	N/A
Model/Type reference	:	SP4541
Serial Number	:	N/A
Report Number	:	EED32H000601-3
FCC ID	:	2AETNSP4541
Test Standards	:	47 CFR Part 2(2014) 47 CFR Part 22 subpart H(2014) 47 CFR Part 24 subpart E(2014)
Test result	:	PASS

Prepared for:

WOO GLOBAL MARKETS, S.L.
Camino de Vinateros, 10. Bajo (Oficinas) 28030 MADRID - SPAIN

Prepared by:

Centre Testing International (Shenzhen) Corporation
Building C, Scientific Innovation Park, Tiegang Reservior, Xixiang, Baoan District, Shenzhen, China
TEL: +86-755-3368 3919
FAX: +86-755-3368 3385

Tested by: Wave Xin Reviewed by: Kevin Lan

Approved by: Sheek Luo Date: Jun. 03, 2015

Sheek Luo
Lab supervisor

Check No.: 1727844581

2 Version

Version No.	Date	Description
00	2015-04-01	Original

3 Test Summary

Test Item	Test Requirement	Test method	Result
GSM 850, WCDMA (Band V)			
Conducted output power	Part 2.1046(a)/Part 22.913(a)	ITA-603-C-2004 & KDB 971168 D01v02r02	PASS
Effective Radiated Power of Transmitter(ERP)	Part 2.1046(a)/Part 22.913(a)	ITA-603-C-2004 & 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)	ITA-603-C-2004 & KDB 971168 D01v02r02	PASS
Field strength of spurious radiation	Part 2.1053/ Part 2.1057/ Part 22.917(a)(b)	ITA-603-C-2004 & KDB 971168 D01v02r02	PASS
Frequency stability	Part 2.1055/ Part 22.355	ITA-603-C-2004 & KDB 971168 D01v02r02	PASS
GSM 1900,WCDMA (Band II)			
Conducted output power	Part 2.1046(a) /Part 24.232(c)	ITA-603-C-2004& KDB 971168 D01v02r02	PASS
Effective Radiated Power of Transmitter(EIRP)	Part 2.1046(a) / Part 24.232(c)	ITA-603-C-2004 & KDB 971168 D01v02r02	PASS
peak-to-average ratio	Part 24.232(d)	KDB 971168 D01v02r02	PASS
99% &26dB Occupied 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)	ITA-603-C-2004 & KDB 971168 D01v02r02	PASS
Field strength of spurious radiation	Part 2.1053 /Part 2.1057 / Part 24.238(a)(b)	ITA-603-C-2004 & KDB 971168 D01v02r02	PASS
Frequency stability	Part 2.1055/Part 24.235	ITA-603-C-2004 & KDB 971168 D01v02r02	PASS

Remark:
Tx: In this whole report Tx (or tx) means transmitter. Rx: In this whole report Rx (or rx) means receiver.
LCH: In this whole report LCH means low channel. MCH: In this whole report LCH means middle channel.
HCH: In this whole report LCH means high channel.
VL: In this whole report Volt means low voltage. (DC 3.2V)
VN: In this whole report Volt means normal voltage. (DC 3.7V)
VH:In this whole report Volt means high voltage. (DC 4.2V)
TN: In this whole report Temp means normal temperature. (25℃)
Humid: In this whole report Humid means humidity.
N/A: In this whole report not application.

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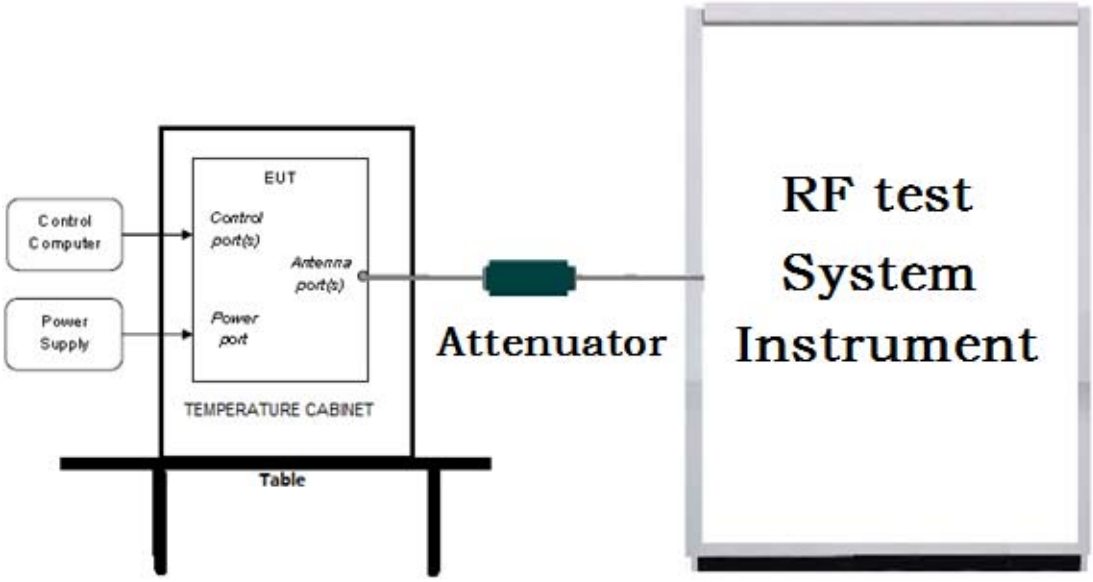
5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

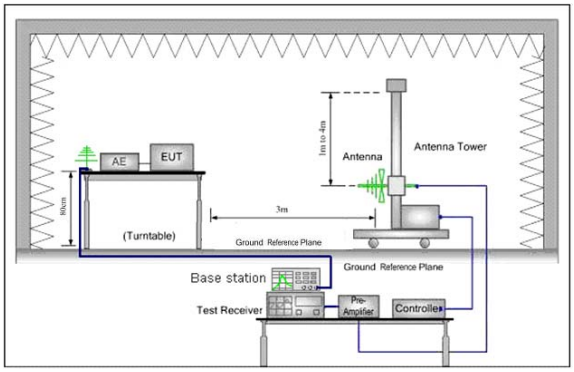


Figure 1. 30MHz to 1GHz

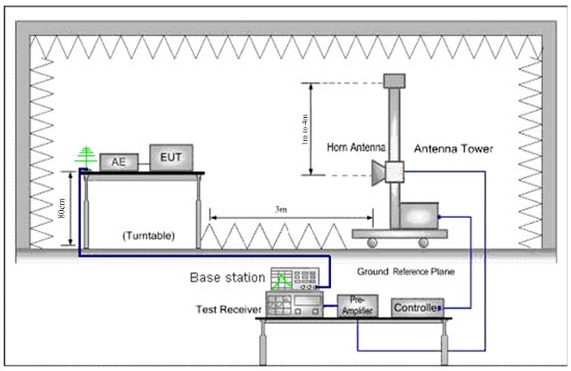


Figure 2. above 1GHz

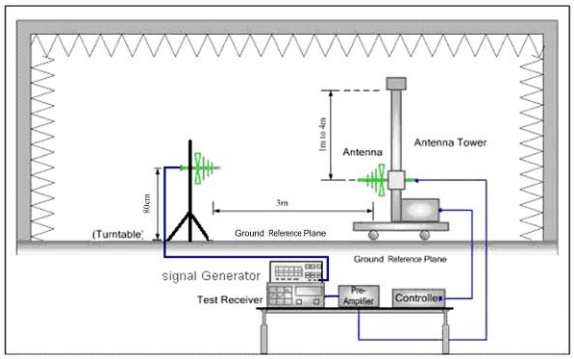


Figure 1. 30MHz to 1GHz

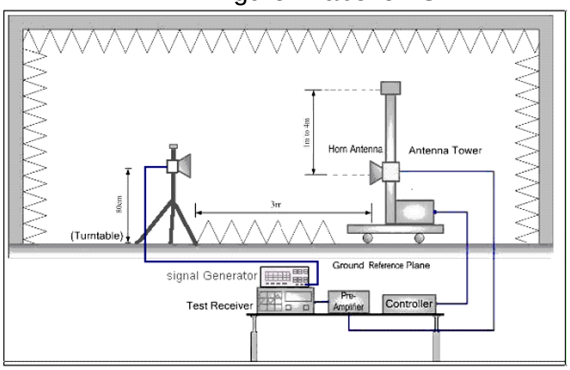


Figure 2. above 1GHz

5.2 Test Environment

Operating Environment:	
Temperature:	25.0 °C
Humidity:	53 % RH
Atmospheric Pressure:	995mbar

5.3 Test Condition

Test channel:

Test Mode	Tx/Rx	RF Channel		
		Low(L)	Middle(M)	High(H)
GSM/GPRS850	Tx	Channel 128	Channel 190	Channel 251
	（824 MHz ~849 MHz）	824.2MHz	836.6 MHz	848.8 MHz
	Rx	Channel 128	Channel 190	Channel 251
	（869 MHz ~894 MHz）	869.2 MHz	881.6 MHz	893.8 MHz
WCDMA band V	Tx	Channel 4132	Channel 4182	Channel 4233
	（824 MHz ~849 MHz）	826.4 MHz	836.4 MHz	846.6 MHz
	Rx	Channel 4357	Channel 4407	Channel 4458
	（869 MHz ~894 MHz）	871.4 MHz	881.4 MHz	891.6 MHz
GSM/GPRS 1900	Tx	Channel 512	Channel 661	Channel 810
	（1850 MHz ~1910 MHz）	1850.2MHz	1880.0 MHz	1909.8 MHz
	Rx	Channel 512	Channel 661	Channel 810
	（1930 MHz ~1990 MHz）	1930.2 MHz	1960.0 MHz	1989.8 MHz
WCDMA Band II	Tx	Channel 9262	Channel 9400	Channel 9538
	（1850 MHz ~1910 MHz）	1852.4 MHz	1880.0 MHz	1907.6 MHz
	Rx	Channel 9662	Channel 9800	Channel 9938
	（1930 MHz ~1990 MHz）	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.

GSM850		Burst-Averaged output Power (dBm)		
		128CH	190CH	251CH
GSM		31.95	31.95	31.82
GPRS (GMSK)	1 Tx Slot	31.88	31.92	31.80
	2 Tx Slots	30.16	30.36	29.99
	3 Tx Slots	28.09	28.59	27.93
	4 Tx Slots	26.55	26.63	26.00

GSM1900		Burst-Averaged output Power (dBm)		
		512CH	661CH	810CH
GSM		29.87	29.40	29.48
GPRS (GMSK)	1 Tx Slot	29.90	29.49	29.58
	2 Tx Slots	27.65	27.77	27.76
	3 Tx Slots	25.53	25.64	25.55
	4 Tx Slots	23.84	24.23	24.37

UMTS Band II		Conducted Power (dBm)		
		9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	23.02	22.80	22.66
	64kbps RMC	22.65	22.58	22.43
	144kbps RMC	22.55	22.49	22.36
	384kbps RMC	22.56	22.52	22.32
HSDPA	Subtest 1	22.23	22.25	22.32
	Subtest 2	22.33	22.35	22.36
	Subtest 3	22.46	22.48	22.45
	Subtest 4	22.44	22.44	22.39

UMTS Band V		Conducted Power (dBm)		
		4132CH	4182CH	4233CH
WCDMA	12.2kbps RMC	22.81	22.94	22.99
	64kbps RMC	22.56	22.69	22.62
	144kbps RMC	22.60	22.71	22.61
	384kbps RMC	22.59	22.72	22.59
HSDPA	Subtest 1	22.65	22.76	22.59
	Subtest 2	22.68	22.77	22.58
	Subtest 3	22.70	22.75	22.64
	Subtest 4	22.65	22.71	22.59

SIM 2 Card Conducted transmitter power measurement result.

GSM850		Burst-Averaged output Power (dBm)		
		128CH	190CH	251CH
GSM		31.74	31.70	31.63
GPRS (GMSK)	1 Tx Slot	31.69	31.73	31.61
	2 Tx Slots	29.97	30.17	29.81
	3 Tx Slots	27.94	28.45	27.74
	4 Tx Slots	26.36	26.44	25.81

GSM1900		Burst-Averaged output Power (dBm)		
		512CH	661CH	810CH
GSM		29.68	29.21	29.29
GPRS (GMSK)	1 Tx Slot	29.78	29.33	29.39
	2 Tx Slots	27.46	27.58	27.50
	3 Tx Slots	25.35	25.46	25.36
	4 Tx Slots	23.65	24.04	24.18

UMTS Band II		Conducted Power (dBm)		
		9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	22.83	22.61	22.47
	64kbps RMC	22.46	22.39	22.29
	144kbps RMC	22.31	22.34	22.17
	384kbps RMC	22.37	22.33	22.13
HSDPA	Subtest 1	22.02	22.06	22.13
	Subtest 2	22.14	22.16	22.17
	Subtest 3	22.25	22.29	22.26
	Subtest 4	22.25	22.25	22.25

UMTS Band V		Conducted Power (dBm)		
		4132CH	4182CH	4233CH
WCDMA	12.2kbps RMC	22.62	22.71	22.81
	64kbps RMC	22.37	22.53	22.43
	144kbps RMC	22.41	22.52	22.42
	384kbps RMC	22.44	22.53	22.44
HSDPA	Subtest 1	22.42	22.57	22.48
	Subtest 2	22.49	22.58	22.39
	Subtest 3	22.51	22.56	22.45
	Subtest 4	22.46	22.52	22.46

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

band	Radiated	Conducted
GSM/GPRS 850	1) GSM Link 2) GPRS 8 Link	1) GSM Link 2) GPRS 8 Link
GSM/GPRS 1900	1)GSM Link 2) GPRS 8 Link	1) GSM Link 2) GPRS 8 Link
WCDMA Band V	RMC 12.2Kbps Link	RMC 12.2Kbps Link
WCDMA Band II	RMC 12.2Kbps Link	RMC 12.2Kbps Link

6 General Information

6.1 Client Information

Applicant:	WOO GLOBAL MARKETS, S.L.
Address of Applicant:	Camino de Vinateros, 10. Bajo (Oficinas) 28030 MADRID - SPAIN
Manufacturer:	WOO GLOBAL MARKETS, S.L.
Address of Manufacturer:	Camino de Vinateros, 10. Bajo (Oficinas) 28030 MADRID - SPAIN

6.2 General Description of EUT

Product Name:	3G smart phone	
Model No.(EUT):	SP4541	
Tark mark:	N/A	
EUT Supports Radios application	GSM/GPRS 850: Tx:824.20 - 848.80MHz;Rx: 869.20 – 893.80MHz GSM/GPRS 1900: Tx:1850.20 – 1909.80MHz; Rx:1930.20 – 1989.80MHz WCDMA/HSDPA Band V: Tx:826.40 -846.60MHz;Rx: 871.40 – 891.60MHz WCDMA/HSDPA Band II: Tx:1852.40 – 1907.60MHz;Rx:1932.40 – 1987.60MHz BT3.0+EDR: 2402 – 2480MHz IEEE 802.11b/g/n(HT20): 2412 – 2462MHz	
Power Supply:	Adapter:	Input: AC 100V-240V 50-60Hz 0.4A Output: DC 5.0V 1000mA
	Battery:	DC3.7V (Li-on Rechargeable Battery)
Sample Received Date:	May 12, 2015	
Sample tested Date:	May 12,2015 to Jun. 03, 2015	

6.3 Product Specification subjective to this standard

Frequency Band:	GSM/GPRS 850: Tx:824.20 -848.80MHz;Rx: 869.20 – 893.80MHz GSM/GPRS 1900: Tx:1850.20 – 1909.80MHz; Rx:1930.20 – 1989.80MHz WCDMA/HSDPA Band V: Tx:826.40 -846.60MHz;Rx: 871.40 – 891.60MHz WCDMA/HSDPA Band II: Tx:1852.40 – 1907.60MHz;Rx:1932.40 – 1987.60MHz
Modulation Type:	GSM/GPRS Mode with GMSK Modulation WCDMA Mode with QPSK Modulation
Sample Type:	Portable production
Antenna Type:	Integral
Antenna Gain:	0dBi

6.4 Description of Support Units

The EUT has been tested independently.

6.5 Test Location

All tests were performed at:

Centre Testing International (Shenzhen) Corporation
Building C, Scientific Innovation Park, Tiegang Reservior, Xixiang, Baoan District, Shenzhen, China
TEL: +86-755-3368 3919
FAX: +86-755-3368 3385
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 (Shenzhen) 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 (Shenzhen) 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.: 756231

Centre Testing International (Shenzhen) 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 756231.

IC-Registration No.: 7408A

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

IC-Registration No.: 7408B

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

NEMKO-Aut. No.: ELA503

Centre Testing International (Shenzhen) 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 (Shenzhen) 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 (Shenzhen) 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 (Shenzhen) 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 (Shenzhen) 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.

7 Equipment List

Communication RF test system instrument					
Equipment	**Manufacturer**	**Mode No.**	**Serial Number**	**Cal. Date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Spectrum Analyzer	Agilent	E4440A	MY46185649	12-18-2014	12-17-2015
Signal Generator	Agilent	E4438C	MY45095744	04-19-2015	04-18-2016
Communication test set	Agilent	E5515C	GB47050533	01-13-2015	01-12-2016
Signal Generator	Keysight	E8257D	MY53401106	04-14-2015	04-13-2016
Communication test set	R&S	CMW500	152394	04-19-2015	04-18-2016
High-pass filter(3-18GHz)	Sinoscite	FL3CX03WG18 NM12-0398-002	---	01-13-2015	01-12-2016
High-pass filter(5-18GHz)	MICRO-TRONICS	SPA-F-63029-4	---	01-13-2015	01-12-2016
band rejection filter	Sinoscite	FL5CX01CA09C L12-0395-001	---	01-13-2015	01-12-2016
band rejection filter	Sinoscite	FL5CX01CA08C L12-0393-001	---	01-13-2015	01-12-2016
band rejection filter	Sinoscite	FL5CX02CA04C L12-0396-002	---	01-13-2015	01-12-2016
band rejection filter	Sinoscite	FL5CX02CA03C L12-0394-001	---	01-13-2015	01-12-2016
DC Power	Keysight	E3642A	MY54426112	03-31-2015	03-30-2016
DC Power	Keysight	E3642A	MY54426115	03-31-2015	03-30-2016
PC-2	Lenovo	R4960d	---	04-01-2015	03-31-2016
PC-3	Lenovo	R4960d	---	04-01-2015	03-31-2016
RF control unit	JS Tonscend	JS0806-1	20158060004	04-01-2015	03-31-2016
DC power Box	JS Tonscend	JS0806-4	20158060007	04-01-2015	03-31-2016
LTE Automatic test software	JS Tonscend	JSTS1120-1	---	04-01-2015	03-31-2016
WCDMA Automatic test software	JS Tonscend	JSTS1120-3	---	04-01-2015	03-31-2016
GSM Automatic test software	JS Tonscend	JSTS1120-3	---	04-01-2015	03-31-2016

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	---	06-02-2013	06-01-2016
TRILOG Broadband Antenna	SCHWARZBECK	VULB9163	9163-617	07-14-2014	07-13-2015
Microwave Preamplifier	Agilent	8449B	3008A02425	02-05-2015	02-04-2016
Horn Antenna	ETS-LINDGREN	3117	00057410	07-08-2012	07-07-2015
Loop Antenna	ETS	6502	00071730	07-23-2013	07-22-2015
Spectrum Analyzer	R&S	FSP40	100416	07-09-2014	07-08-2015
Receiver	R&S	ESCI	100435	07-09-2014	07-08-2015
Multi device Controller	maturo	NCD/070/10711112	---	01-13-2015	01-12-2016
LISN	schwarzbeck	NNBM8125	81251547	07-09-2014	07-08-2015
LISN	schwarzbeck	NNBM8125	81251546	07-09-2014	07-08-2015
Signal Generator	Agilent	E4438C	MY45095744	04-19-2015	04-18-2016
Signal Generator	Keysight	E8257D	MY53401106	04-14-2015	04-13-2016
Temperature/ Humidity Indicator	TAYLOR	1451	5190	07-10-2014	07-09-2015
Communication test set	Agilent	E5515C	GB47050533	01-13-2015	01-12-2016
Cable line	Fulai(7M)	SF106	5219/6A	01-13-2015	01-12-2016
Cable line	Fulai(6M)	SF106	5220/6A	01-13-2015	01-12-2016
Cable line	Fulai(3M)	SF106	5216/6A	01-13-2015	01-12-2016
Cable line	Fulai(3M)	SF106	5217/6A	01-13-2015	01-12-2016
Communication test set	R&S	CMW500	152394	04-19-2015	04-18-2016
High-pass filter(3-18GHz)	Sinoscite	FL3CX03WG18NM12-0398-002	---	01-13-2015	01-12-2016
High-pass filter(5-18GHz)	MICRO-TRONICS	SPA-F-63029-4	---	01-13-2015	01-12-2016
band rejection filter	Sinoscite	FL5CX01CA09CL12-0395-001	---	01-13-2015	01-12-2016
band rejection filter	Sinoscite	FL5CX01CA08CL12-0393-001	---	01-13-2015	01-12-2016
band rejection filter	Sinoscite	FL5CX02CA04CL12-0396-002	---	01-13-2015	01-12-2016
band rejection filter	Sinoscite	FL5CX02CA03CL12-0394-001	---	01-13-2015	01-12-2016

8 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	PART 22 (2014)	PART 22 – PUBLIC MOBILE SERVICES Subpart H – Cellular Radiotelephone Service
2	PART 24 (2014)	PART 24 – PERSONAL COMMUNICATIONS SERVICES Subpart E – Broadband PCS
3	PART 2 (2014)	Frequency allocations and radio treaty matters; general rules and regulations
4	TIA-603-C-2004	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)	ITA-603-C& 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% &26dB Occupied 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)	ITA-603-C & KDB 971168 D01v02r02	Spurious emissions at antenna terminals	PASS	Appendix E)
Part 2.1055/ Part 22.355/ Part 24.235	ITA-603-C & KDB 971168 D01v02r02	Frequency stability	PASS	Appendix F)
Part 2.1053/ Part 2.1057/ Part 22.917(a)(b)/ Part 24.238(a)(b)	ITA-603-C & KDB 971168 D01v02r02	Field strength of spurious radiation	PASS	Appendix G)
Part 2.1046(a)/Part 22.913(a)/ Part 24.232(c)	ITA-603-C & KDB 971168 D01v02r02	Effective Radiated Power of Transmitter(ERP)	PASS	Appendix H)

Test Mode	Test Modes description
GSM/TM1	GSM system,GSM,GMSK modulation
GSM/TM2	GSM system,GPRS,GMSK modulation
Test Mode	Test Modes description
UMTS/TM1	WCDMA system,QPSK modulation

Appendix A) RF Power Output

Test Band	Test Mode	Test Channel	Measured(dBm)	Limit (dBm)	Verdict
GSM850	GSM/TM1	LCH	31.95	38.5	PASS
		MCH	31.95	38.5	PASS
		HCH	31.82	38.5	PASS
	GSM/TM2	LCH	31.88	38.5	PASS
		MCH	31.92	38.5	PASS
		HCH	31.80	38.5	PASS

Test Band	Test Mode	Test Channel	Measured(dBm)	Limit (dBm)	Verdict
GSM1900	GSM/TM1	LCH	29.87	33	PASS
		MCH	29.40	33	PASS
		HCH	29.48	33	PASS
	GSM/TM2	LCH	29.90	33	PASS
		MCH	29.49	33	PASS
		HCH	29.58	33	PASS

Test Band	Test Mode	Test Channel	Measured(dBm)	Limit (dBm)	Verdict
WCDMA850	UMTS/TM1	LCH	23.02	38.5	PASS
		MCH	22.80	38.5	PASS
		HCH	22.66	38.5	PASS

Test Band	Test Mode	Test Channel	Measured(dBm)	Limit (dBm)	Verdict
WCDMA1900	UMTS/TM1	LCH	22.81	33	PASS
		MCH	22.94	33	PASS
		HCH	22.99	33	PASS

Appendix B) Peak-to-Average Ratio

Test Band	Test Mode	Test Channel	Measured (dBm)	Limit (dBm)	Verdict
GSM1900	GSM/TM1	LCH	7.41	13	PASS
		MCH	8.07	13	PASS
		HCH	9.82	13	PASS
	GSM/TM2	LCH	8.50	13	PASS
		MCH	9.85	13	PASS
		HCH	11.30	13	PASS

Test Band	Test Mode	Test Channel	Measured (dBm)	Limit (dBm)	Verdict
WCDMA1900	UMTS/TM1	LCH	3.36	13	PASS
		MCH	3.37	13	PASS
		HCH	3.20	13	PASS

Appendix C) BandWidth

Test Band	Test Mode	Test Channel	Occupied Bandwidth (KHZ)	Emission Bandwidth (KHZ)	Verdict
GSM850	GSM/TM1	LCH	251.49	314.96	PASS
		MCH	251.47	315.20	PASS
		HCH	243.04	321.66	PASS
	GSM/TM2	LCH	240.37	299.23	PASS
		MCH	244.42	304.59	PASS
		HCH	251.33	321.95	PASS

Test Band	Test Mode	Test Channel	Occupied Bandwidth (KHZ)	Emission Bandwidth (KHZ)	Verdict
GSM1900	GSM/TM1	LCH	244.80	311.77	PASS
		MCH	242.03	313.65	PASS
		HCH	246.59	312.37	PASS
	GSM/TM2	LCH	240.15	305.70	PASS
		MCH	252.49	321.40	PASS
		HCH	250.73	325.11	PASS

Test Band	Test Mode	Test Channel	Occupied Bandwidth (KHZ)	Emission Bandwidth (KHZ)	Verdict
WCDMA 850	UMTS/TM1	LCH	4103.5	4663	PASS
		MCH	4087.5	4659	PASS
		HCH	4095.3	4676	PASS

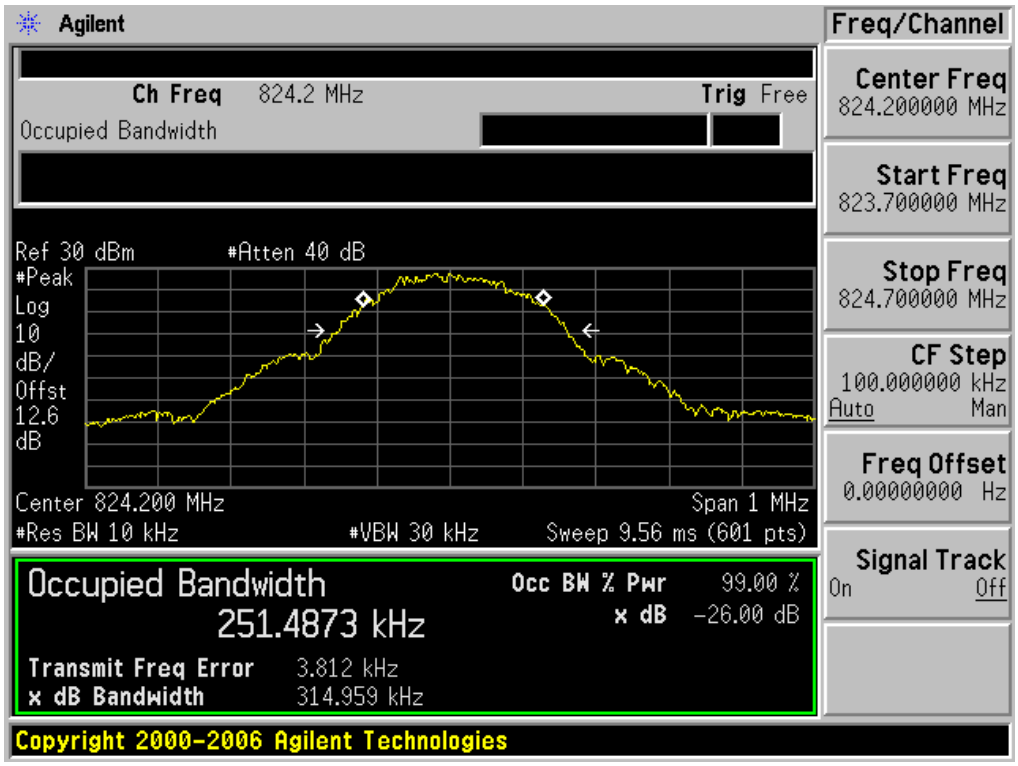
Test Band	Test Mode	Test Channel	Occupied Bandwidth (KHZ)	Emission Bandwidth (KHZ)	Verdict
WCDMA 1900	UMTS/TM1	LCH	4090.7	4652	PASS
		MCH	4116.9	4689	PASS
		HCH	4112.7	4661	PASS

For GSM

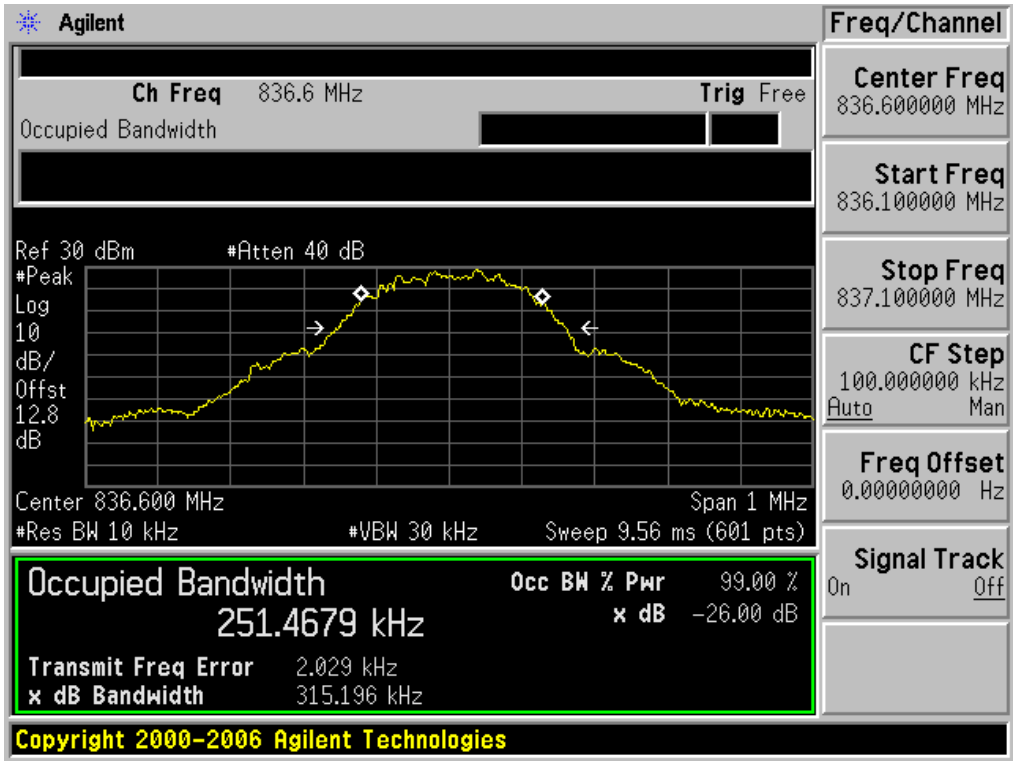
Test Band=GSM850

Test Mode=GSM/TM1

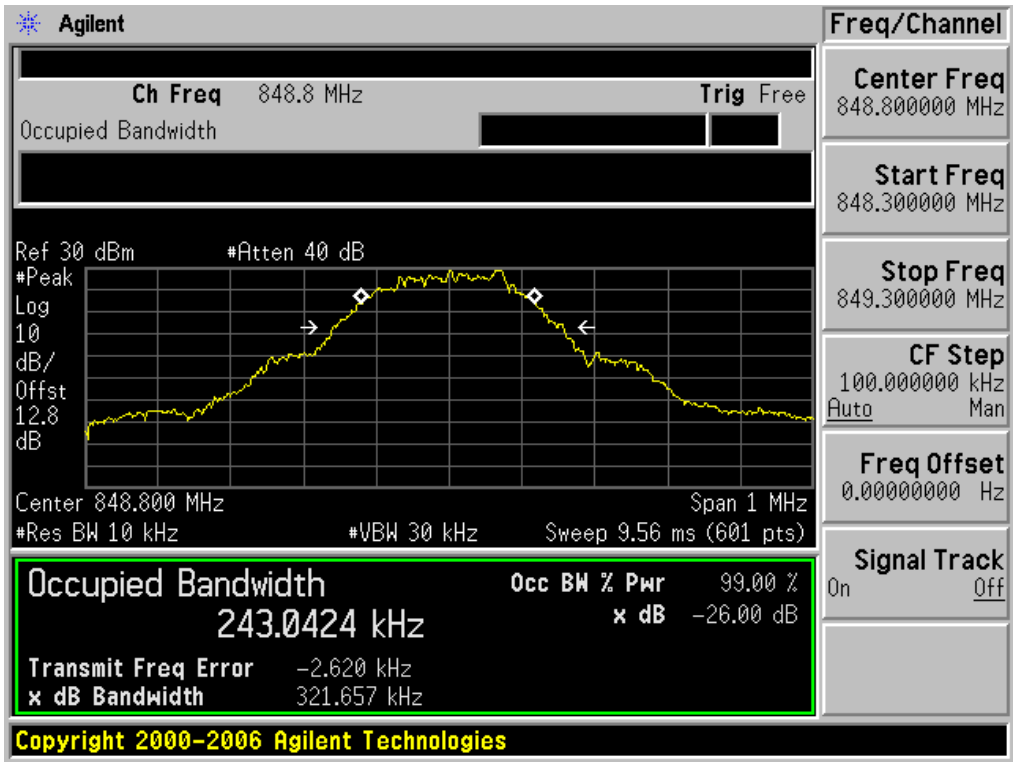
Test Channel=LCH



Test Channel=MCH

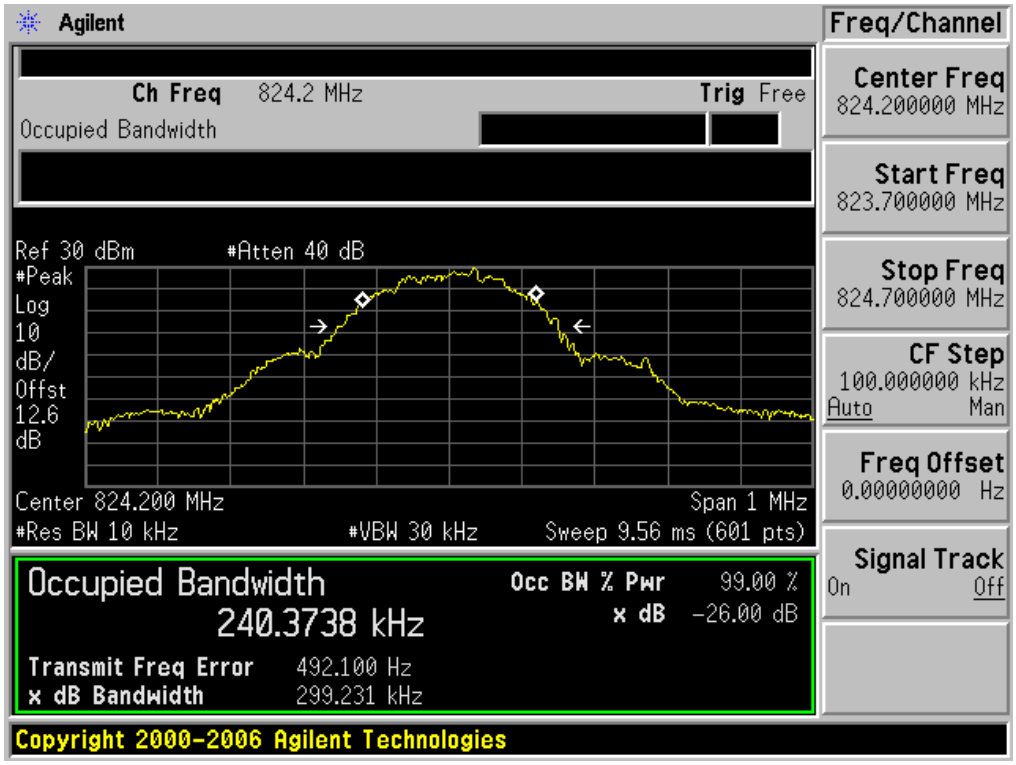


Test Channel=HCH

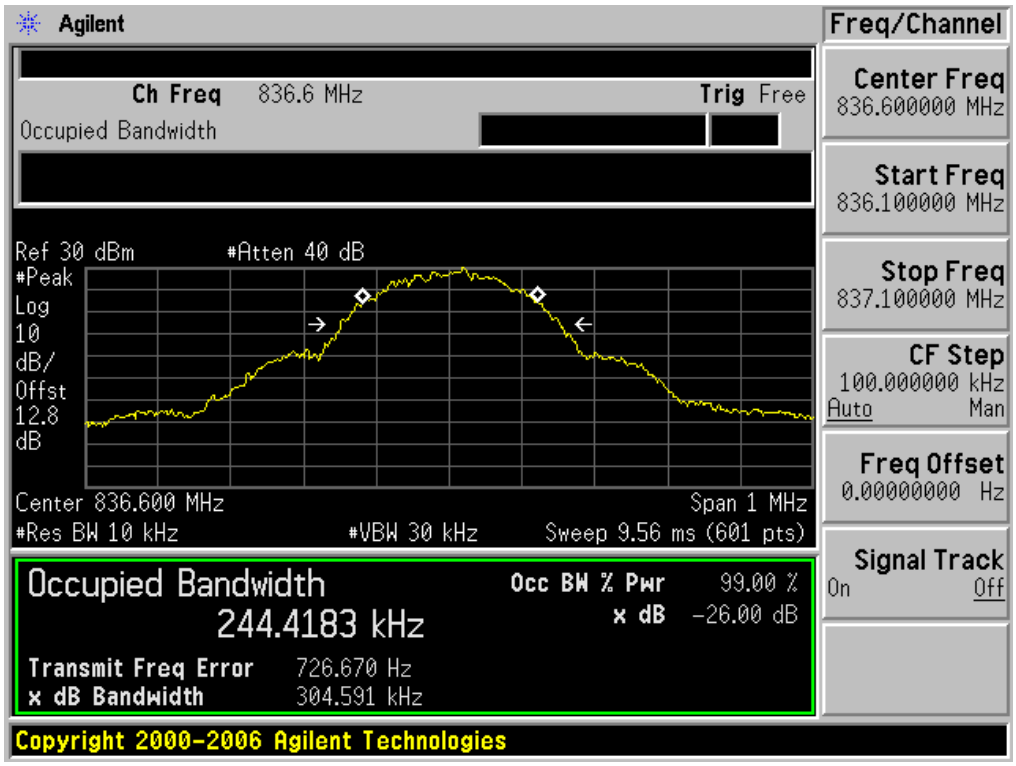


Test Mode=GSM/TM2

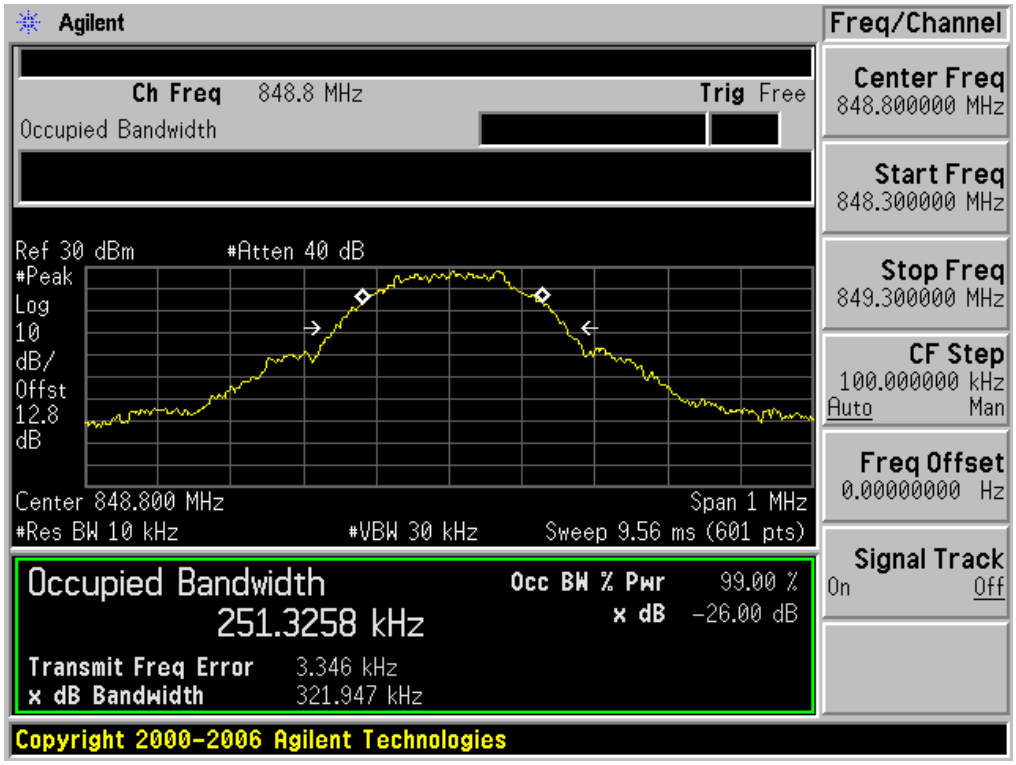
Test Channel=LCH



Test Channel=MCH



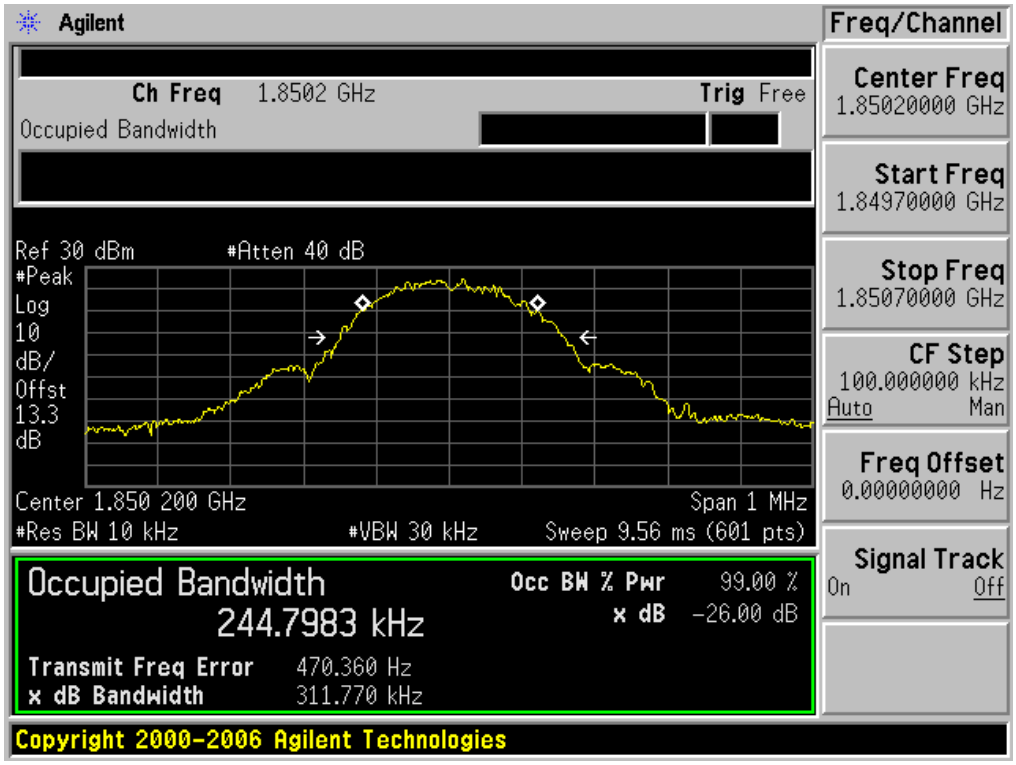
Test Channel=HCH



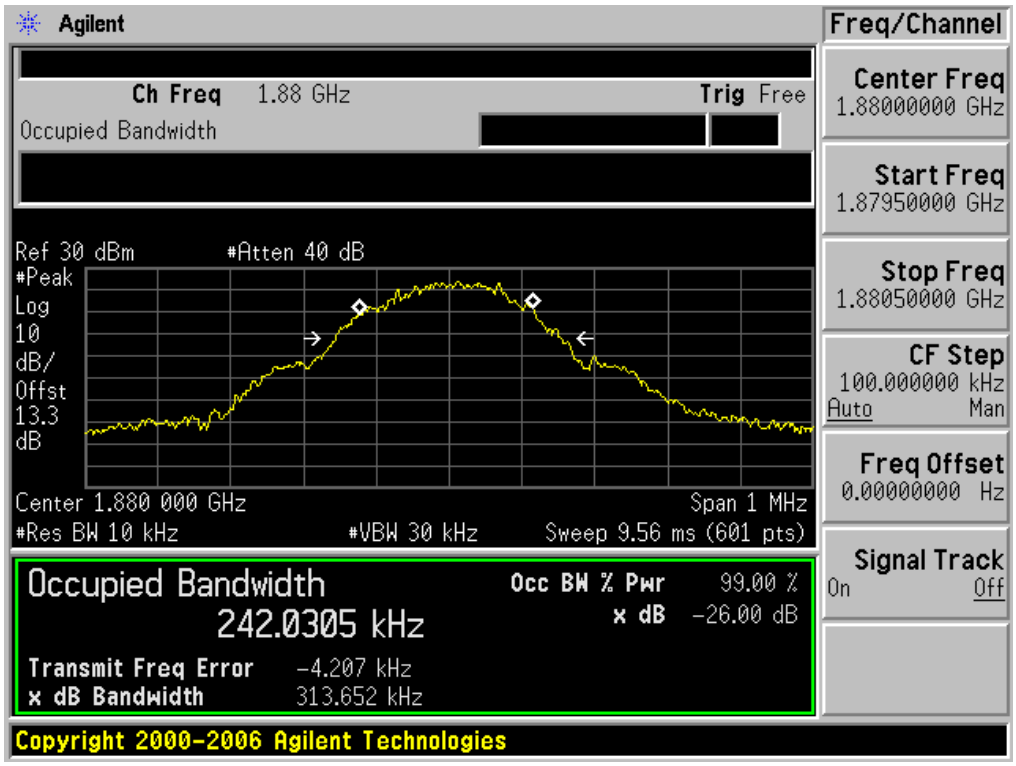
Test Band=GSM1900

Test Mode=GSM/TM1

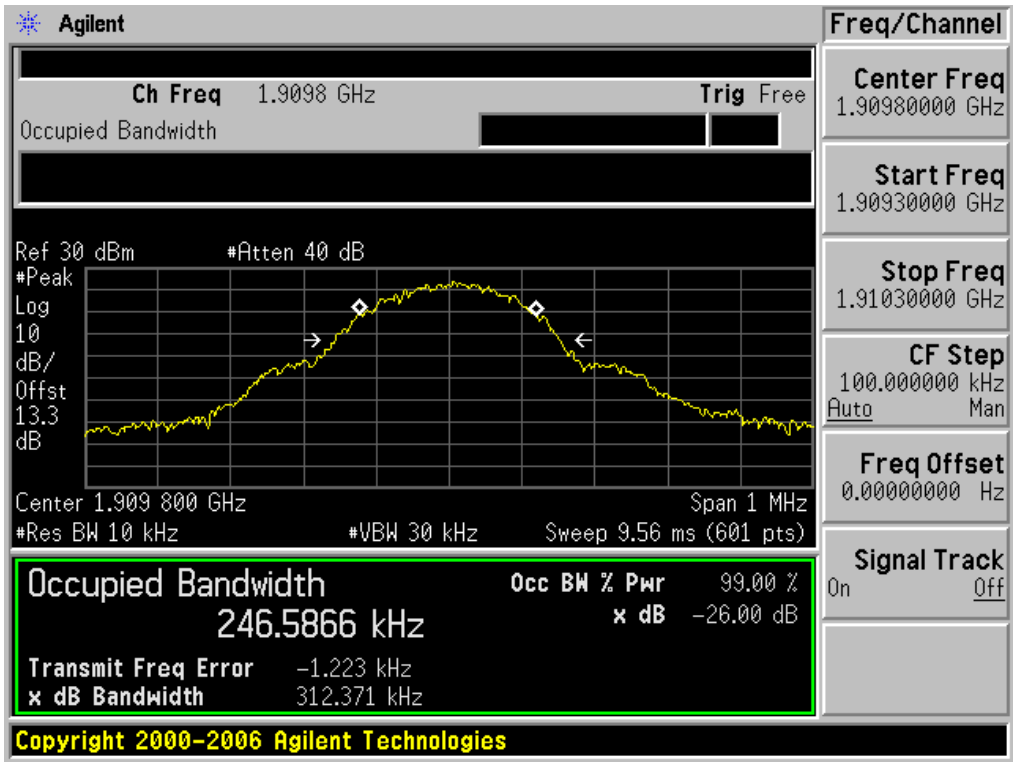
Test Channel=LCH



Test Channel=MCH

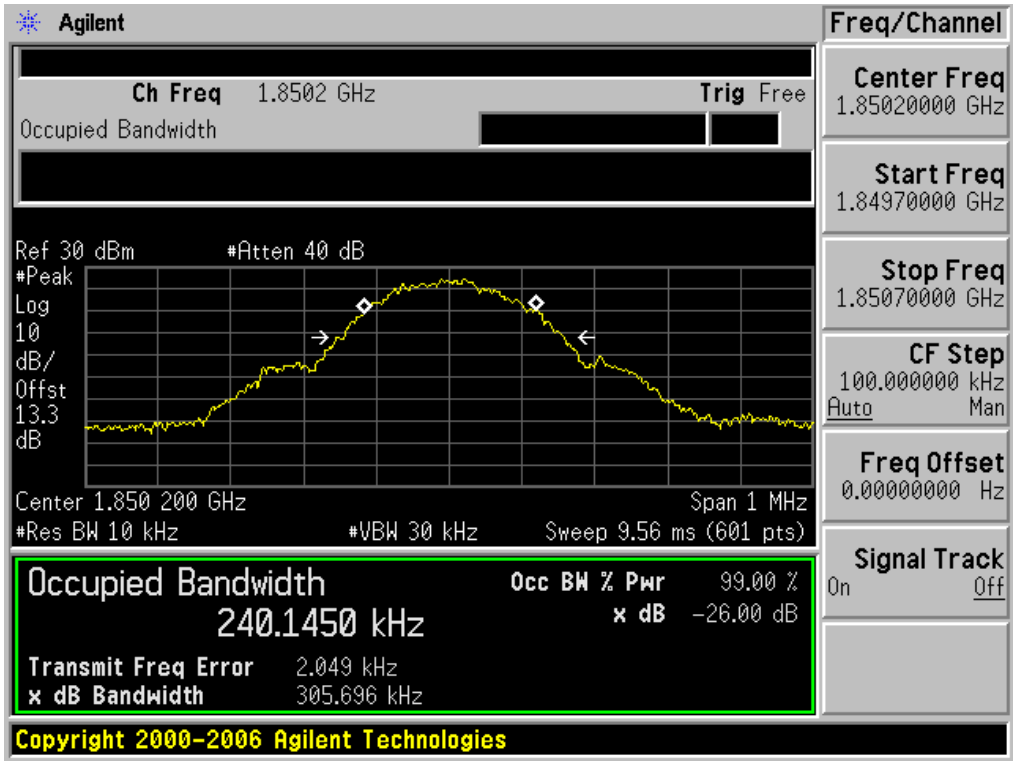


Test Channel=HCH

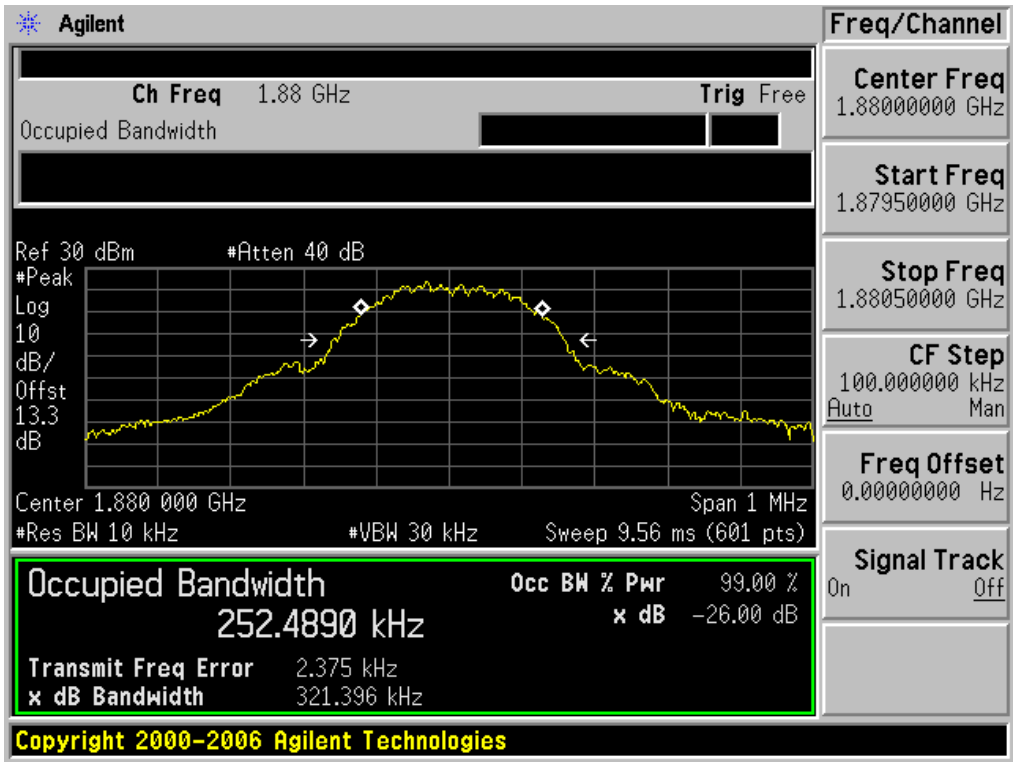


Test Mode=GSM/TM2

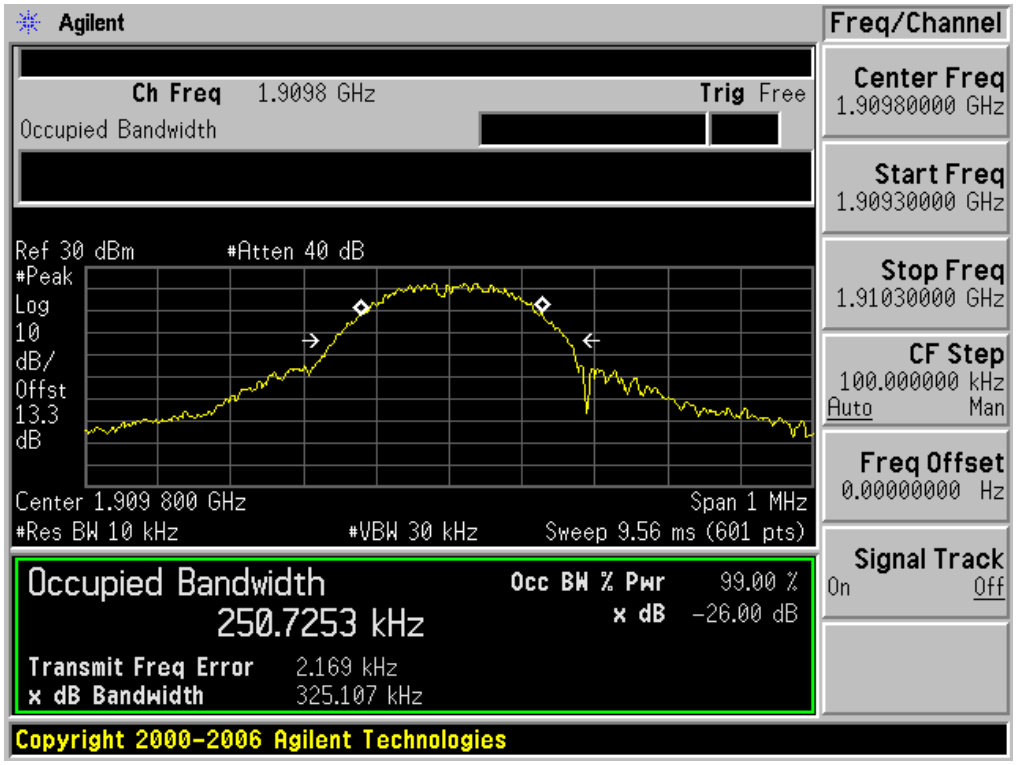
Test Channel=LCH



Test Channel=MCH



Test Channel=HCH

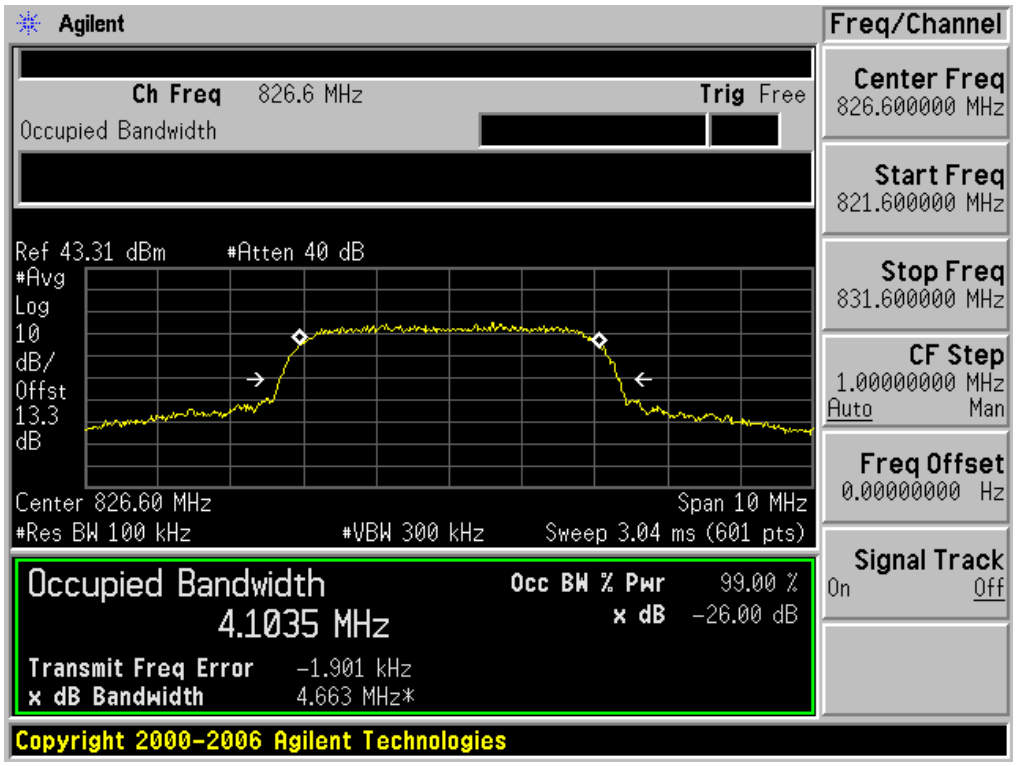


For WCDMA

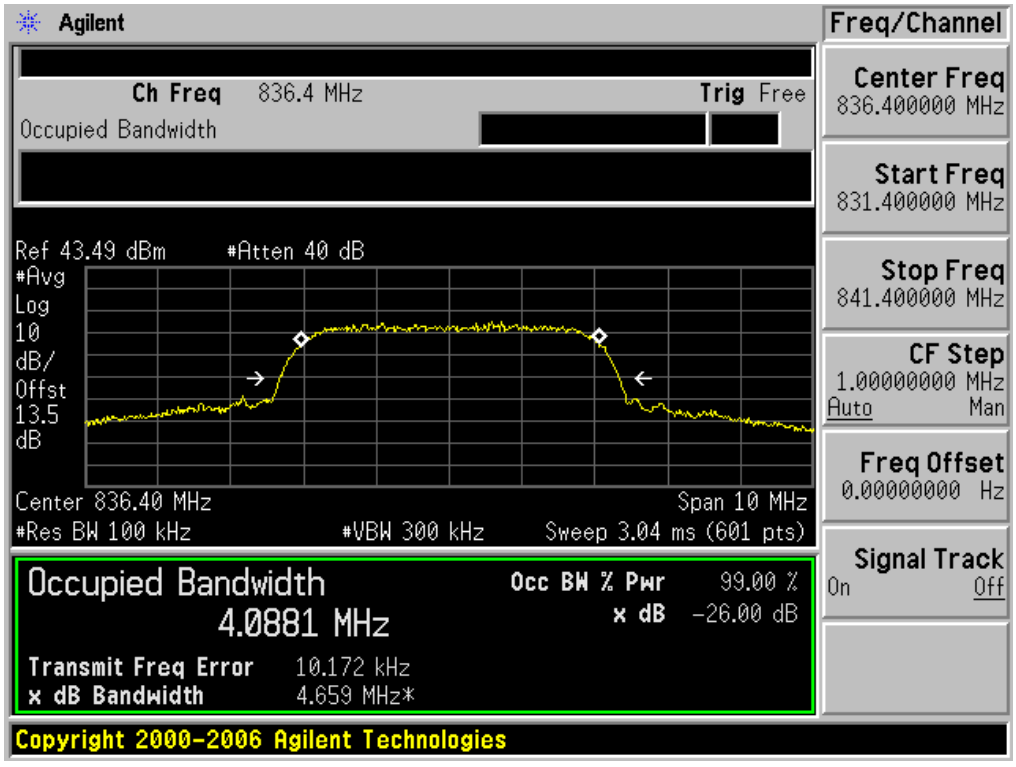
Test Band=WCDMA850

Test Mode=UMTS/TM1

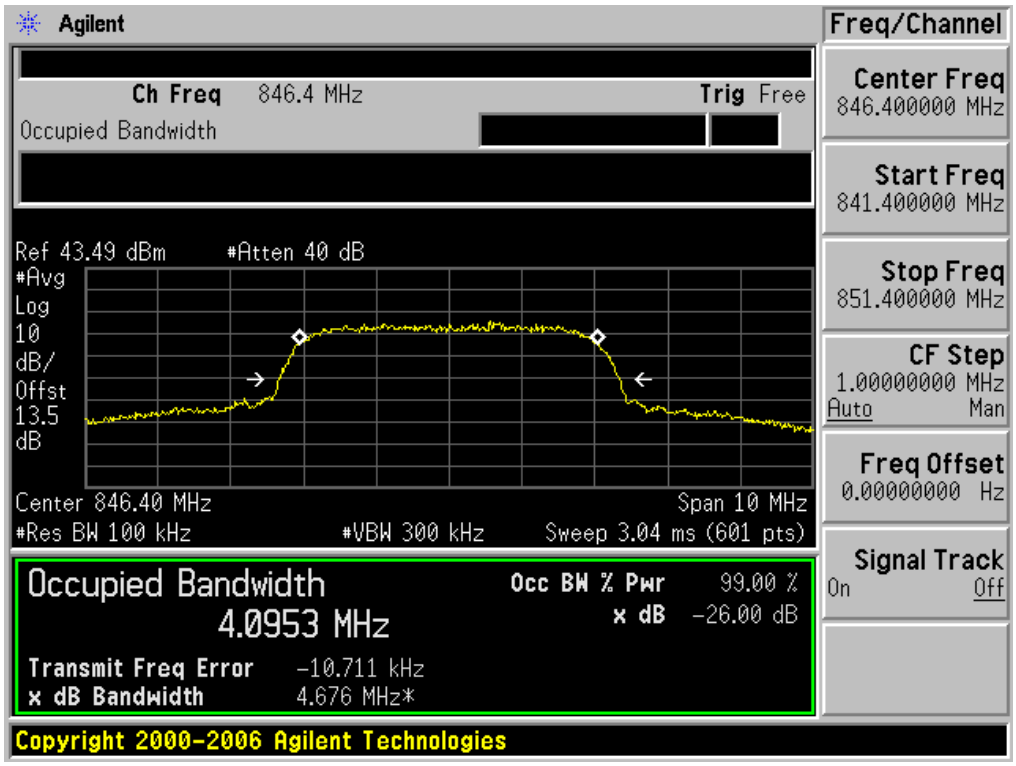
Test Channel=LCH



Test Channel=MCH



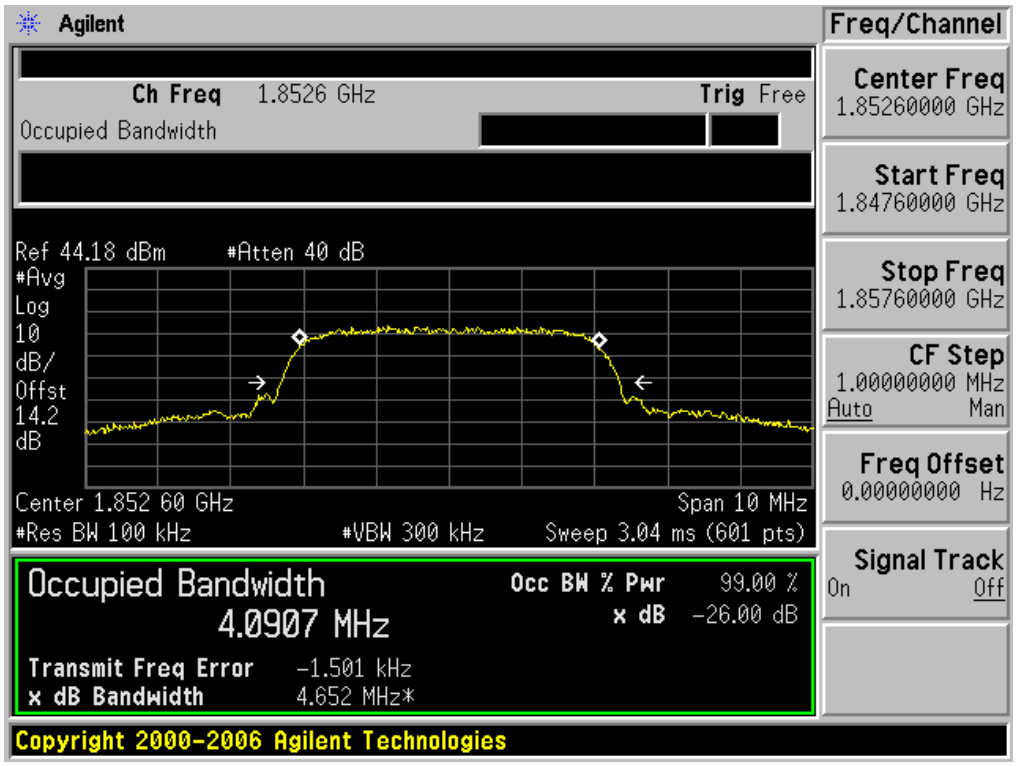
Test Channel=HCH



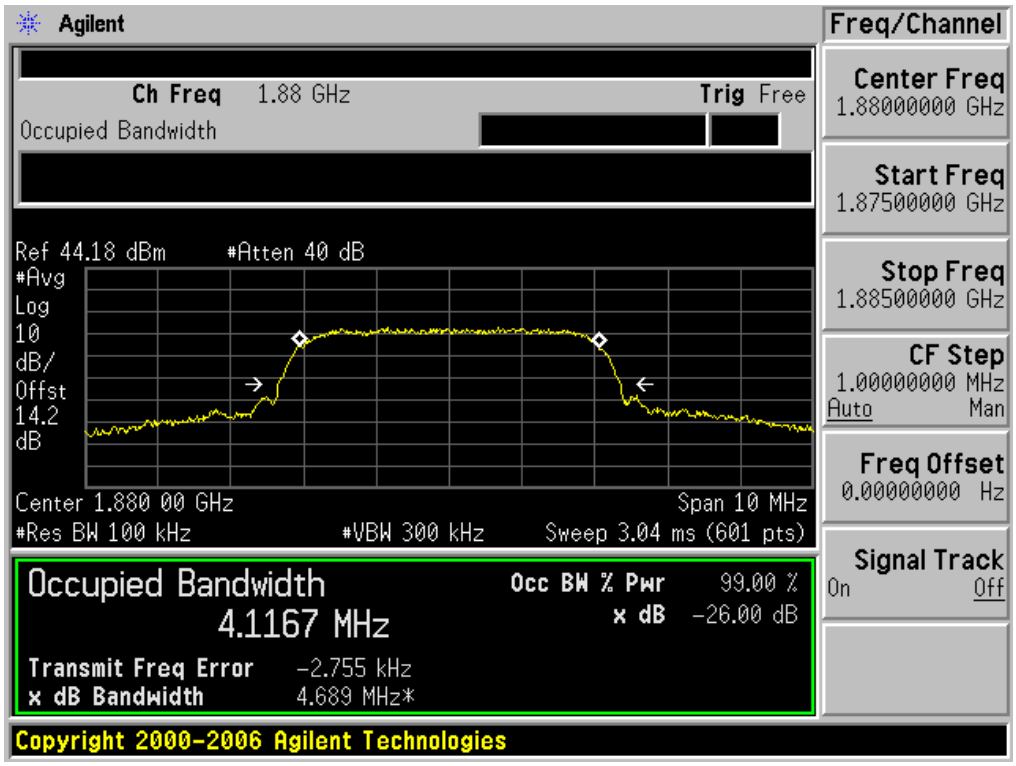
Test Band=WCDMA1900

Test Mode=UMTS/TM1

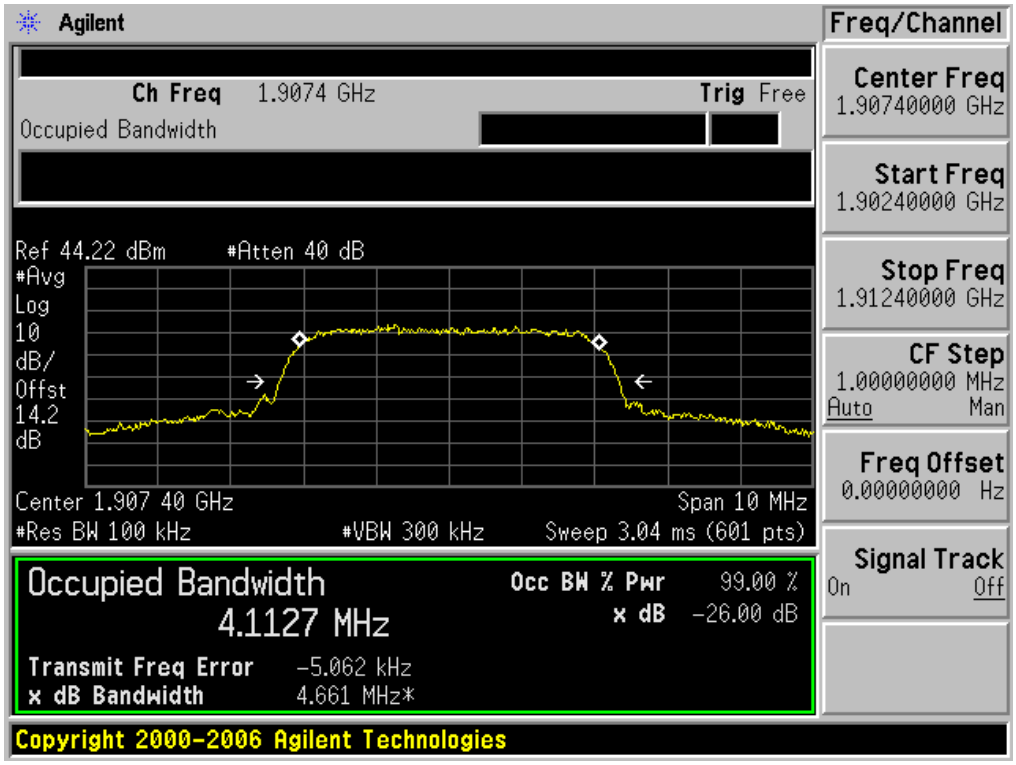
Test Channel=LCH



Test Channel=MCH



Test Channel=HCH



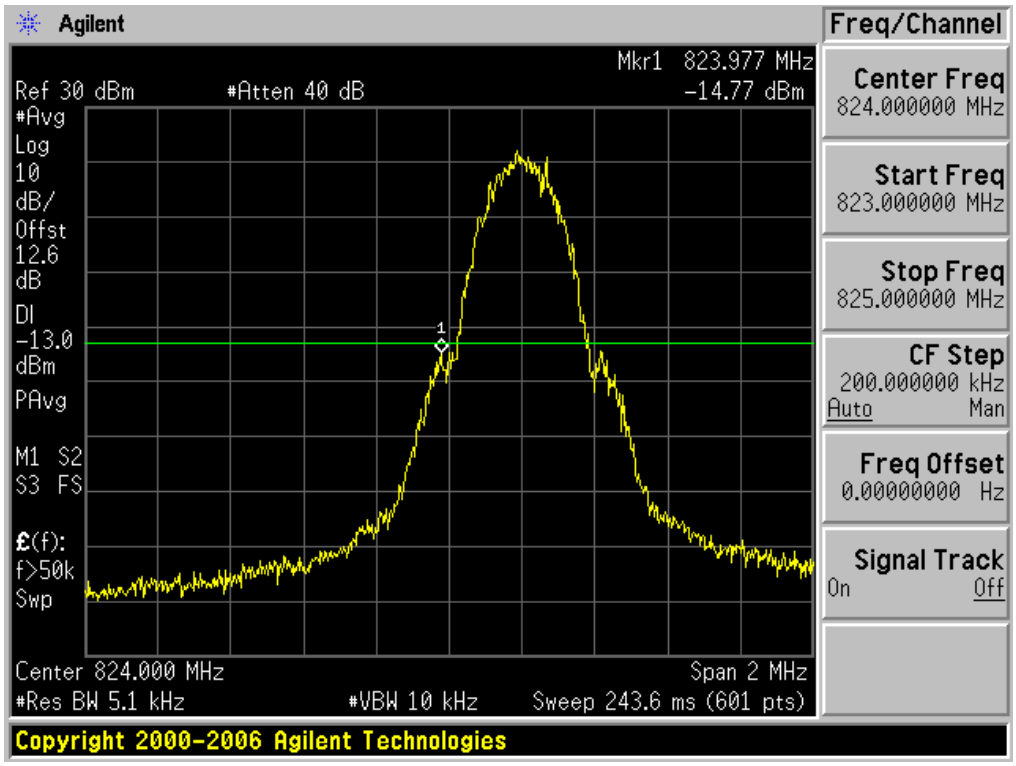
Appendix D) Band Edges Compliance

For GSM

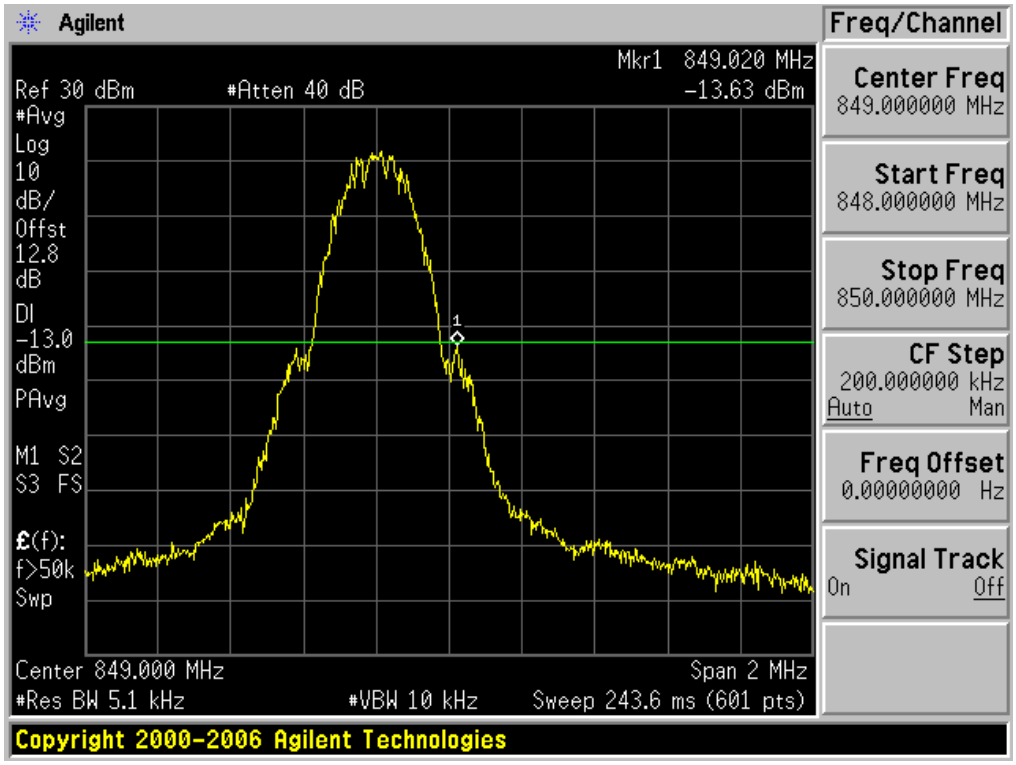
Test Band=GSM850

Test Mode=GSM/TM1

Test Channel=LCH

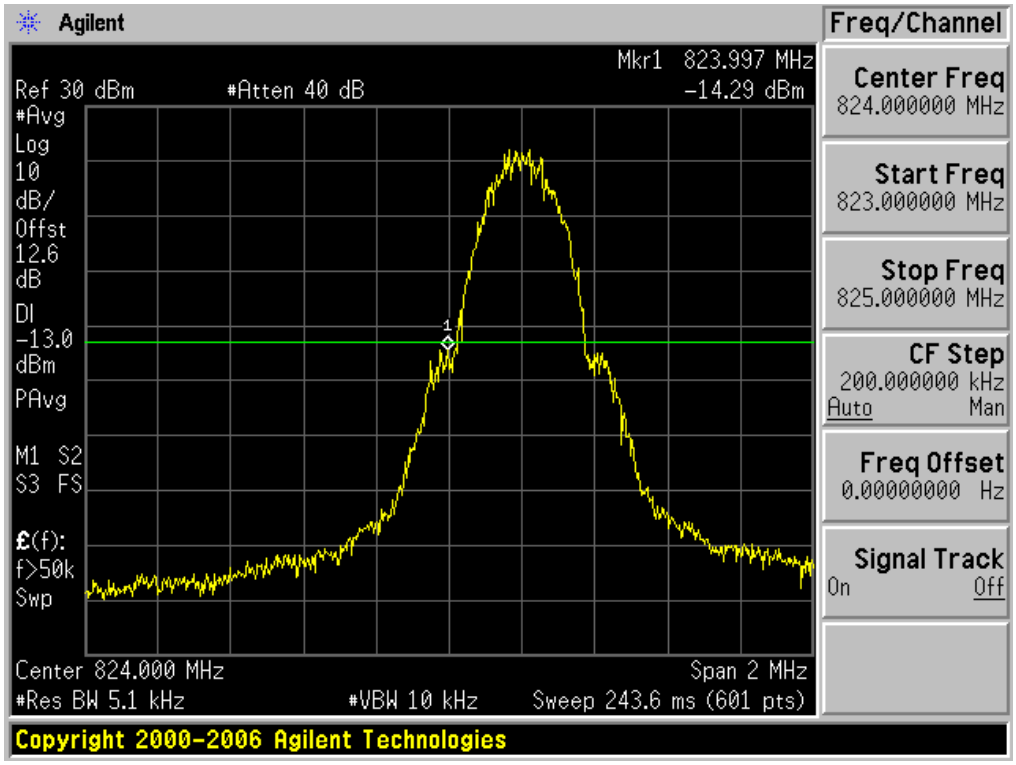


Test Channel=HCH

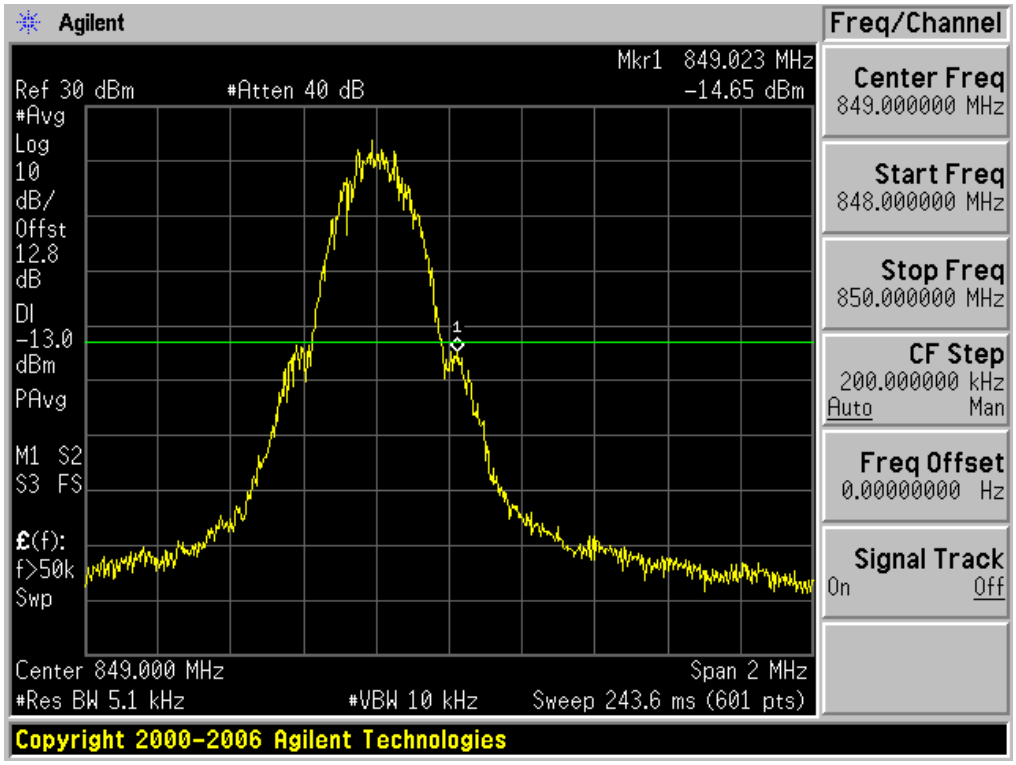


Test Mode=GSM/TM2

Test Channel=LCH



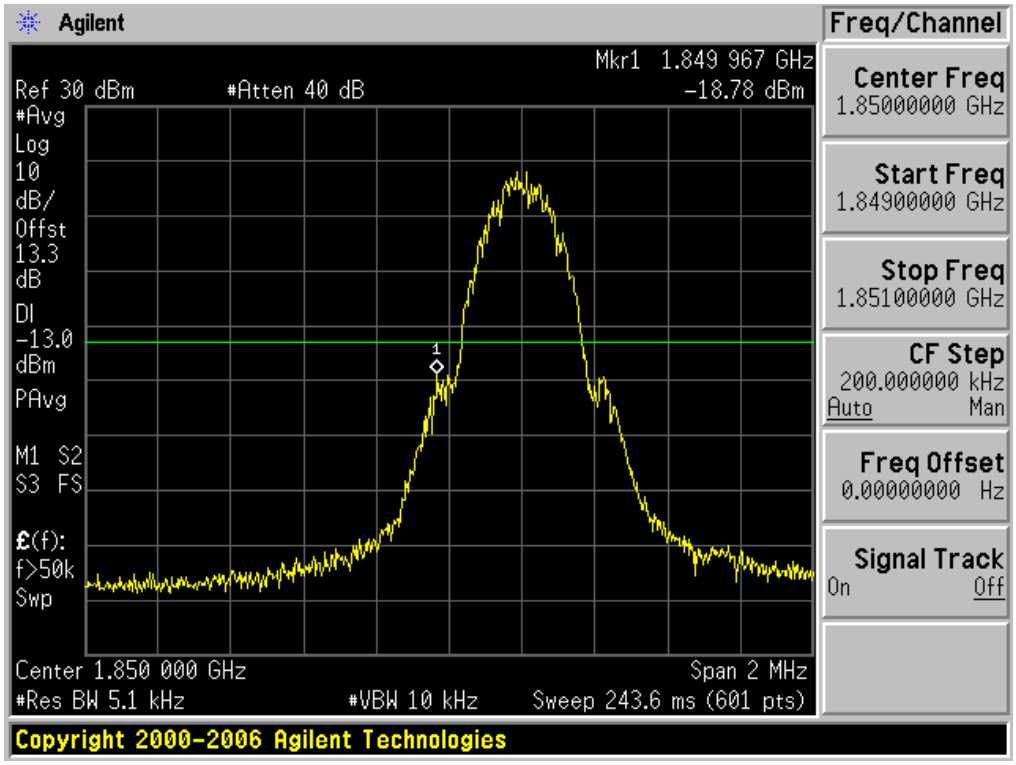
Test Channel=HCH



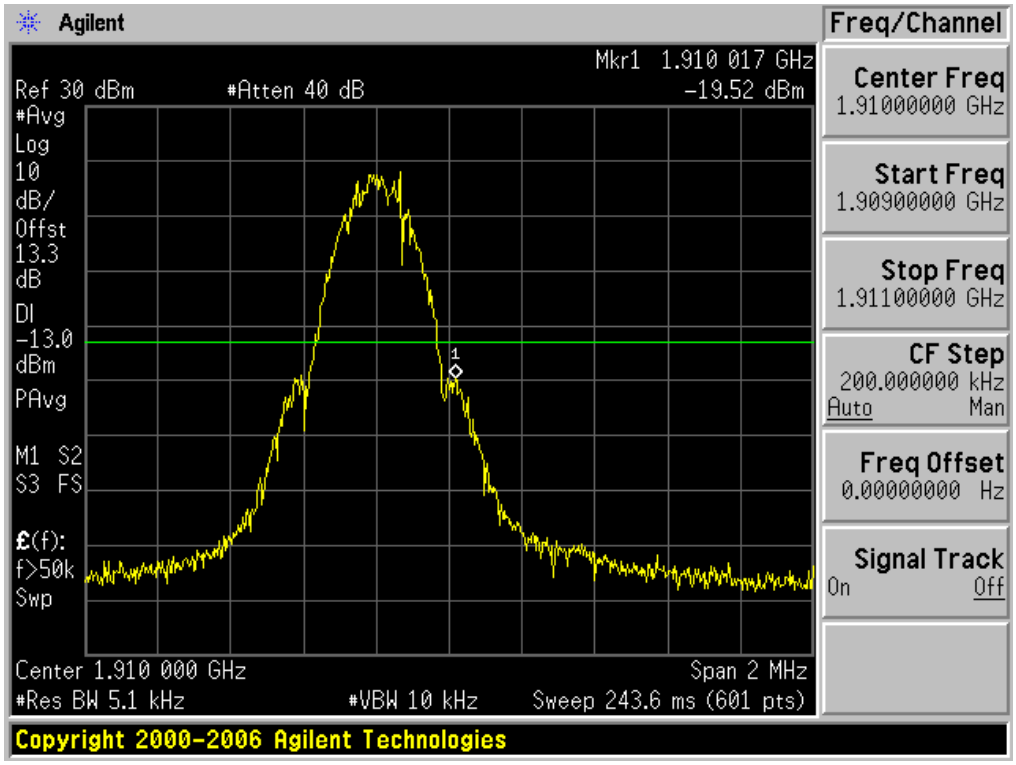
Test Band=GSM1900

Test Mode=GSM/TM1

Test Channel=LCH

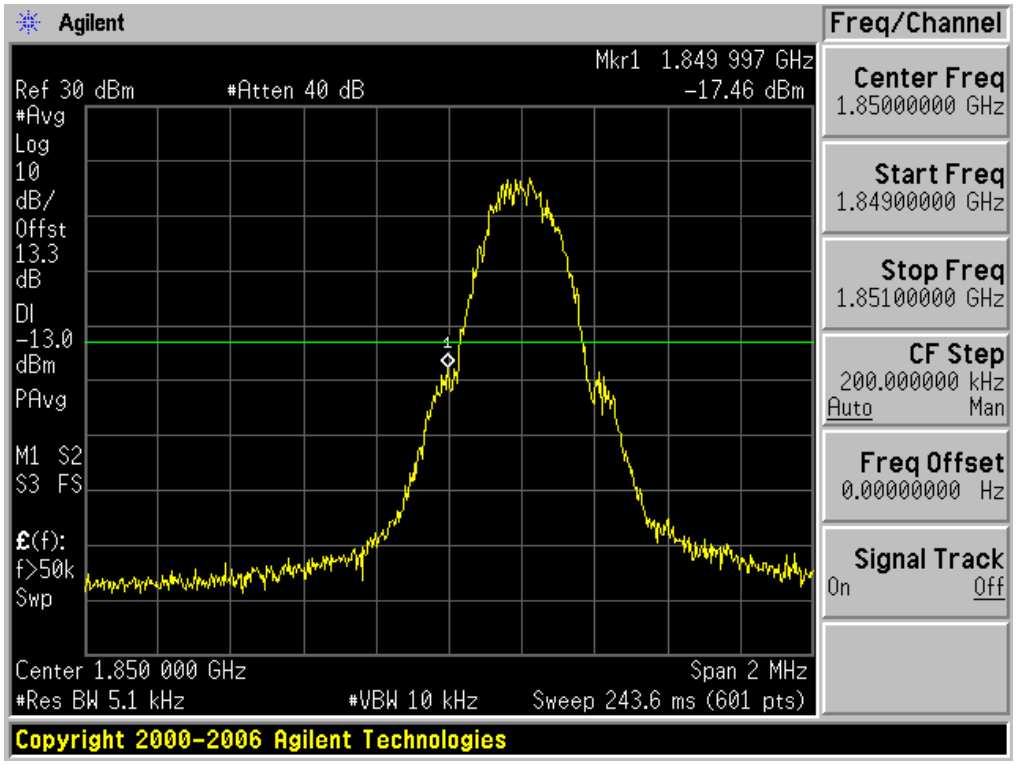


Test Channel=HCH

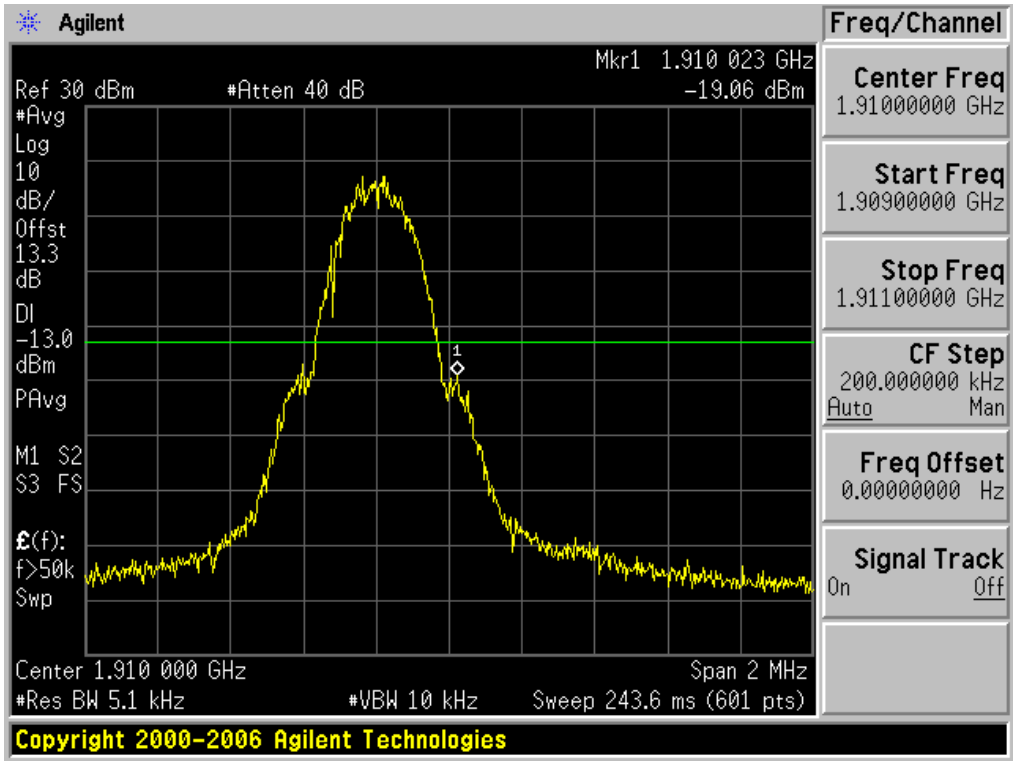


Test Mode=GSM/TM2

Test Channel=LCH



Test Channel=HCH

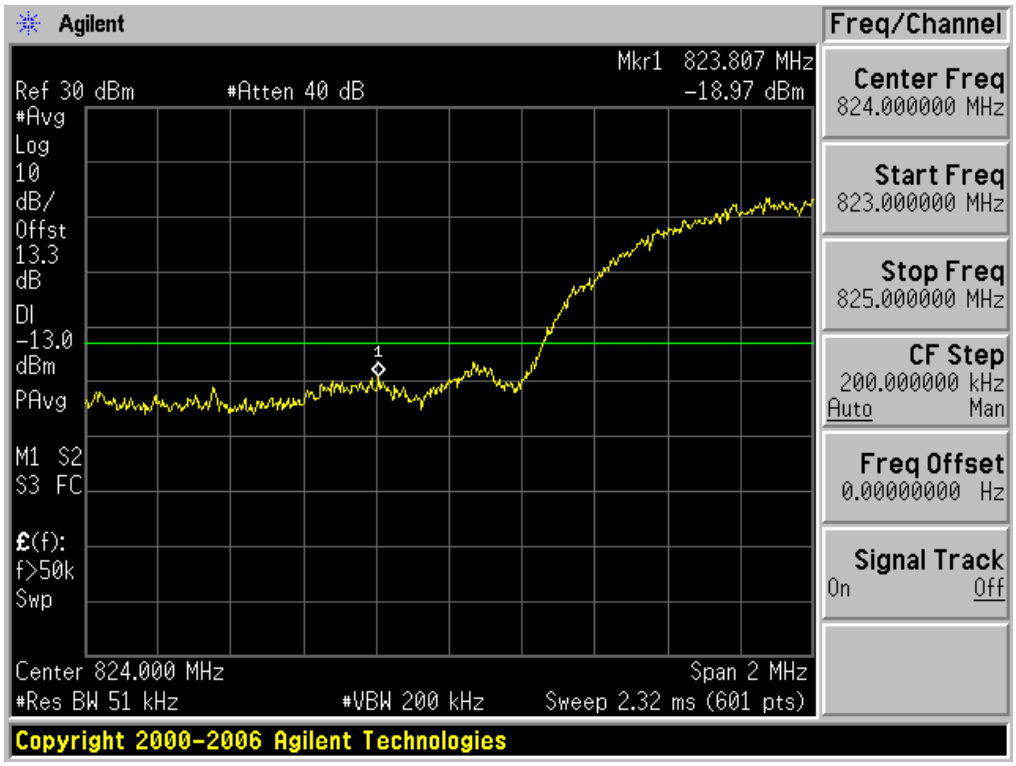


For WCDMA

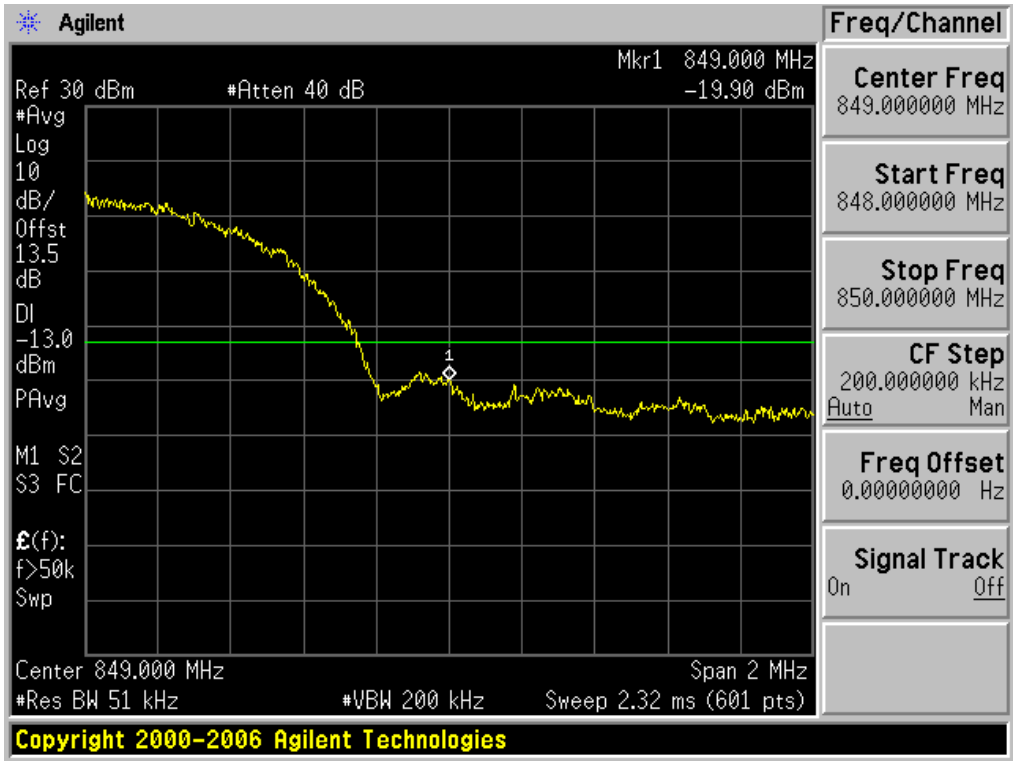
Test Band=WCDMA850

Test Mode=UMTS/TM1

Test Channel=LCH



Test Channel=HCH

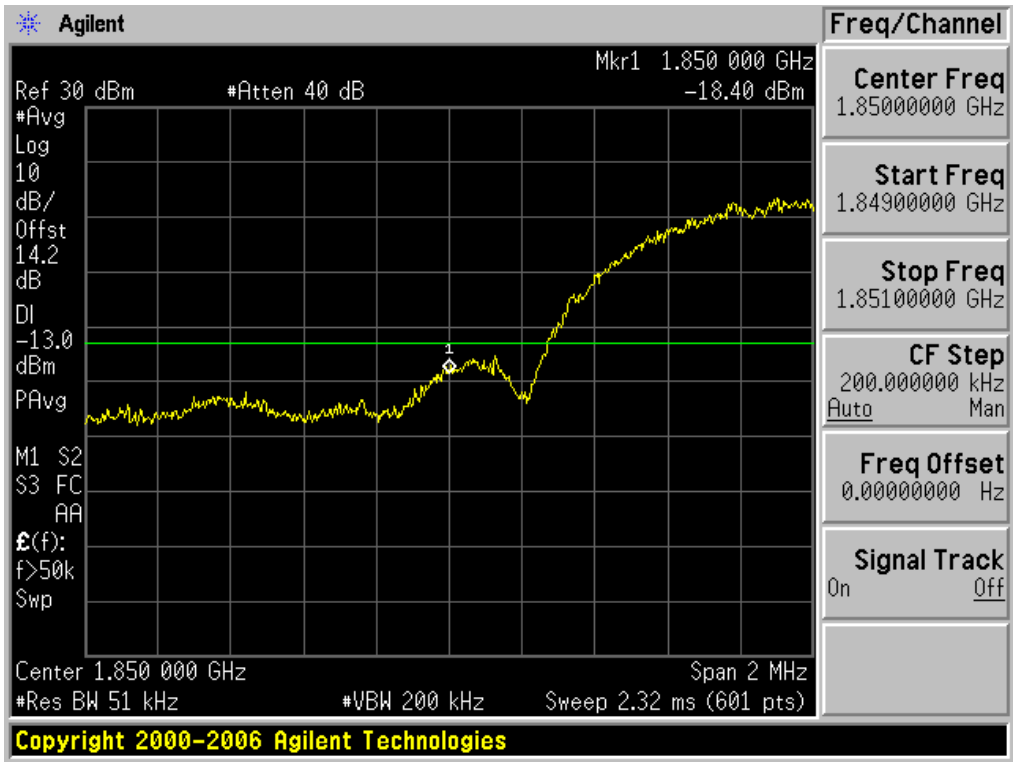


Test Band=WCDMA1700

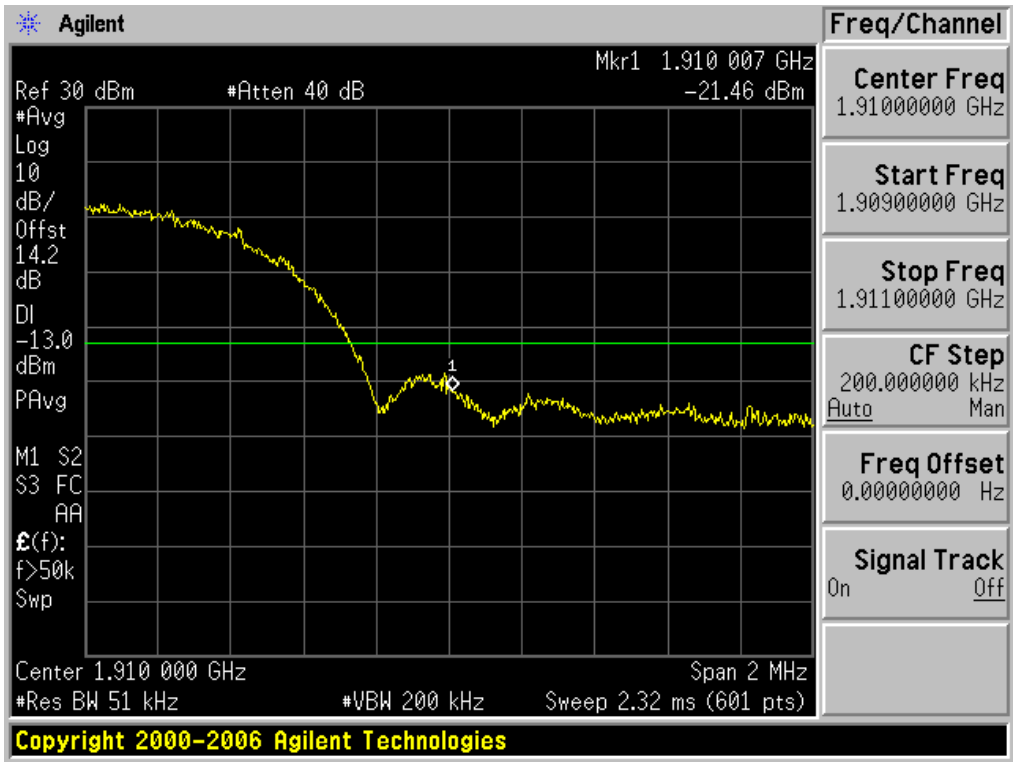
Test Band=WCDMA1900

Test Mode=UMTSTM1

Test Channel=LCH



Test Channel=HCH



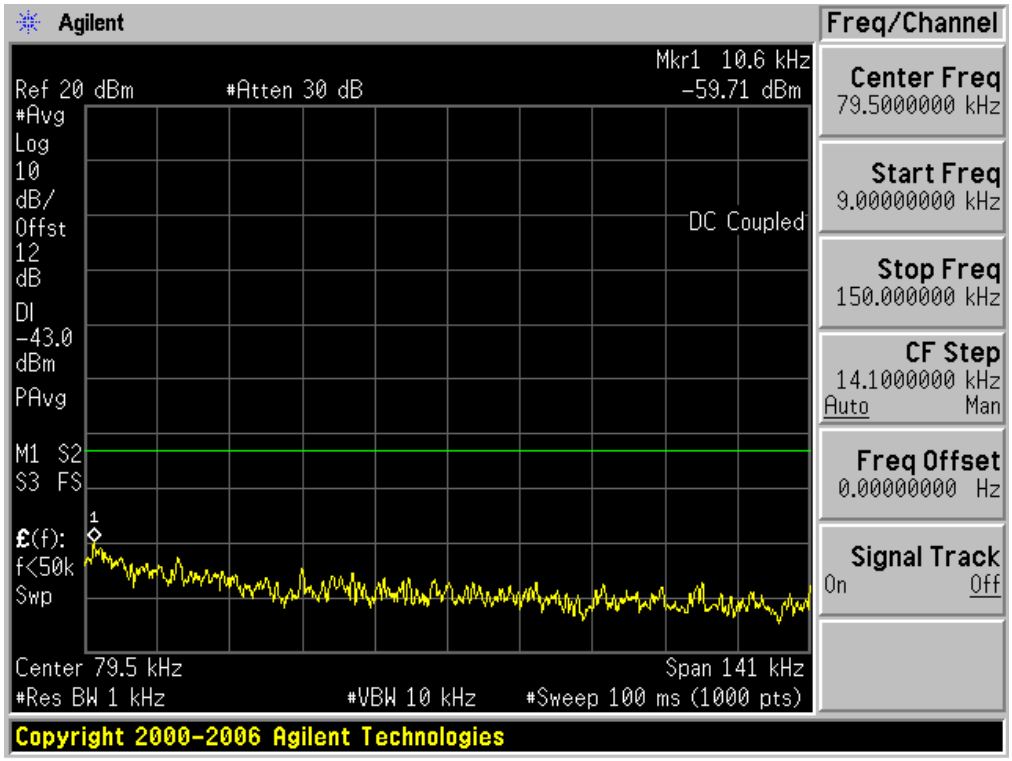
Appendix E) Spurious Emission at Antenna Terminal

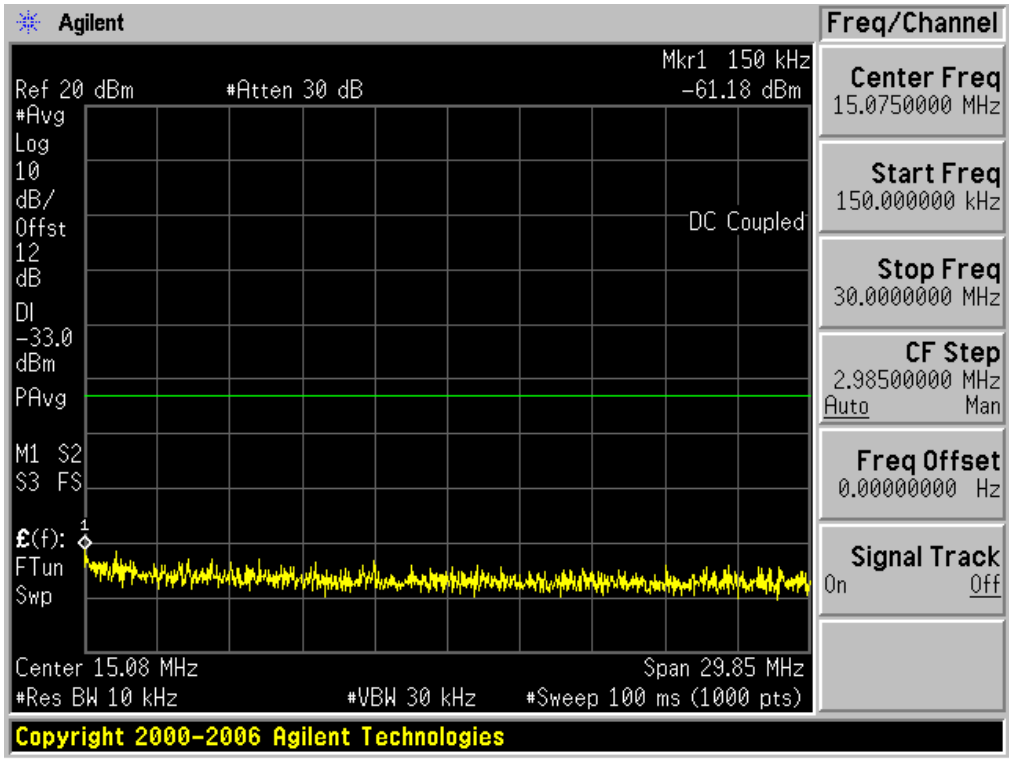
For GSM

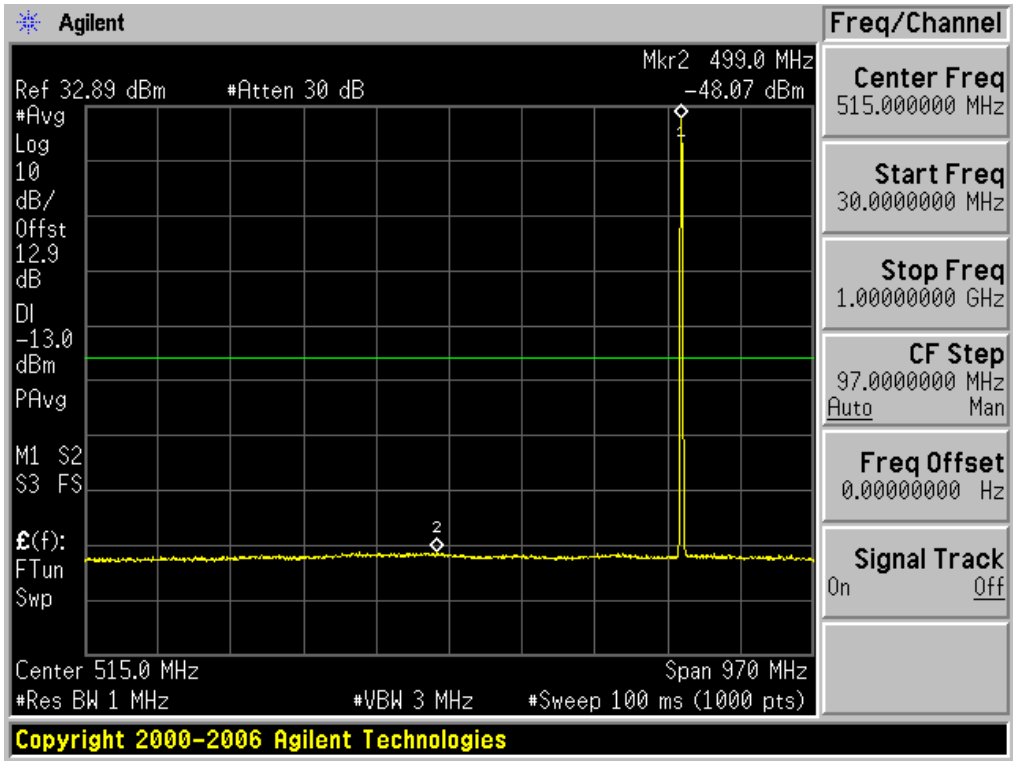
Test Band=GSM850

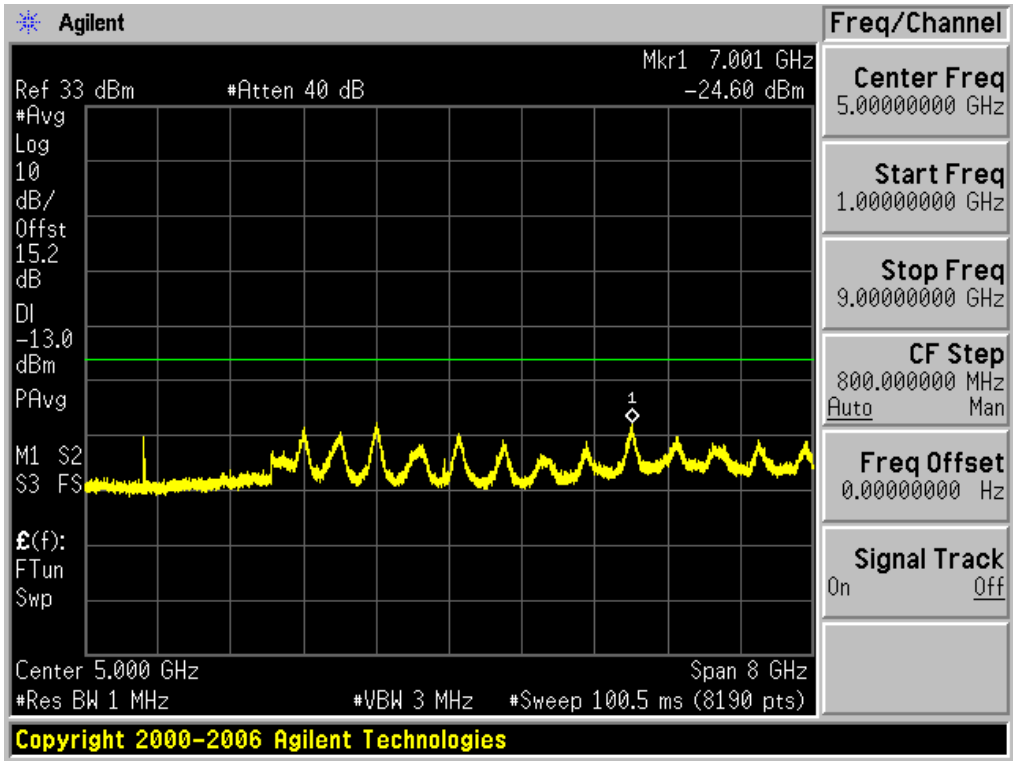
Test Mode=GSM/TM1

Test Channel=LCH

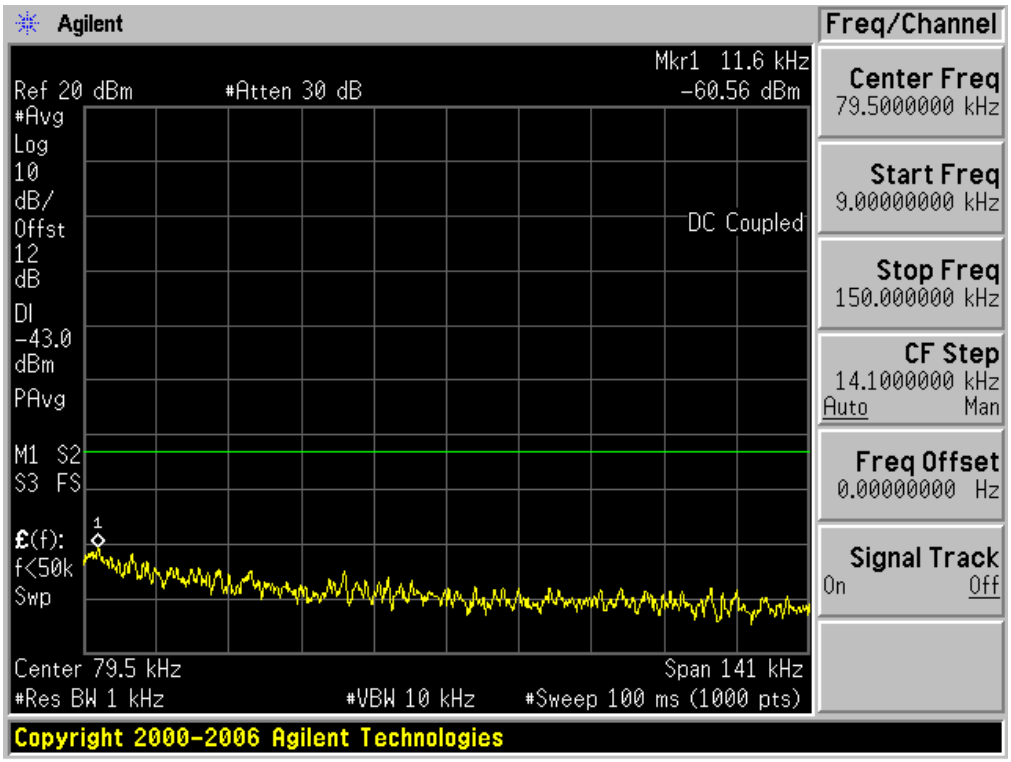


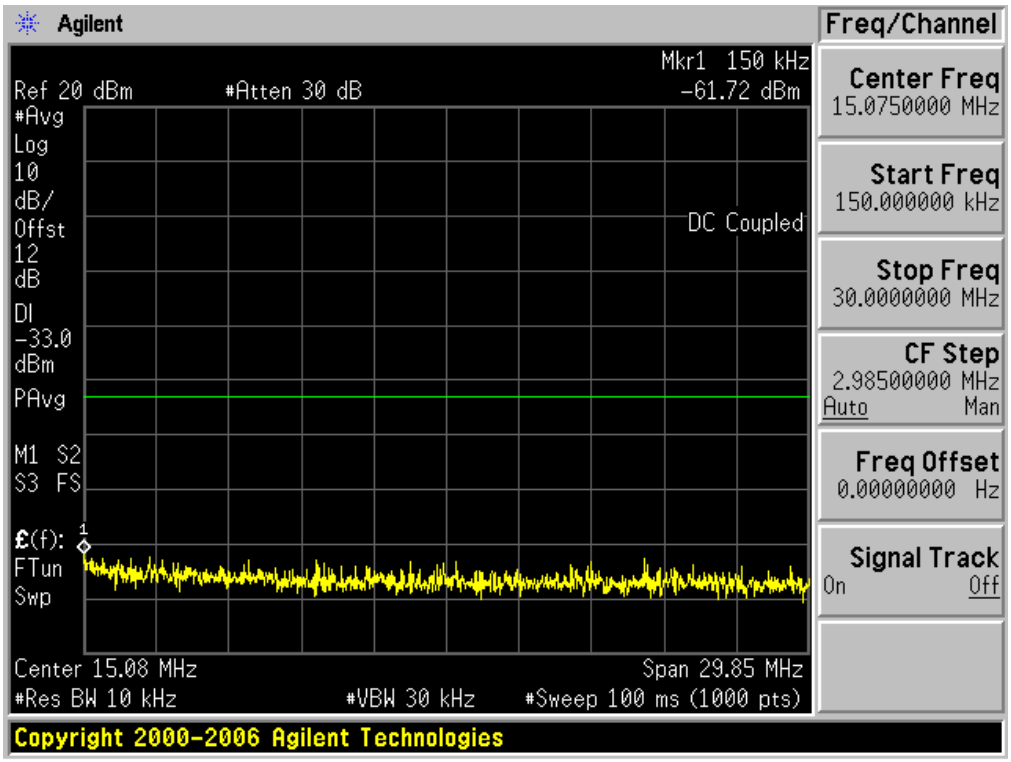

Agilent
Freq/Channel
Mkr1 150 kHz
Ref 20 dBm
#Atten 30 dB
-61.18 dBm
#Avg
Log
10
dB/
Offst
12
dB
DC Coupled
Dl
-33.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 15.08 MHz
Span 29.85 MHz
#Res BW 10 kHz
#VBW 30 kHz
#Sweep 100 ms (1000 pts)
Center Freq
15.0750000 MHz
Start Freq
150.000000 kHz
Stop Freq
30.0000000 MHz
CF Step
2.98500000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

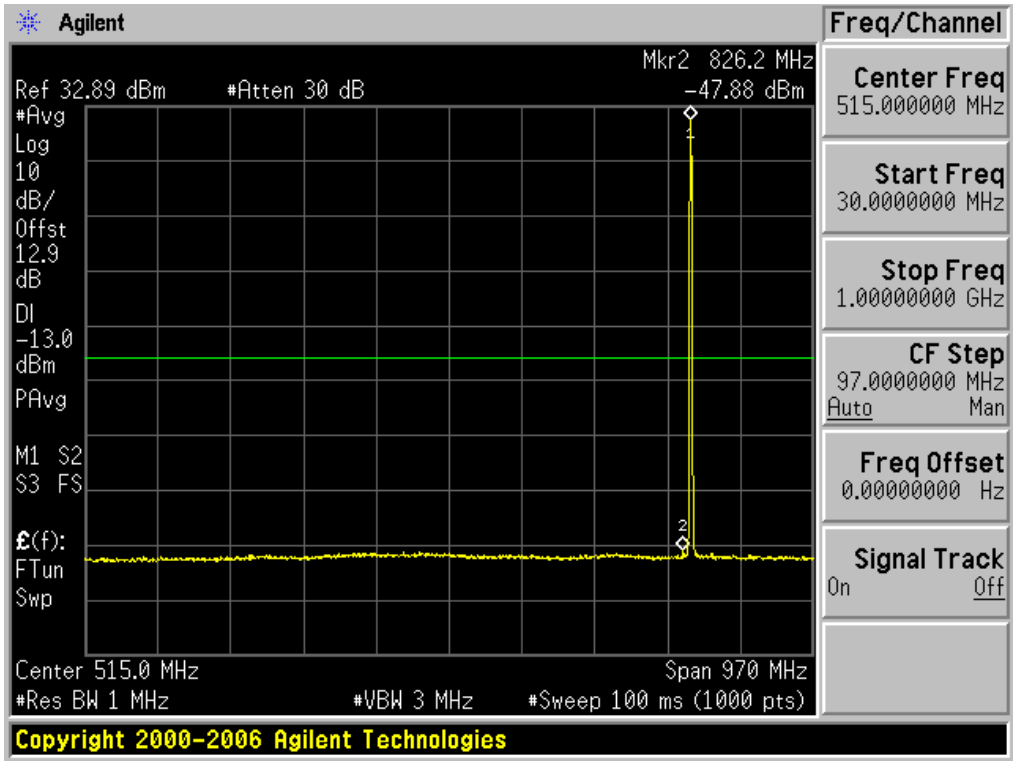

Agilent
Freq/Channel
Mkr2 499.0 MHz
Ref 32.89 dBm
#Atten 30 dB
-48.07 dBm
#Avg
Log
10
dB/
Offst
12.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
#Sweep 100 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

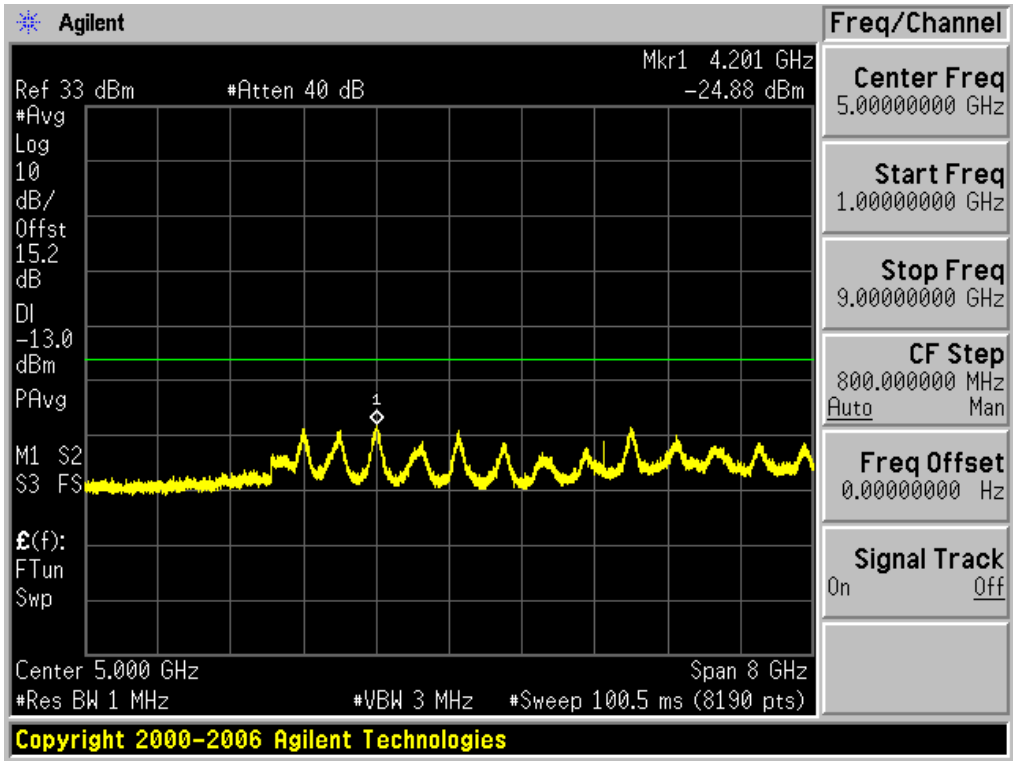

Agilent
Freq/Channel
Mkr1 7.001 GHz
Ref 33 dBm
#Atten 40 dB
-24.60 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
#Sweep 100.5 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

Test Channel=MCH

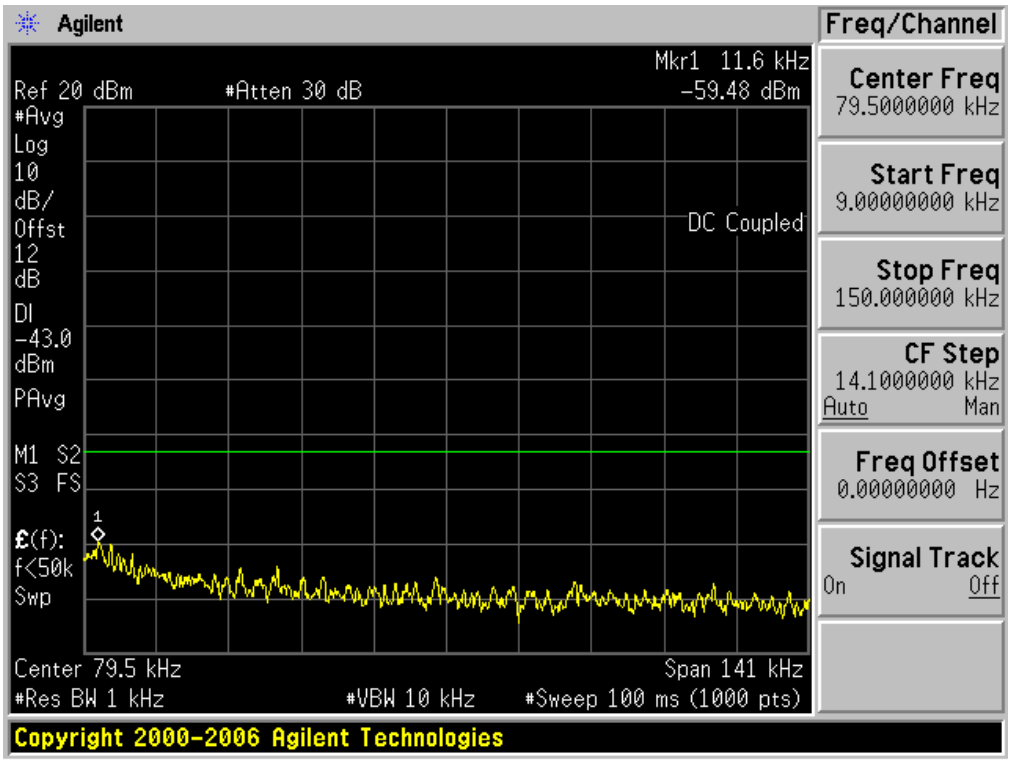


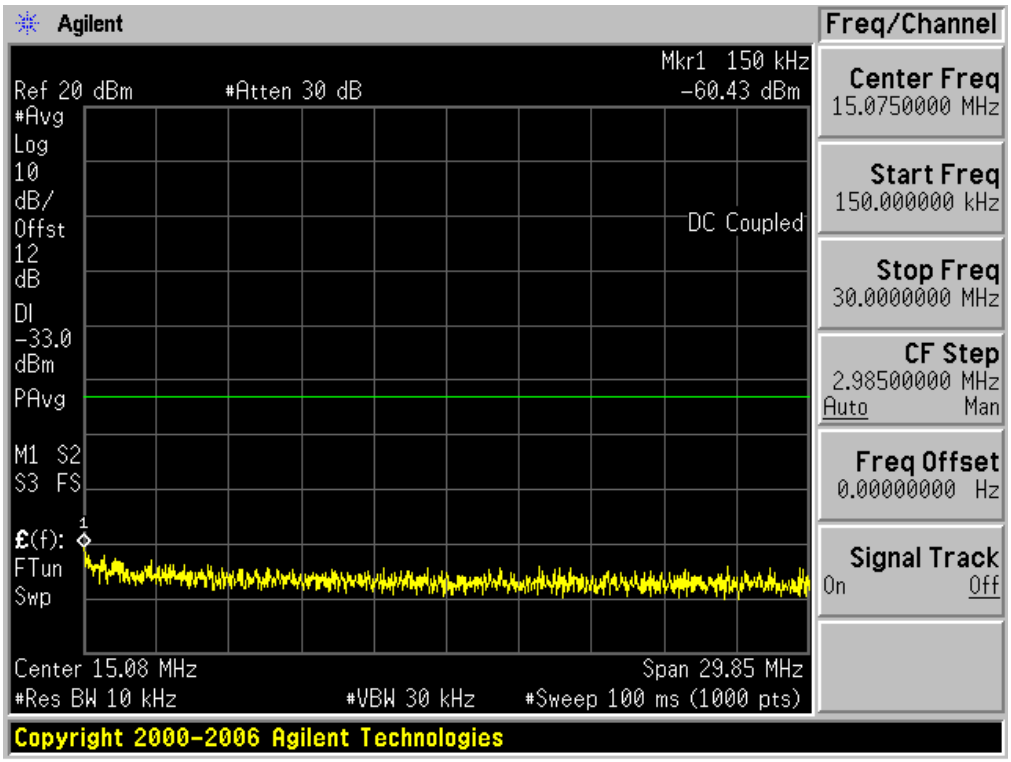


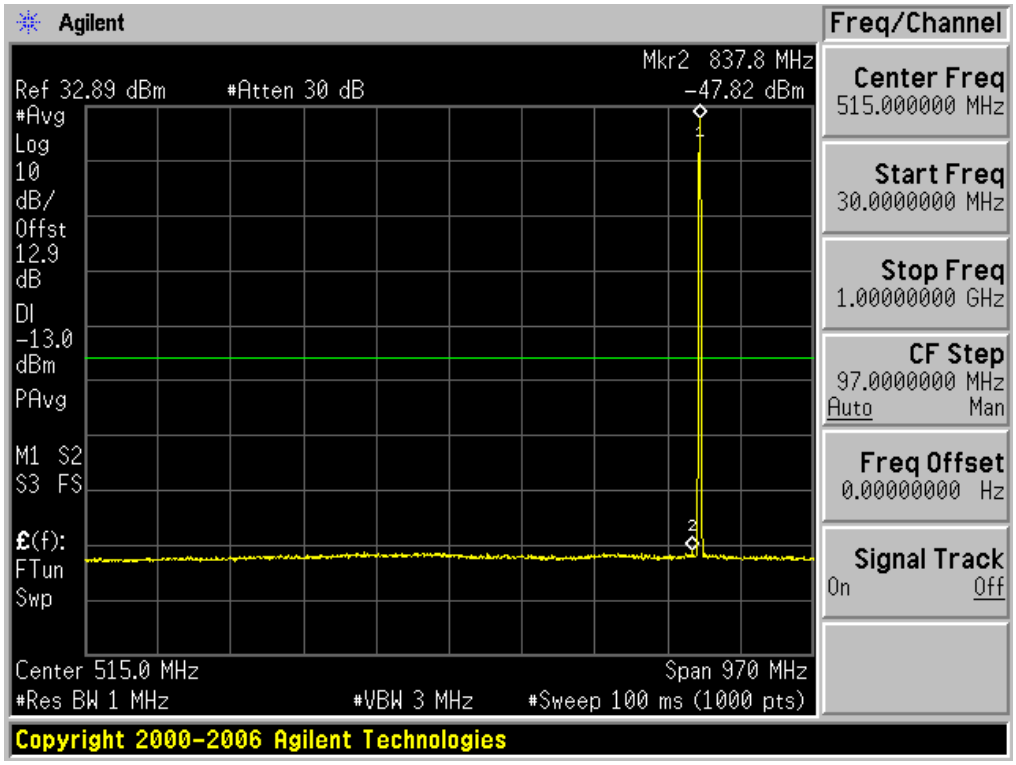

Agilent
Freq/Channel
Mkr2 826.2 MHz
Ref 32.89 dBm #Atten 30 dB -47.88 dBm
#Avg
Log
10
dB/
Offst
12.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz #VBW 3 MHz #Sweep 100 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

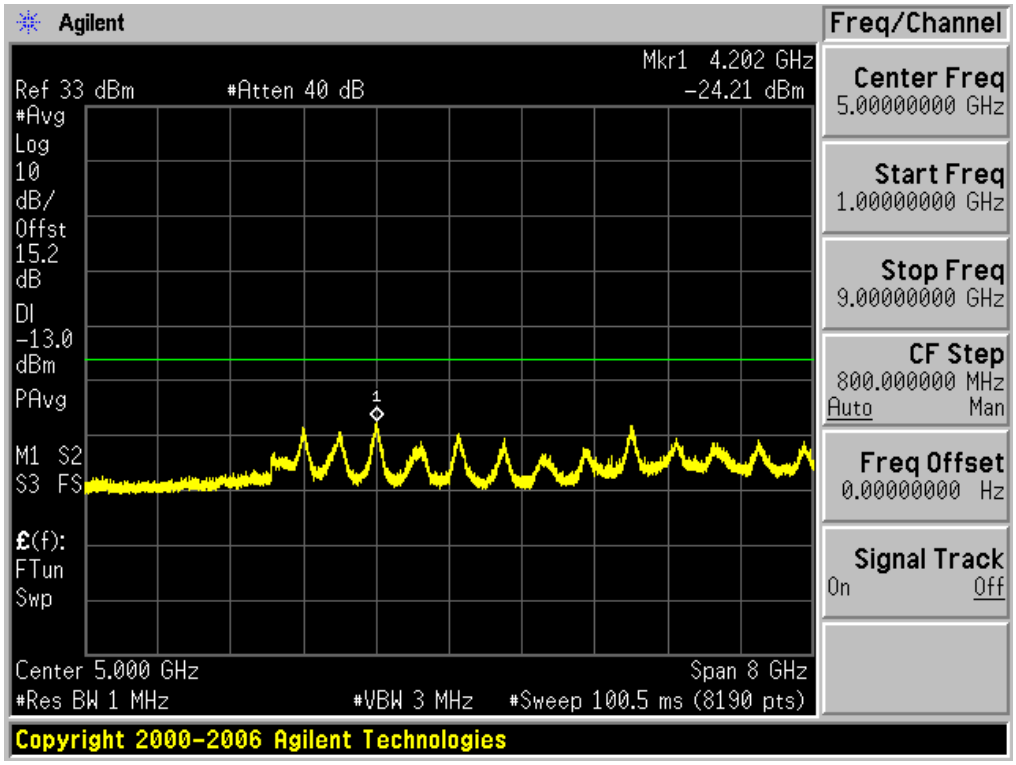

Agilent
Freq/Channel
Mkr1 4.201 GHz
Ref 33 dBm #Atten 40 dB -24.88 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz #VBW 3 MHz #Sweep 100.5 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

Test Channel=HCH



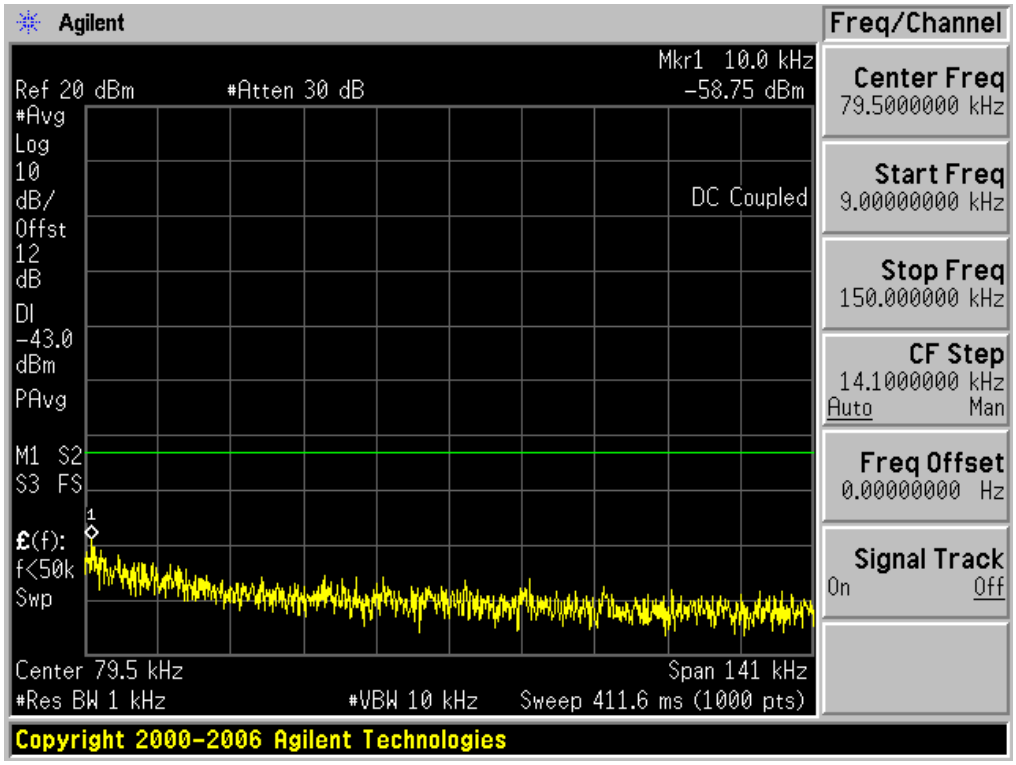


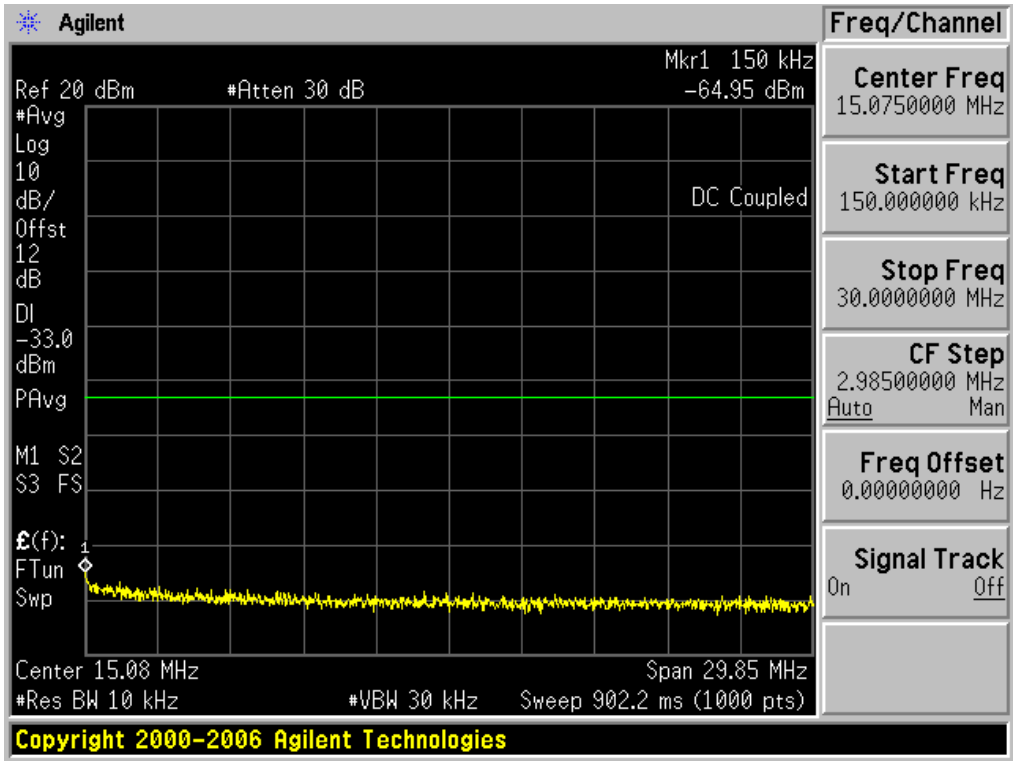

Agilent
Freq/Channel
Mkr2 837.8 MHz
Ref 32.89 dBm #Atten 30 dB -47.82 dBm
#Avg
Log
10
dB/
Offst
12.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz #VBW 3 MHz #Sweep 100 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

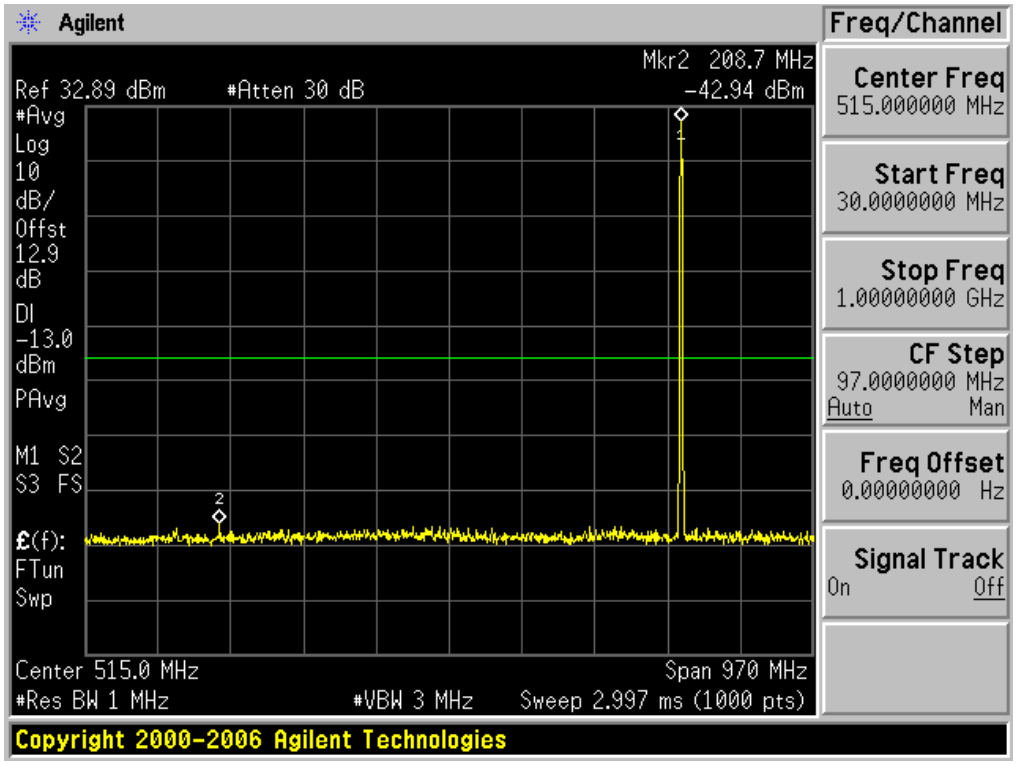

Agilent
Freq/Channel
Mkr1 4.202 GHz
Ref 33 dBm #Atten 40 dB -24.21 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz #VBW 3 MHz #Sweep 100.5 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
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 208.7 MHz
Ref 32.89 dBm #Atten 30 dB -42.94 dBm
#Avg
Log
10
dB/
Offst
12.9
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
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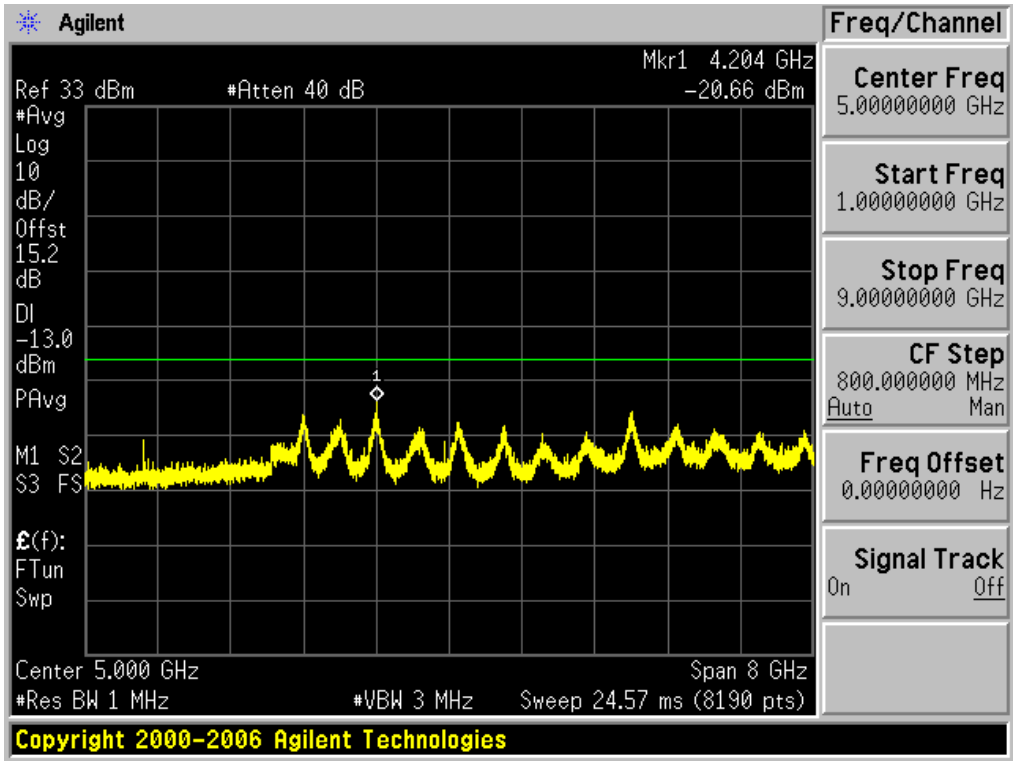
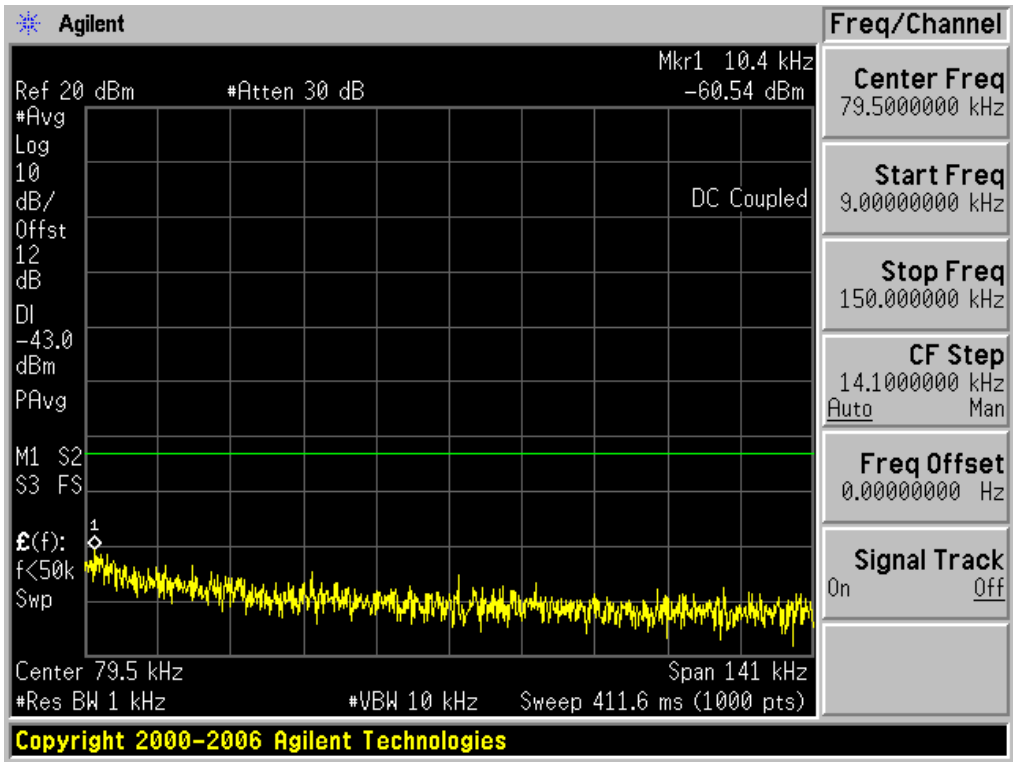
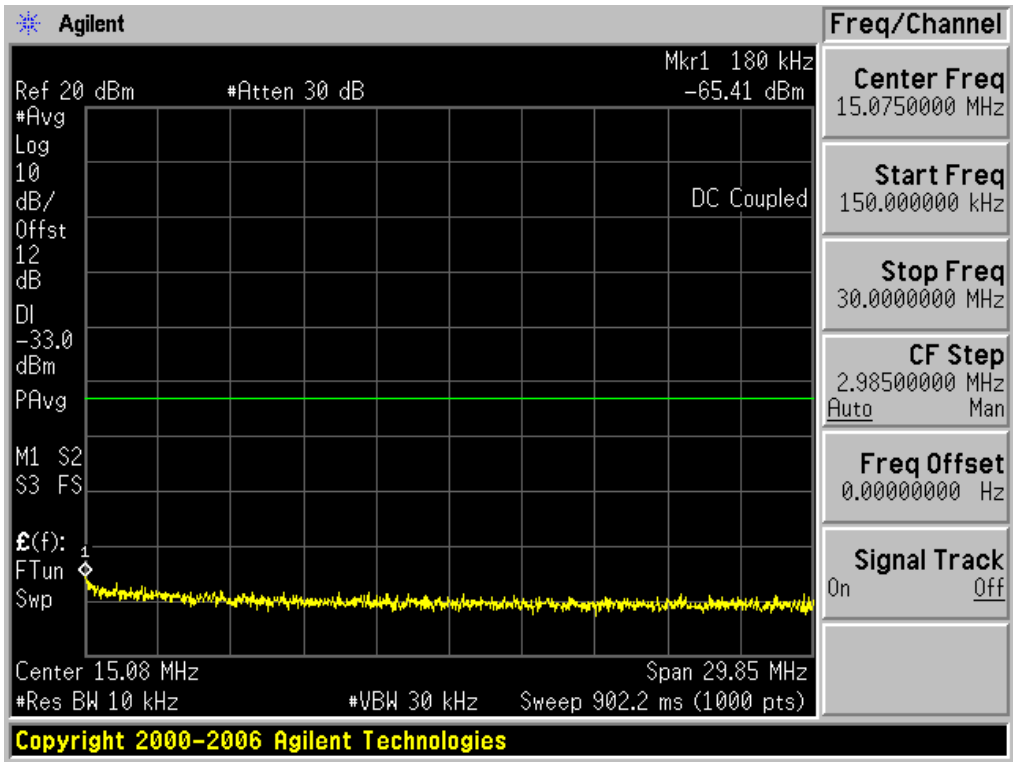
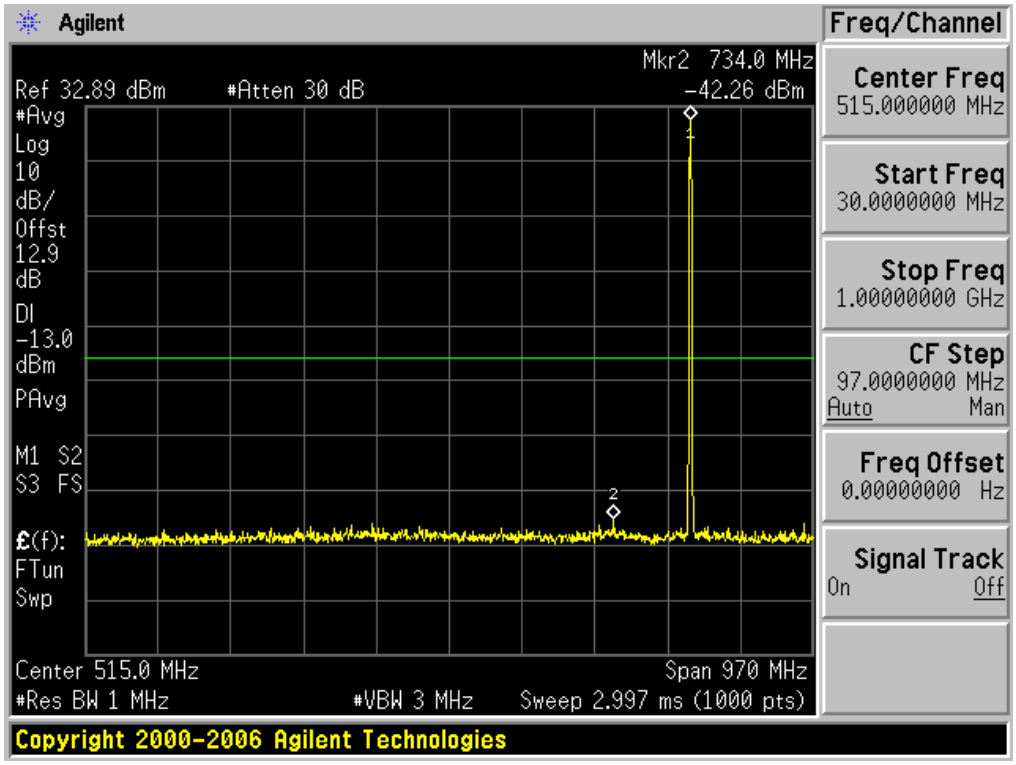
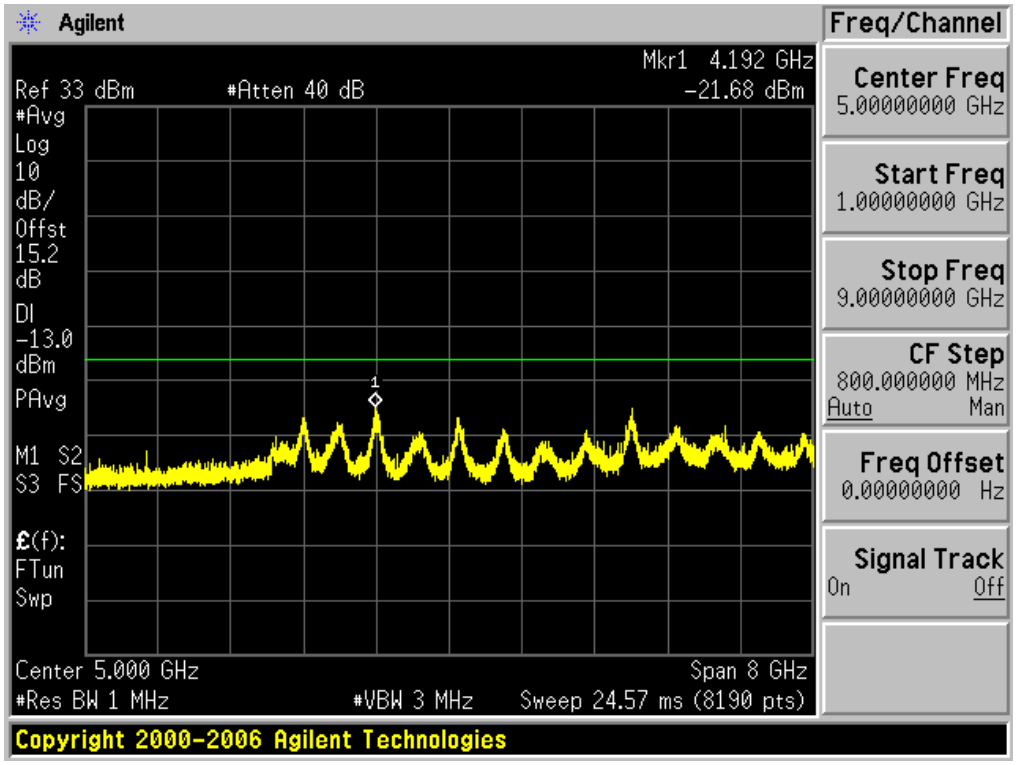

Agilent
Freq/Channel
Mkr1 4.204 GHz
Ref 33 dBm #Atten 40 dB -20.66 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz #VBW 3 MHz Sweep 24.57 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
CF Step
800.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

Test Channel=MCH

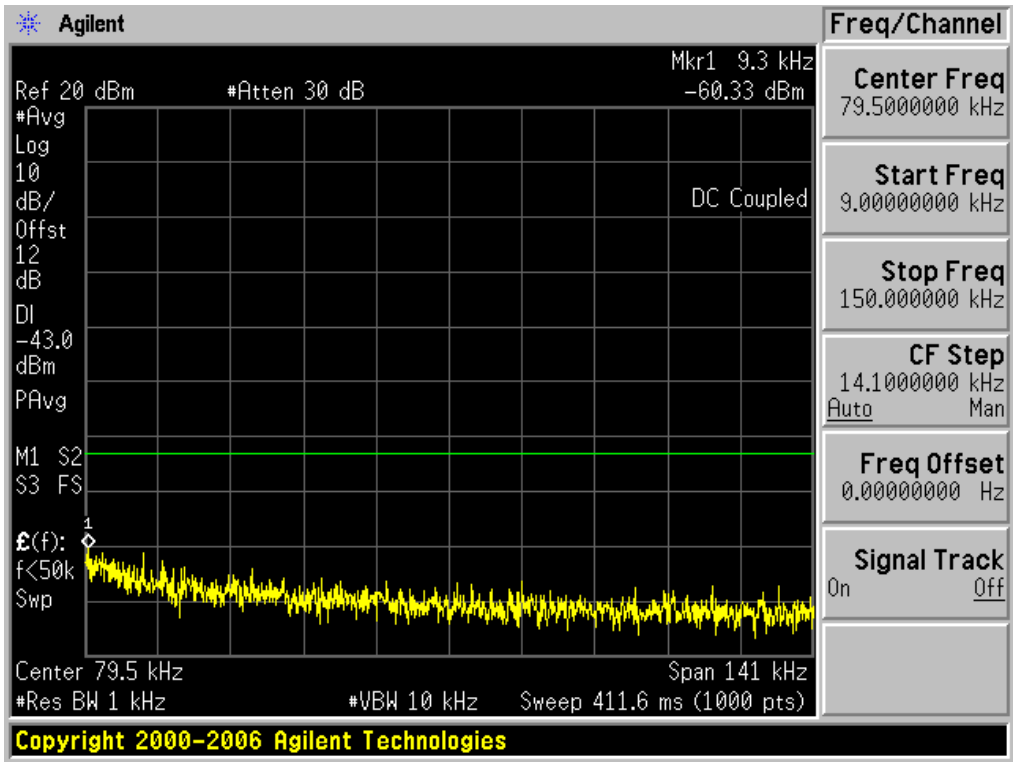


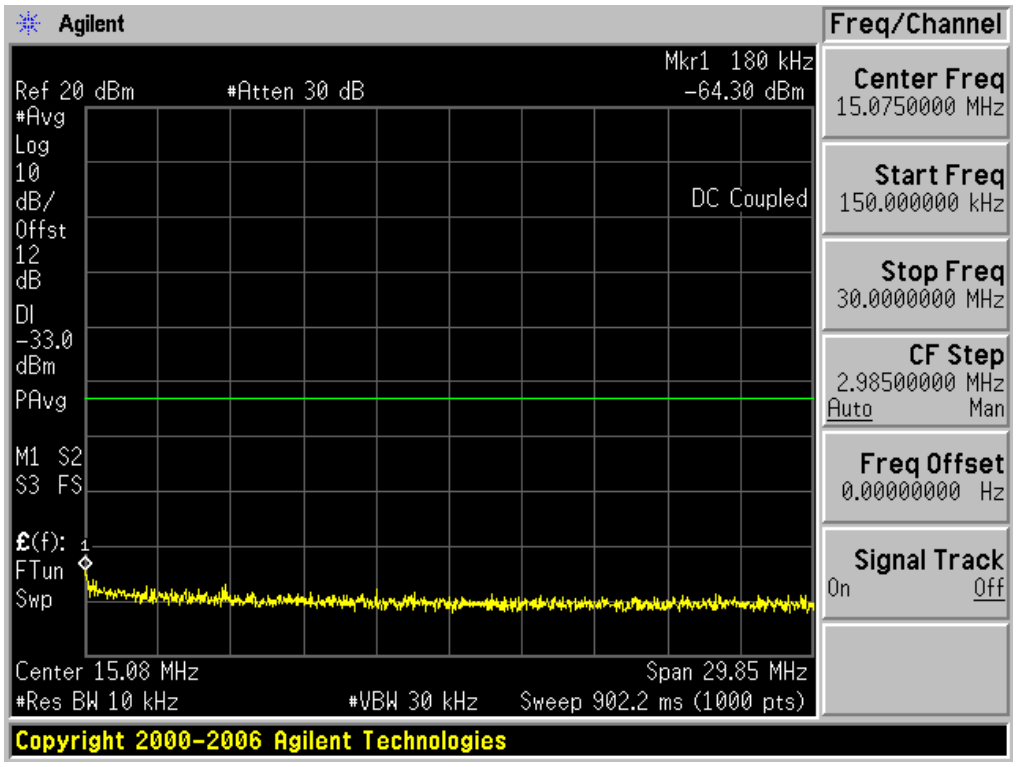


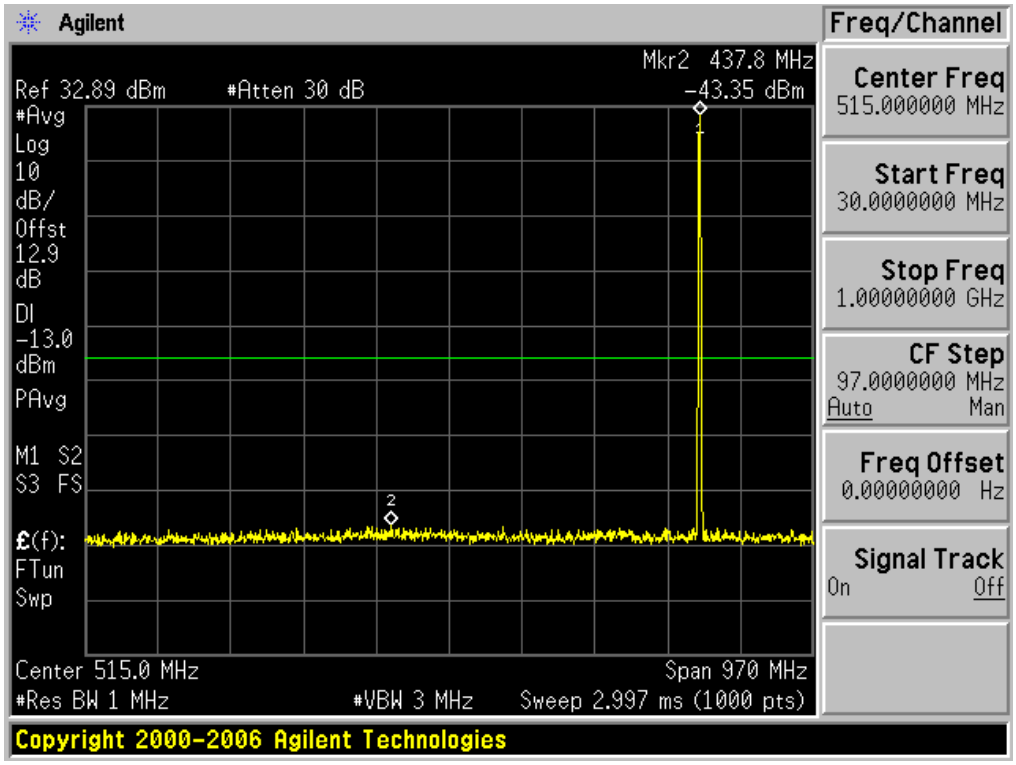

Agilent
Freq/Channel
Mkr2 734.0 MHz
Ref 32.89 dBm #Atten 30 dB -42.26 dBm
#Avg
Log
10
dB/
Offst
12.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz #VBW 3 MHz Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

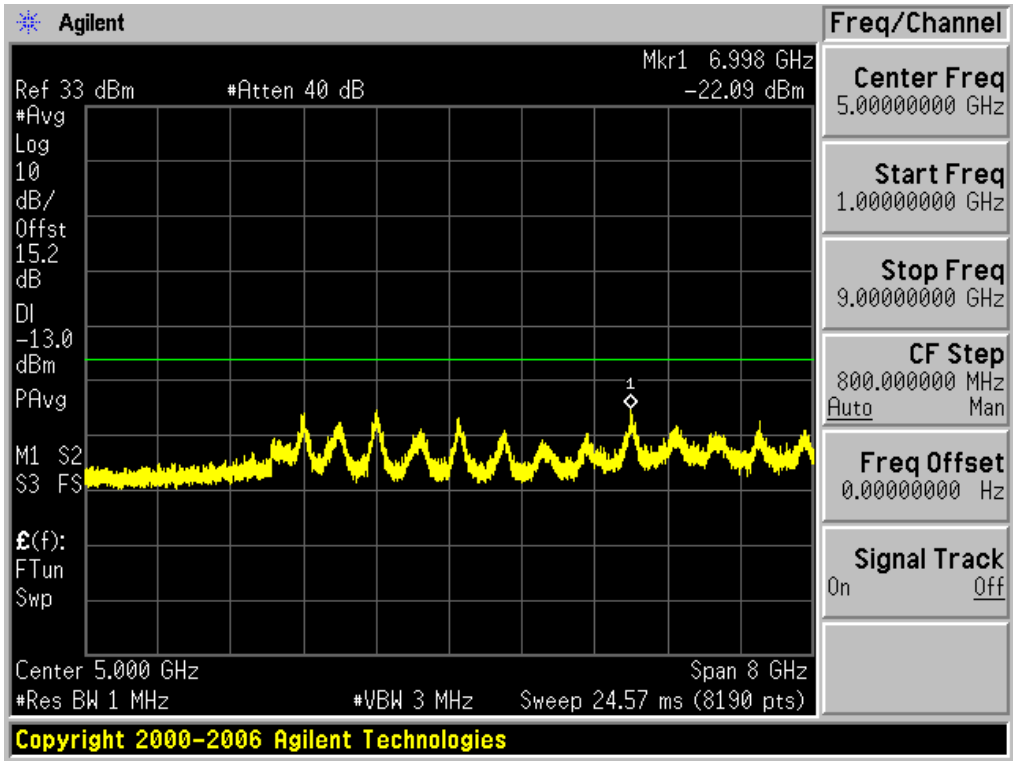

Agilent
Freq/Channel
Mkr1 4.192 GHz
Ref 33 dBm #Atten 40 dB -21.68 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz #VBW 3 MHz Sweep 24.57 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
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 437.8 MHz
Ref 32.89 dBm #Atten 30 dB -43.35 dBm
#Avg
Log
10
dB/
Offst
12.9
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 6.998 GHz
Ref 33 dBm #Atten 40 dB -22.09 dBm
#Avg
Log
10
dB/
Offst
15.2
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
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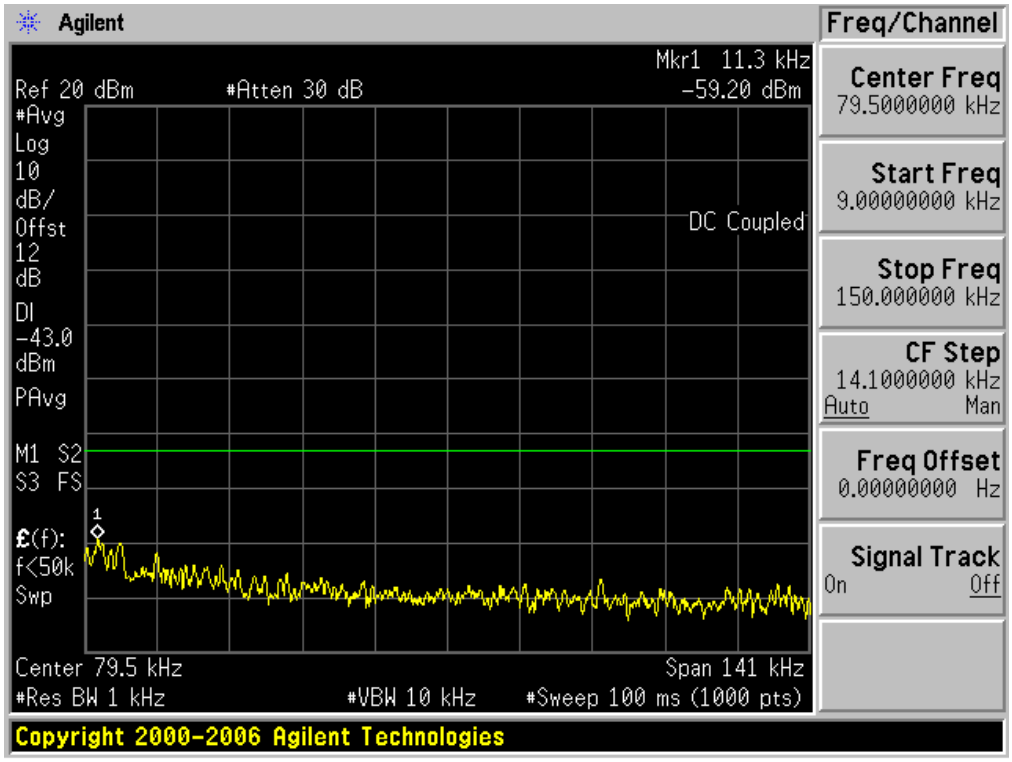
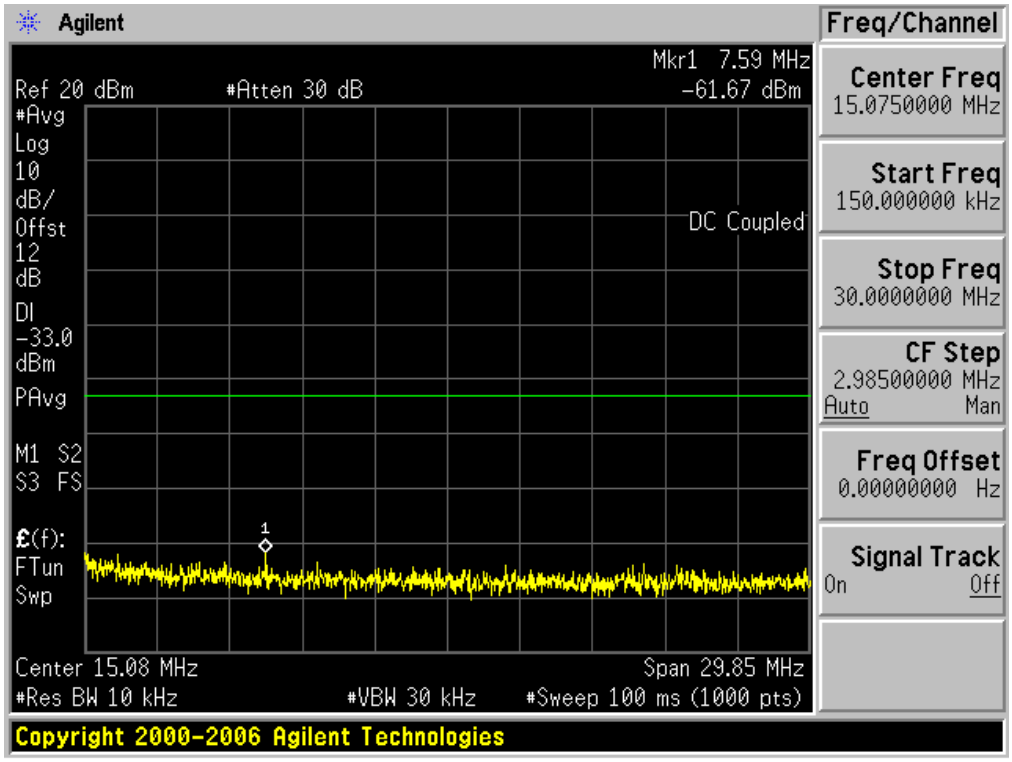
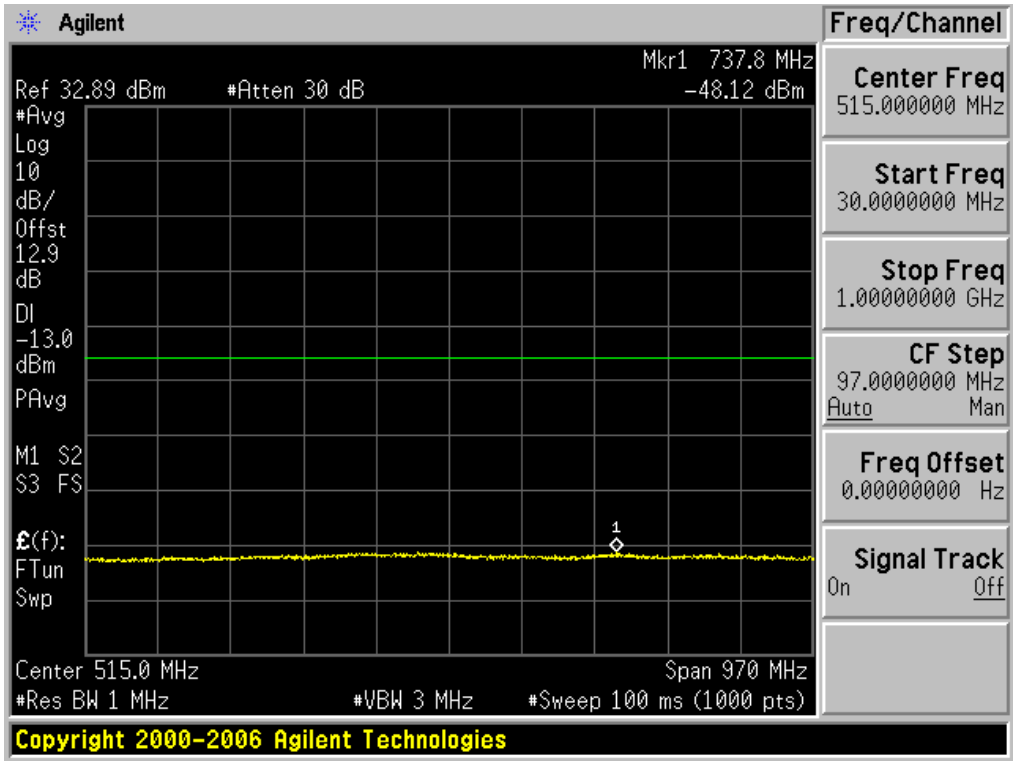
Test Band=GSM1900

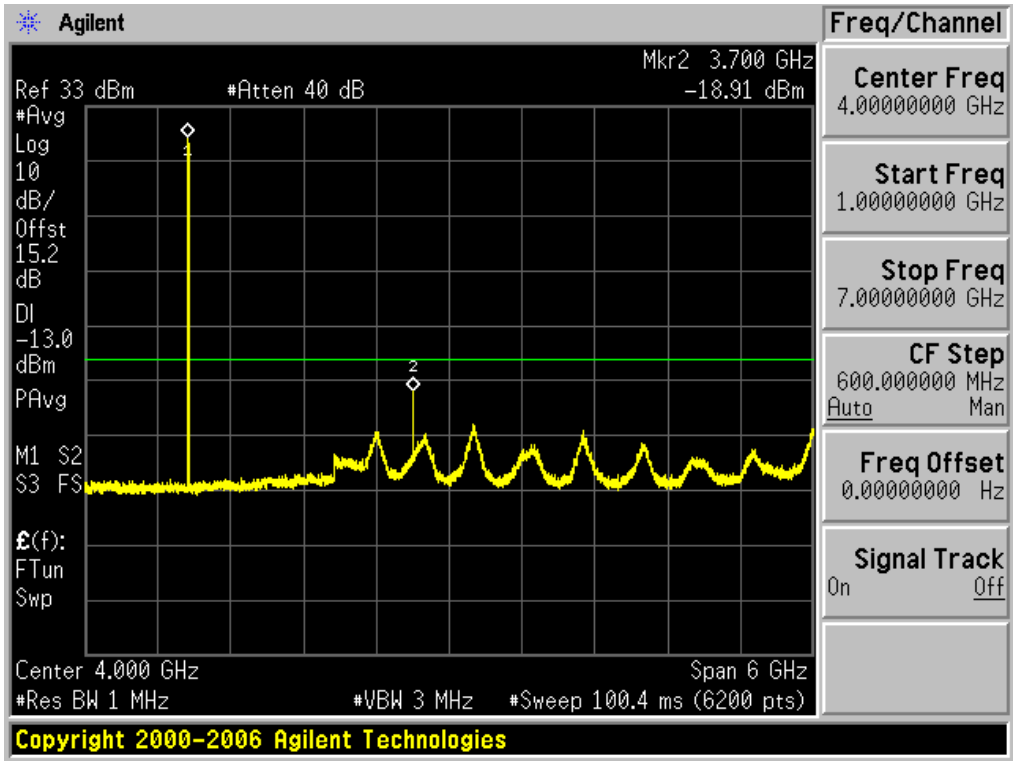
Test Mode=GSM/TM1

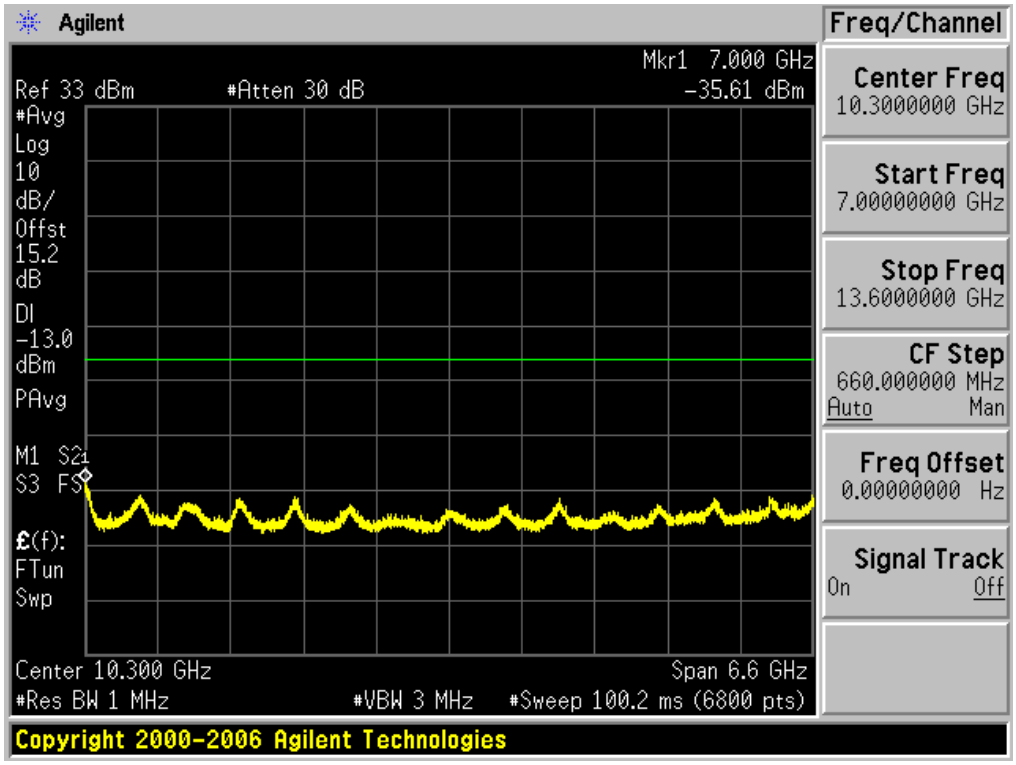
Test Channel=LCH

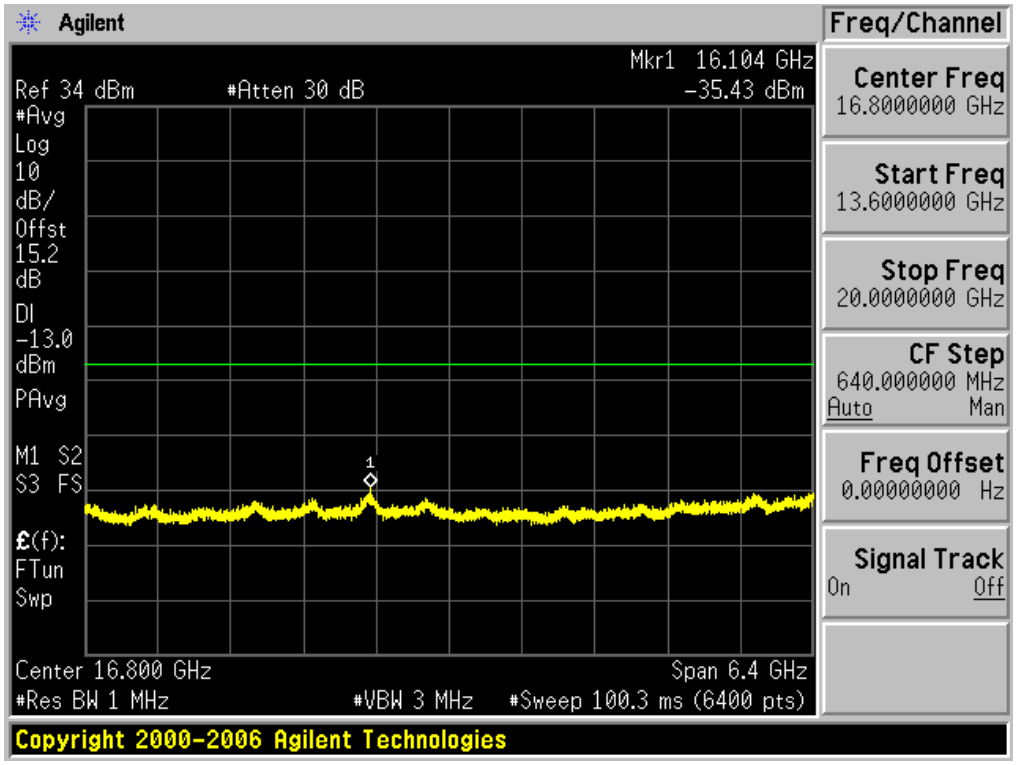





Agilent
Freq/Channel
Mkr1 737.8 MHz
Ref 32.89 dBm #Atten 30 dB -48.12 dBm
#Avg
Log
10
dB/
Offst
12.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz #VBW 3 MHz #Sweep 100 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 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 3.700 GHz
Ref 33 dBm #Atten 40 dB -18.91 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz #VBW 3 MHz #Sweep 100.4 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 7.000 GHz
Ref 33 dBm
#Atten 30 dB
-35.61 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
#Sweep 100.2 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 16.104 GHz
Ref 34 dBm
#Atten 30 dB
-35.43 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
#Sweep 100.3 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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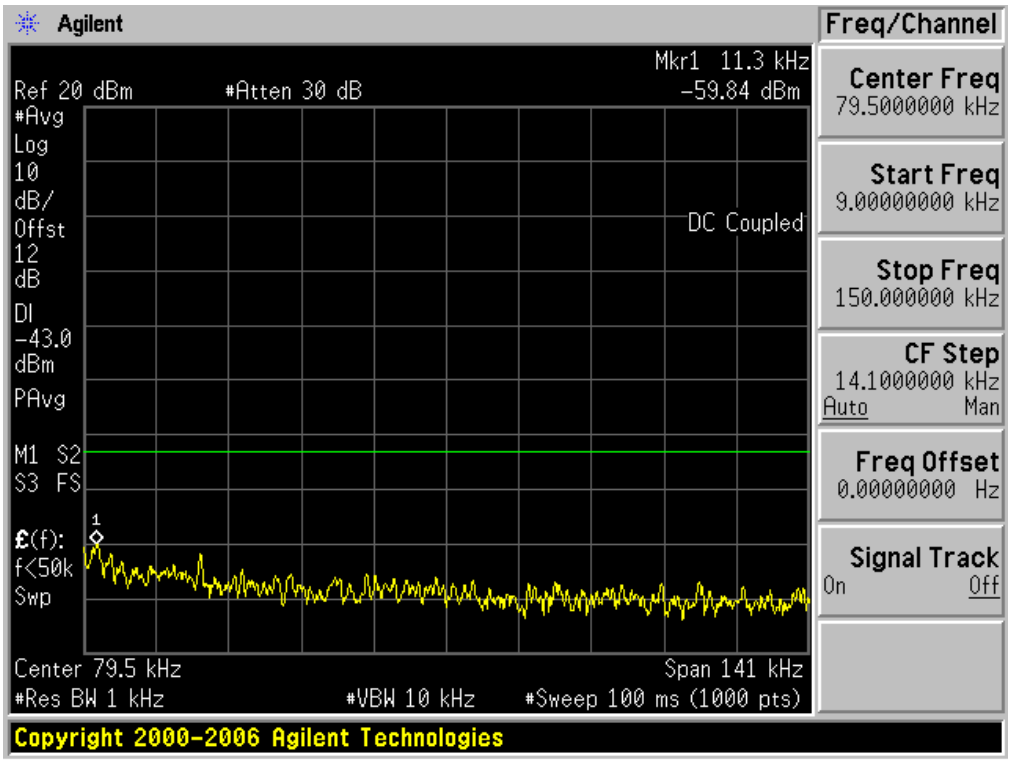
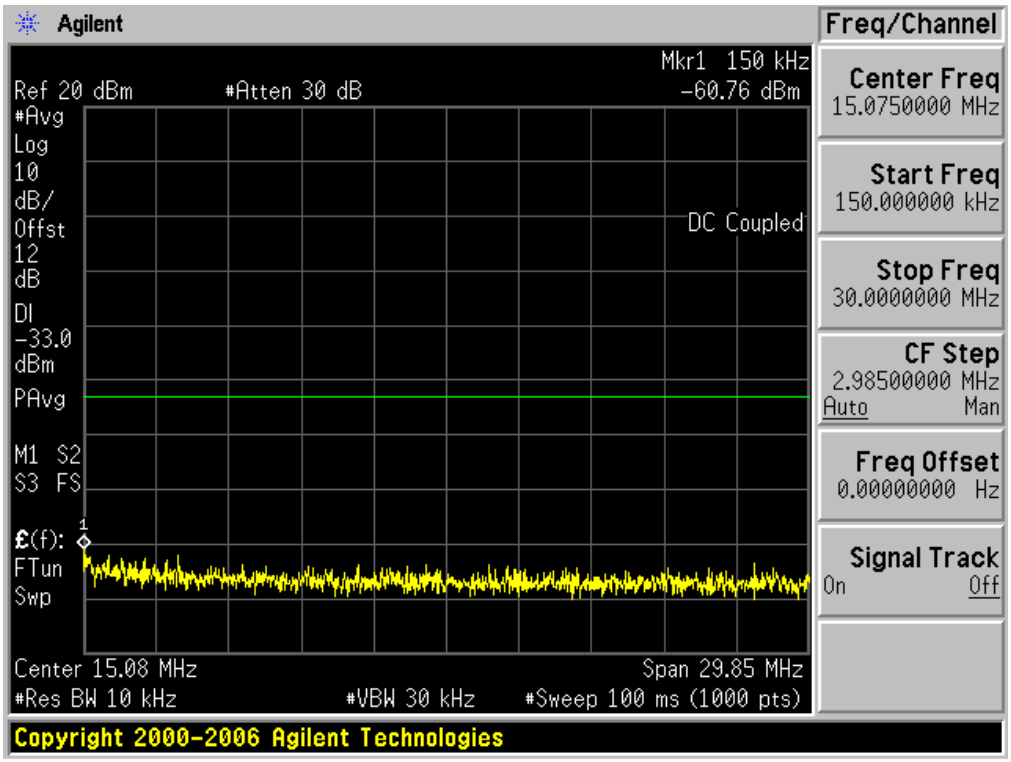
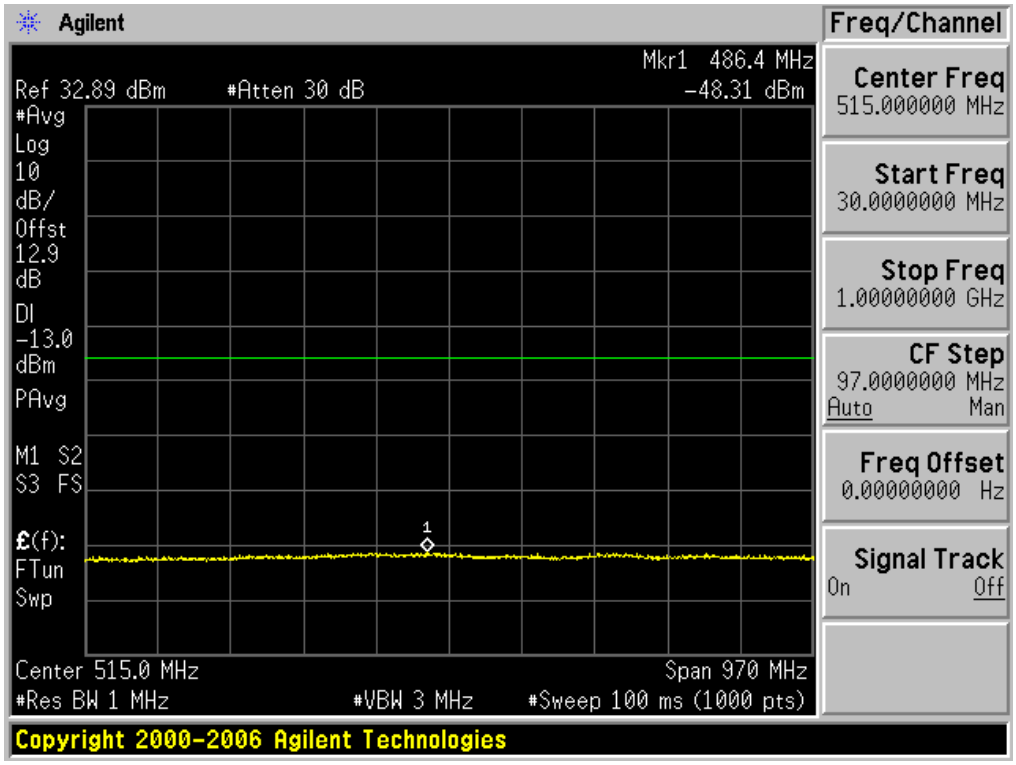
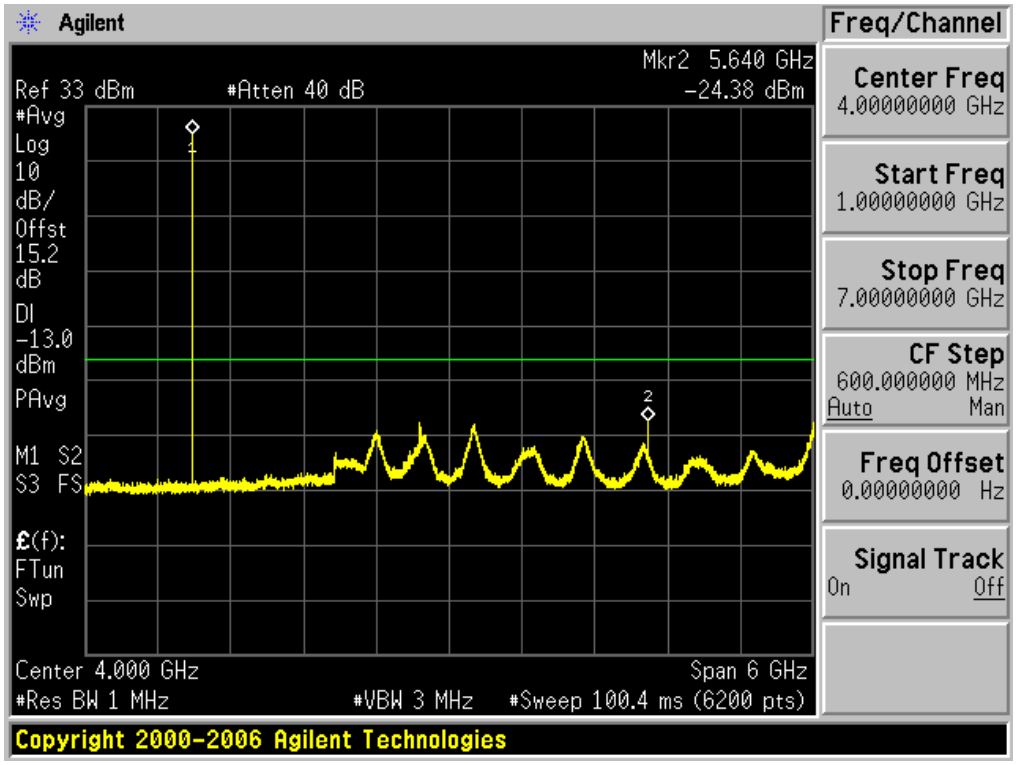
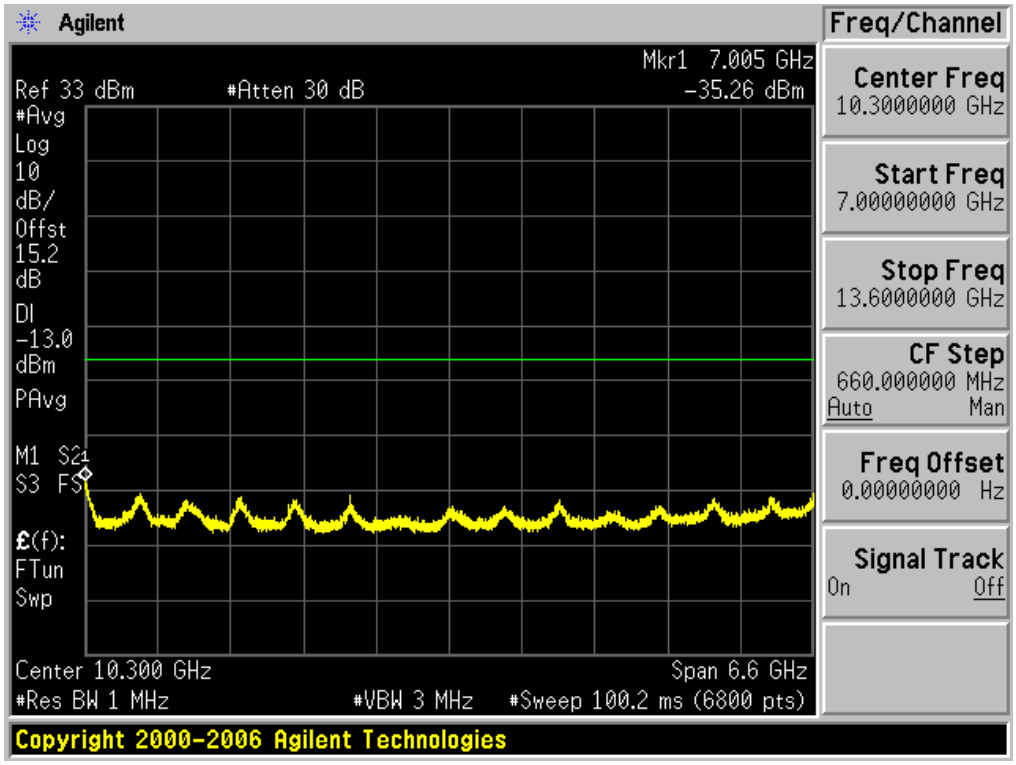
Test Channel=MCH

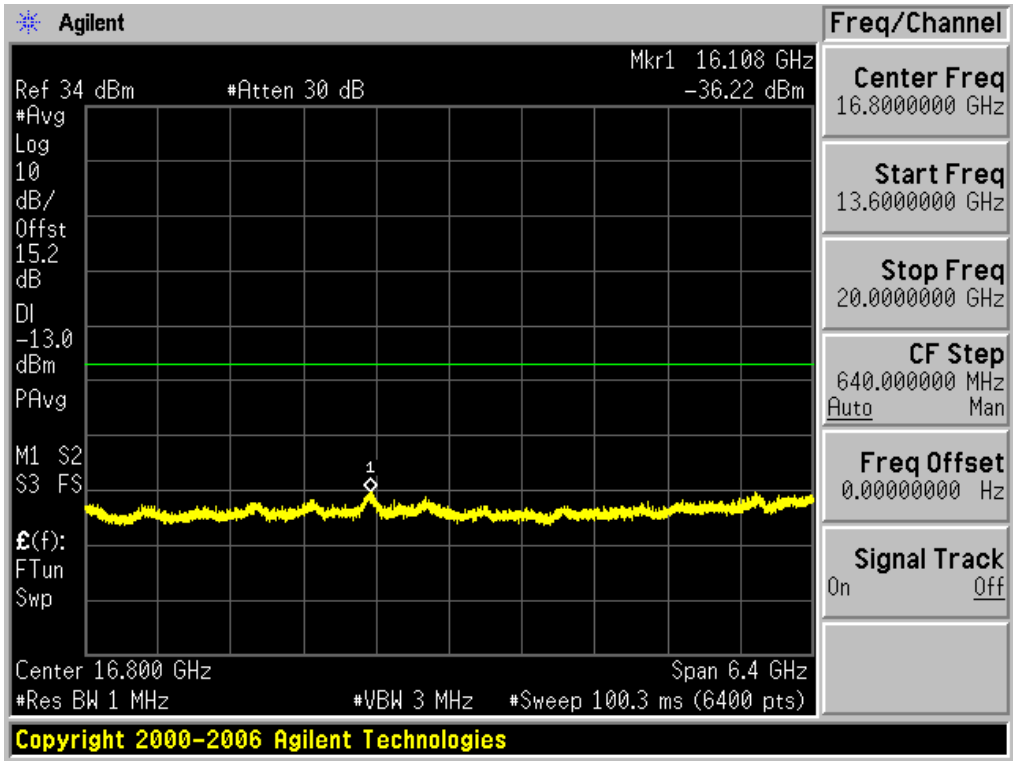




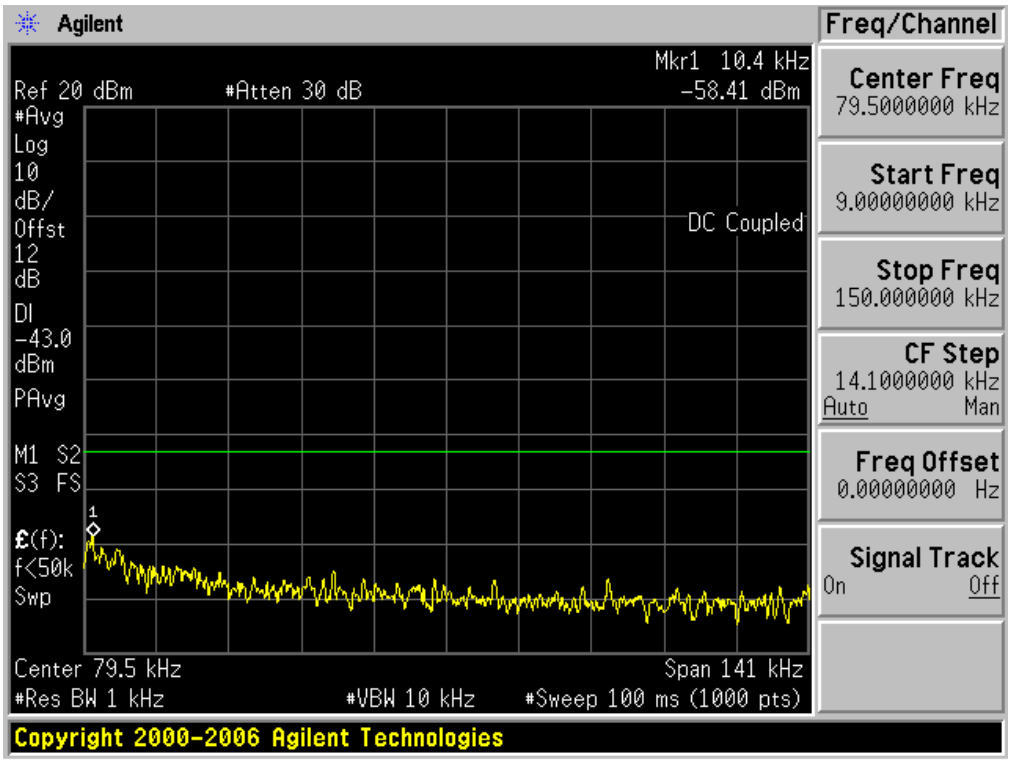

Agilent
Freq/Channel
Mkr1 486.4 MHz
Ref 32.89 dBm #Atten 30 dB -48.31 dBm
#Avg
Log
10
dB/
Offst
12.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz #VBW 3 MHz #Sweep 100 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

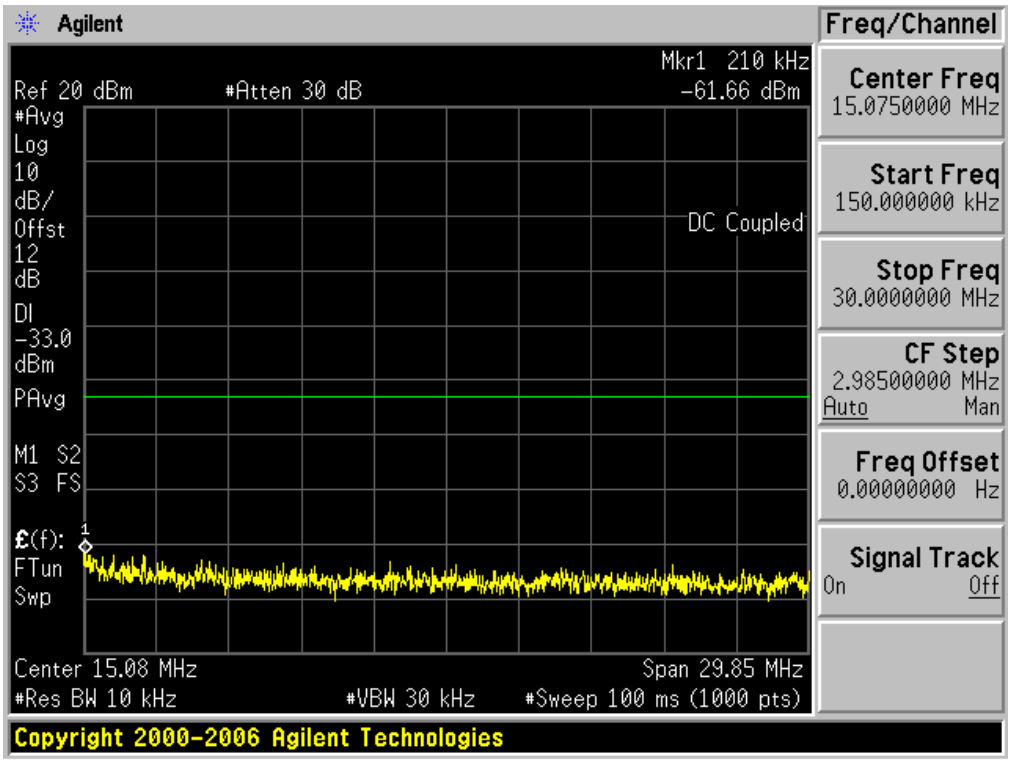

Agilent
Freq/Channel
Mkr2 5.640 GHz
Ref 33 dBm #Atten 40 dB -24.38 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz #VBW 3 MHz #Sweep 100.4 ms (6200 pts)
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

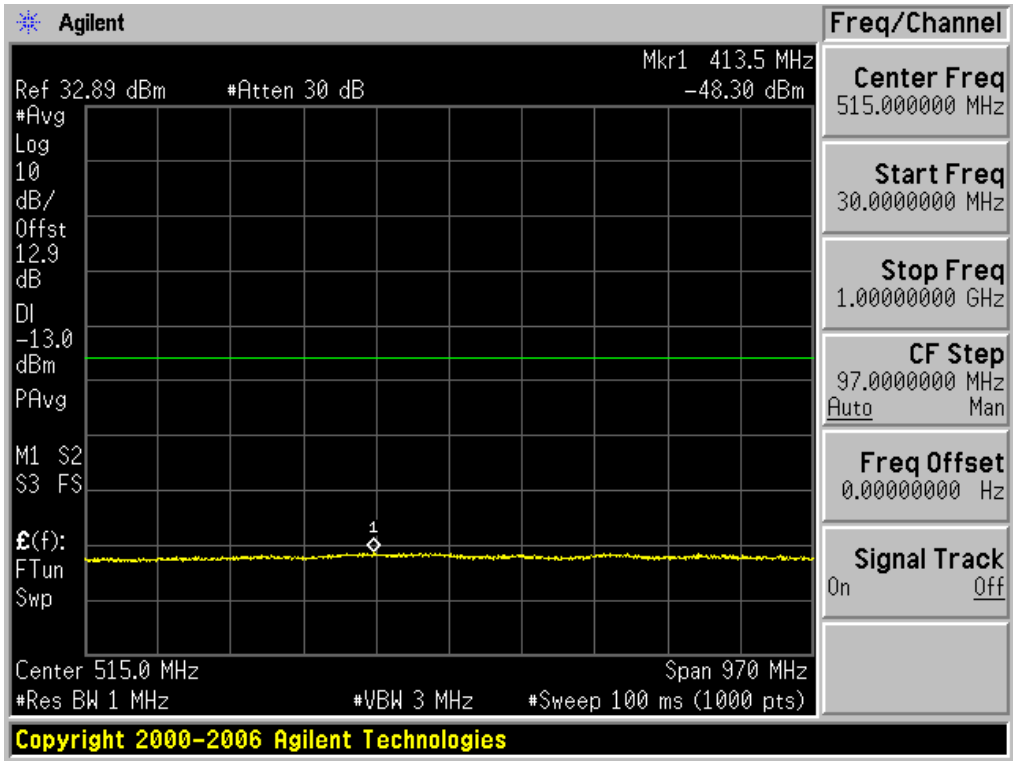

Agilent
Freq/Channel
Mkr1 7.005 GHz
Ref 33 dBm
#Atten 30 dB
-35.26 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
#Sweep 100.2 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

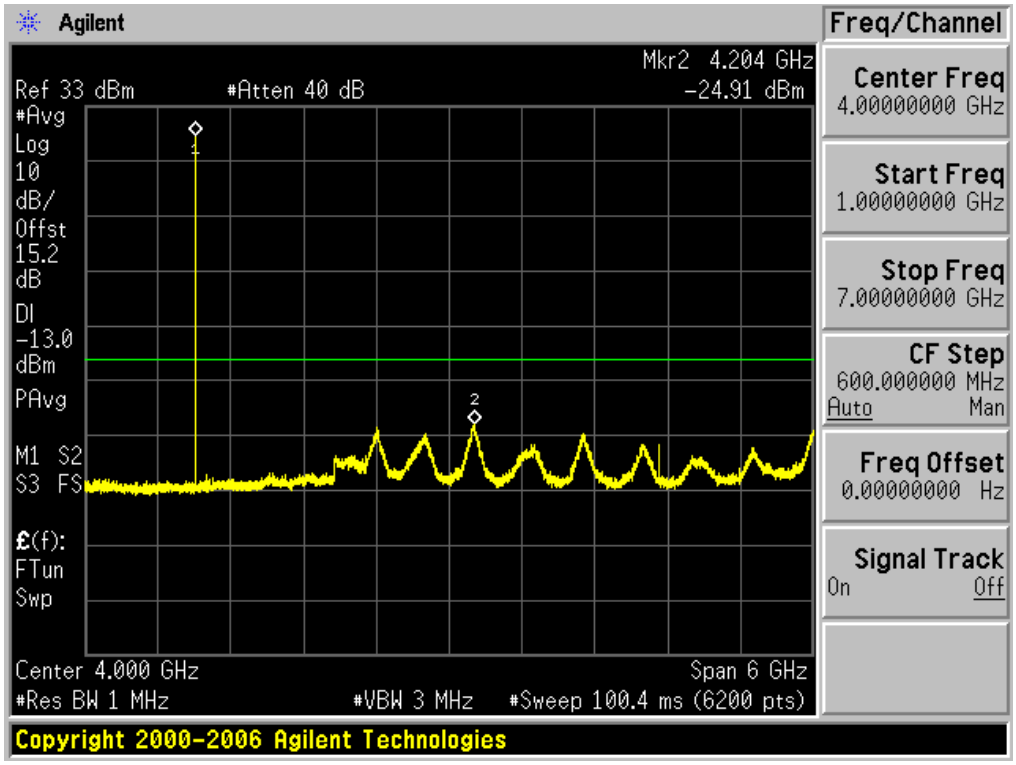

Agilent
Freq/Channel
Mkr1 16.108 GHz
Ref 34 dBm
#Atten 30 dB
-36.22 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
#Sweep 100.3 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

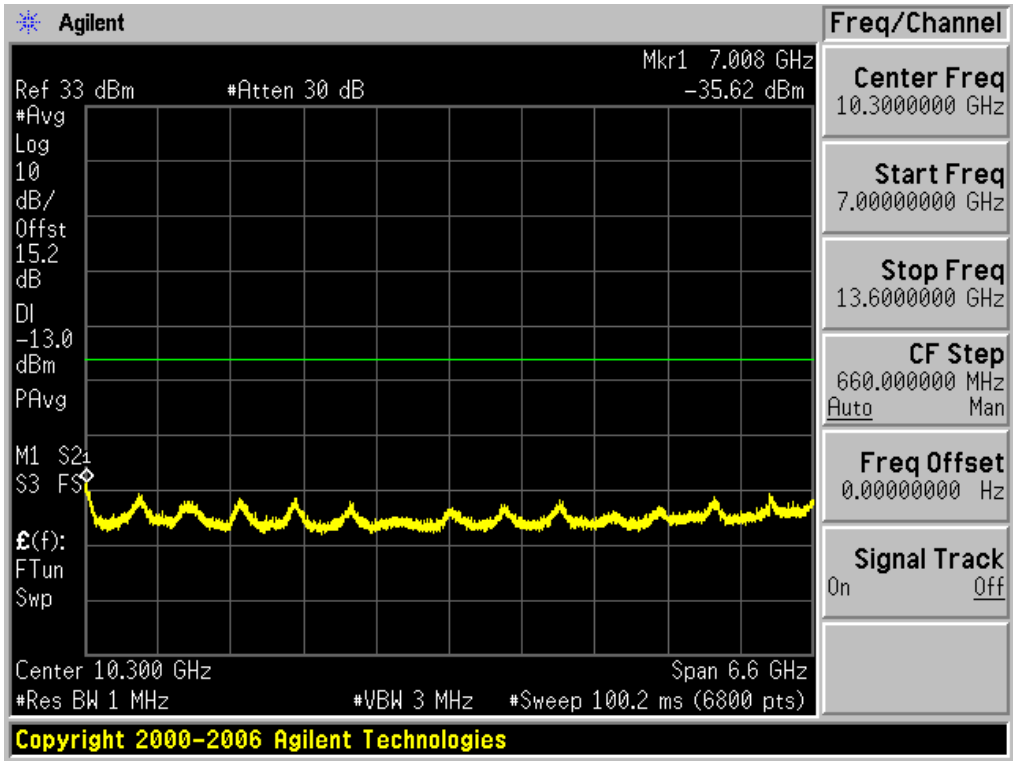
Test Channel=HCH

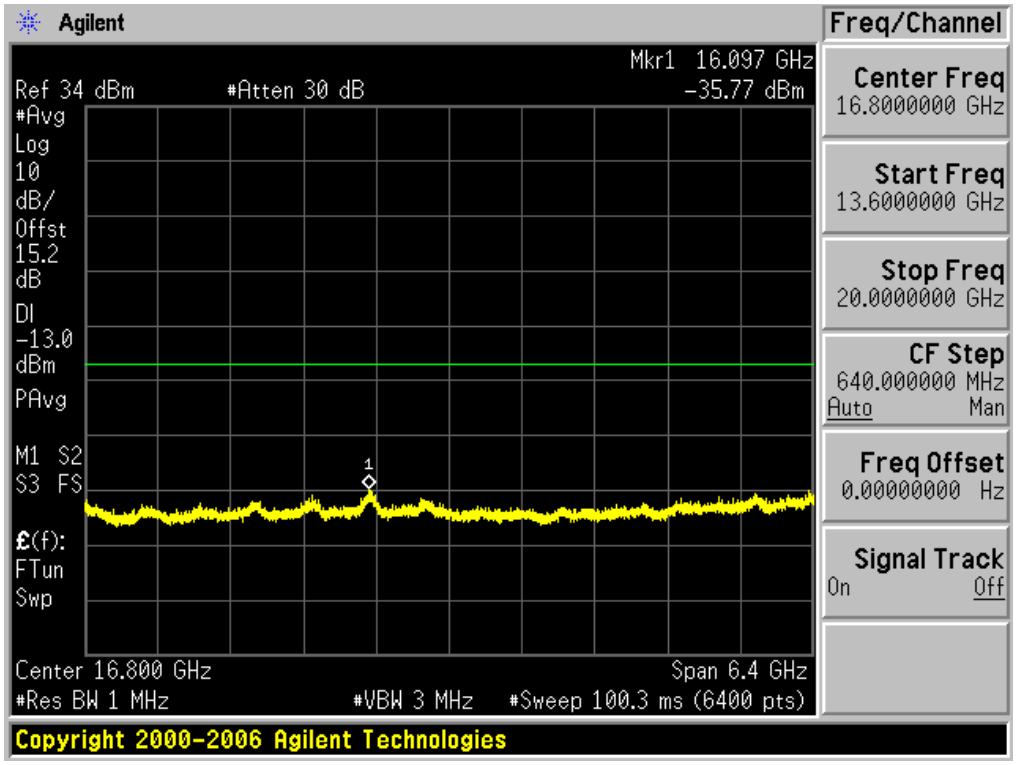





Agilent
Freq/Channel
Mkr1 413.5 MHz
Ref 32.89 dBm #Atten 30 dB -48.30 dBm
#Avg
Log
10
dB/
Offst
12.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz #VBW 3 MHz #Sweep 100 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

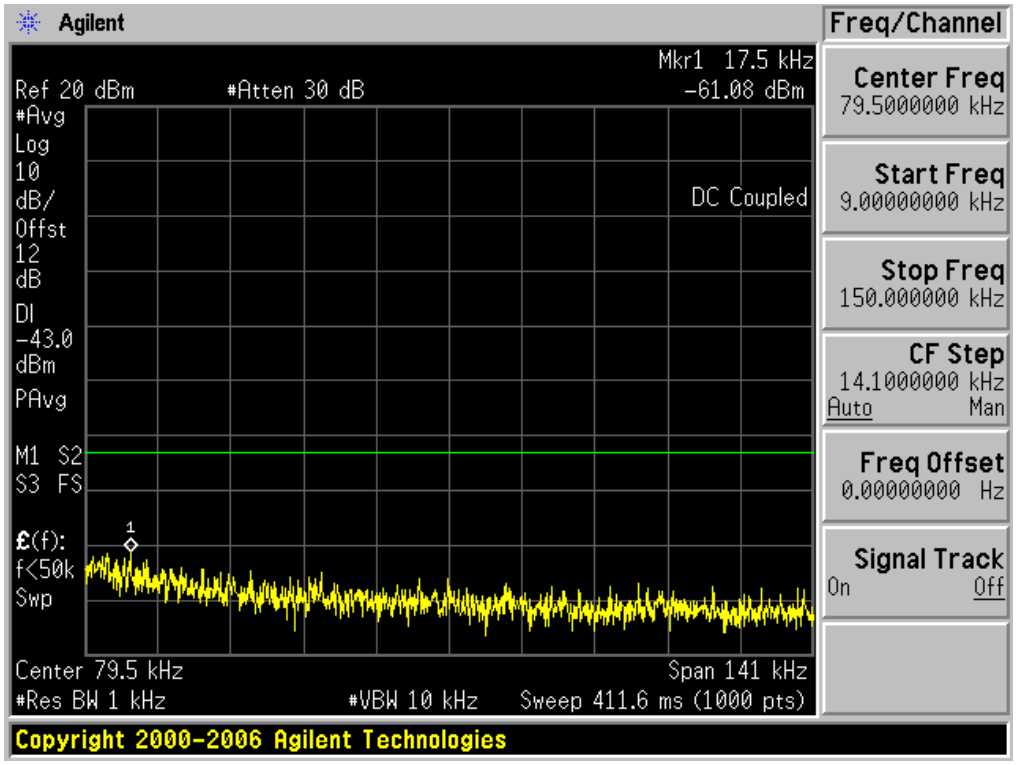

Agilent
Freq/Channel
Mkr2 4.204 GHz
Ref 33 dBm #Atten 40 dB -24.91 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz #VBW 3 MHz #Sweep 100.4 ms (6200 pts)
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

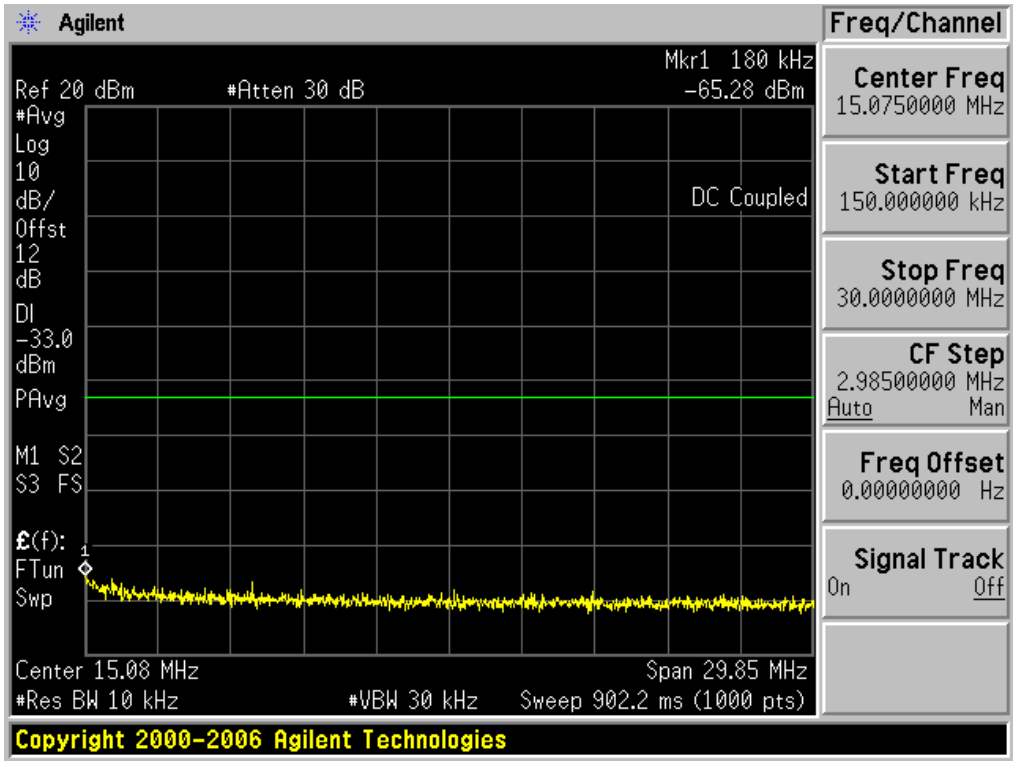

Agilent
Freq/Channel
Mkr1 7.008 GHz
Ref 33 dBm
#Atten 30 dB
-35.62 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
#Sweep 100.2 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

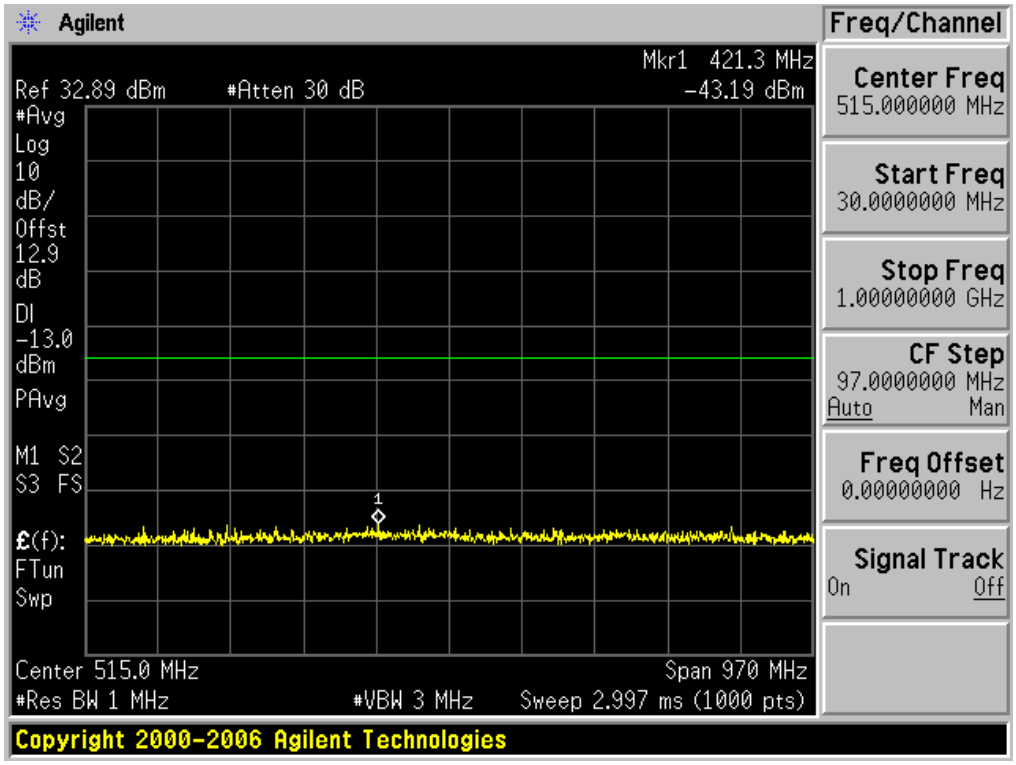

Agilent
Freq/Channel
Mkr1 16.097 GHz
Ref 34 dBm
#Atten 30 dB
-35.77 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
#Sweep 100.3 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

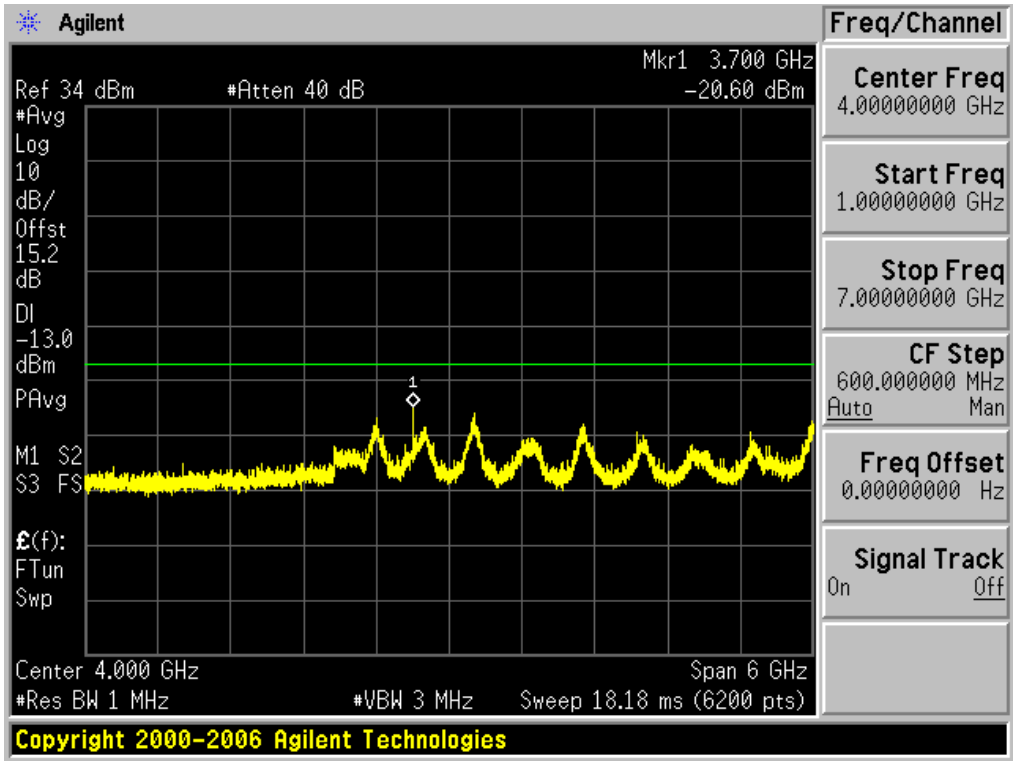
Test Mode=GSM/TM2

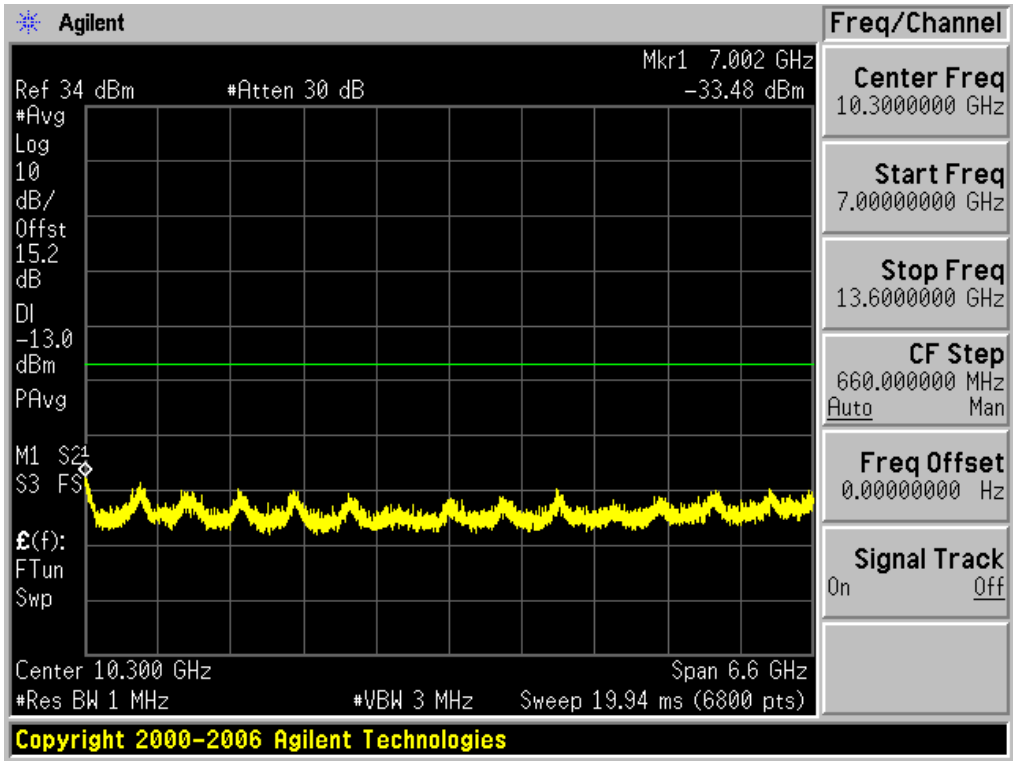
Test Channel=LCH

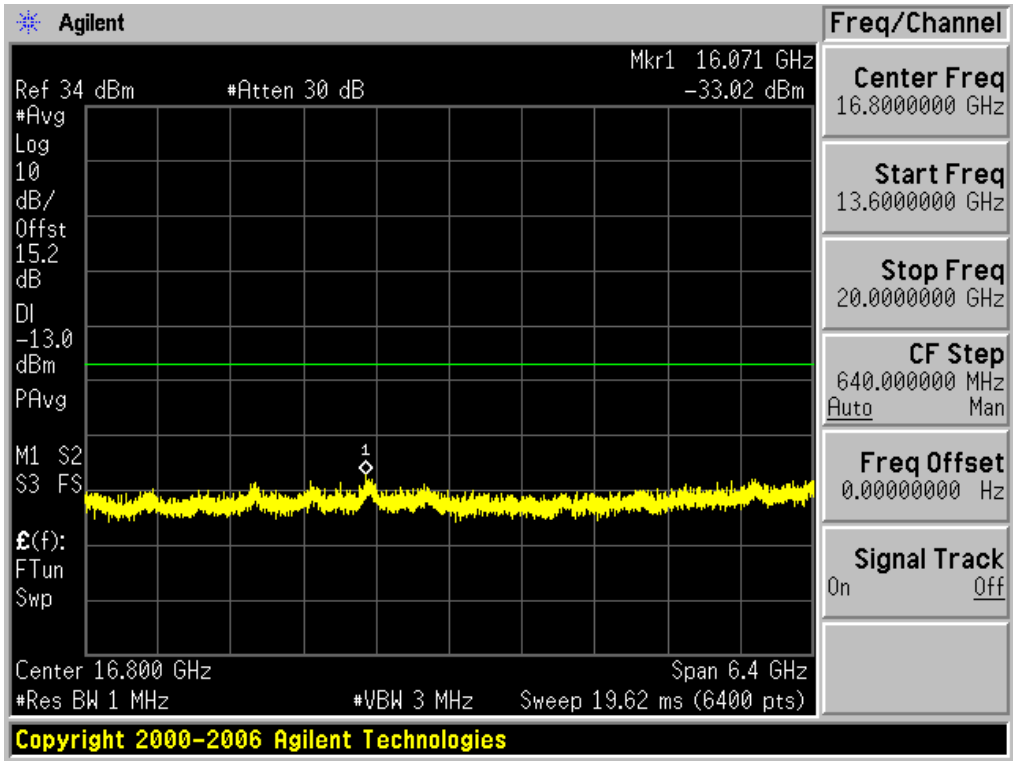





Agilent
Freq/Channel
Mkr1 421.3 MHz
Ref 32.89 dBm #Atten 30 dB -43.19 dBm
#Avg
Log
10
dB/
Offst
12.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz #VBW 3 MHz Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 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 3.700 GHz
Ref 34 dBm #Atten 40 dB -20.60 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(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 7.002 GHz
Ref 34 dBm
#Atten 30 dB
-33.48 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(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 16.071 GHz
Ref 34 dBm
#Atten 30 dB
-33.02 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(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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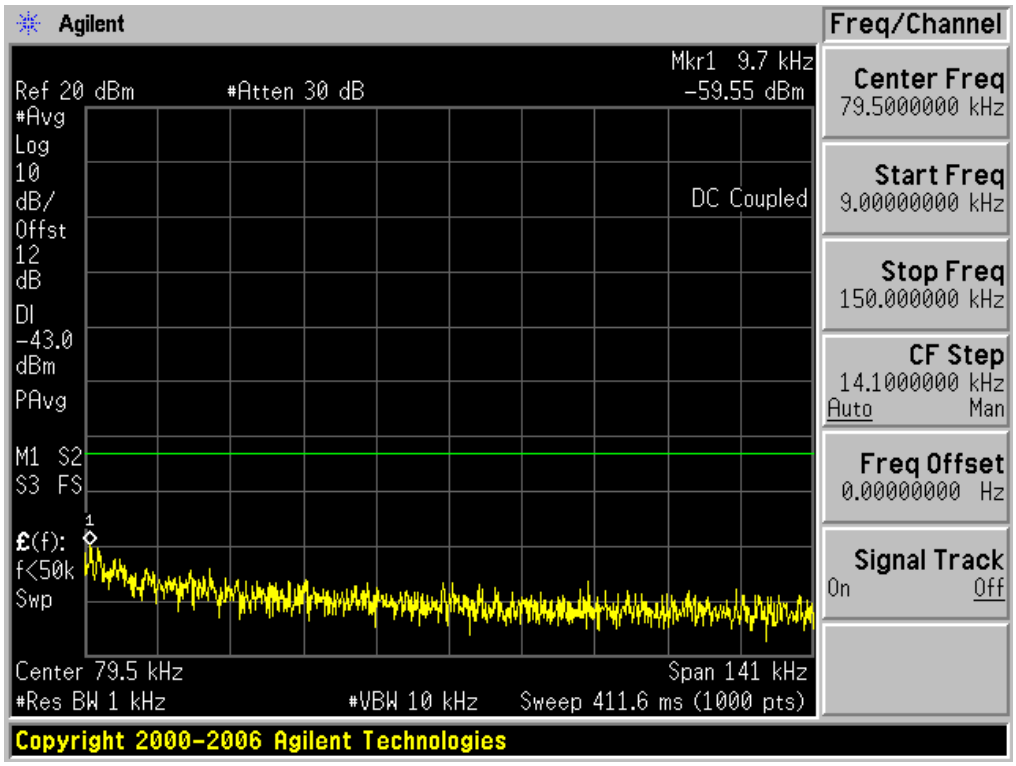
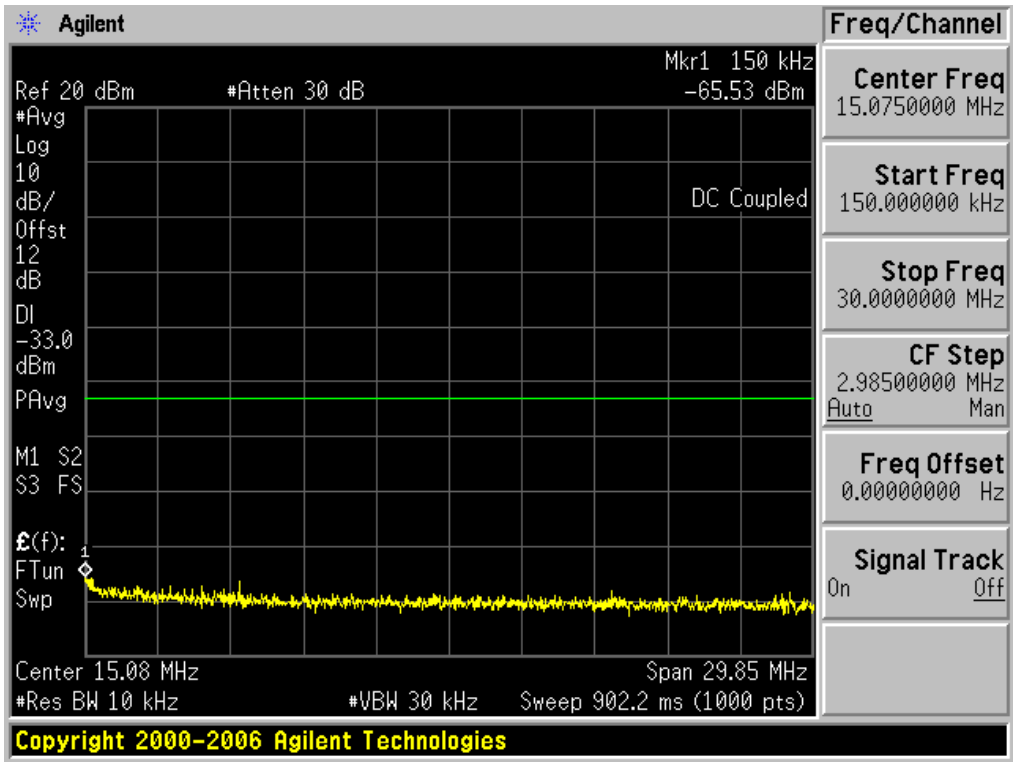
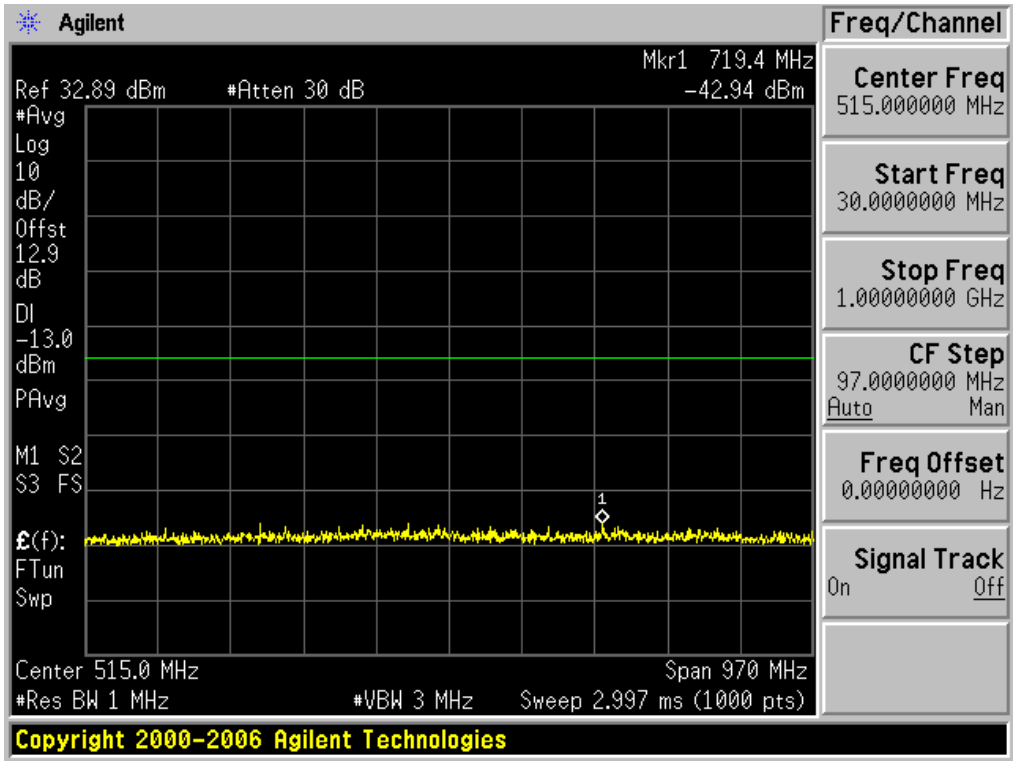
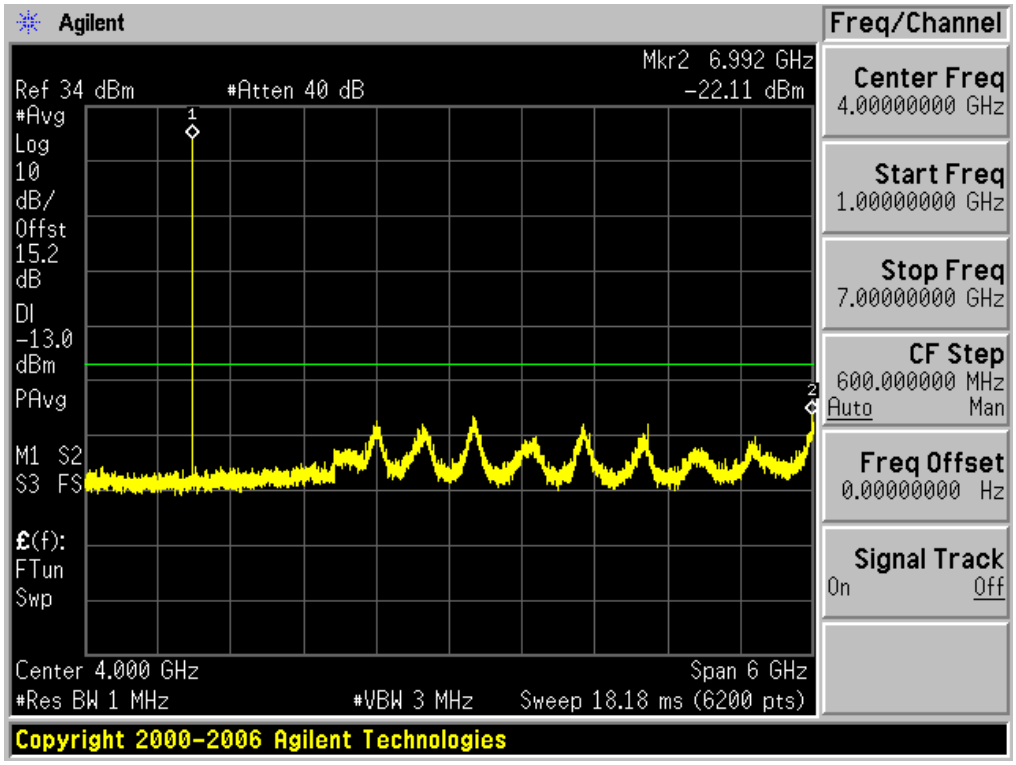
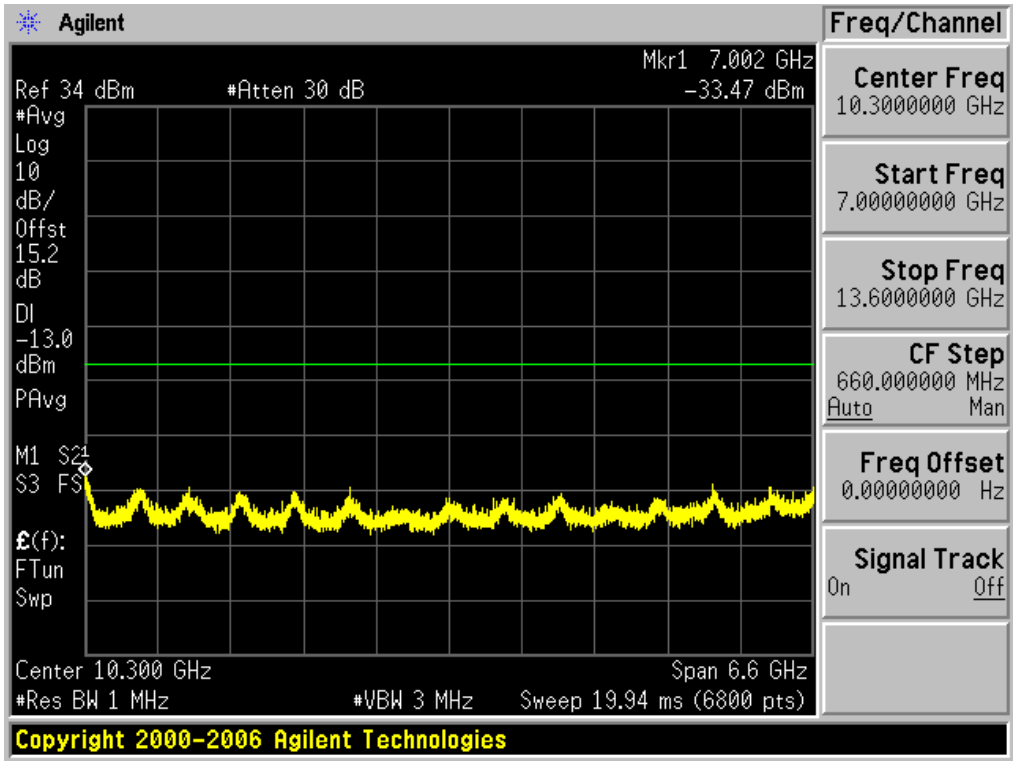
Test Channel=MCH

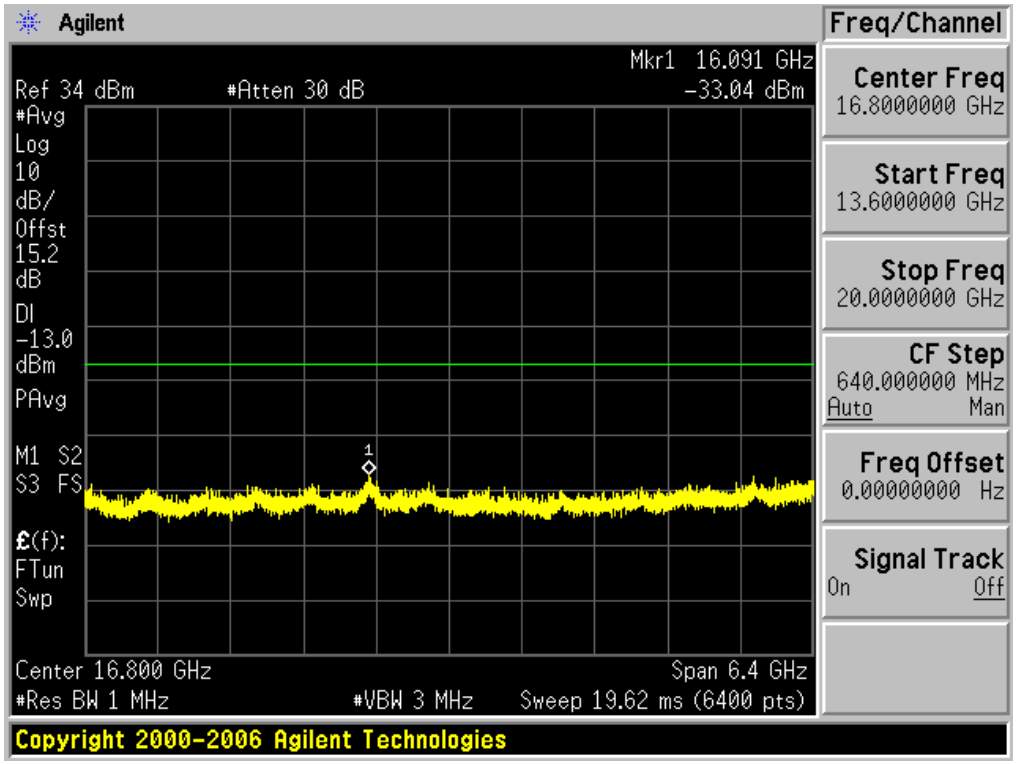




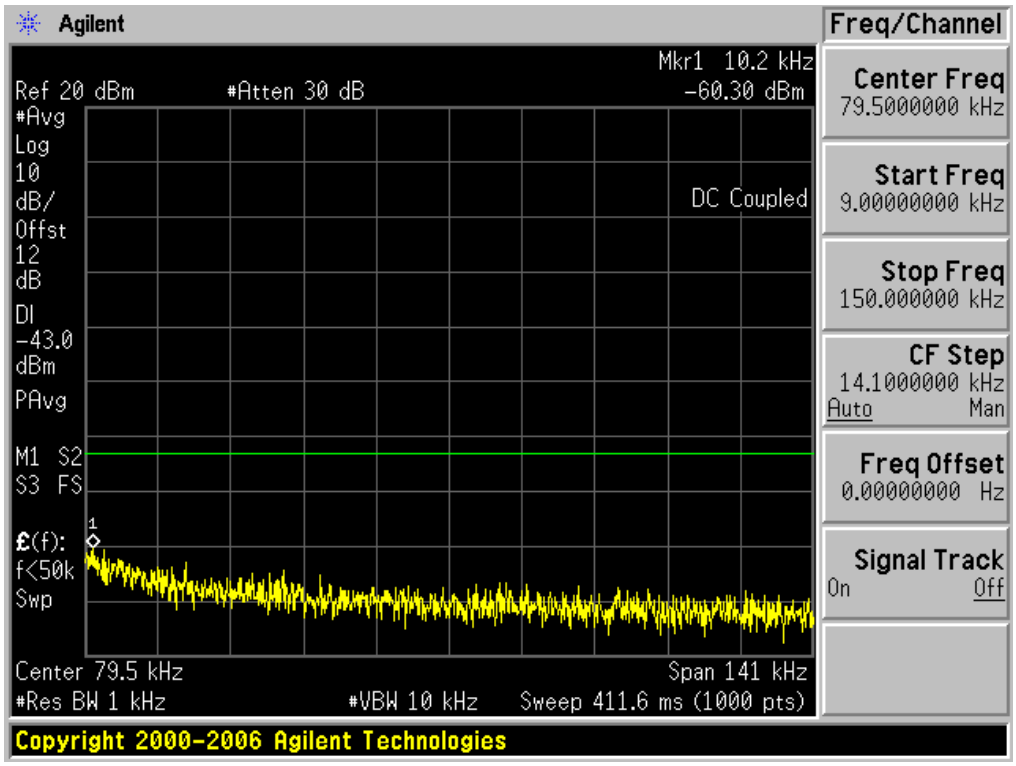

Agilent
Freq/Channel
Mkr1 719.4 MHz
Ref 32.89 dBm #Atten 30 dB -42.94 dBm
#Avg
Log
10
dB/
Offst
12.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

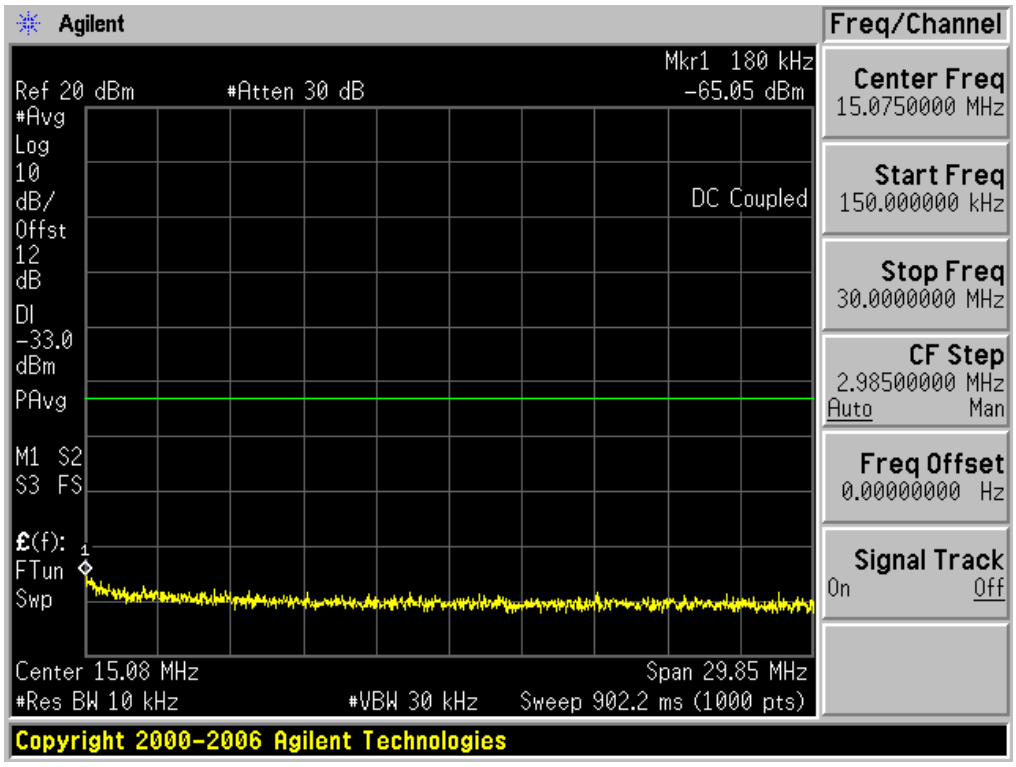

Agilent
Freq/Channel
Mkr2 6.992 GHz
Ref 34 dBm #Atten 40 dB -22.11 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 18.18 ms (6200 pts)
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

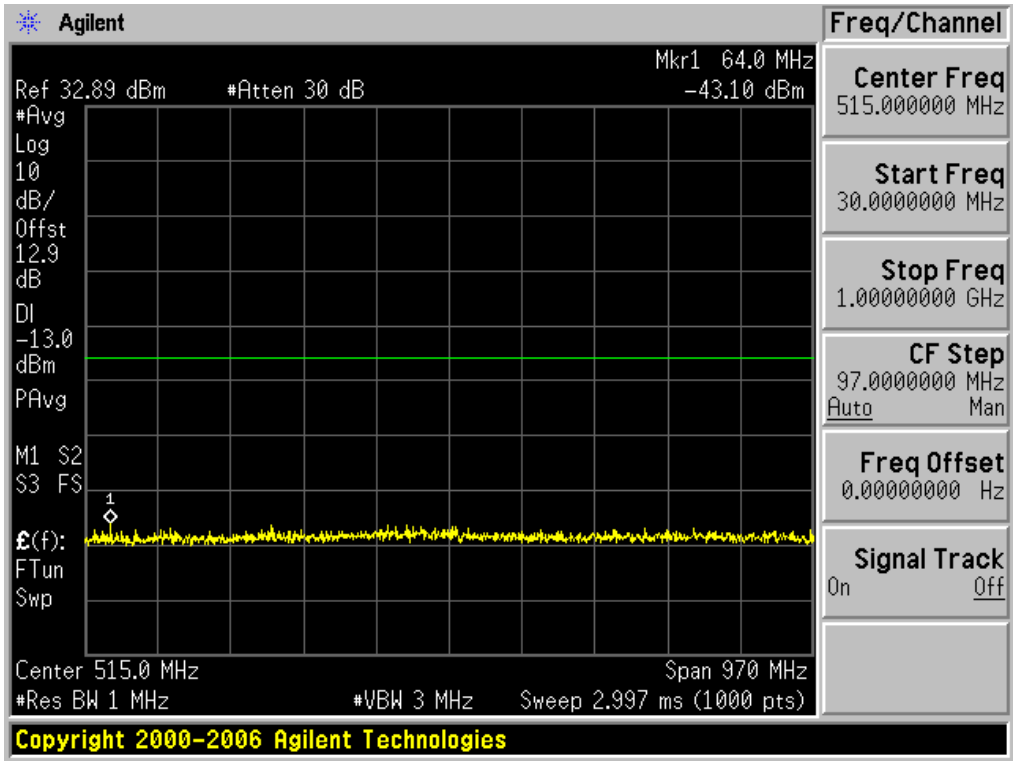

Agilent
Freq/Channel
Mkr1 7.002 GHz
Ref 34 dBm
#Atten 30 dB
-33.47 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

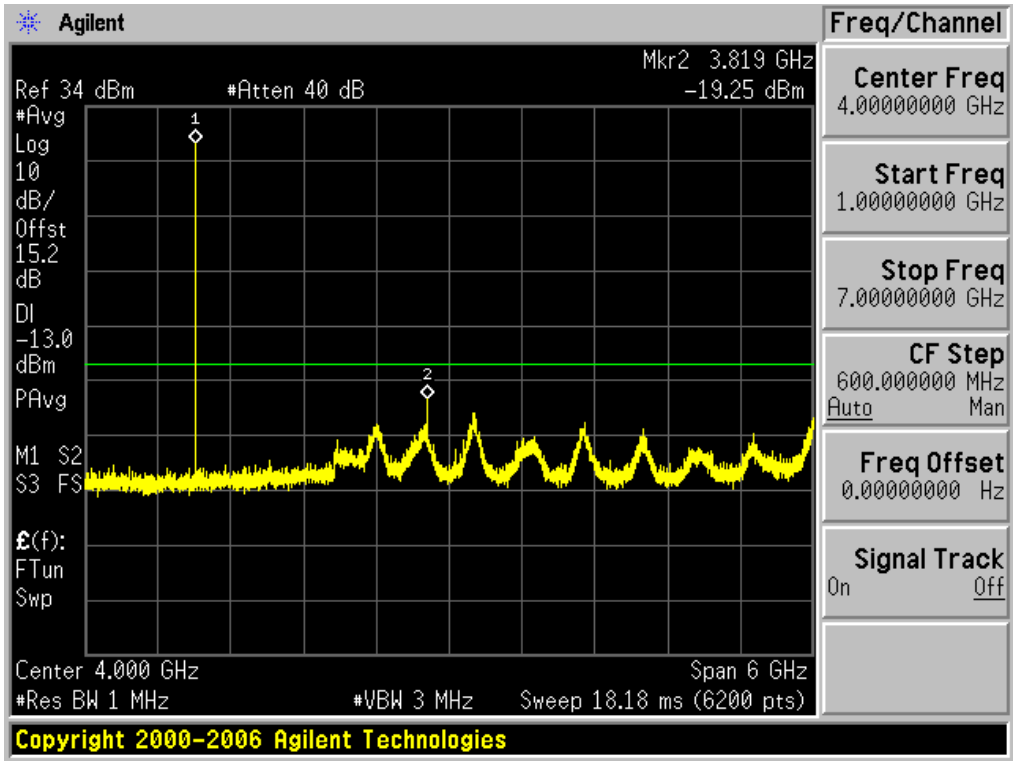

Agilent
Freq/Channel
Mkr1 16.091 GHz
Ref 34 dBm
#Atten 30 dB
-33.04 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

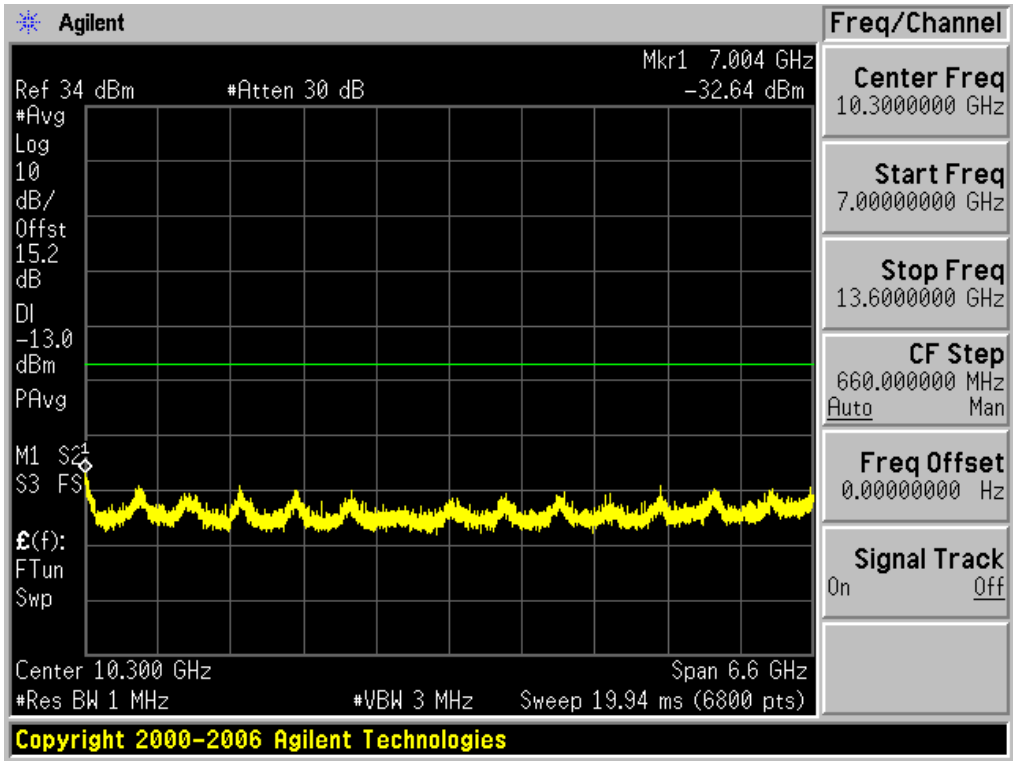
Test Channel=HCH

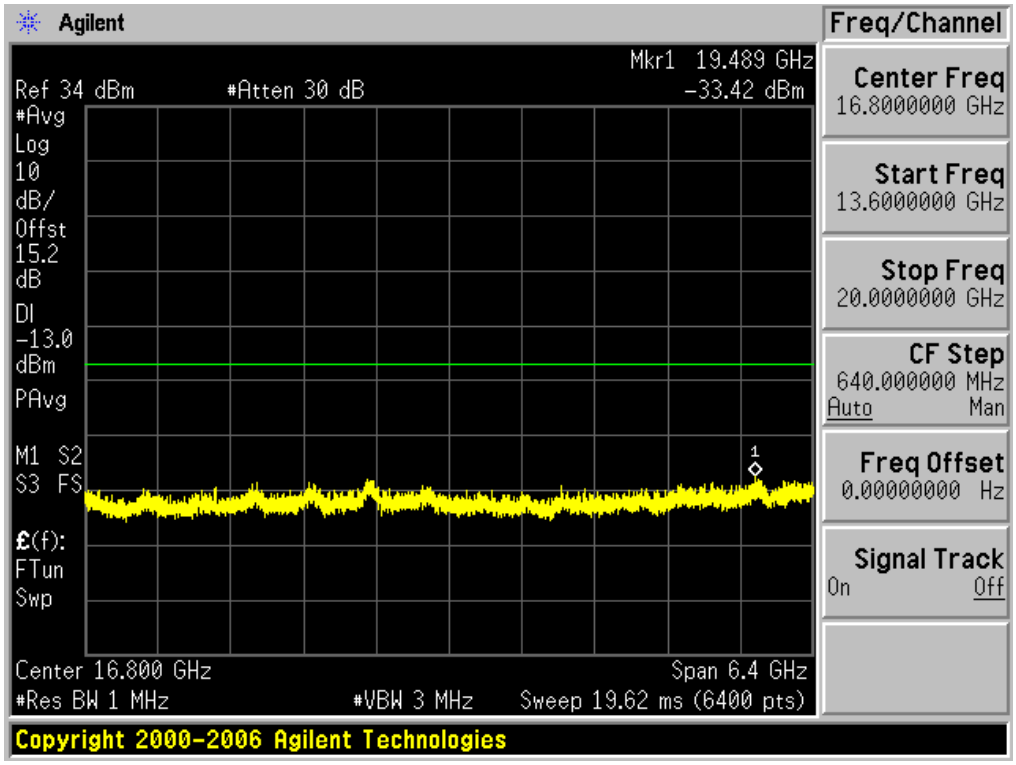





Agilent
Freq/Channel
Mkr1 64.0 MHz
Ref 32.89 dBm #Atten 30 dB -43.10 dBm
#Avg
Log
10
dB/
Offst
12.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 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
Mkr2 3.819 GHz
Ref 34 dBm #Atten 40 dB -19.25 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(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 7.004 GHz
Ref 34 dBm
#Atten 30 dB
-32.64 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(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 19.489 GHz
Ref 34 dBm
#Atten 30 dB
-33.42 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(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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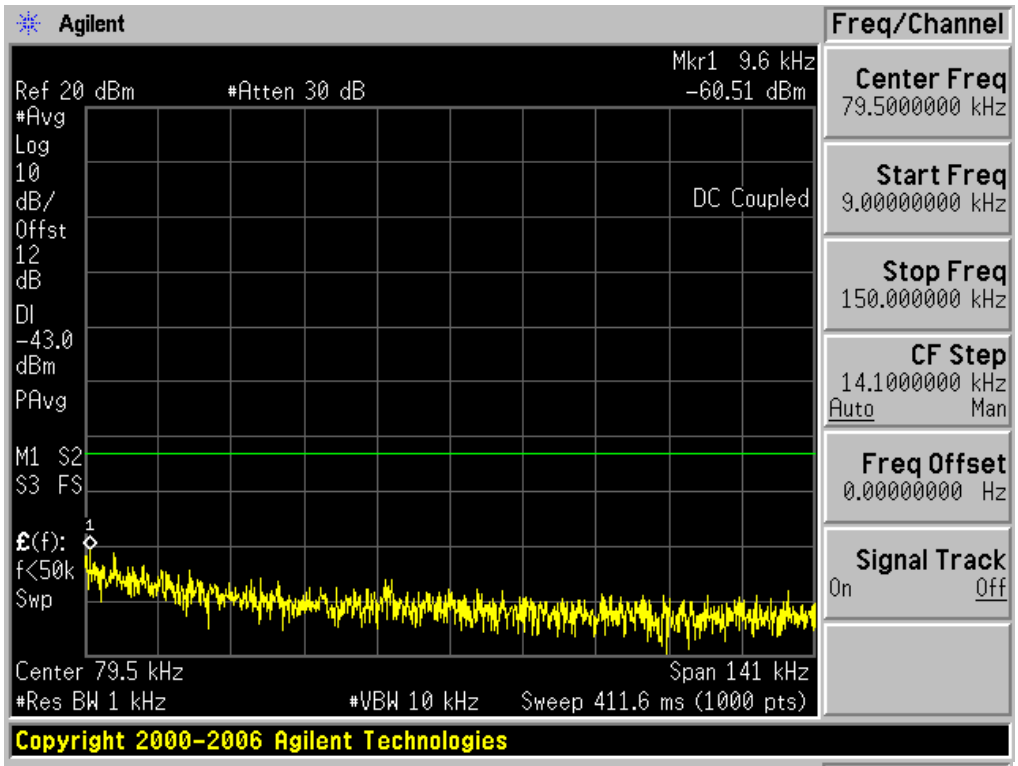
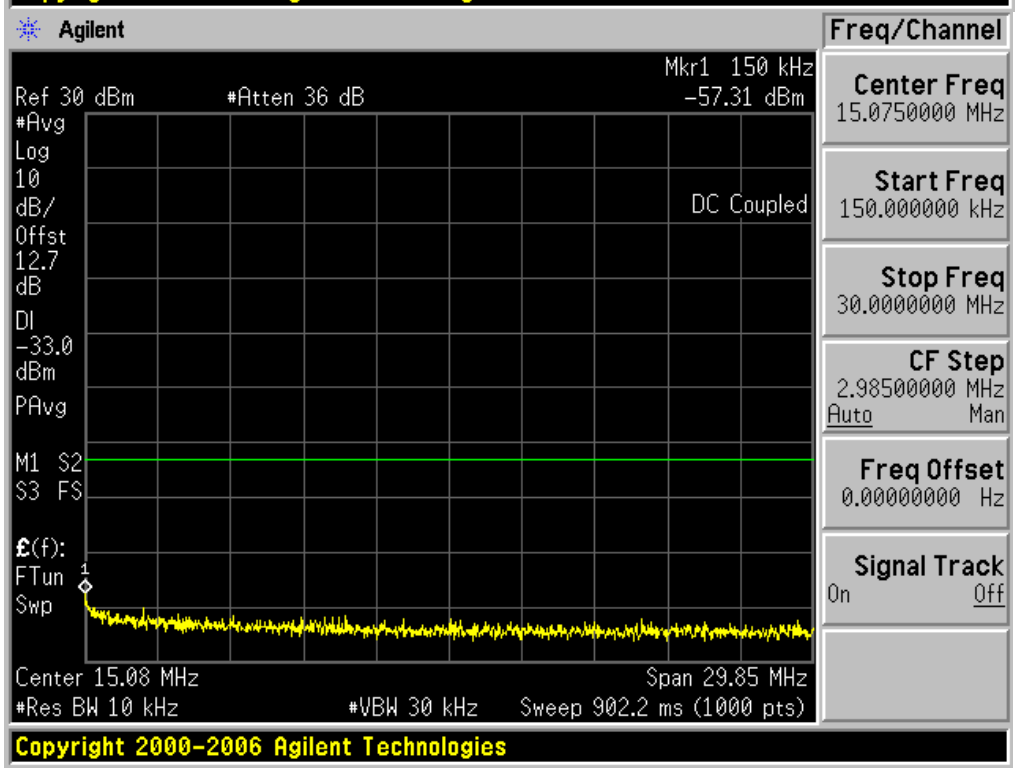
For WCDMA

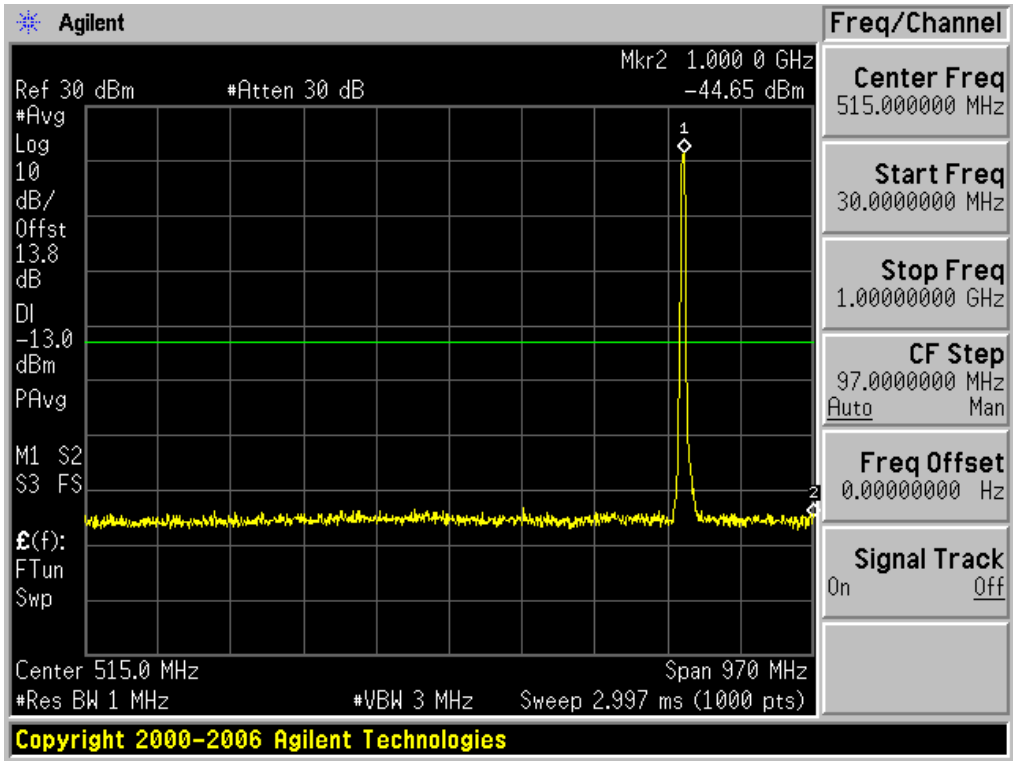
Test Band=WCDMA850

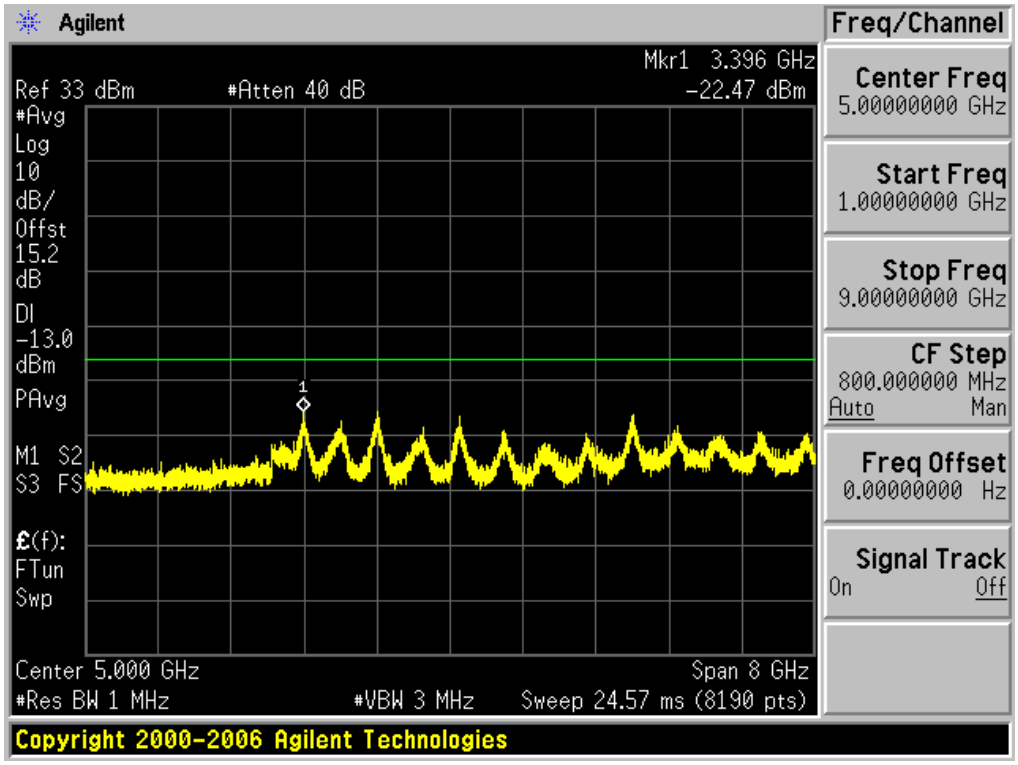
Test Mode=UMTS/TM1

Test Channel=LCH






Agilent
Freq/Channel
Mkr2 1.000 0 GHz
Ref 30 dBm
#Atten 30 dB
-44.65 dBm
#Avg
Log
10
dB/
Offst
13.8
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 3.396 GHz
Ref 33 dBm
#Atten 40 dB
-22.47 dBm
#Avg
Log
10
dB/
Offst
15.2
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
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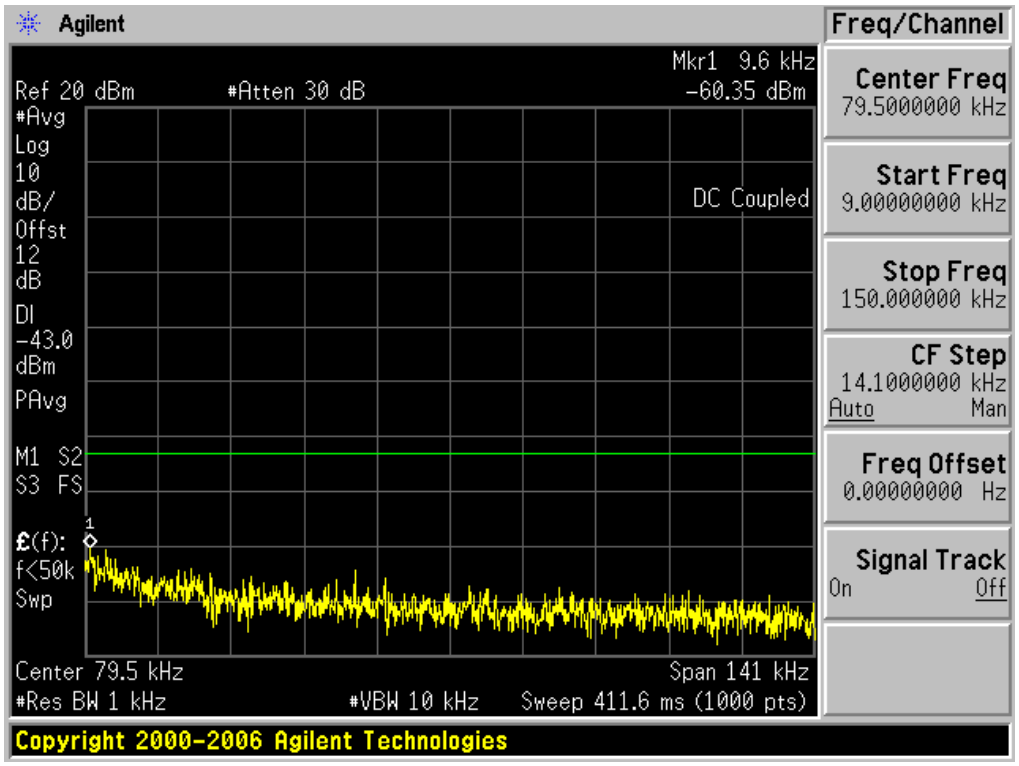
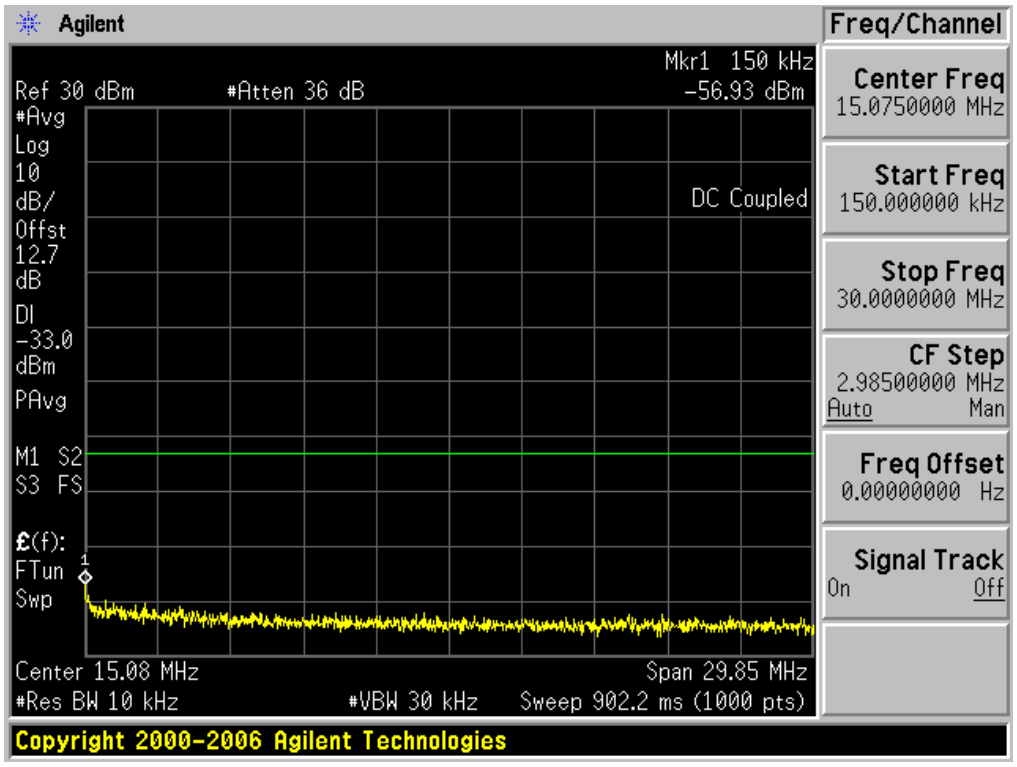
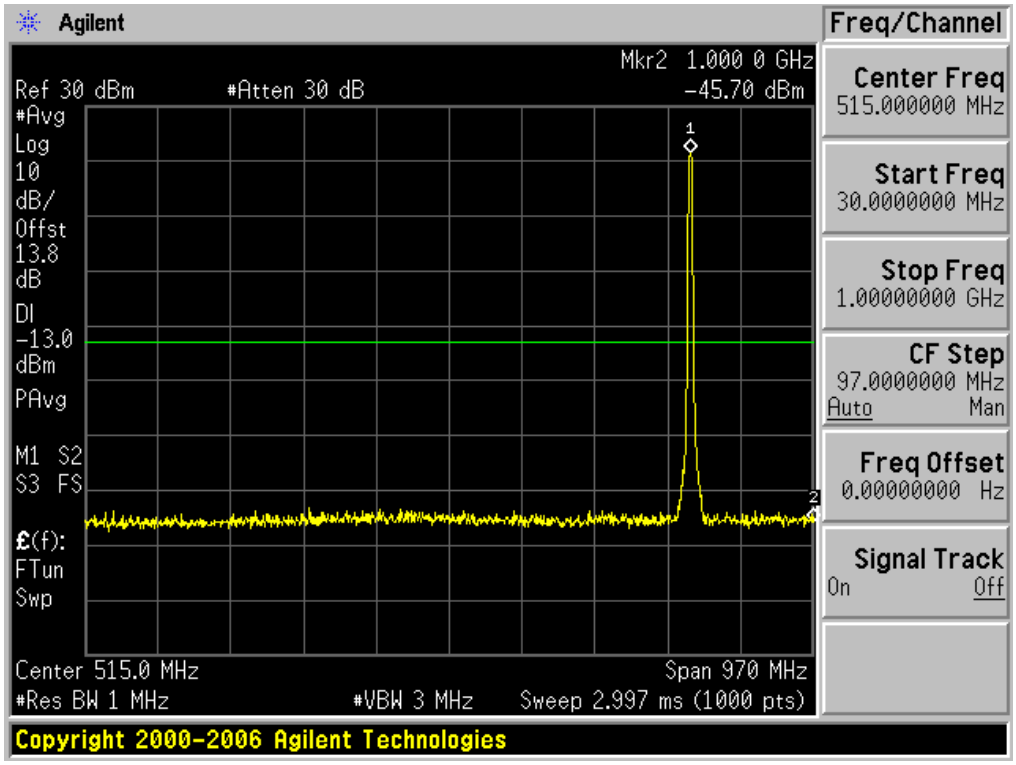
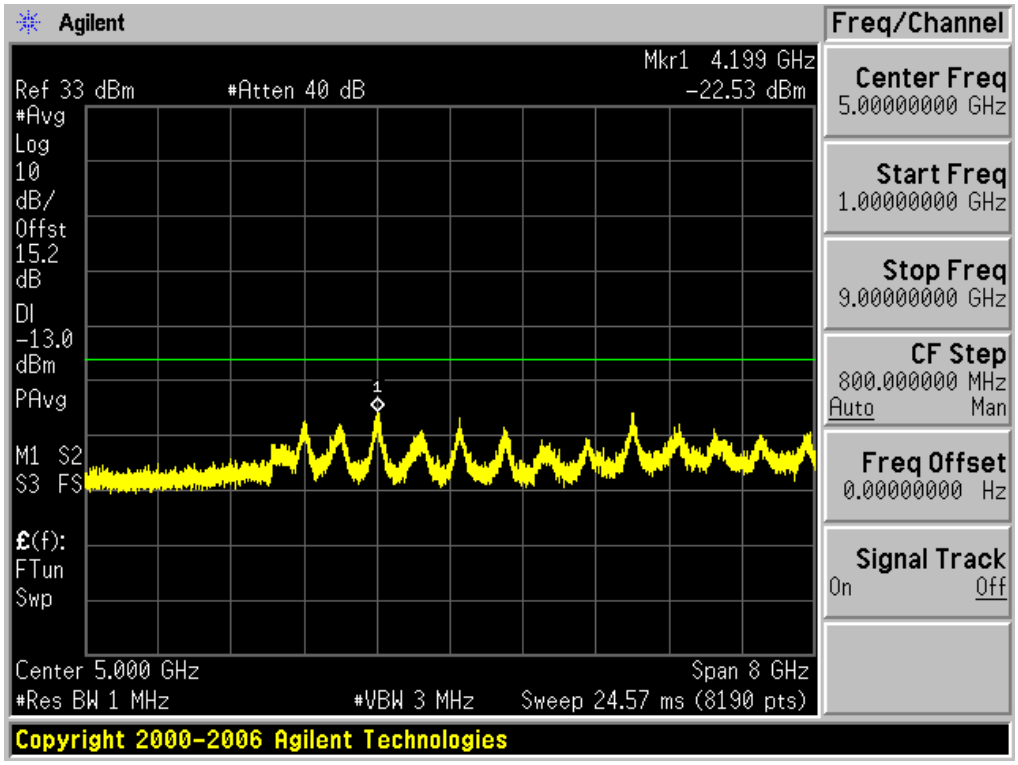
Test Channel=MCH

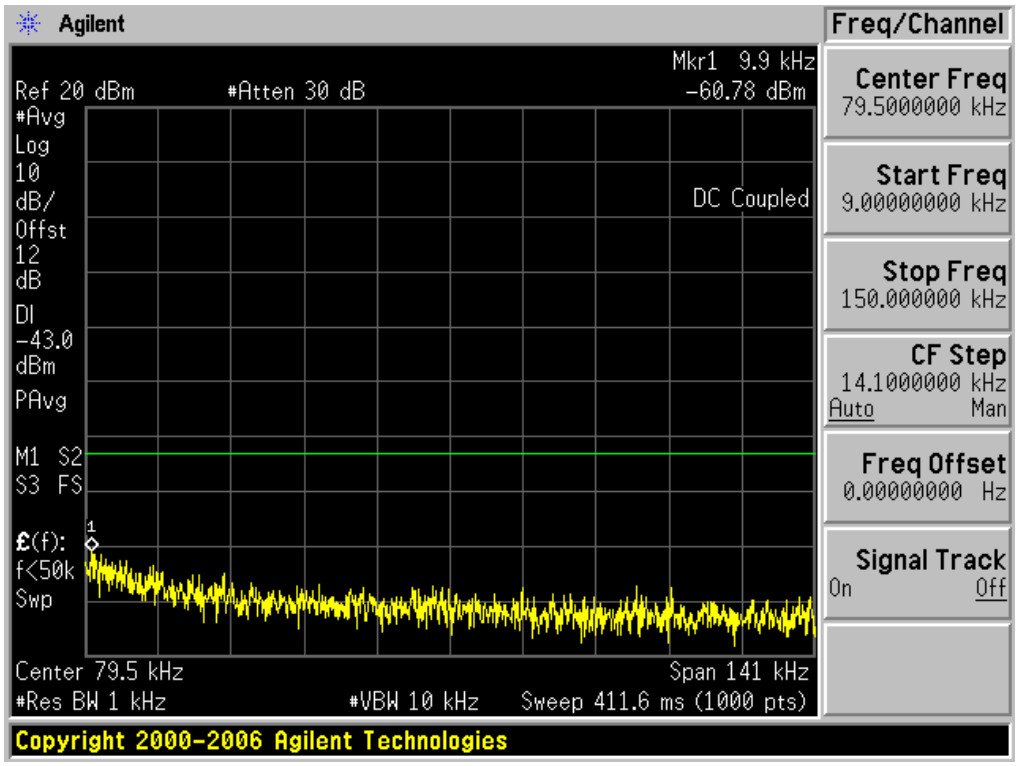


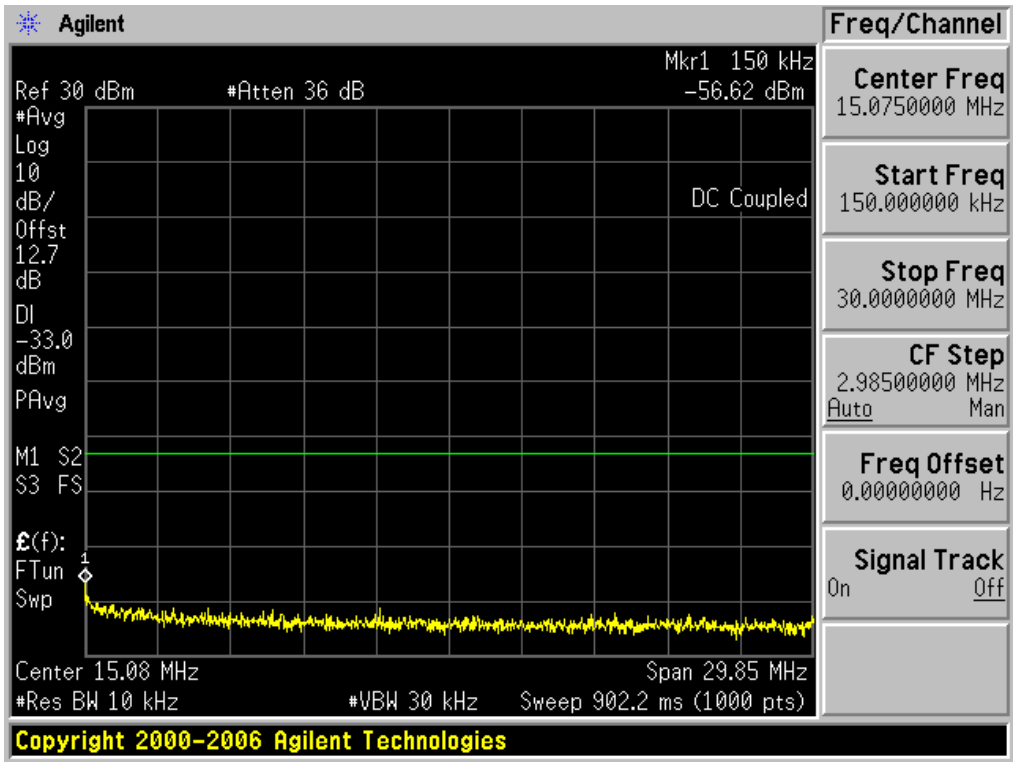


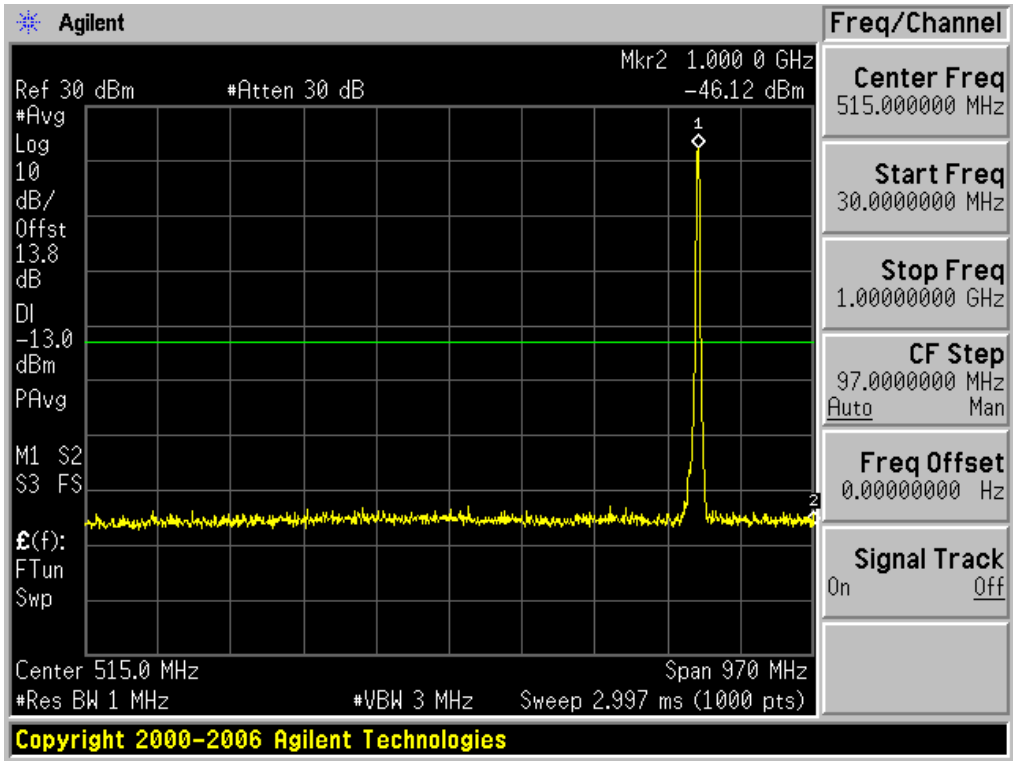

Agilent
Freq/Channel
Mkr2 1.000 0 GHz
Ref 30 dBm
#Atten 30 dB
-45.70 dBm
#Avg
Log
10
dB/
Offst
13.8
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

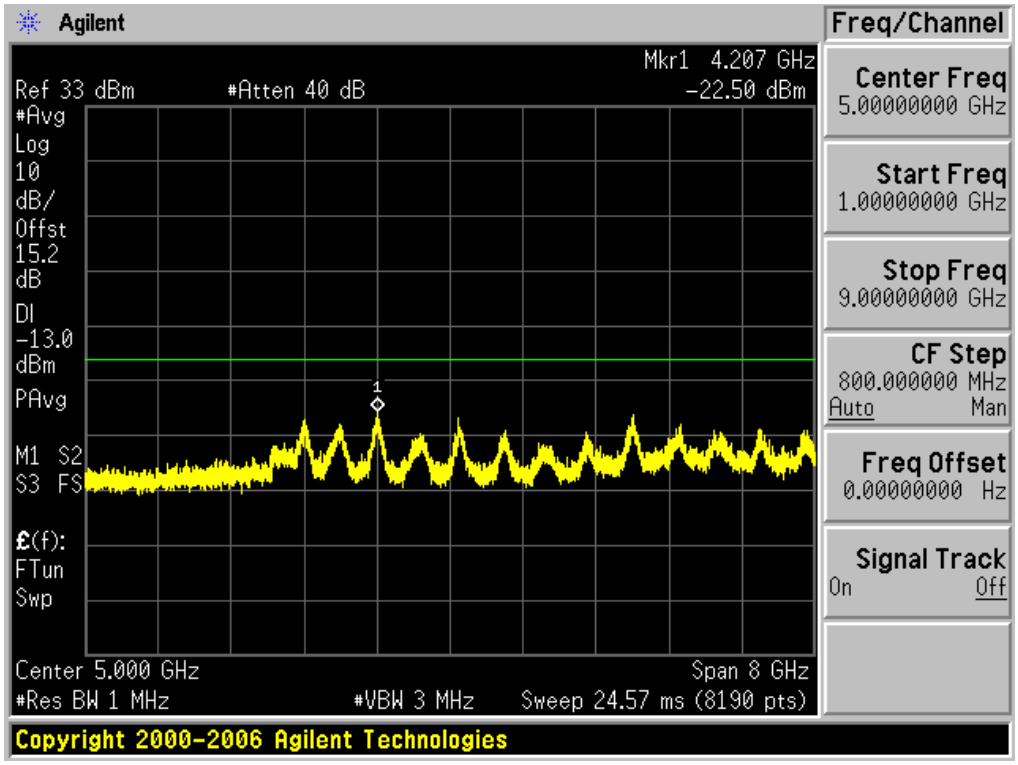

Agilent
Freq/Channel
Mkr1 4.199 GHz
Ref 33 dBm
#Atten 40 dB
-22.53 dBm
#Avg
Log
10
dB/
Offst
15.2
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 5.000 GHz
Span 8 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 24.57 ms (8190 pts)
Center Freq
5.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
9.00000000 GHz
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 1.000 0 GHz
Ref 30 dBm
#Atten 30 dB
-46.12 dBm
#Avg
Log
10
dB/
Offst
13.8
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 4.207 GHz
Ref 33 dBm
#Atten 40 dB
-22.50 dBm
#Avg
Log
10
dB/
Offst
15.2
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
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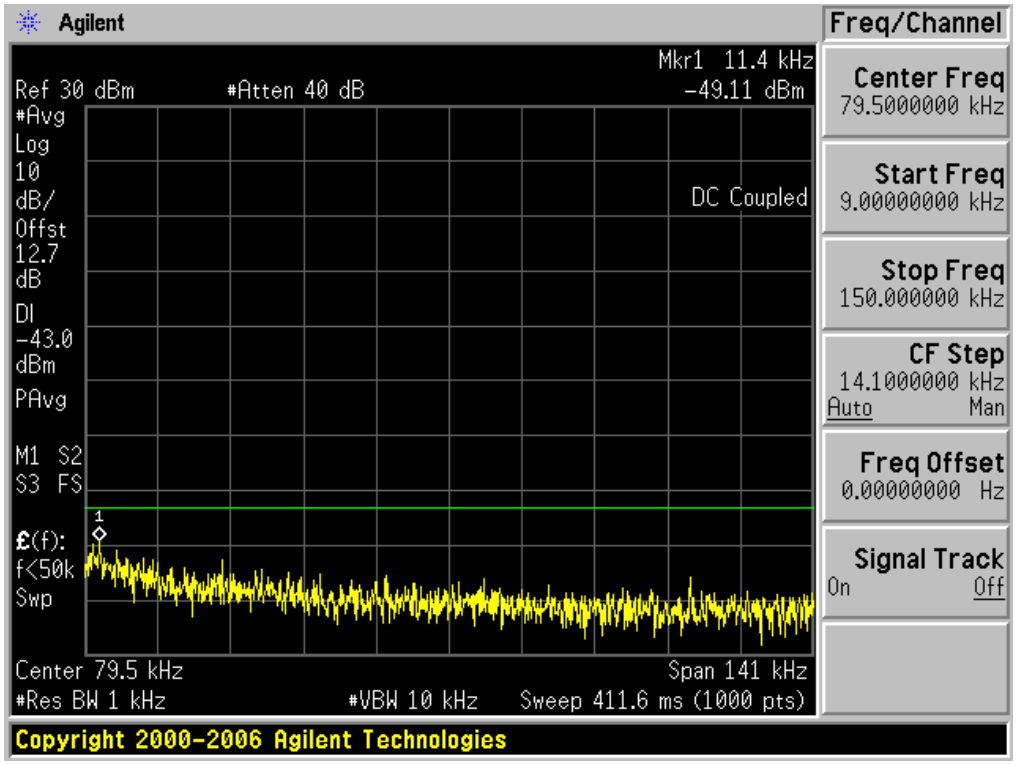
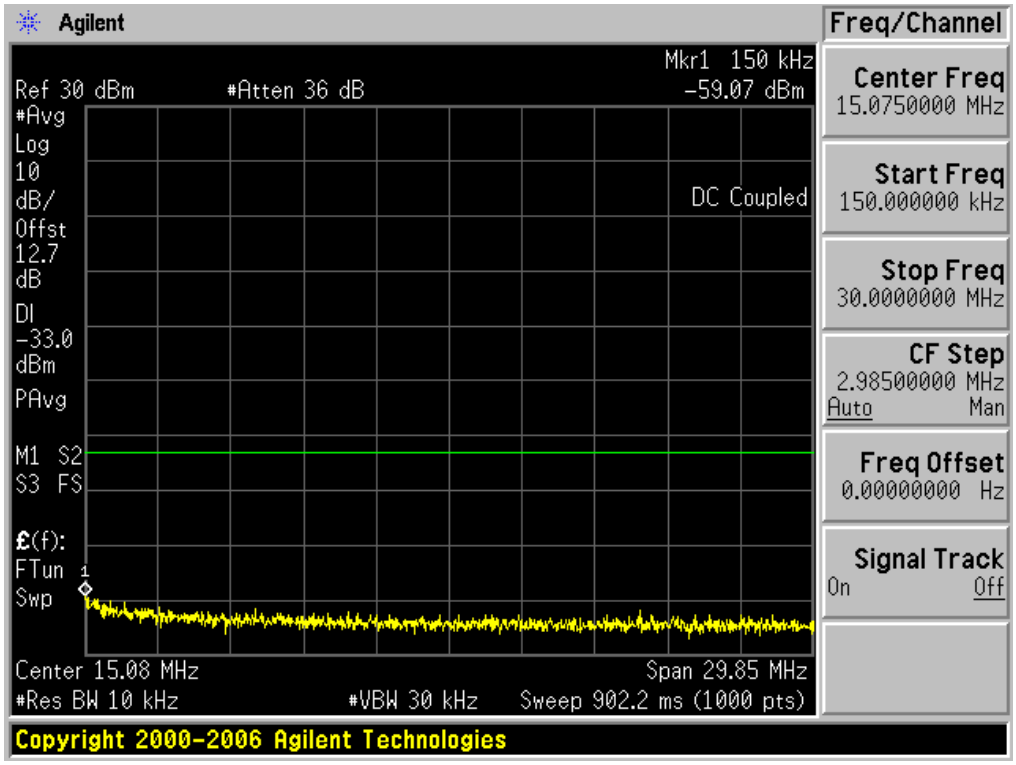
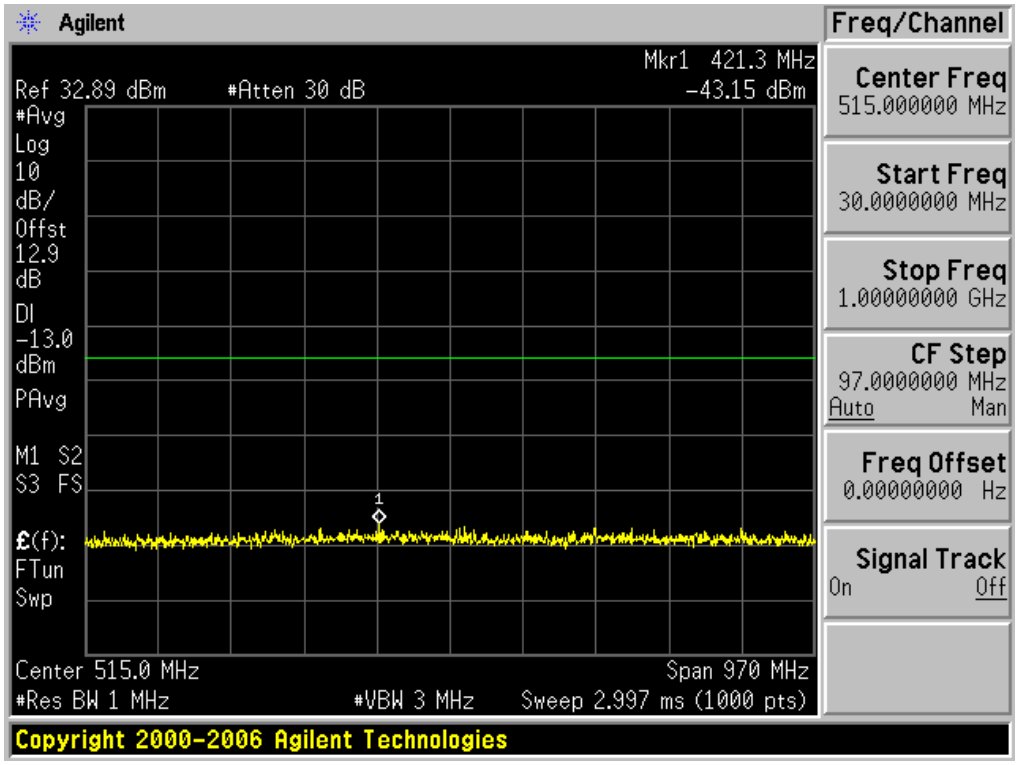
Test Band=WCDMA1900

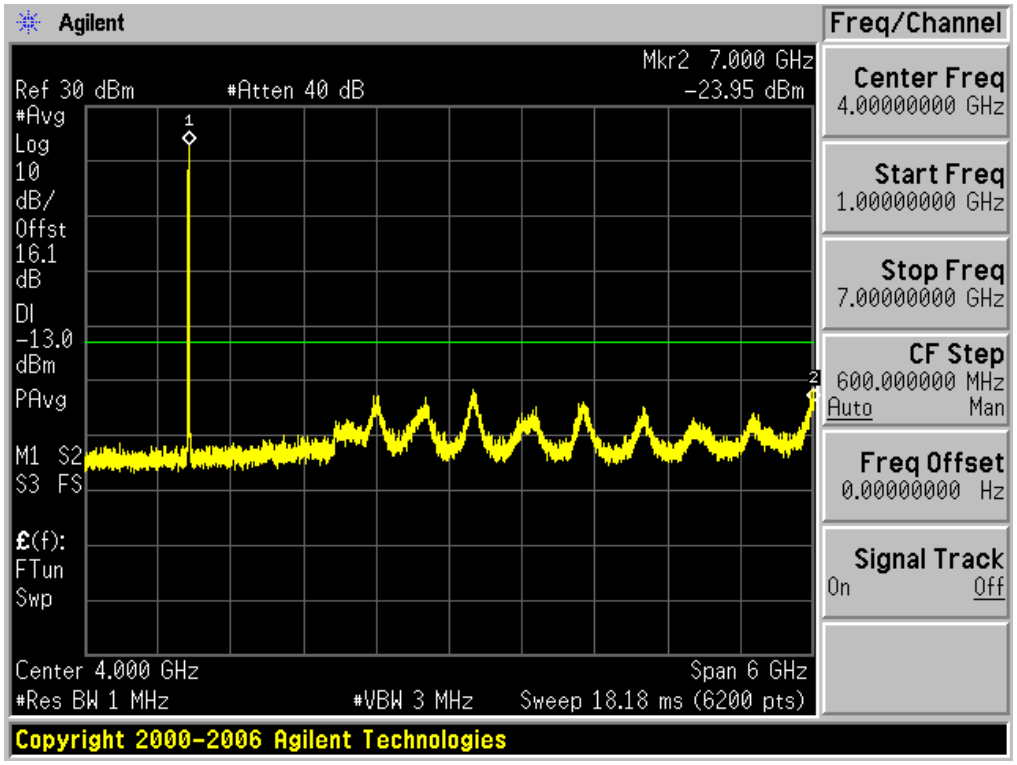
Test Mode=UMTS/TM1

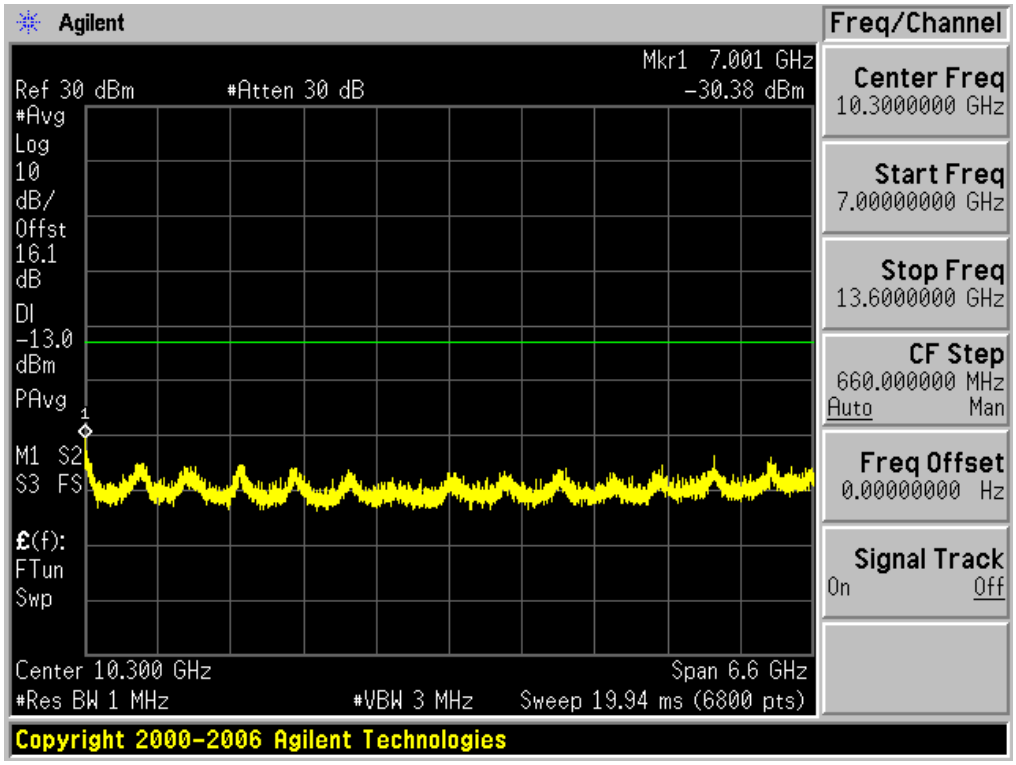
Test Channel=LCH

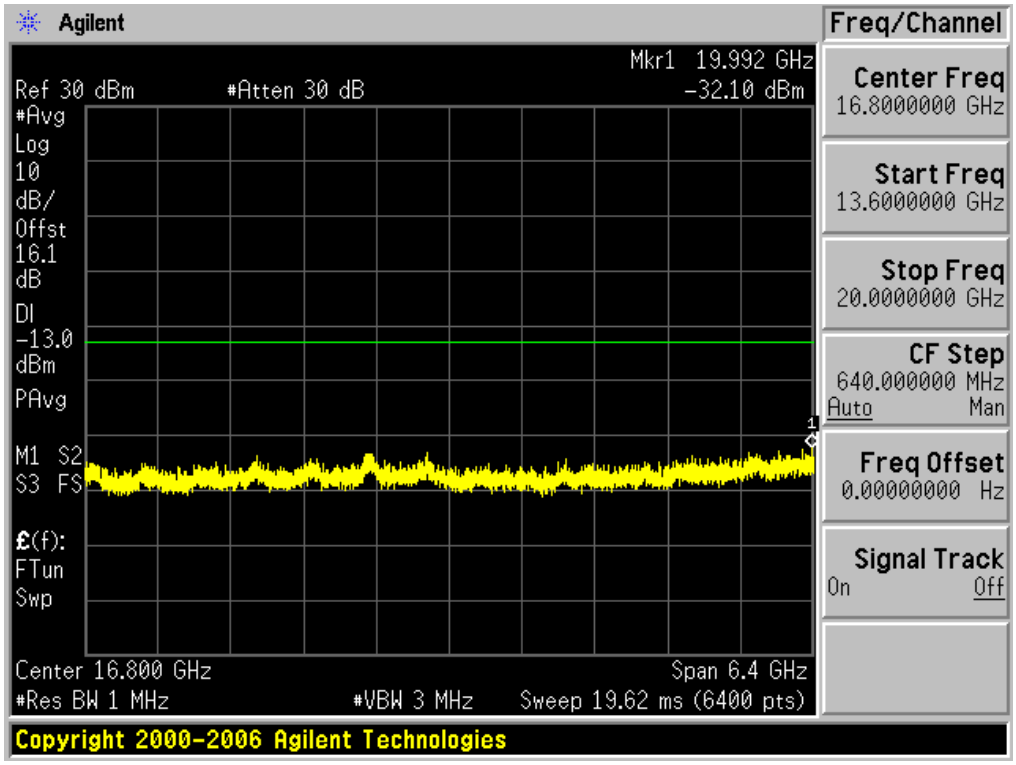




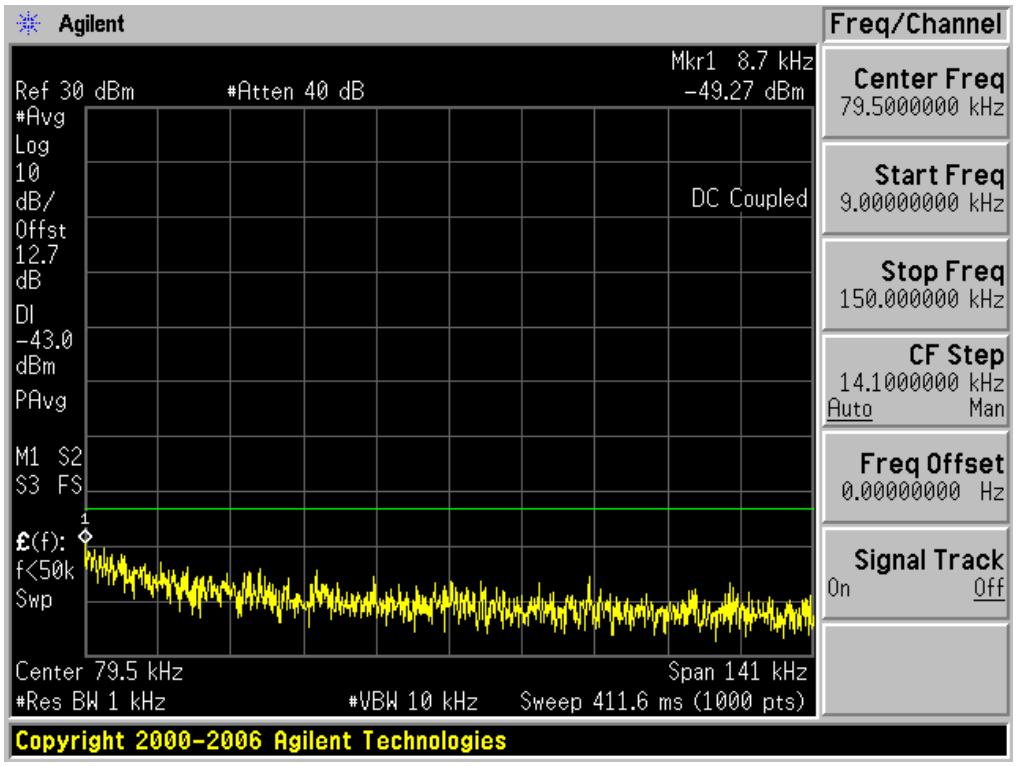

Agilent
Freq/Channel
Mkr1 421.3 MHz
Ref 32.89 dBm #Atten 30 dB -43.15 dBm
#Avg
Log
10
dB/
Offst
12.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz #VBW 3 MHz Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

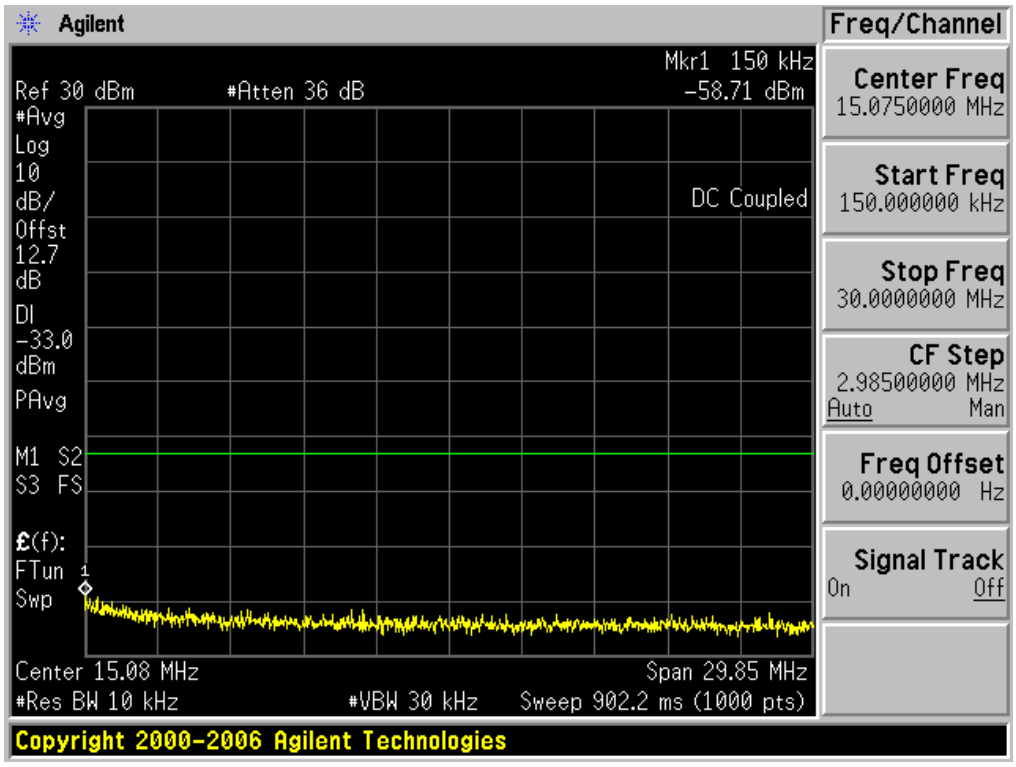

Agilent
Freq/Channel
Mkr2 7.000 GHz
Ref 30 dBm #Atten 40 dB -23.95 dBm
#Avg
Log
10
dB/
Offst
16.1
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz #VBW 3 MHz Sweep 18.18 ms (6200 pts)
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

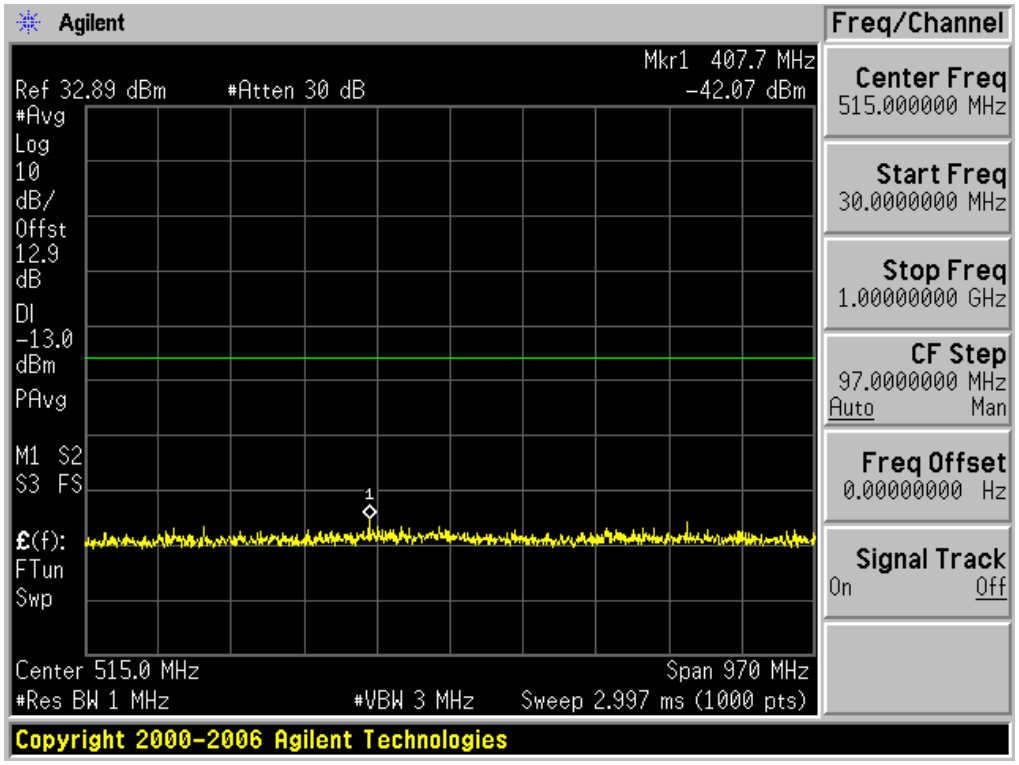

Agilent
Freq/Channel
Mkr1 7.001 GHz
Ref 30 dBm
#Atten 30 dB
-30.38 dBm
#Avg
Log
10
dB/
Offst
16.1
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

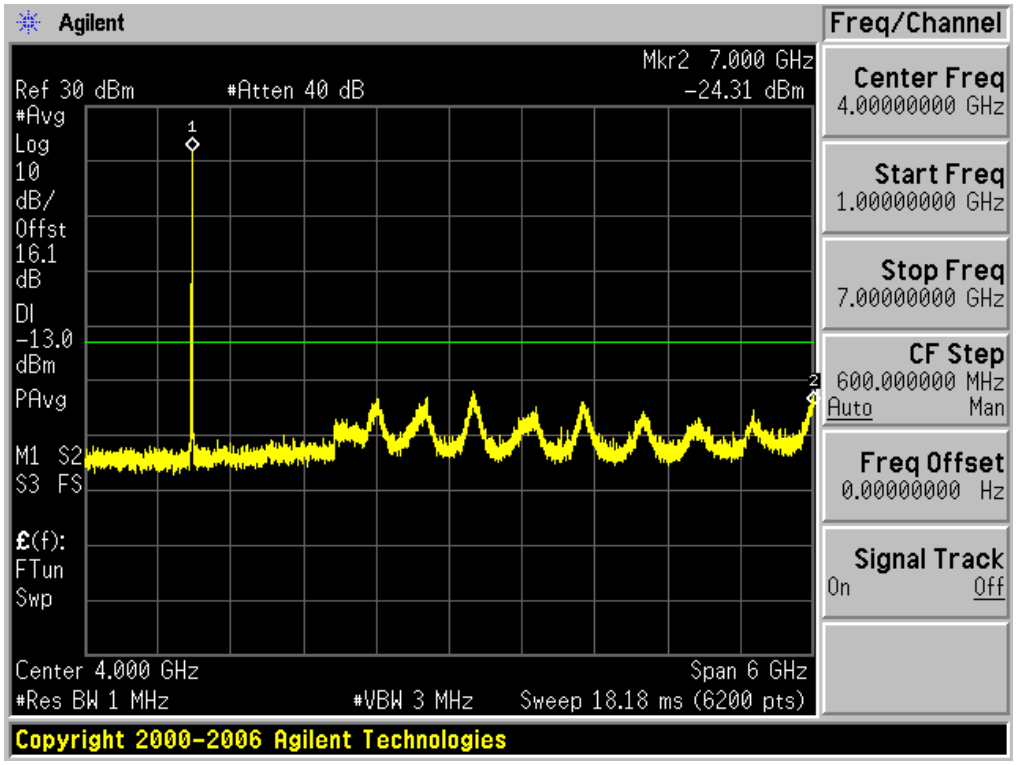

Agilent
Freq/Channel
Mkr1 19.992 GHz
Ref 30 dBm
#Atten 30 dB
-32.10 dBm
#Avg
Log
10
dB/
Offst
16.1
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

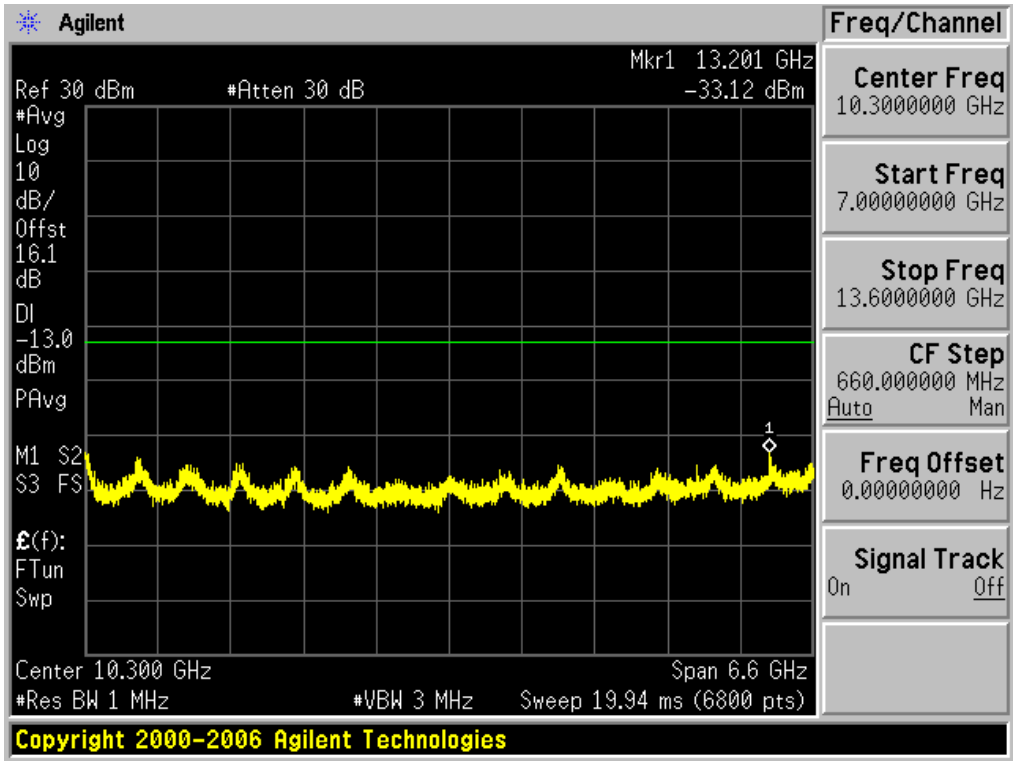
Test Channel=MCH

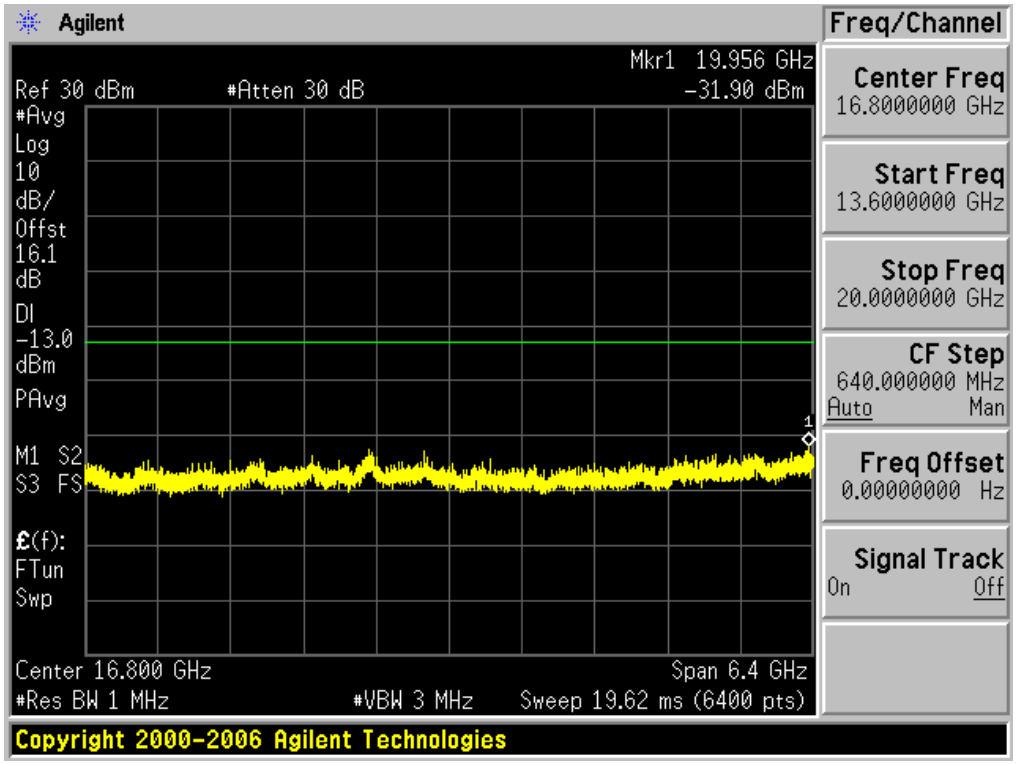




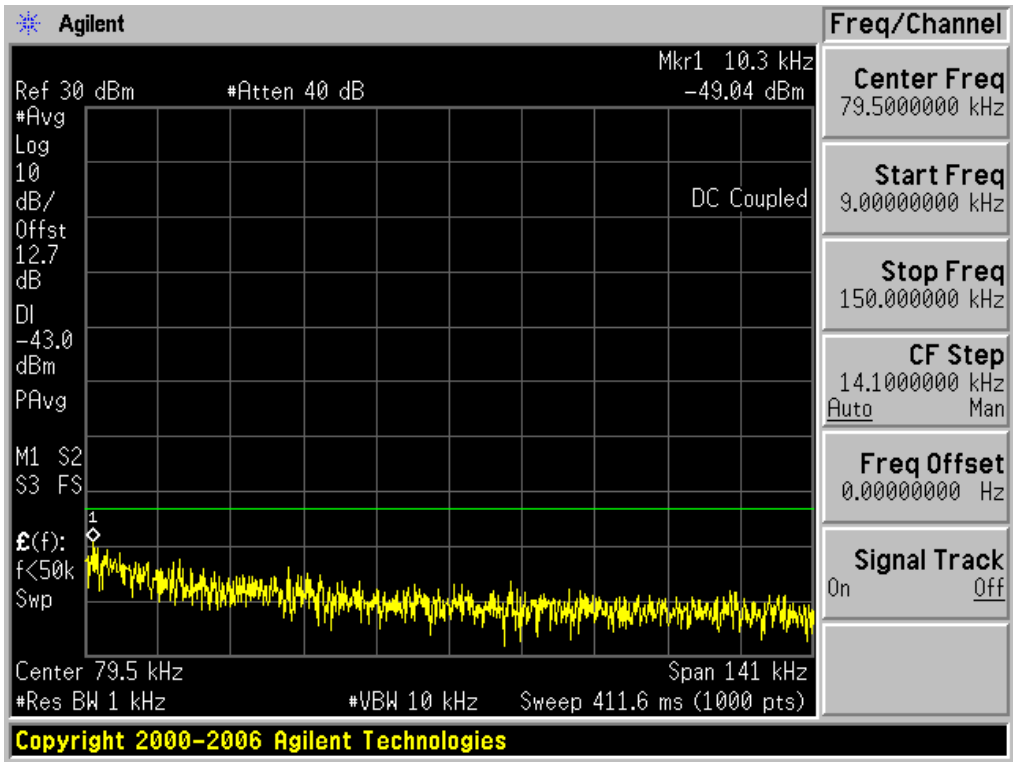

Agilent
Freq/Channel
Mkr1 407.7 MHz
Ref 32.89 dBm #Atten 30 dB -42.07 dBm
#Avg
Log
10
dB/
Offst
12.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz #VBW 3 MHz Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 GHz
CF Step
97.0000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

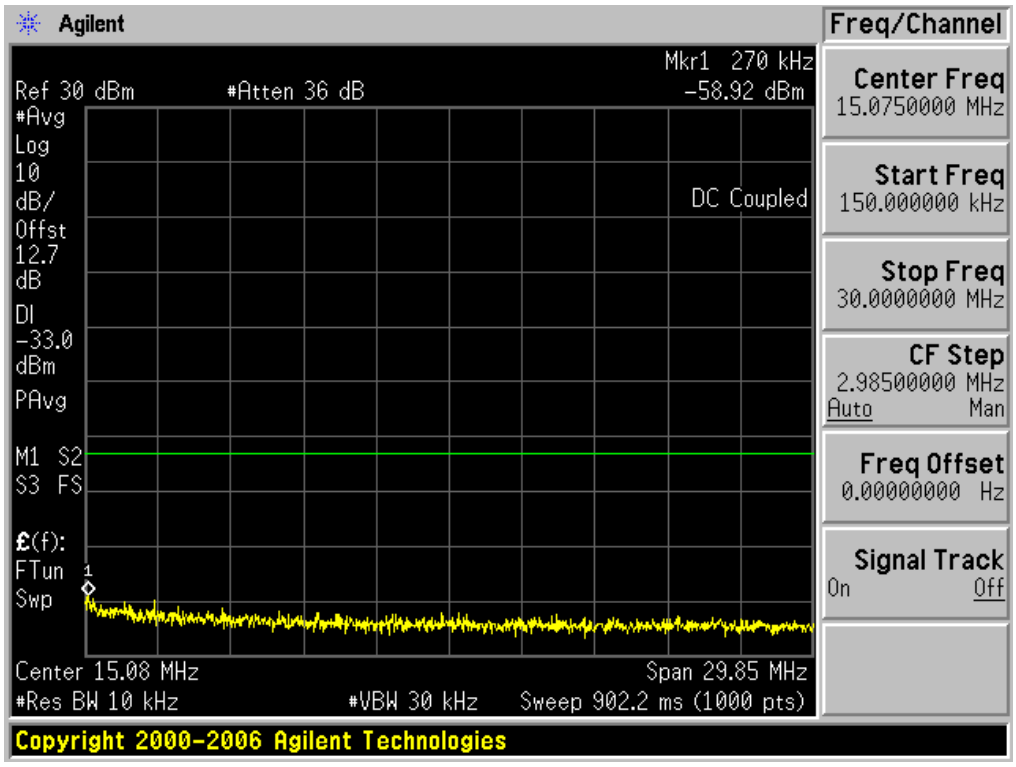

Agilent
Freq/Channel
Mkr2 7.000 GHz
Ref 30 dBm #Atten 40 dB -24.31 dBm
#Avg
Log
10
dB/
Offst
16.1
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 4.000 GHz
Span 6 GHz
#Res BW 1 MHz #VBW 3 MHz Sweep 18.18 ms (6200 pts)
Center Freq
4.00000000 GHz
Start Freq
1.00000000 GHz
Stop Freq
7.00000000 GHz
CF Step
600.000000 MHz
Auto Man
Freq Offset
0.00000000 Hz
Signal Track
On Off
Copyright 2000-2006 Agilent Technologies

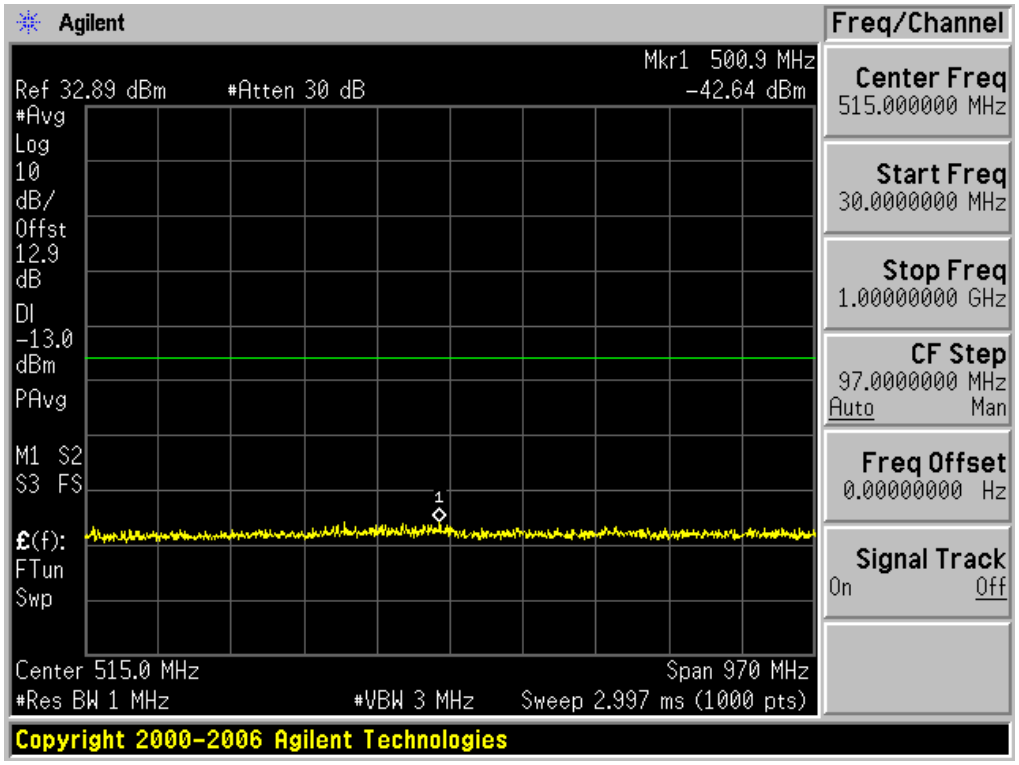

Agilent
Freq/Channel
Mkr1 13.201 GHz
Ref 30 dBm
#Atten 30 dB
-33.12 dBm
#Avg
Log
10
dB/
Offst
16.1
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 10.300 GHz
Span 6.6 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.94 ms (6800 pts)
Center Freq
10.3000000 GHz
Start Freq
7.00000000 GHz
Stop Freq
13.6000000 GHz
CF Step
660.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

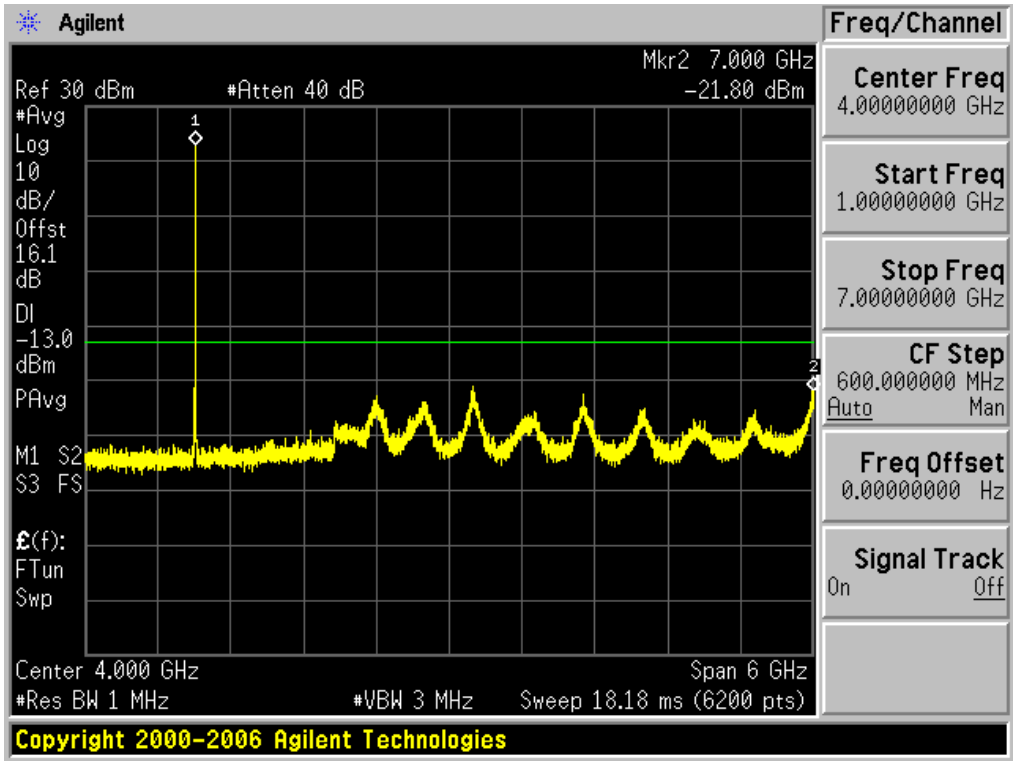

Agilent
Freq/Channel
Mkr1 19.956 GHz
Ref 30 dBm
#Atten 30 dB
-31.90 dBm
#Avg
Log
10
dB/
Offst
16.1
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 16.800 GHz
Span 6.4 GHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 19.62 ms (6400 pts)
Center Freq
16.8000000 GHz
Start Freq
13.6000000 GHz
Stop Freq
20.0000000 GHz
CF Step
640.000000 MHz
Auto
Man
Freq Offset
0.00000000 Hz
Signal Track
On
Off
Copyright 2000-2006 Agilent Technologies

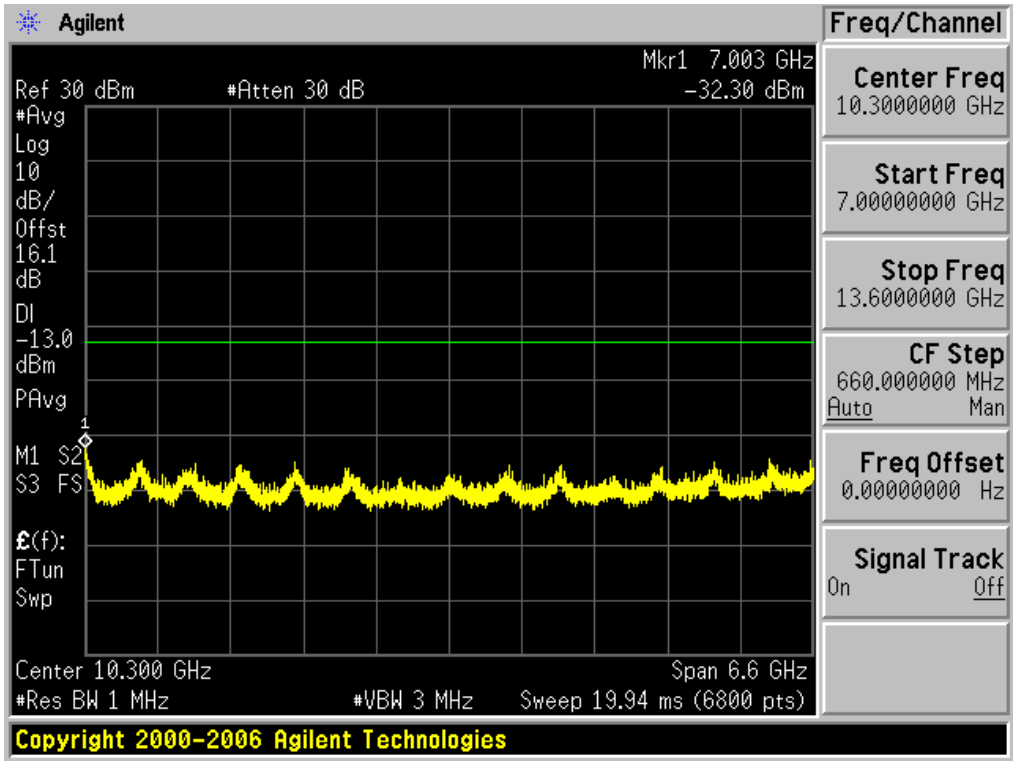
Test Channel=HCH

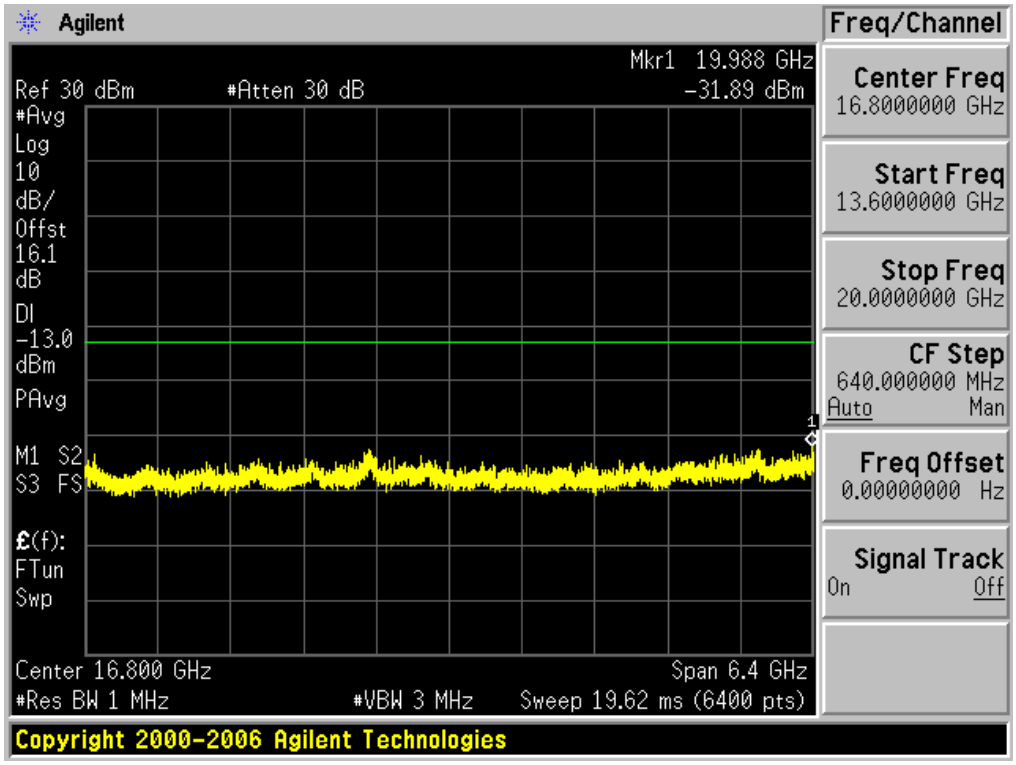





Agilent
Freq/Channel
Mkr1 500.9 MHz
Ref 32.89 dBm #Atten 30 dB -42.64 dBm
#Avg
Log
10
dB/
Offst
12.9
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(f):
FTun
Swp
Center 515.0 MHz
Span 970 MHz
#Res BW 1 MHz
#VBW 3 MHz
Sweep 2.997 ms (1000 pts)
Center Freq
515.000000 MHz
Start Freq
30.0000000 MHz
Stop Freq
1.00000000 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
Mkr2 7.000 GHz
Ref 30 dBm #Atten 40 dB -21.80 dBm
#Avg
Log
10
dB/
Offst
16.1
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(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 7.003 GHz
Ref 30 dBm
#Atten 30 dB
-32.30 dBm
#Avg
Log
10
dB/
Offst
16.1
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(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 19.988 GHz
Ref 30 dBm
#Atten 30 dB
-31.89 dBm
#Avg
Log
10
dB/
Offst
16.1
dB
Dl
-13.0
dBm
PAvg
M1 S2
S3 FS
£(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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Appendix F) Frequency Stability

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	-4.74	-0.01	±2.5	PASS
			TN	VN	-6.62	-0.01	±2.5	PASS
			TN	VH	-8.16	-0.01	±2.5	PASS
		MCH	TN	VL	-11.77	-0.01	±2.5	PASS
			TN	VN	-9.55	-0.01	±2.5	PASS
			TN	VH	-11.98	-0.01	±2.5	PASS
		HCH	TN	VL	-13.02	-0.02	±2.5	PASS
			TN	VN	-12.79	-0.02	±2.5	PASS
			TN	VH	-10.78	-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	TM2	LCH	TN	VL	-12.06	-0.01	±2.5	PASS
			TN	VN	-6.14	-0.01	±2.5	PASS
			TN	VH	-7.00	-0.01	±2.5	PASS
		MCH	TN	VL	-14.23	-0.02	±2.5	PASS
			TN	VN	-9.66	-0.01	±2.5	PASS
			TN	VH	-12.99	-0.02	±2.5	PASS
		HCH	TN	VL	-10.90	-0.01	±2.5	PASS
			TN	VN	-14.82	-0.02	±2.5	PASS
			TN	VH	-13.37	-0.02	±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	-1.54	0.00	±2.5	PASS
			TN	VN	-9.59	-0.01	±2.5	PASS
			TN	VH	-13.01	-0.01	±2.5	PASS
		MCH	TN	VL	-3.97	0.00	±2.5	PASS
			TN	VN	-16.29	-0.01	±2.5	PASS
			TN	VH	-7.80	0.00	±2.5	PASS
		HCH	TN	VL	-19.25	-0.01	±2.5	PASS
			TN	VN	-20.66	-0.01	±2.5	PASS
			TN	VH	-15.95	-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	-4.79	0.00	±2.5	PASS
			TN	VN	2.08	0.00	±2.5	PASS
			TN	VH	-8.78	0.00	±2.5	PASS
		MCH	TN	VL	-7.67	0.00	±2.5	PASS
			TN	VN	-2.64	0.00	±2.5	PASS
			TN	VH	-11.59	-0.01	±2.5	PASS
		HCH	TN	VL	-16.05	-0.01	±2.5	PASS
			TN	VN	-22.18	-0.01	±2.5	PASS
			TN	VH	-24.55	-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
WCDMA 850	TM1	LCH	TN	VL	-5.63	-0.01	±2.5	PASS
			TN	VN	-2.86	0.00	±2.5	PASS
			TN	VH	-4.14	-0.01	±2.5	PASS
		MCH	TN	VL	-4.40	-0.01	±2.5	PASS
			TN	VN	-2.86	-0.01	±2.5	PASS
			TN	VH	-4.84	-0.01	±2.5	PASS
		HCH	TN	VL	1.22	0.00	±2.5	PASS
			TN	VN	-2.86	0.00	±2.5	PASS
			TN	VH	0.94	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
WCDMA 1900	TM1	LCH	TN	VL	4.70	0.00	±2.5	PASS
			TN	VN	3.71	0.00	±2.5	PASS
			TN	VH	3.61	0.00	±2.5	PASS
		MCH	TN	VL	8.47	0.00	±2.5	PASS
			TN	VN	3.71	0.00	±2.5	PASS
			TN	VH	1.63	0.00	±2.5	PASS
		HCH	TN	VL	0.46	0.00	±2.5	PASS
			TN	VN	3.71	0.00	±2.5	PASS
			TN	VH	4.18	0.00	±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	-9.66	-0.01	±2.5	PASS
			VN	-20	-6.06	-0.01	±2.5	PASS
			VN	-10	-4.78	-0.01	±2.5	PASS
			VN	0	-14.15	-0.02	±2.5	PASS
			VN	10	-15.12	-0.02	±2.5	PASS
			VN	20	-16.00	-0.02	±2.5	PASS
			VN	30	-10.52	-0.01	±2.5	PASS
			VN	40	-11.10	-0.01	±2.5	PASS
			VN	50	-6.93	-0.01	±2.5	PASS
GSM850	TM1	MCH	VN	-30	-12.72	-0.02	±2.5	PASS
			VN	-20	-7.74	-0.01	±2.5	PASS
			VN	-10	-9.25	-0.01	±2.5	PASS
			VN	0	-12.29	-0.01	±2.5	PASS
			VN	10	-9.60	-0.01	±2.5	PASS
			VN	20	-13.09	-0.02	±2.5	PASS
			VN	30	-12.89	-0.02	±2.5	PASS
			VN	40	-18.66	-0.02	±2.5	PASS
			VN	50	-10.45	-0.01	±2.5	PASS
GSM850	TM1	HCH	VN	-30	-16.60	-0.02	±2.5	PASS
			VN	-20	-11.01	-0.01	±2.5	PASS
			VN	-10	-6.03	-0.01	±2.5	PASS
			VN	0	-15.63	-0.02	±2.5	PASS
			VN	10	-13.56	-0.02	±2.5	PASS
			VN	20	-10.86	-0.01	±2.5	PASS
			VN	30	-9.12	-0.01	±2.5	PASS
			VN	40	-9.64	-0.01	±2.5	PASS
			VN	50	-17.26	-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
GSM850	TM2	LCH	VN	-30	-11.28	-0.01	±2.5	PASS
			VN	-20	-11.10	-0.01	±2.5	PASS
			VN	-10	-12.34	-0.01	±2.5	PASS
			VN	0	-9.41	-0.01	±2.5	PASS
			VN	10	-12.25	-0.01	±2.5	PASS
			VN	20	-14.79	-0.02	±2.5	PASS
			VN	30	-10.58	-0.01	±2.5	PASS
			VN	40	-13.54	-0.02	±2.5	PASS
			VN	50	-10.75	-0.01	±2.5	PASS
GSM850	TM2	MCH	VN	-30	-5.32	-0.01	±2.5	PASS
			VN	-20	-10.73	-0.01	±2.5	PASS
			VN	-10	-10.11	-0.01	±2.5	PASS
			VN	0	-14.77	-0.02	±2.5	PASS
			VN	10	-13.39	-0.02	±2.5	PASS
			VN	20	-12.30	-0.01	±2.5	PASS
			VN	30	-9.06	-0.01	±2.5	PASS
			VN	40	-11.22	-0.01	±2.5	PASS
			VN	50	-8.03	-0.01	±2.5	PASS
GSM850	TM2	HCH	VN	-30	-10.84	-0.01	±2.5	PASS
			VN	-20	-8.06	-0.01	±2.5	PASS
			VN	-10	-13.68	-0.02	±2.5	PASS
			VN	0	-17.06	-0.02	±2.5	PASS
			VN	10	-11.68	-0.01	±2.5	PASS
			VN	20	-8.74	-0.01	±2.5	PASS
			VN	30	-12.04	-0.01	±2.5	PASS
			VN	40	-8.22	-0.01	±2.5	PASS
			VN	50	-13.03	-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
GSM1900	TM1	LCH	VN	-30	-14.69	-0.01	±2.5	PASS
			VN	-20	-2.53	0.00	±2.5	PASS
			VN	-10	-4.70	0.00	±2.5	PASS
			VN	0	-5.76	0.00	±2.5	PASS
			VN	10	-13.57	-0.01	±2.5	PASS
			VN	20	-4.12	0.00	±2.5	PASS
			VN	30	-4.36	0.00	±2.5	PASS
			VN	40	-11.71	-0.01	±2.5	PASS
			VN	50	-6.44	0.00	±2.5	PASS
GSM1900	TM1	MCH	VN	-30	-11.25	-0.01	±2.5	PASS
			VN	-20	-10.21	-0.01	±2.5	PASS
			VN	-10	-8.94	0.00	±2.5	PASS
			VN	0	-13.33	-0.01	±2.5	PASS
			VN	10	-15.22	-0.01	±2.5	PASS
			VN	20	-6.40	0.00	±2.5	PASS
			VN	30	-5.51	0.00	±2.5	PASS
			VN	40	-6.38	0.00	±2.5	PASS
			VN	50	-6.29	0.00	±2.5	PASS
GSM1900	TM1	HCH	VN	-30	-24.49	-0.01	±2.5	PASS
			VN	-20	-18.70	-0.01	±2.5	PASS
			VN	-10	-26.69	-0.01	±2.5	PASS
			VN	0	-12.83	-0.01	±2.5	PASS
			VN	10	-12.18	-0.01	±2.5	PASS
			VN	20	-16.02	-0.01	±2.5	PASS
			VN	30	-29.47	-0.02	±2.5	PASS
			VN	40	-27.25	-0.01	±2.5	PASS
			VN	50	-14.53	-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	-11.34	-0.01	±2.5	PASS
			VN	-20	-17.71	-0.01	±2.5	PASS
			VN	-10	0.79	0.00	±2.5	PASS
			VN	0	-5.38	0.00	±2.5	PASS
			VN	10	-11.31	-0.01	±2.5	PASS
			VN	20	-6.43	0.00	±2.5	PASS
			VN	30	0.24	0.00	±2.5	PASS
			VN	40	-17.77	-0.01	±2.5	PASS
			VN	50	-9.13	0.00	±2.5	PASS
GSM1900	TM2	MCH	VN	-30	1.82	0.00	±2.5	PASS
			VN	-20	2.24	0.00	±2.5	PASS
			VN	-10	7.28	0.00	±2.5	PASS
			VN	0	-18.50	-0.01	±2.5	PASS
			VN	10	-4.61	0.00	±2.5	PASS
			VN	20	2.34	0.00	±2.5	PASS
			VN	30	-7.31	0.00	±2.5	PASS
			VN	40	-7.80	0.00	±2.5	PASS
			VN	50	-1.39	0.00	±2.5	PASS
GSM1900	TM2	HCH	VN	-30	-29.17	-0.02	±2.5	PASS
			VN	-20	-22.89	-0.01	±2.5	PASS
			VN	-10	-26.52	-0.01	±2.5	PASS
			VN	0	-22.67	-0.01	±2.5	PASS
			VN	10	-14.97	-0.01	±2.5	PASS
			VN	20	-21.93	-0.01	±2.5	PASS
			VN	30	-23.28	-0.01	±2.5	PASS
			VN	40	-19.08	-0.01	±2.5	PASS
			VN	50	-19.95	-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
WCDMA 850	TM1	LCH	VN	-30	-4.43	-0.01	±2.5	PASS
			VN	-20	-5.20	-0.01	±2.5	PASS
			VN	-10	11.39	0.01	±2.5	PASS
			VN	0	-4.33	-0.01	±2.5	PASS
			VN	10	9.63	0.01	±2.5	PASS
			VN	20	0.86	0.00	±2.5	PASS
			VN	30	-4.20	-0.01	±2.5	PASS
			VN	40	-4.55	-0.01	±2.5	PASS
			VN	50	-4.46	-0.01	±2.5	PASS
WCDMA 850	TM1	MCH	VN	-30	11.79	0.01	±2.5	PASS
			VN	-20	-5.28	-0.01	±2.5	PASS
			VN	-10	-4.56	-0.01	±2.5	PASS
			VN	0	-4.49	-0.01	±2.5	PASS
			VN	10	-4.78	-0.01	±2.5	PASS
			VN	20	-5.14	-0.01	±2.5	PASS
			VN	30	-5.14	-0.01	±2.5	PASS
			VN	40	-4.62	-0.01	±2.5	PASS
			VN	50	-4.38	-0.01	±2.5	PASS
WCDMA 850	TM1	HCH	VN	-30	1.00	0.00	±2.5	PASS
			VN	-20	-0.20	0.00	±2.5	PASS
			VN	-10	1.16	0.00	±2.5	PASS
			VN	0	0.93	0.00	±2.5	PASS
			VN	10	1.35	0.00	±2.5	PASS
			VN	20	1.79	0.00	±2.5	PASS
			VN	30	1.16	0.00	±2.5	PASS
			VN	40	2.14	0.00	±2.5	PASS
			VN	50	1.20	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
WCDMA 1900	TM1	LCH	VN	-30	4.39	0.00	±2.5	PASS
			VN	-20	3.34	0.00	±2.5	PASS
			VN	-10	4.16	0.00	±2.5	PASS
			VN	0	8.47	0.00	±2.5	PASS
			VN	10	3.54	0.00	±2.5	PASS
			VN	20	5.87	0.00	±2.5	PASS
			VN	30	1.15	0.00	±2.5	PASS
			VN	40	-6.78	0.00	±2.5	PASS
			VN	50	5.11	0.00	±2.5	PASS
WCDMA 1900	TM1	MCH	VN	-30	8.81	0.00	±2.5	PASS
			VN	-20	3.98	0.00	±2.5	PASS
			VN	-10	5.14	0.00	±2.5	PASS
			VN	0	4.32	0.00	±2.5	PASS
			VN	10	3.85	0.00	±2.5	PASS
			VN	20	7.20	0.00	±2.5	PASS
			VN	30	-4.78	0.00	±2.5	PASS
			VN	40	5.18	0.00	±2.5	PASS
			VN	50	-33.79	-0.02	±2.5	PASS
WCDMA 1900	TM1	HCH	VN	-30	4.04	0.00	±2.5	PASS
			VN	-20	-0.32	0.00	±2.5	PASS
			VN	-10	4.77	0.00	±2.5	PASS
			VN	0	2.18	0.00	±2.5	PASS
			VN	10	3.28	0.00	±2.5	PASS
			VN	20	-6.14	0.00	±2.5	PASS
			VN	30	8.18	0.00	±2.5	PASS
			VN	40	1.24	0.00	±2.5	PASS
			VN	50	4.42	0.00	±2.5	PASS

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

Receiver Setup:

Frequency	Detector	RBW	VBW	Remark
30MHz-1GHz	peak	100 kHz	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 V
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	100	31.45	38.45	-7	Pass	H
	150	124	30.18	38.45	-8.27	Pass	V
190/836.6	150	180	31.67	38.45	-6.78	Pass	H
	150	148	30.18	38.45	-8.27	Pass	V
251/848.8	150	200	31.39	38.45	-7.06	Pass	H
	150	210	30.09	38.45	-8.36	Pass	V

GPRS 850 Class 8							
Channel/fc (MHz)	Height (cm)	Azimuth (deg)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
128/824.2	150	100	31.29	38.45	-7.16	Pass	H
	150	245	30.09	38.45	-8.36	Pass	V
190/836.6	150	167	31.32	38.45	-7.13	Pass	H
	150	200	30.61	38.45	-7.84	Pass	V
251/848.8	150	180	31.76	38.45	-6.69	Pass	H
	150	155	30.18	38.45	-8.27	Pass	V

WCDMA band V RMC 12.2K							
Channel/fc (MHz)	Height (cm)	Azimuth (deg)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
4132/ 826.4	150	100	22.45	38.45	-16	Pass	H
	150	245	21.09	38.45	-17.36	Pass	V
4183/ 836.6	150	170	22.32	38.45	-16.13	Pass	H
	150	124	21.87	38.45	-16.58	Pass	V
4233/ 846.6	150	100	22.42	38.45	-16.03	Pass	H
	150	150	21.13	38.45	-17.32	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	100	28.78	33.01	-4.23	Pass	H
	150	190	27.19	33.01	-5.82	Pass	V
661/1880.0	150	189	28.67	33.01	-4.34	Pass	H
	150	133	27.87	33.01	-5.14	Pass	V
810/1909.8	150	155	28.56	33.01	-4.45	Pass	H
	150	180	27.65	33.01	-5.36	Pass	V

GPRS 1900 Class 8							
Channel/fc (MHz)	Height (cm)	Azimuth (deg)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
512/1850.2	150	100	28.78	33.01	-4.23	Pass	H
	150	150	27.78	33.01	-5.23	Pass	V
661/1880.0	150	155	28.56	33.01	-4.45	Pass	H
	150	180	27.67	33.01	-5.34	Pass	V
810/1909.8	150	198	28.66	33.01	-4.35	Pass	H
	150	100	27.67	33.01	-5.34	Pass	V

WCDMA band II RCM 12.2K							
Channel/fc (MHz)	Height (cm)	Azimuth (deg)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
9262/1852.4	150	100	21.89	33.01	-11.12	Pass	H
	150	150	20.98	33.01	-12.03	Pass	V
9400/1880.0	150	145	21.78	33.01	-11.23	Pass	H
	150	123	20.78	33.01	-12.23	Pass	V
9538/1907.6	150	350	21.67	33.01	-11.34	Pass	H
	150	180	20.88	33.01	-12.13	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>100 kHz</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>

GSM 850, 128 channel/824.2 MHz(lower channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1648.4	150	200	-42.17	-13	-29.17	Pass	H
2472.6	150	150	-38.90	-13	-25.90	Pass	H
---				-13		Pass	H
1648.4	150	248	-41.87	-13	-28.87	Pass	V
2472.6	150	143	-36.09	-13	-23.09	Pass	V
---				-13		Pass	V
GSM 850, 190 channel/836.6MHz (middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1673.2	200	198	-43.19	-13	-30.19	Pass	H
2509.8	150	200	-39.08	-13	-26.08	Pass	H
---				-13		Pass	H
1673.2	150	124	-42.88	-13	-29.88	Pass	V
2509.8	150	180	-37.10	-13	-24.10	Pass	V
---				-13		Pass	V

GSM 850, 251 channel/848.8MHz(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1697.6	150	200	-42.67	-13	-29.67	Pass	H
2546.4	200	150	-37.90	-13	-24.90	Pass	H
---				-13		Pass	H
1697.6	150	145	-41.89	-13	-28.89	Pass	V
2546.4	150	155	-36.98	-13	-23.98	Pass	V
---				-13		Pass	V

GPRS 850 (Class 8), 128 channel/824.2 MHz(lower channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1648.4	150	245	-44.18	-13	-31.18	Pass	H
2472.6	150	125	-38.09	-13	-25.09	Pass	H
---				-13		Pass	H
1648.4	150	200	-43.89	-13	-30.89	Pass	V
2472.6	150	167	-38.89	-13	-25.89	Pass	V
---				-13		Pass	V

GPRS 850 (Class 8), 190 channel/836.6MHz (middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1673.2	150	245	-46.29	-13	-33.29	Pass	H
2509.8	150	127	-40.29	-13	-27.29	Pass	H
---				-13		Pass	H
1673.2	150	100	-45.89	-13	-32.89	Pass	V
2509.8	150	180	-39.89	-13	-26.89	Pass	V
---				-13		Pass	V

GPRS 850 (Class 8), 251 channel/848.8MHz(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1697.6	200	200	-44.29	-13	-31.29	Pass	H
2546.4	150	145	-39.09	-13	-26.09	Pass	H
---				-13		Pass	H
1697.6	150	143	-43.89	-13	-30.89	Pass	V
2546.4	150	167	-40.01	-13	-27.01	Pass	V
---				-13		Pass	V

WCDMA band V (RMC 122.2K), 4132 channel/826.4 MHz(lower channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1652.8	150	123	-48.90	-13	-35.90	Pass	H
2479.2	150	145	-40.87	-13	-27.87	Pass	H
---				-13		Pass	H
1652.8	150	180	-47.88	-13	-34.88	Pass	V
2479.2	150	277	-42.98	-13	-29.98	Pass	V
--				-13		Pass	V

WCDMA band V (RMC 122.2K), 4183 channel/836.6 MHz(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1673.2	150	300	-47.87	-13	-34.87	Pass	H
2509.8	150	120	-42.11	-13	-29.11	Pass	H
---				-13		Pass	H
1673.2	150	155	-46.09	-13	-33.09	Pass	V
2509.8	150	129	-40.89	-13	-27.89	Pass	V
---				-13		Pass	V

WCDMA band V (RMC 122.2K), 4233 channel/846.6 MHz(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
1693.2	150	100	-46.09	-13	-33.09	Pass	H
2539.8	150	167	-41.19	-13	-28.19	Pass	H
---				-13		Pass	H
1693.2	150	234	-48.11	-13	-35.11	Pass	V
2539.8	150	200	-42.89	-13	-29.89	Pass	V
---				-13		Pass	V

GSM 1900, 512 channel/1850.2MHz(lower channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
3700.4	150	189	-42.16	-13	-29.16	Pass	H
5550.6	150	234	-48.12	-13	-35.12	Pass	H
---				-13		Pass	H
3700.4	150	100	-41.28	-13	-28.28	Pass	V
5550.6	150	220	-48.82	-13	-35.82	Pass	V
---				-13		Pass	V

GSM 1900, 661 channel/1880.0MHz(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
3760.0	150	200	-42.09	-13	-29.09	Pass	H
5640.0	150	120	-49.11	-13	-36.11	Pass	H
---				-13		Pass	H
3760.0	150	100	-41.98	-13	-28.98	Pass	V
5640.0	150	120	-48.98	-13	-35.98	Pass	V
---				-13		Pass	V

GSM 1900, 810 channel/1909.8MHz(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
3819.6	150	100	-42.78	-13	-29.78	Pass	H
5729.4	150	120	-48.09	-13	-35.09	Pass	H
---				-13		Pass	H
3819.6	150	180	-41.09	-13	-28.09	Pass	V
5729.4	150	220	-49.09	-13	-36.09	Pass	V
---				-13		Pass	V

GPRS 1900 (Class 8), 512 channel/1850.2MHz(lower channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
3700.4	150	126	-45.18	-13	-32.18	Pass	H
5550.6	150	145	-50.34	-13	-37.34	Pass	H
---				-13		Pass	H
3700.4	150	169	-44.28	-13	-31.28	Pass	V
5550.6	150	178	-51.23	-13	-38.23	Pass	V
---				-13		Pass	V

GPRS 1900(Class 8), 661 channel/1880.0MHz(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
3760.0	150	309	-45.09	-13	-32.09	Pass	H
5640.0	150	133	-50.19	-13	-37.19	Pass	H
---				-13		Pass	H
3760.0	150	155	-43.09	-13	-30.09	Pass	V
5640.0	150	142	-48.09	-13	-35.09	Pass	V
---				-13		Pass	V

GPRS 1900(Class 8), 810 channel/1909.8MHz(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
3819.6	150	129	-46.89	-13	-33.89	Pass	H
5729.4	150	100	-50.09	-13	-37.09	Pass	H
---				-13		Pass	H
3819.6	150	145	-47.11	-13	-34.11	Pass	V
5729.4	150	150	-49.09	-13	-36.09	Pass	V
---				-13		Pass	V

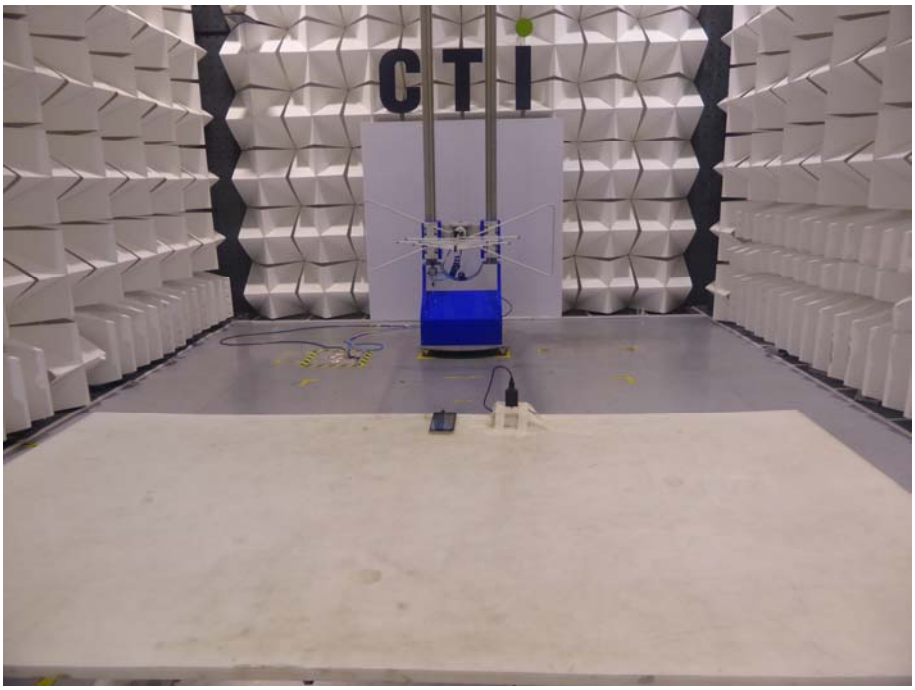
WCDMA band II(RMC 12.2K), 9262 channel/1852.4MHz(lower channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
3704.8	150	190	-47.89	-13	-34.89	Pass	H
5557.2	150	200	-52.09	-13	-39.09	Pass	H
---				-13		Pass	H
3704.8	150	145	-48.99	-13	-35.99	Pass	V
5557.2	150	155	-51.09	-13	-38.09	Pass	V
---				-13		Pass	V
WCDMA band II (RMC 12.2K), 9400 channel/1880.0MHz(middle channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
3760.0	150	189	-49.09	-13	-36.09	Pass	H
5640.0	150	127	-52.10	-13	-39.10	Pass	H
---				-13		Pass	H
3760.0	150	167	-48.11	-13	-35.11	Pass	V
5640.0	150	100	-51.09	-13	-38.09	Pass	V
---				-13		Pass	V

WCDMA band II (RMC 12.2K), 9538 channel/1907.6MHz(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
3815.2	150	100	-48.09	-13	-35.09	Pass	H
5722.8	150	256	-52.11	-13	-39.11	Pass	H
				-13		Pass	H
3815.2	150	157	-49.18	-13	-36.18	Pass	V
5722.8	150	189	-52.87	-13	-39.87	Pass	V
				-13		Pass	V

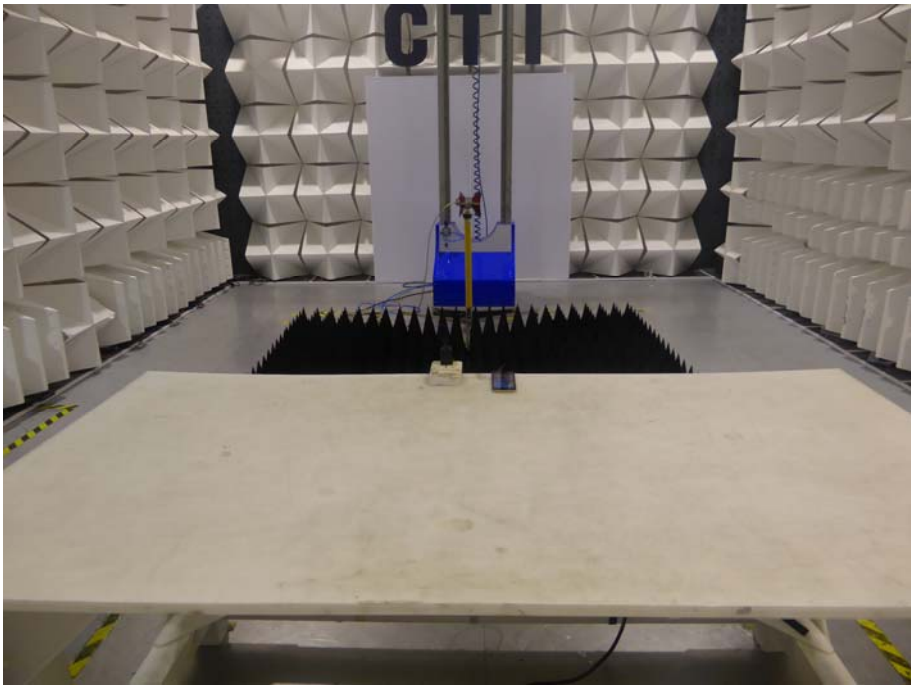
Note:

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



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



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

PHOTOGRAPHS OF EUT Constructional Details

View of external EUT-1

View of external EUT-2

View of external EUT-3

View of external EUT-4

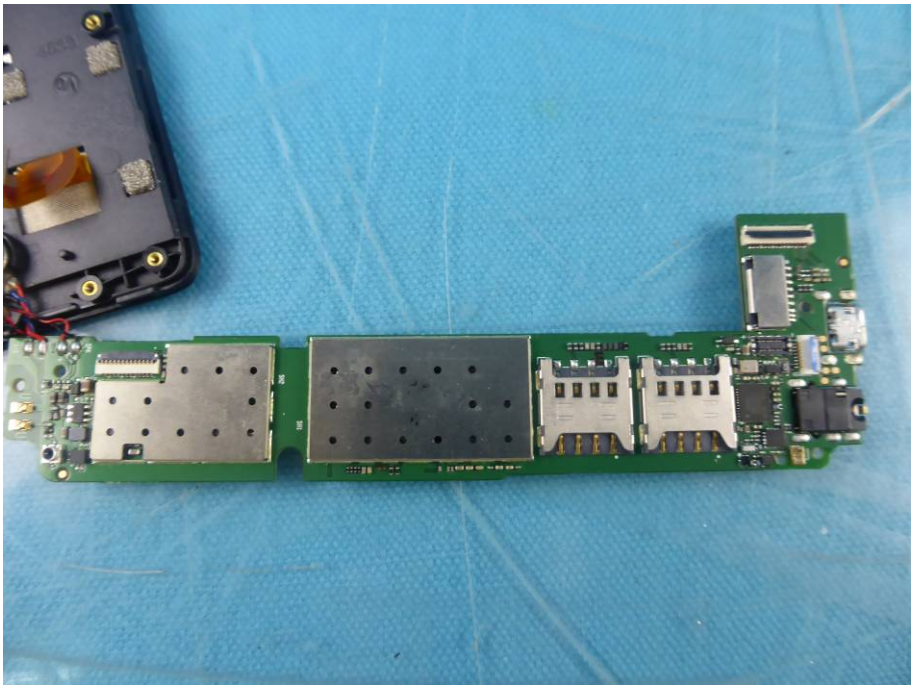
View of external EUT-5

View of external EUT-6

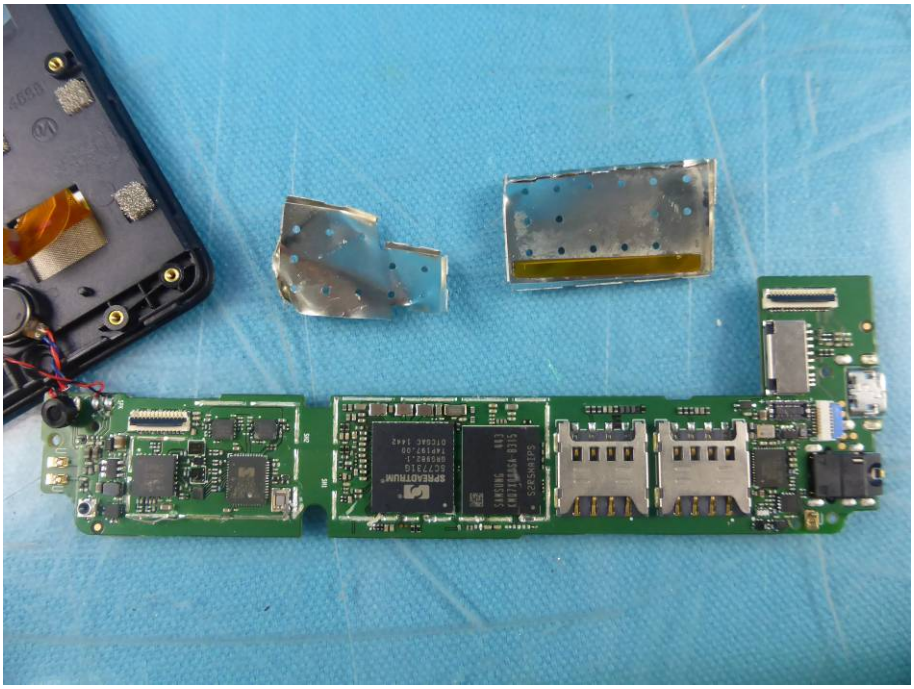
View of internal EUT-1

View of internal EUT-2

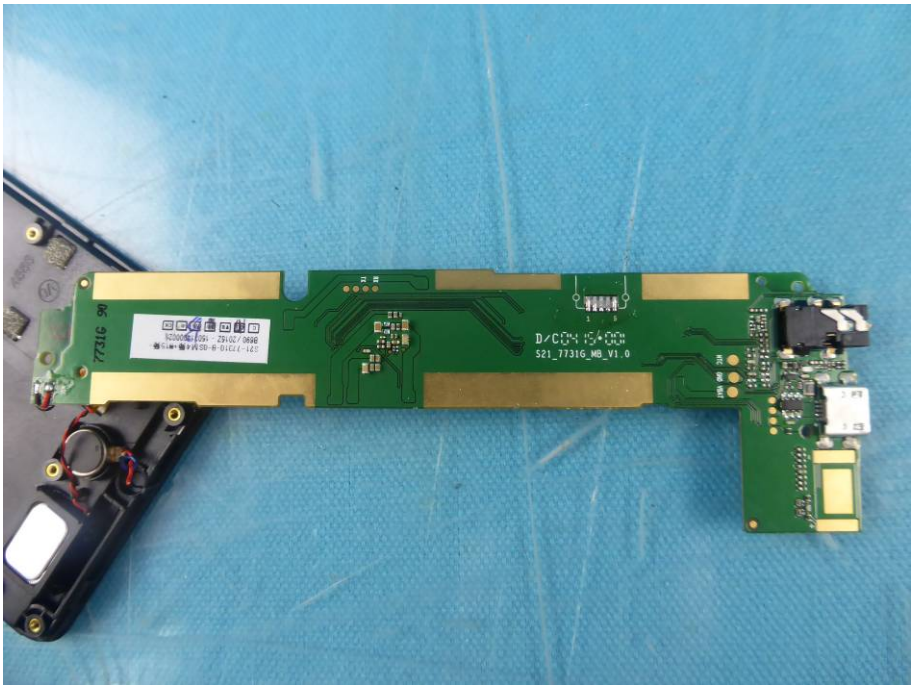
View of internal EUT-3



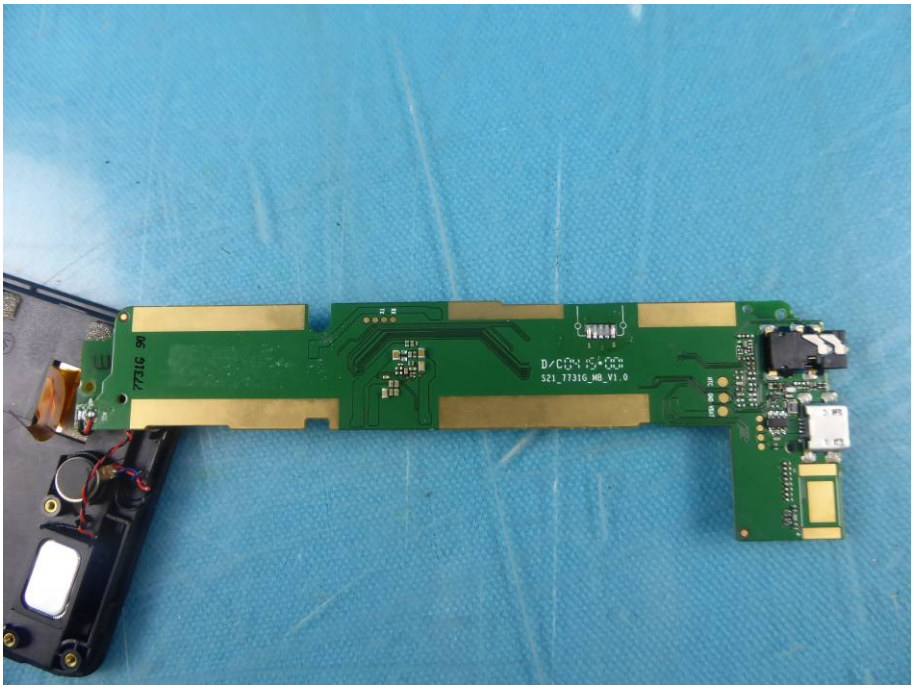
View of internal EUT-4



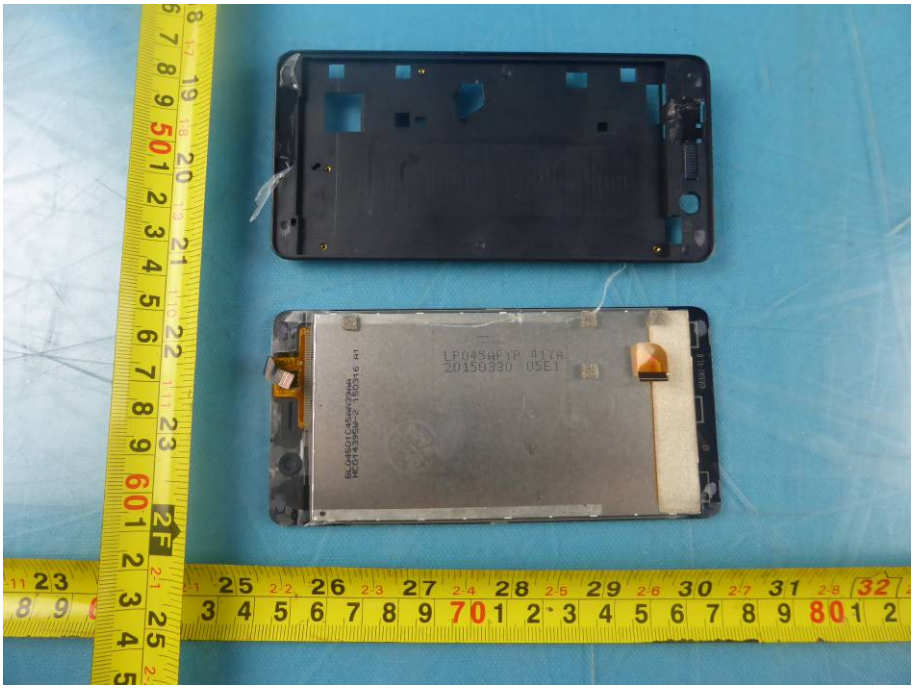
View of internal EUT-5



View of internal EUT-6



View of internal EUT-7



View of internal EUT-8

View of internal EUT-9

View of internal EUT-10

*** End of Report ***

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