

TEST REPORT

Product : 10.1" 3G Phone Tablet
Trade mark : Dragon Touch, KingPad, KingSlim, SureTouch
Model/Type reference : E10, E10X, E100, E10 PLUS, E10X PLUS, E100X, E100X PLUS, 1855
Serial Number : N/A
Report Number : EED32H000437-1
FCC ID : S5V-D10E10
Date of Issue: : Jul. 18, 2015
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:

Proexpress Distributor LLC

11011 GREENWOOD AVE.N APT 5, SEATTLE, WA 98103, United States

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Date:

Jul. 18, 2015

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Check No.: 1727804505



2 Version

Version No.	Date	Description
00	Jul. 18, 2015	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%&26dBOccupied 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 ofspurious 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-averageratio	Part 24.232(d)	KDB 971168 D01v02r02	PASS
99%&26dBOccupied Bandwidth	Part 2.1049(h)	Part 24.238(b)&KDB 971168 D01v02r02	PASS
Band Edge at antenna terminals	Part 2.1051/ Part 24.238(a)	Part 24.238(b)&KDB 971168 D01v02r02	PASS
Spurious emissions at antenna terminals	Part 2.1051/ Part 2.1057/ Part 24.238(a)(b)	ITA-603-C-2004&KDB 971168 D01v02r02	PASS
Field strength ofspurious 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

Model No.: E10, E10X, E100, E10 PLUS, E10X PLUS, E100X, E100X PLUS, 1855

Only the Model E10 was tested, since the electrical circuit design, layout, components used and internal wiring were identical for all above models. Only different on outer color and model names.

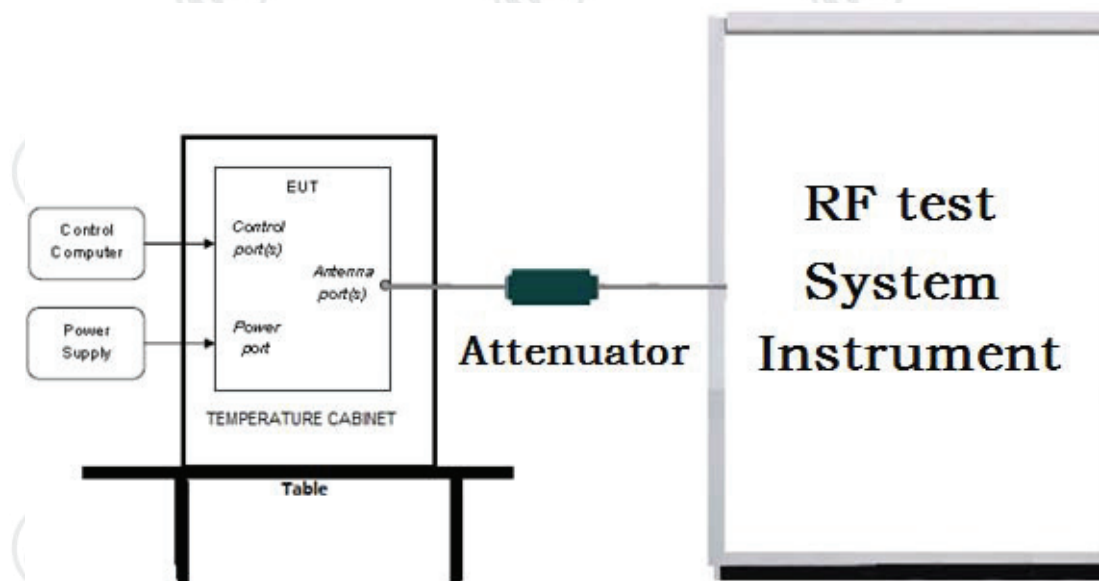
4 Content

1	COVER PAGE	1
2	VERSION	2
3	TEST SUMMARY	3
4	CONTENT	4
5	TEST REQUIREMENT	5
5.1	TEST SETUP	5
5.1.1	For Conducted test setup	5
5.1.2	For Radiated Emissions test setup	5
5.2	TEST ENVIRONMENT	6
5.3	TEST CONDITION	6
6	GENERAL INFORMATION	9
6.1	CLIENT INFORMATION	9
6.2	GENERAL DESCRIPTION OF EUT	9
6.3	PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD	9
6.4	DESCRIPTION OF SUPPORT UNITS	10
6.5	TEST LOCATION	10
6.6	TEST FACILITY	10
6.7	DEVIATION FROM STANDARDS	11
6.8	ABNORMALITIES FROM STANDARD CONDITIONS	11
6.9	OTHER INFORMATION REQUESTED BY THE CUSTOMER	11
6.10	MEASUREMENT UNCERTAINTY (95% CONFIDENCE LEVELS, K=2)	11
7	EQUIPMENT LIST	12
8	RADIO TECHNICAL REQUIREMENTS SPECIFICATION	14
	Appendix A) RF Power Output	16
	Appendix B) Peak-to-Average Ratio	17
	Appendix C) Band Width	18
	Appendix D) Band Edges Compliance	28
	Appendix E) Spurious Emission at Antenna Terminal	34
	Appendix F) Frequency Stability	81
	Appendix G) Effective Radiated Power of Transmitter (ERP/EIRP)	90
	Appendix H) Field strength of spurious radiation	93
	PHOTOGRAPHS OF TEST SETUP	100
	PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS	101

5 TestRequirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

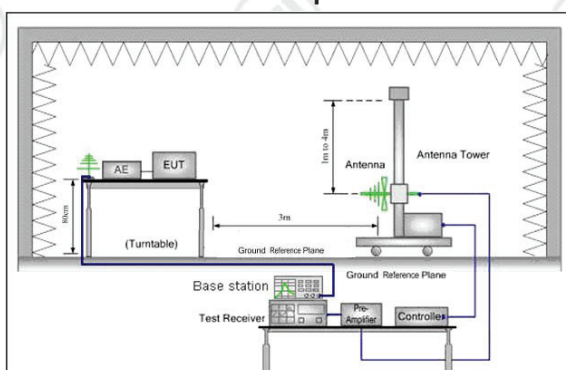


Figure 1. 30MHz to 1GHz

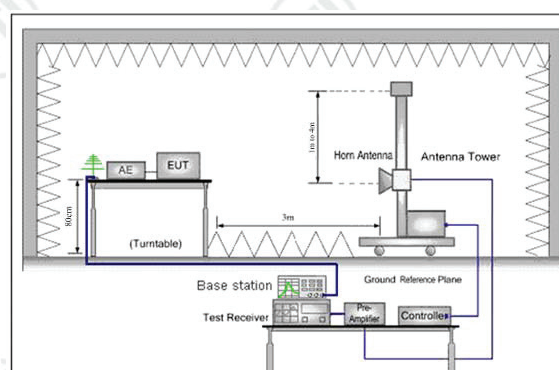


Figure 2. above 1GHz

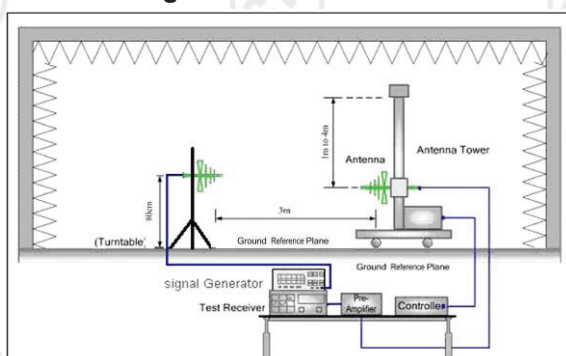


Figure 1. 30MHz to 1GHz

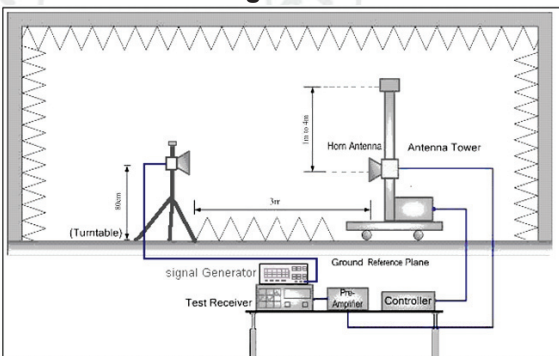


Figure 2. above 1GHz

5.2 Test Environment

Operating Environment:	
Temperature:	25 °C
Humidity:	53 % RH
Atmospheric Pressure:	995mbar

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°C)

Humid: In this whole report Humid means humidity.

N/A: In this whole report not application.

5.3 Test Condition

Test channel:

Test Mode	Tx/Rx	RF Channel		
		Low(L)	Middle(M)	High(H)
GSM/GPRS850	Tx (824 MHz ~849 MHz)	Channel 128	Channel 190	Channel 251
		824.2MHz	836.6 MHz	848.8 MHz
	Rx (869 MHz ~894 MHz)	Channel 128	Channel 190	Channel 251
		869.2 MHz	881.6 MHz	893.8 MHz
WCDMA band V	Tx (824 MHz ~849 MHz)	Channel 4132	Channel 4182	Channel 4233
		826.4 MHz	836.4 MHz	846.6 MHz
	Rx (869 MHz ~894 MHz)	Channel 4357	Channel 4407	Channel 4458
		871.4 MHz	881.4 MHz	891.6 MHz
GSM/GPRS 1900	Tx (1850 MHz ~1910 MHz)	Channel 512	Channel 661	Channel 810
		1850.2MHz	1880.0 MHz	1909.8 MHz
	Rx (1930 MHz ~1990 MHz)	Channel 512	Channel 661	Channel 810
		1930.2 MHz	1960.0 MHz	1989.8 MHz
WCDMA Band II	Tx (1850 MHz ~1910 MHz)	Channel 9262	Channel 9400	Channel 9538
		1852.4 MHz	1880.0 MHz	1907.6 MHz
	Rx (1930 MHz ~1990 MHz)	Channel 9662	Channel 9800	Channel 9938
		1932.4 MHz	1960.0 MHz	1987.6 MHz

Test mode:

Pre-scan under all rate at lowestmiddle and highestchannel ,find the transmitter power as below:

GSM850		Burst-Averaged output Power (dBm)		
		128CH	190CH	251CH
GSM(CS)		29.92	31.58	31.25
GPRS (GMSK)	1 Tx Slot	29.91	31.58	31.22
	2 Tx Slots	29.87	31.23	31.08
	3 Tx Slots	29.69	31.08	31.01
	4 Tx Slots	29.68	30.99	30.98

GSM1900		Burst-Averaged output Power (dBm)		
		512CH	661CH	810CH
GSM(CS)		25.45	23.72	24.11
GPRS (GMSK)	1 Tx Slot	25.47	23.67	24.07
	2 Tx Slots	25.41	23.61	24.05
	3 Tx Slots	25.39	23.60	24.03
	4 Tx Slots	25.33	23.56	24.02

UMTS Band II		Conducted Power (dBm)		
		9262CH	9400CH	9538CH
WCDMA	12.2kbps RMC	22.44	22.83	21.05
	64kbps RMC	22.43	22.81	21.02
	144kbps RMC	22.42	22.78	21.00
	384kbps RMC	22.39	22.71	21.98
HSDPA	Subtest 1	22.37	22.70	21.96
	Subtest 2	22.35	22.69	22.95
	Subtest 3	22.31	22.66	22.89
	Subtest 4	22.29	22.56	22.87

UMTS Band V		Conducted Power (dBm)		
		4132CH	4182CH	4233CH
WCDMA	12.2kbps RMC	30.07	28.05	26.24
	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

Pre-scan all mode and data rates and positions,find worse case mode are chosento 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:	Proexpress Distributor LLC
Address of Applicant:	11011 GREENWOOD AVE.N APT 5, SEATTLE, WA 98103, United States
Manufacturer:	Proexpress Distributor LLC
Address of Manufacturer:	11011 GREENWOOD AVE.N APT 5, SEATTLE, WA 98103, United States

6.2 General Description of EUT

Product Name:	10.1" 3G Phone Tablet	
Model No.(EUT):	E10	
Add Mode No.:	E10X, E100, E10 PLUS, E10X PLUS, E100X, E100X PLUS, 1855	
Trade Mark:	Dragon Touch, KingPad, KingSlim, SureTouch	
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 BT4.0: 2402 – 2480MHz IEEE 802.11b/g/n(HT20): 2412 – 2462MHz IEEE 802.11b/g/n(HT40): 2422 – 2452MHz	
Power Supply:	Adapter:	Input: AC 100V-240V 50-60Hz Output: DC 5.0V 2000mA
	Battery:	DC3.7V (Li-on Rechargeable Battery)
Sample Received Date:	May 09, 2015	
Sample tested Date:	May 09, 2015 to Jul. 18, 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 Reservoir, Xixiang, Baoan District, Shenzhen, China

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

No tests were sub-contracted.

6.6 Test Facility

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

CNAS-Lab Code: L1910

Centre Testing International (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.: 565659

Centre Testing International (Shenzhen) Corporation 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 565659.

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.

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

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

7 Equipment List

Communication RF test system 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	---	06-02-2015	06-01-2016
TRILOG Broadband Antenna	SCHWARZBECK	VULB9163	9163-617	07-14-2015	07-13-2016
Microwave Preamplifier	Agilent	8449B	3008A02425	02-05-2015	02-04-2016
Horn Antenna	ETS-LINDGREN	3117	00057410	07-08-2015	07-07-2016
Loop Antenna	ETS	6502	00071730	07-23-2015	07-22-2016
Spectrum Analyzer	R&S	FSP40	100416	07-09-2015	07-08-2016
Receiver	R&S	ESCI	100435	07-09-2015	07-08-2016
Multi device Controller	matur	NCD/070/10711112	---	01-13-2015	01-12-2016
LISN	schwarzbeck	NNBM8125	81251547	07-09-2015	07-08-2016
LISN	schwarzbeck	NNBM8125	81251546	07-09-2015	07-08-2016
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	07-10-2015	07-09-2016
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	29.92	38.5	PASS
		MCH	31.58	38.5	PASS
		HCH	31.25	38.5	PASS
	GSM/TM2	LCH	29.91	38.5	PASS
		MCH	31.58	38.5	PASS
		HCH	31.22	38.5	PASS

Test Band	Test Mode	Test Channel	Measured(dBm)	Limit (dBm)	Verdict
GSM1900	GSM/TM1	LCH	25.45	33	PASS
		MCH	23.72	33	PASS
		HCH	24.11	33	PASS
	GSM/TM2	LCH	25.47	33	PASS
		MCH	23.67	33	PASS
		HCH	24.07	33	PASS

Test Band	Test Mode	Test Channel	Measured(dBm)	Limit (dBm)	Verdict
WCDMA850	UMTS/TM1	LCH	30.07	38.5	PASS
		MCH	28.05	38.5	PASS
		HCH	26.24	38.5	PASS

Test Band	Test Mode	Test Channel	Measured(dBm)	Limit (dBm)	Verdict
WCDMA1900	UMTS/TM1	LCH	22.44	33	PASS
		MCH	22.83	33	PASS
		HCH	21.05	33	PASS

Appendix B) Peak-to-Average Ratio

Test Band	Test Mode	Test Channel	Measured(dBm)	Limit (dBm)	Verdict
GSM1900	GSM/TM1	LCH	10.13	13	PASS
		MCH	6.55	13	PASS
		HCH	8.96	13	PASS
	GSM/TM2	LCH	11.69	13	PASS
		MCH	10.15	13	PASS
		HCH	11.84	13	PASS

Test Band	Test Mode	Test Channel	Measured(dBm)	Limit (dBm)	Verdict
WCDMA1900	UMTS/TM1	LCH	1.79	13	PASS
		MCH	3.08	13	PASS
		HCH	2.43	13	PASS

Appendix C)BandWidth

Test Band	Test Mode	Test Channel	Occupied Bandwidth (KHZ)	Emission Bandwidth (KHZ)	Verdict
GSM850	GSM/TM1	LCH	250.43	319.72	PASS
		MCH	246.54	315.42	PASS
		HCH	249.78	317.66	PASS
	GSM/TM2	LCH	246.38	313.60	PASS
		MCH	245.62	314.84	PASS
		HCH	246.88	317.33	PASS

Test Band	Test Mode	Test Channel	Occupied Bandwidth (KHZ)	Emission Bandwidth (KHZ)	Verdict
GSM1900	GSM/TM1	LCH	246.33	310.91	PASS
		MCH	247.60	315.32	PASS
		HCH	247.86	312.29	PASS
	GSM/TM2	LCH	245.78	313.79	PASS
		MCH	242.89	316.42	PASS
		HCH	245.87	309.12	PASS

Test Band	Test Mode	Test Channel	Occupied Bandwidth (KHZ)	Emission Bandwidth (KHZ)	Verdict
WCDMA 850	UMTS/TM1	LCH	4224.3	4841	PASS
		MCH	4336.7	7581	PASS
		HCH	4214.1	4882	PASS

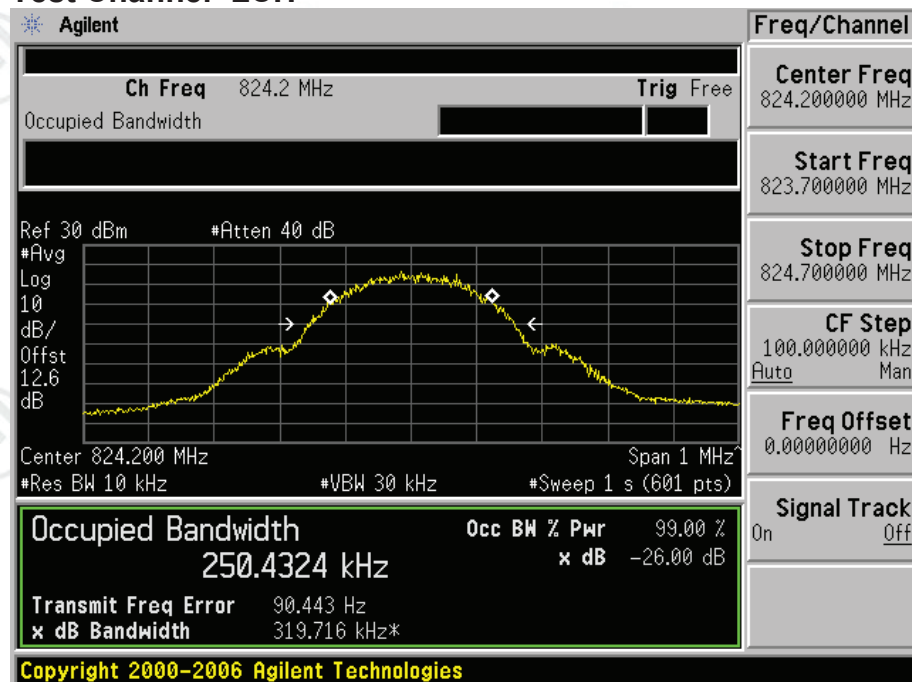
Test Band	Test Mode	Test Channel	Occupied Bandwidth (KHZ)	Emission Bandwidth (KHZ)	Verdict
WCDMA 1900	UMTS/TM1	LCH	4339.6	8690	PASS
		MCH	4180.8	4686	PASS
		HCH	4183.8	4786	PASS

For GSM

Test Band=GSM850

Test Mode=GSM/TM1

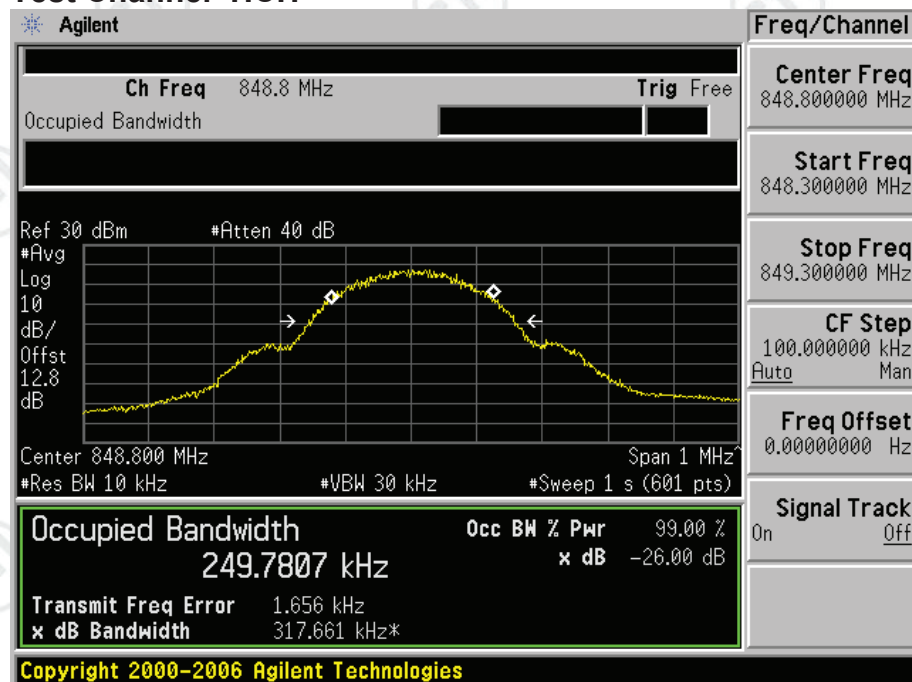
Test Channel=LCH



Test Channel=MCH



Test Channel=HCH



Test Mode=GSM/TM2

Test Channel=LCH



Test Channel=MCH



Test Channel=HCH



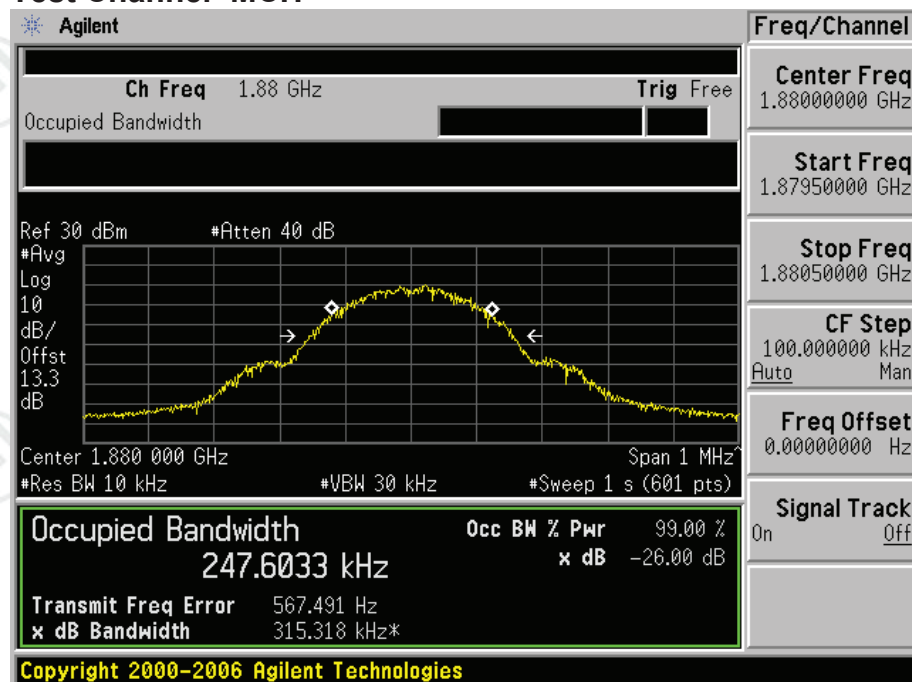
Test Band=GSM1900

Test Mode=GSM/TM1

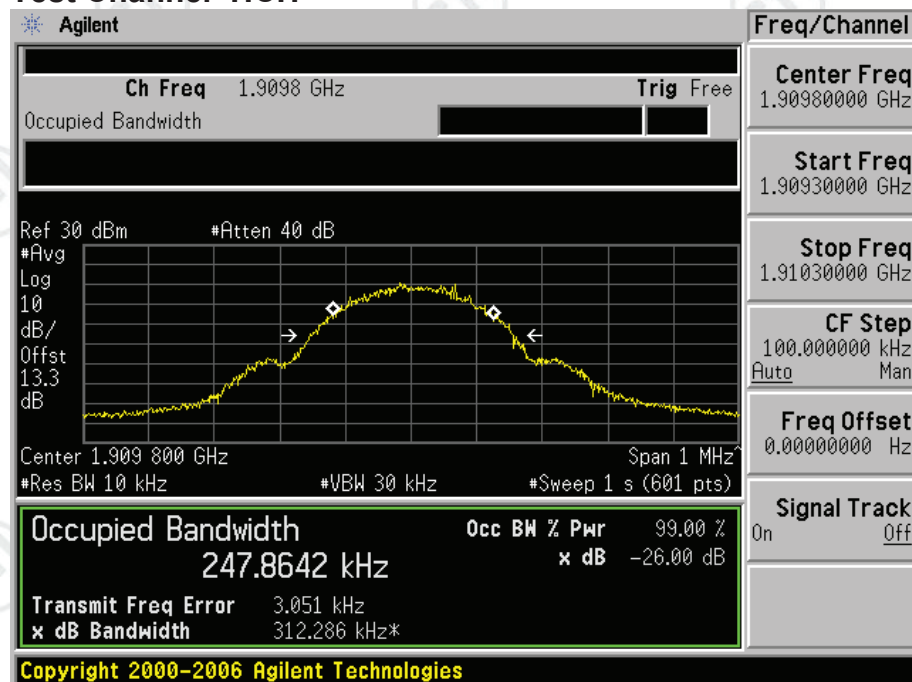
Test Channel=LCH



Test Channel=MCH

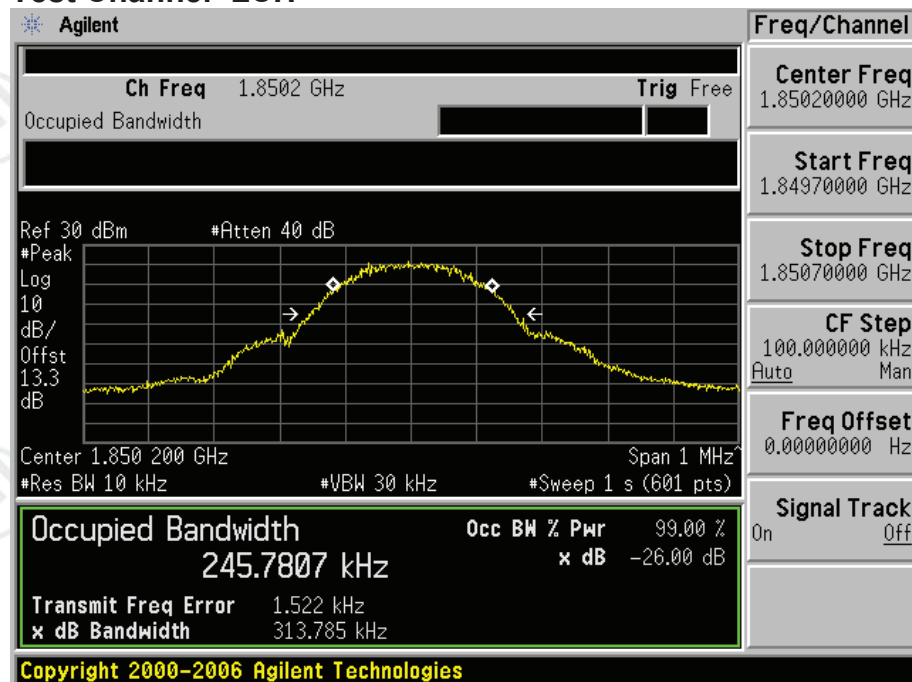


Test Channel=HCH

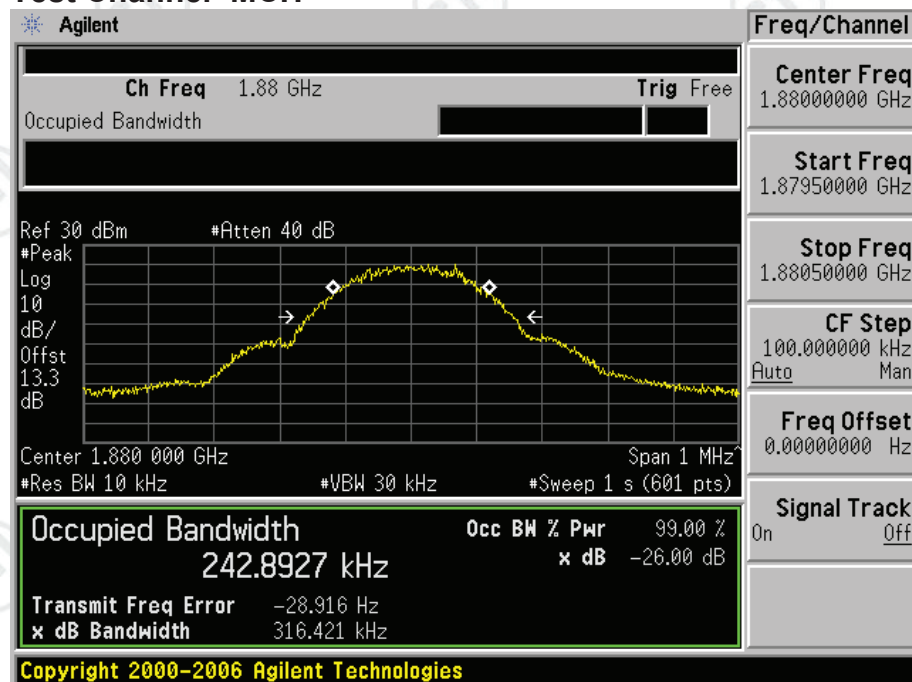


Test Mode=GSM/TM2

Test Channel=LCH



Test Channel=MCH



Test Channel=HCH

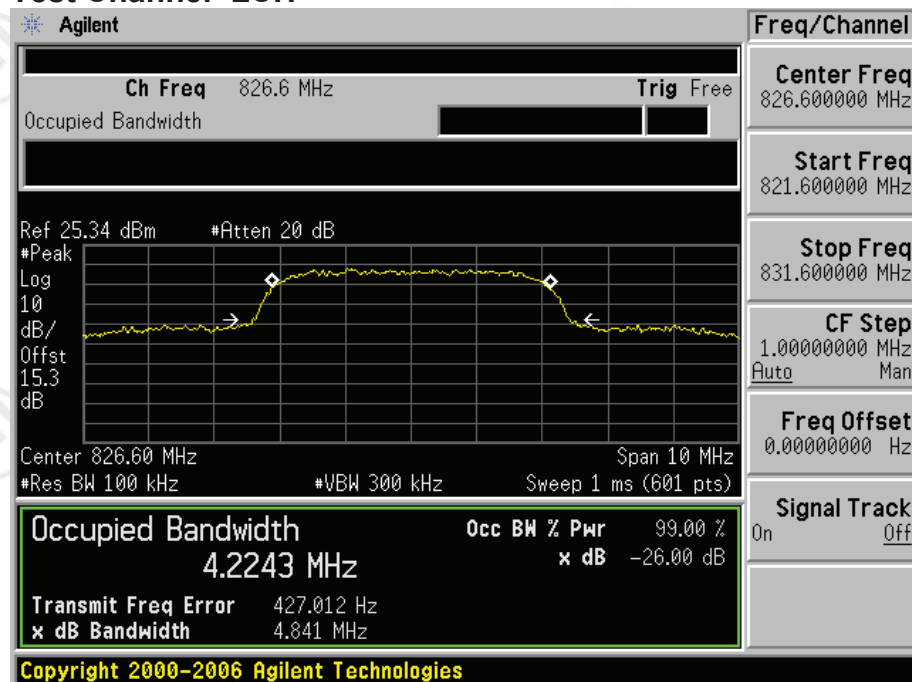


For WCDMA

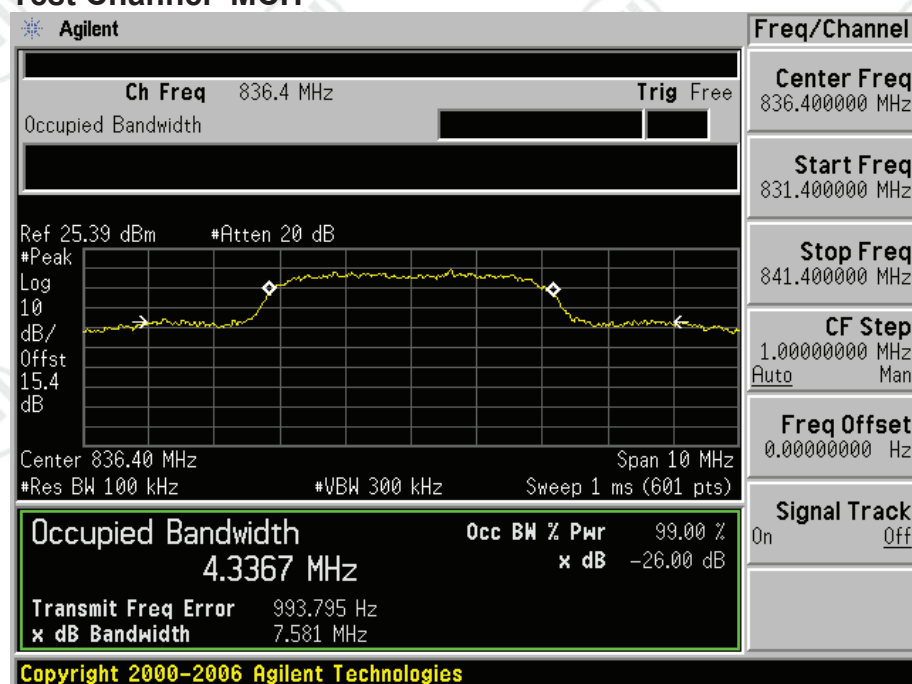
Test Band=WCDMA850

Test Mode=UMTS/TM1

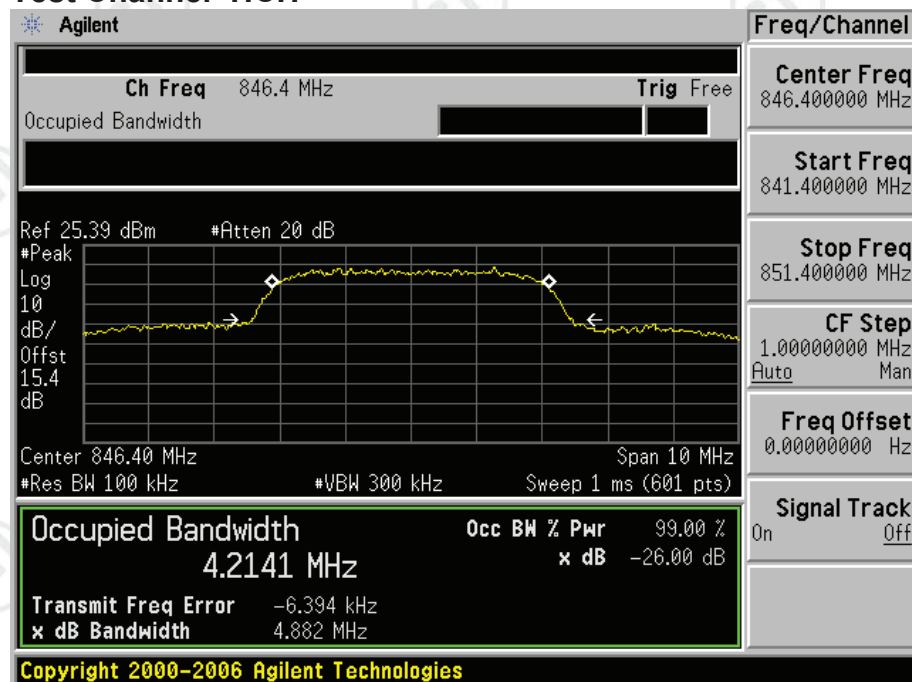
Test Channel=LCH



Test Channel=MCH



Test Channel=HCH



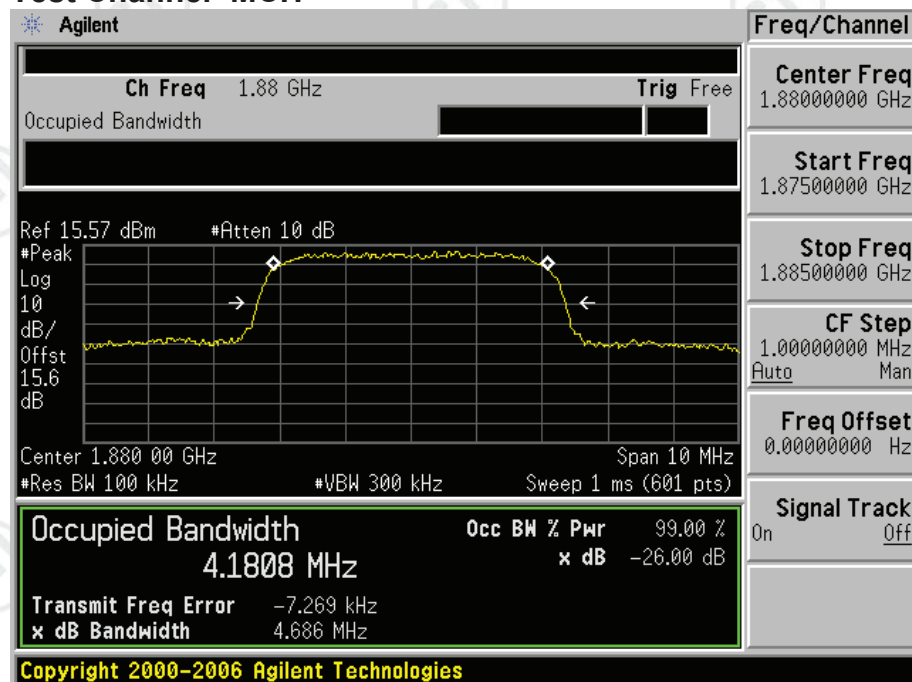
Test Band=WCDMA1900

Test Mode=UMTS/TM1

Test Channel=LCH



Test Channel=MCH



Test Channel=HCH



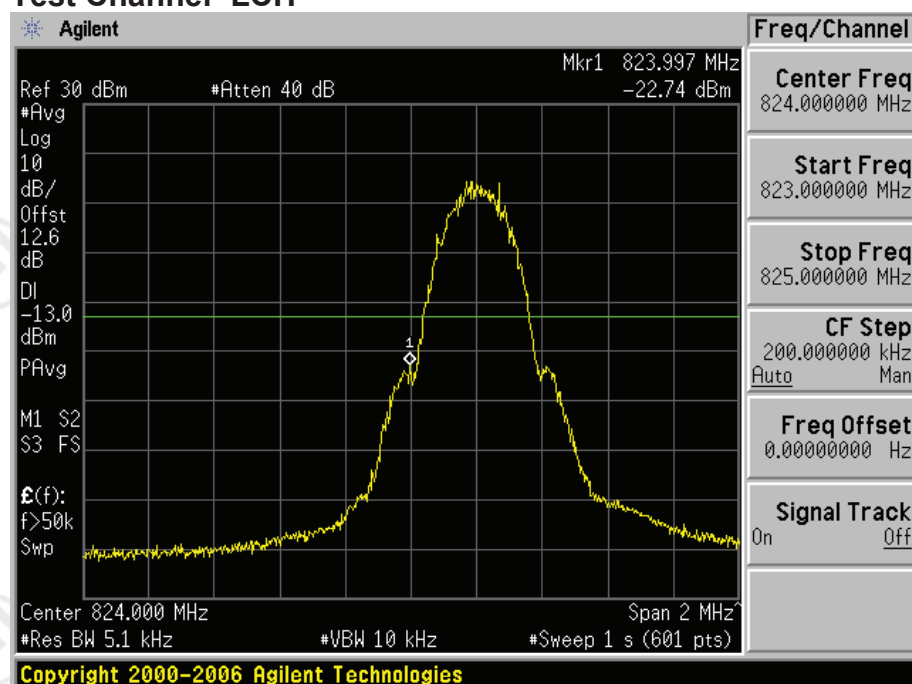
Appendix D) Band Edges Compliance

For GSM

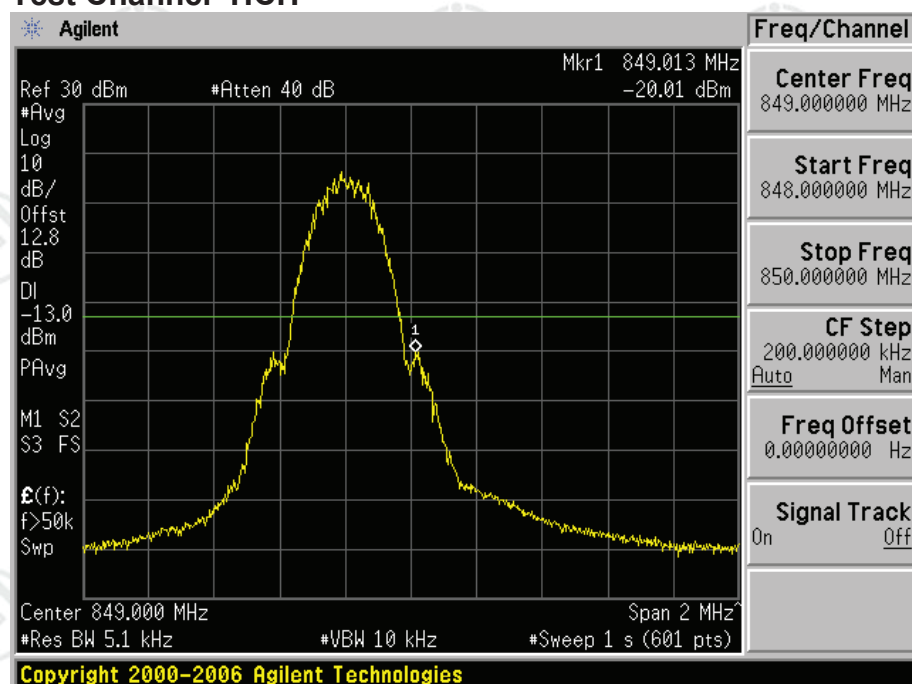
Test Band=GSM850

Test Mode=GSM/TM1

Test Channel=LCH

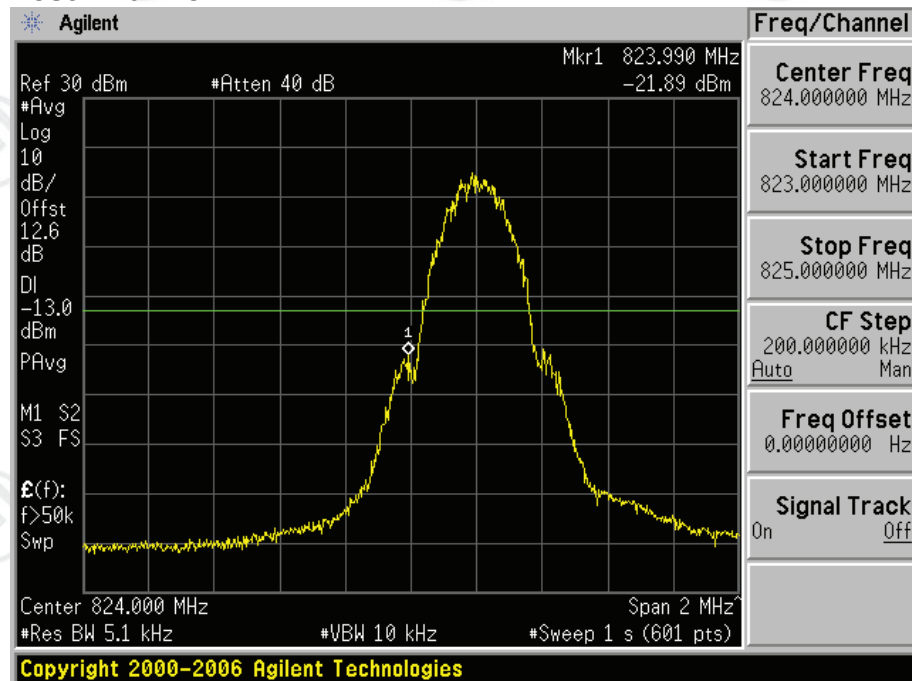


Test Channel=HCH

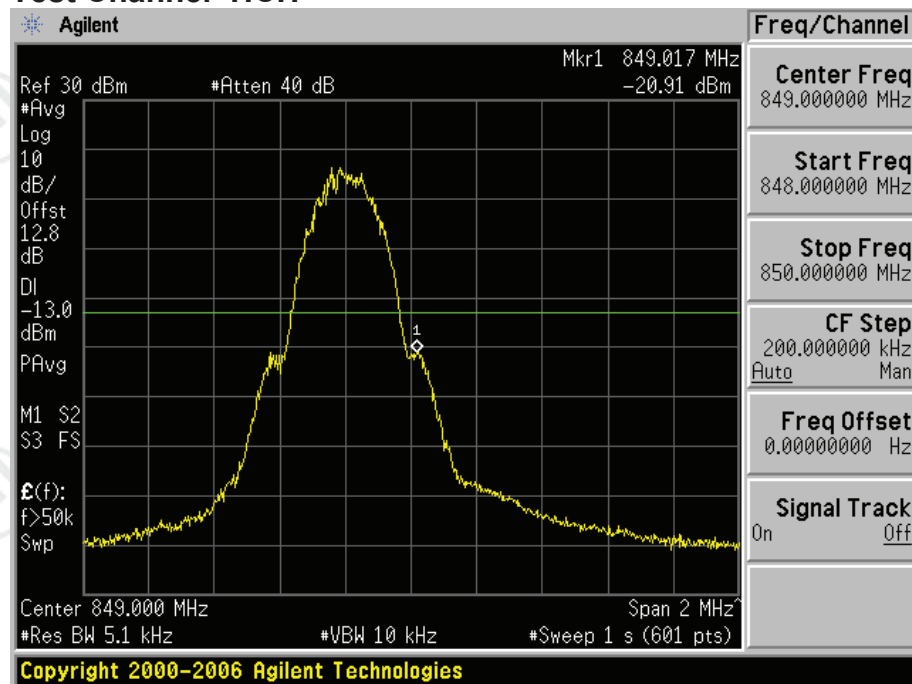


Test Mode=GSM/TM2

Test Channel=LCH



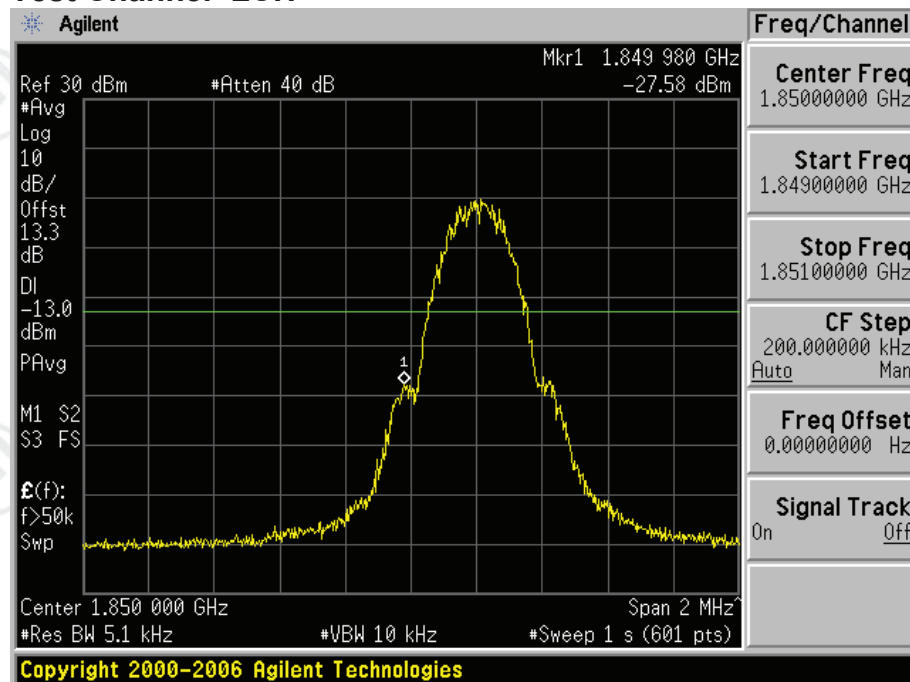
Test Channel=HCH



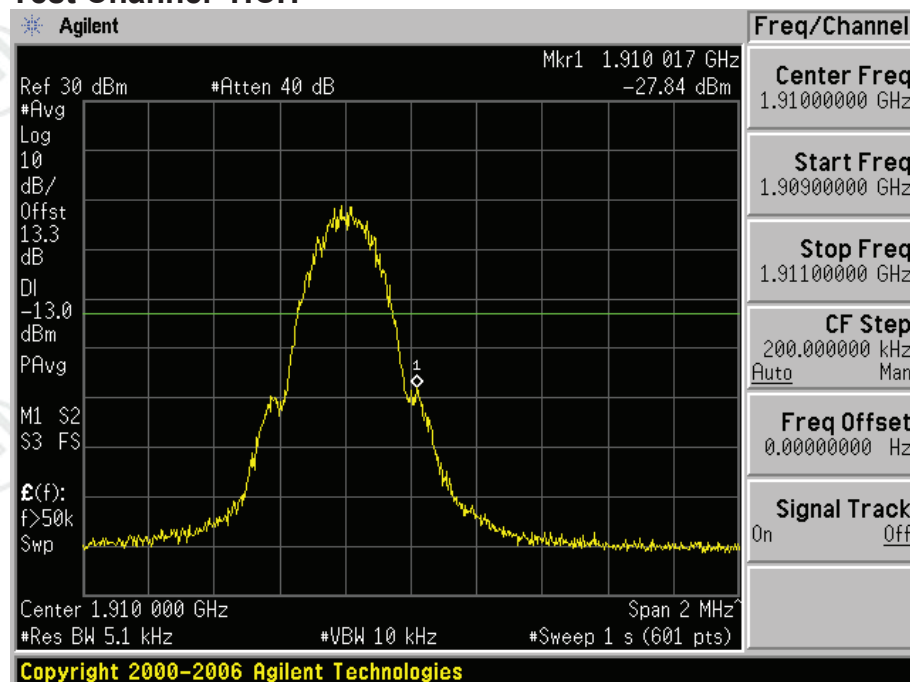
Test Band=GSM1900

Test Mode=GSM/TM1

Test Channel=LCH

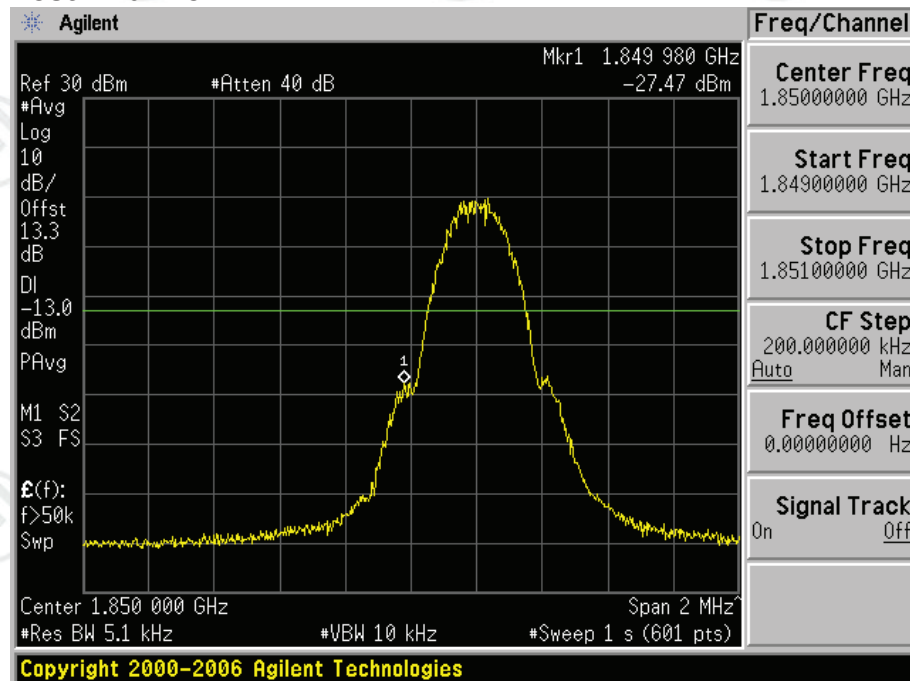


Test Channel=HCH

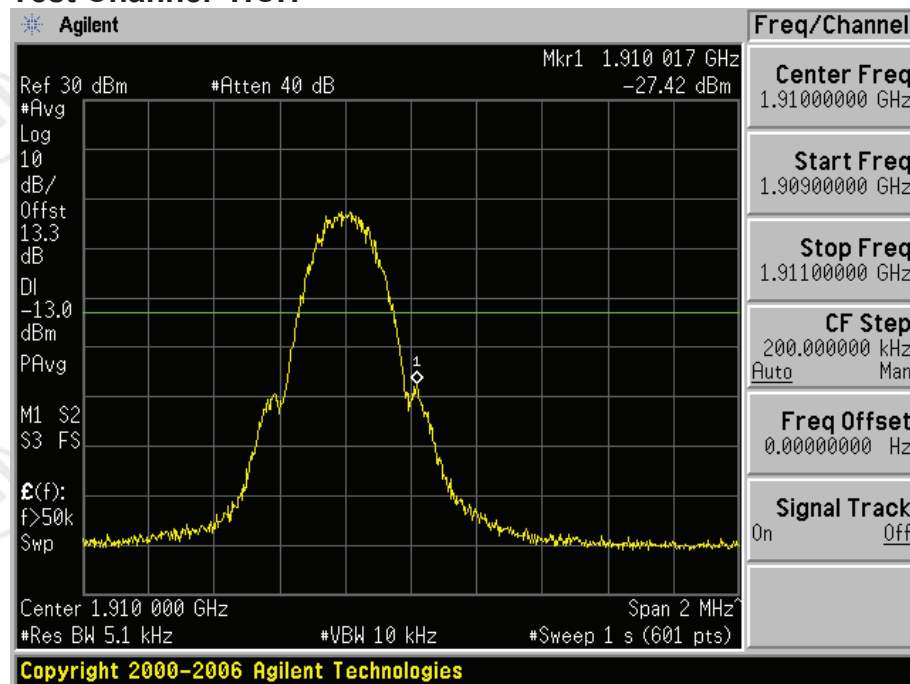


Test Mode=GSM/TM2

Test Channel=LCH



Test Channel=HCH

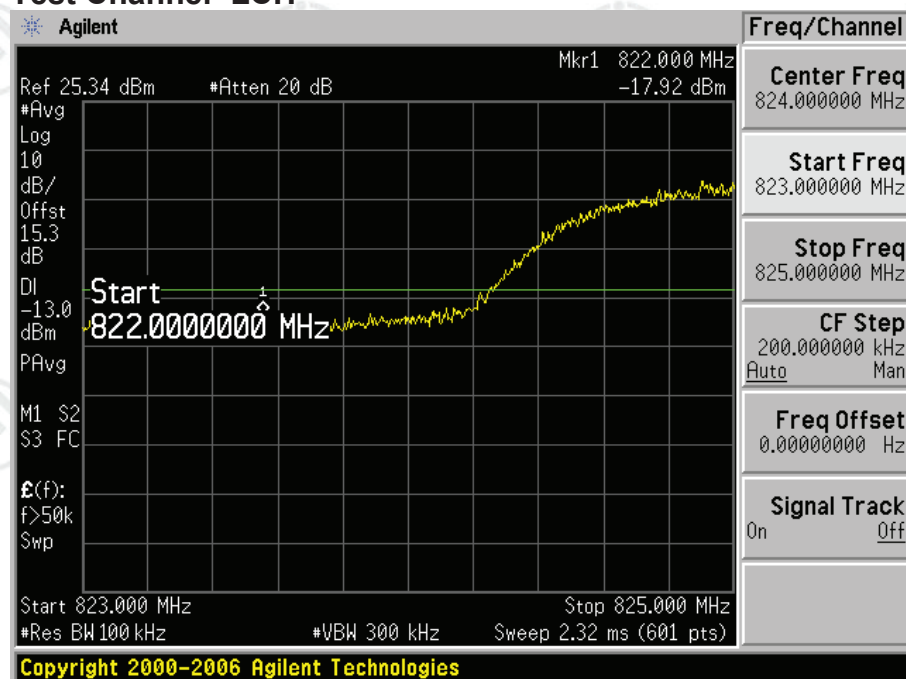


For WCDMA

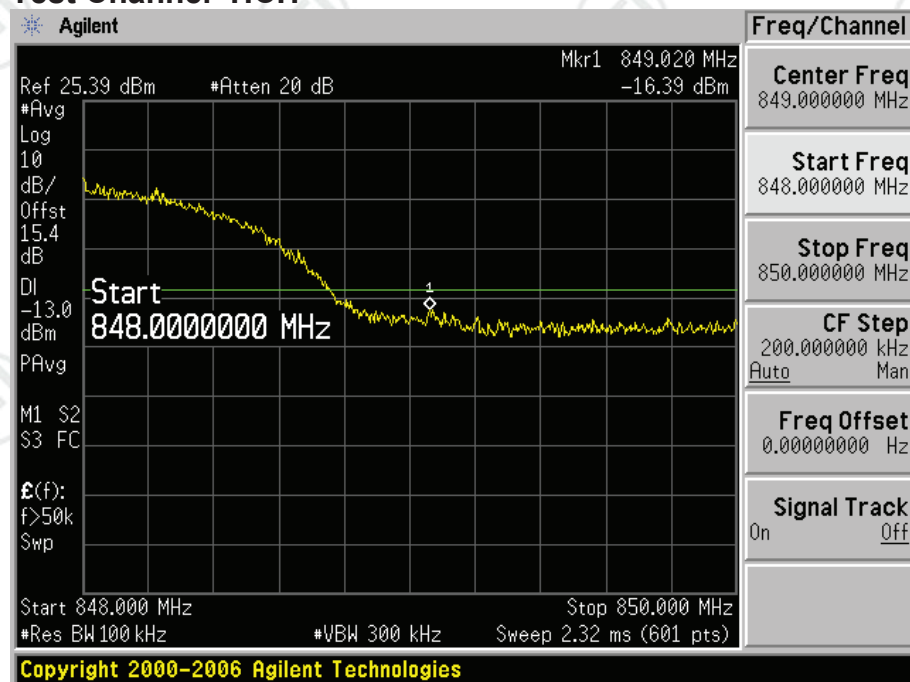
Test Band=WCDMA850

Test Mode=UMTS/TM1

Test Channel=LCH



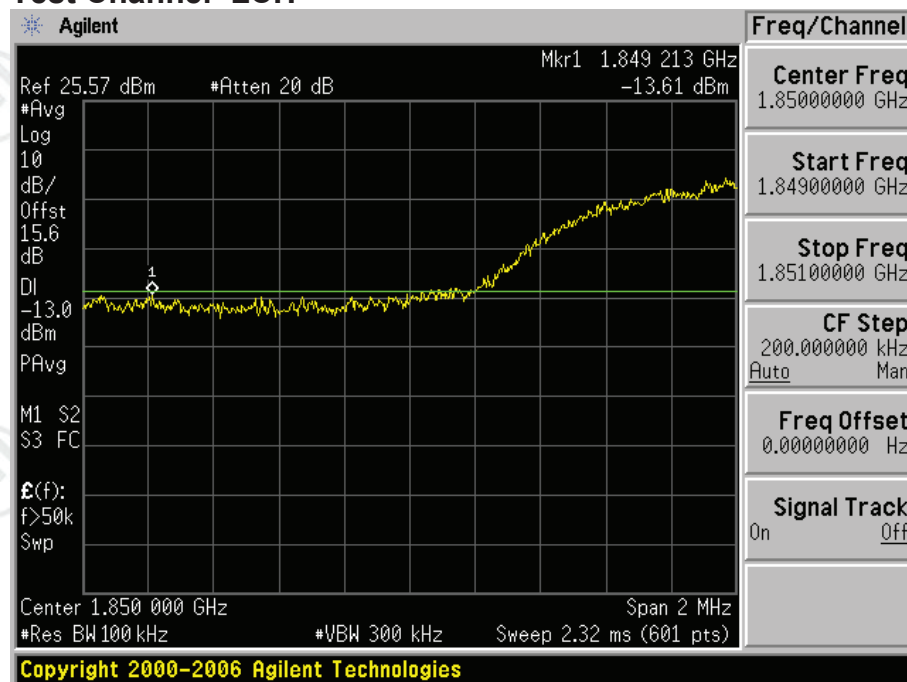
Test Channel=HCH



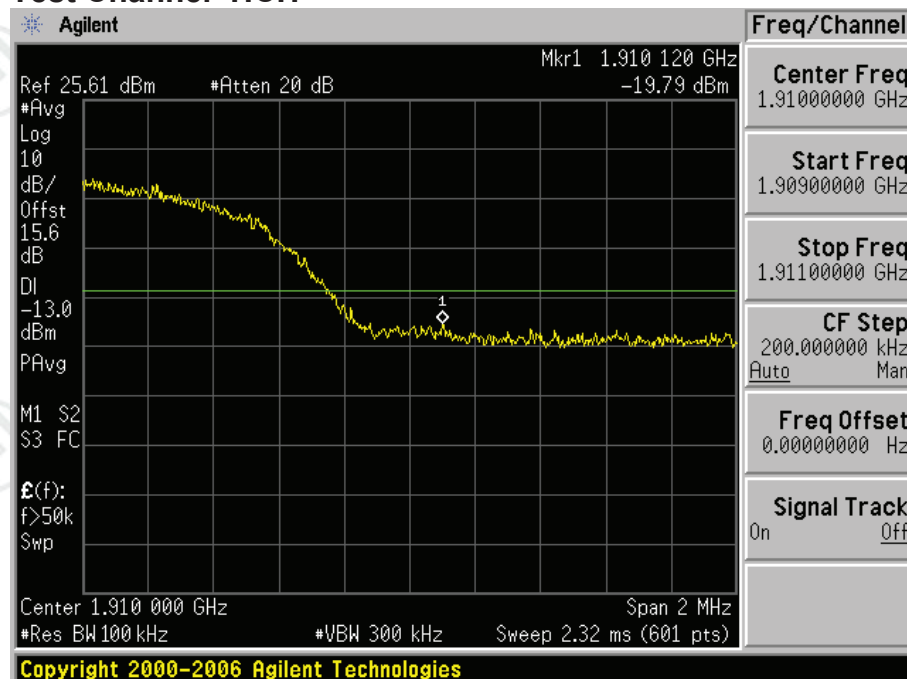
Test Band=WCDMA1900

Test Mode=UMTSTM1

Test Channel=LCH



Test Channel=HCH



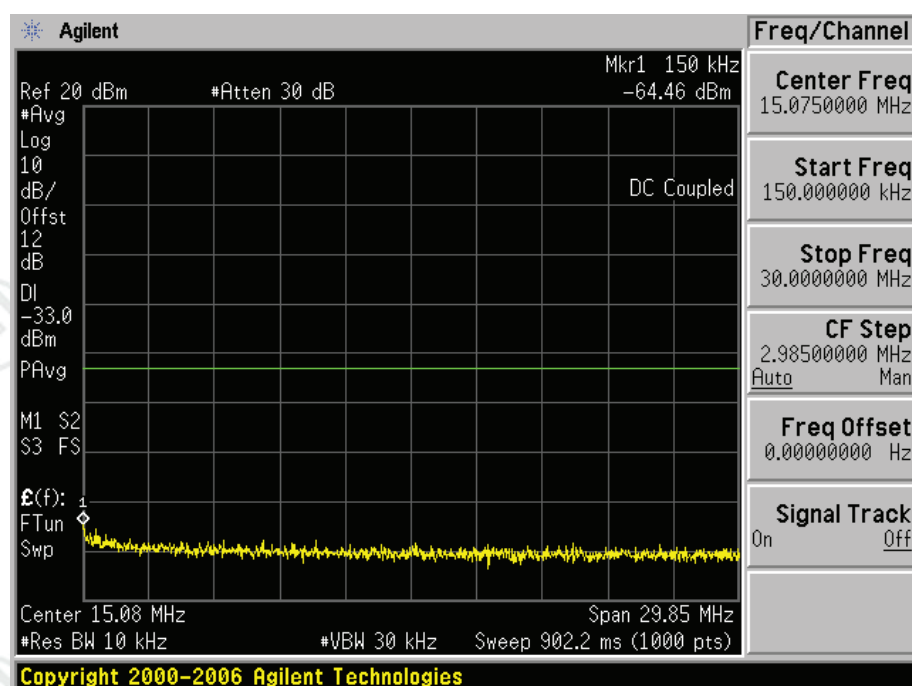
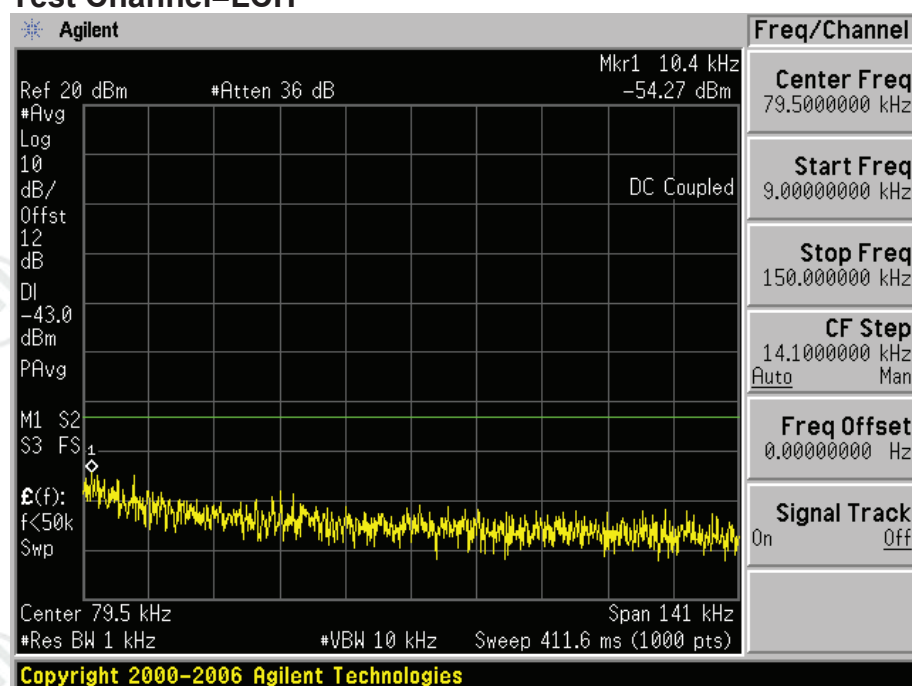
Appendix E)Spurious Emission at Antenna Terminal

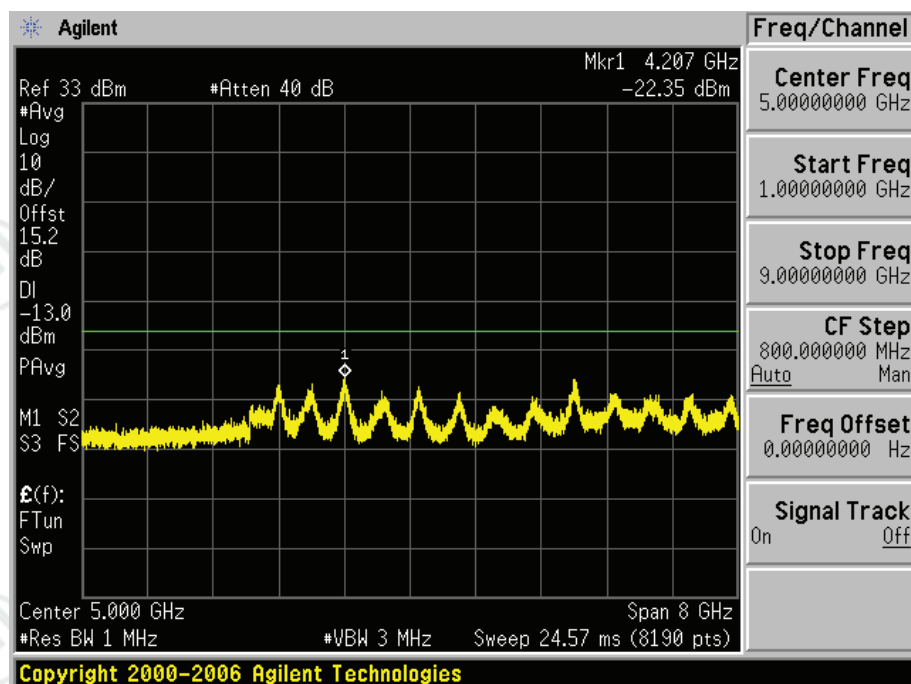
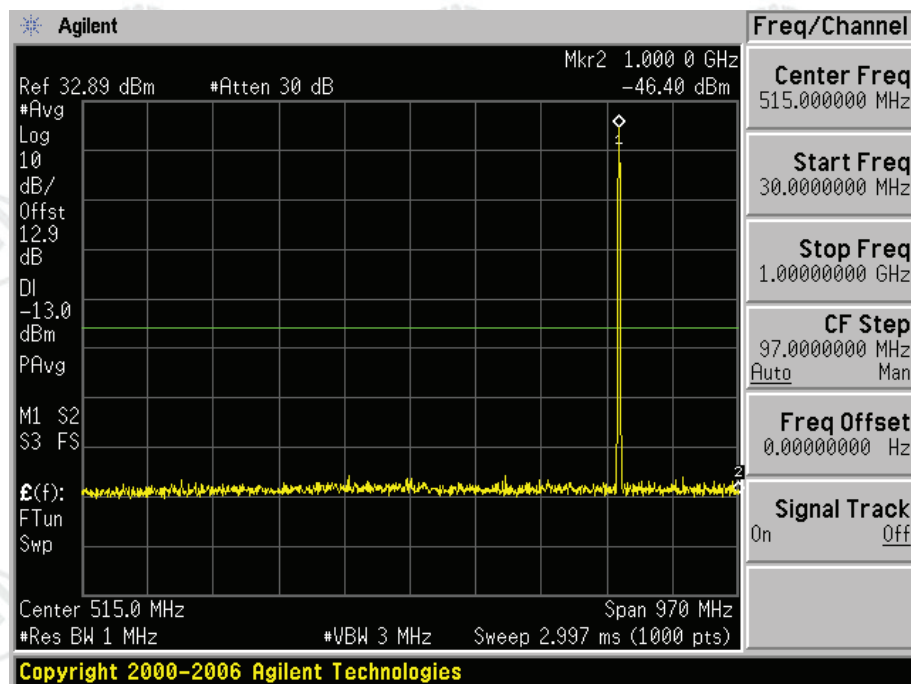
For GSM

Test Band=GSM850

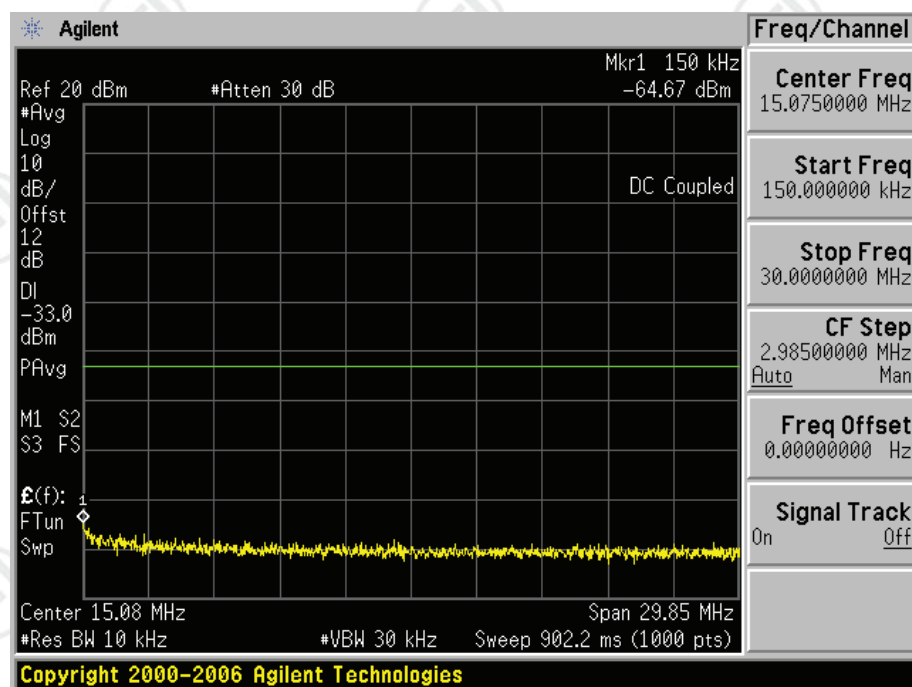
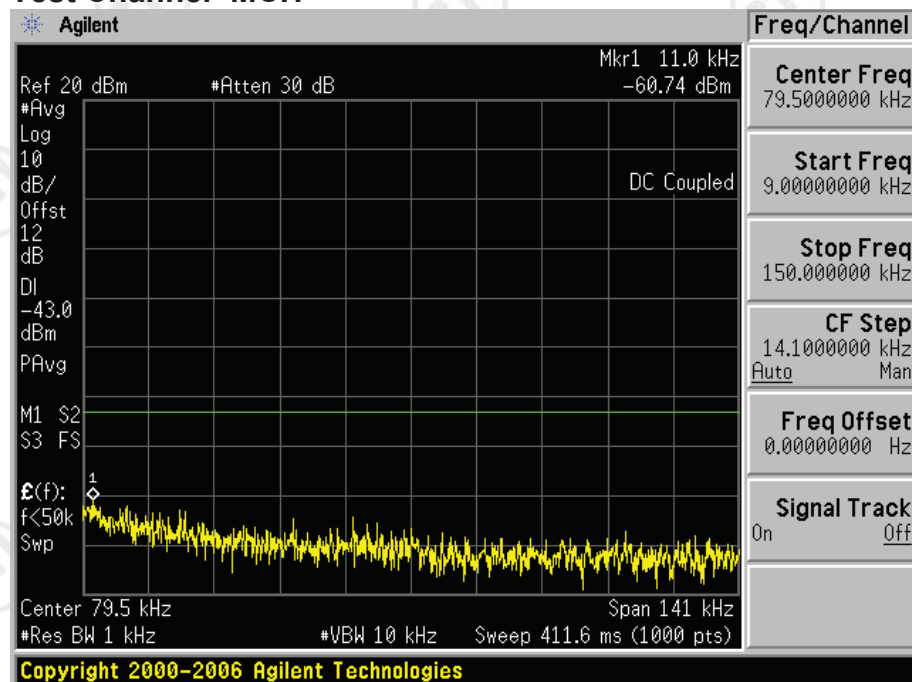
Test Mode=GSM/TM1

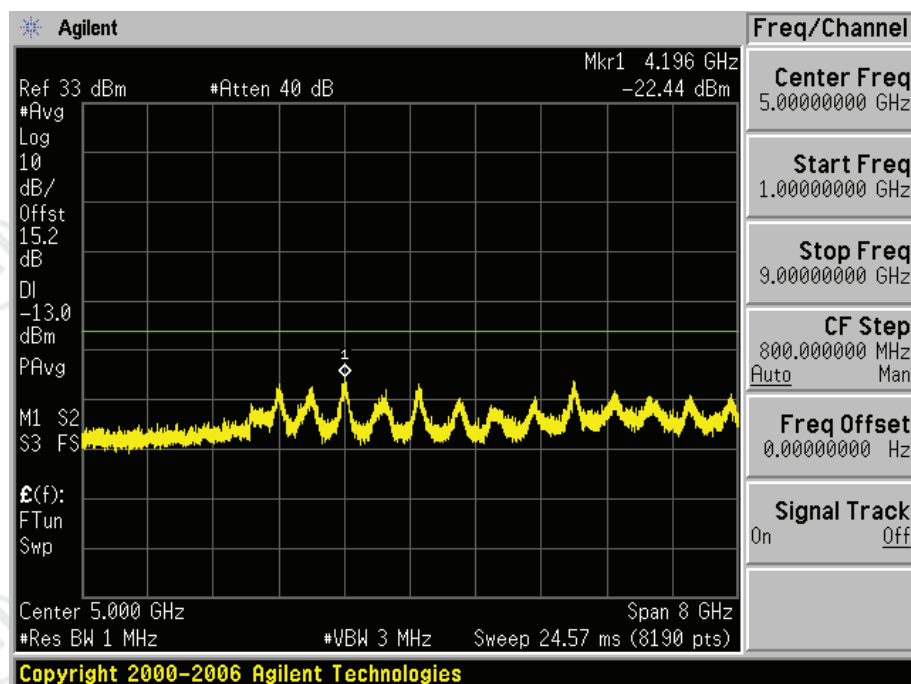
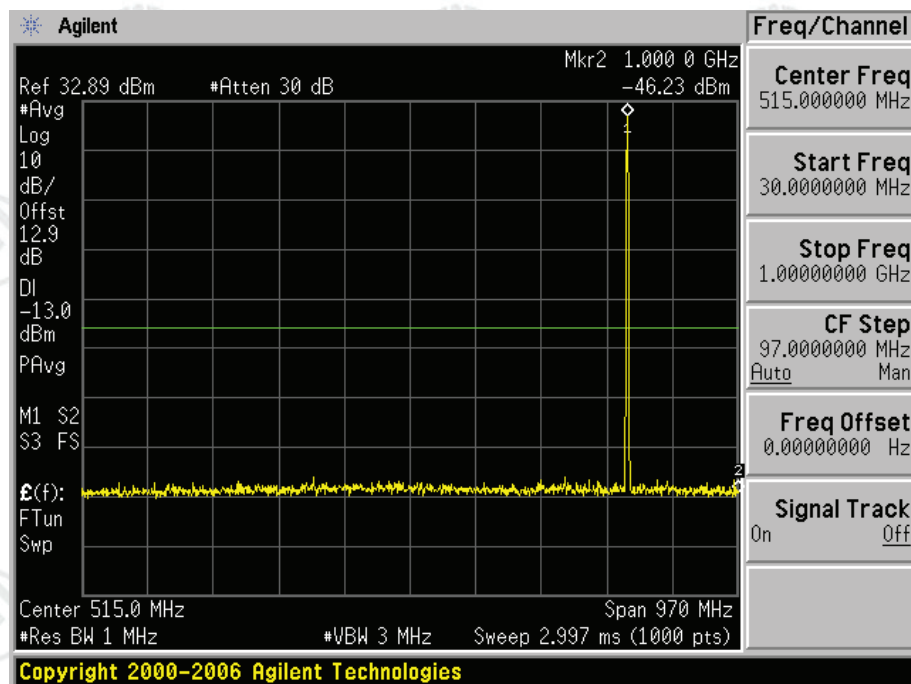
Test Channel=LCH



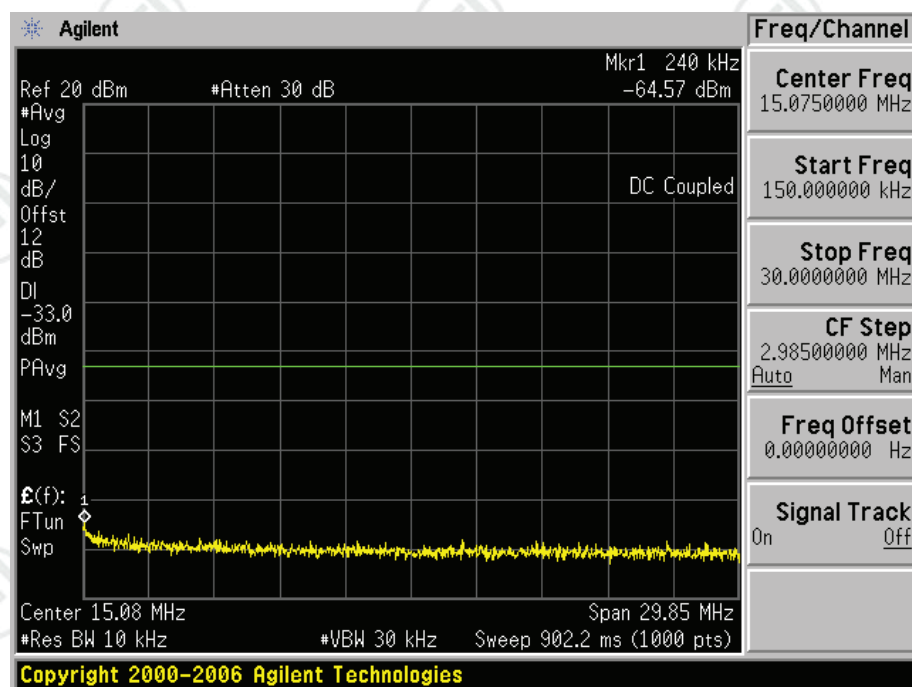
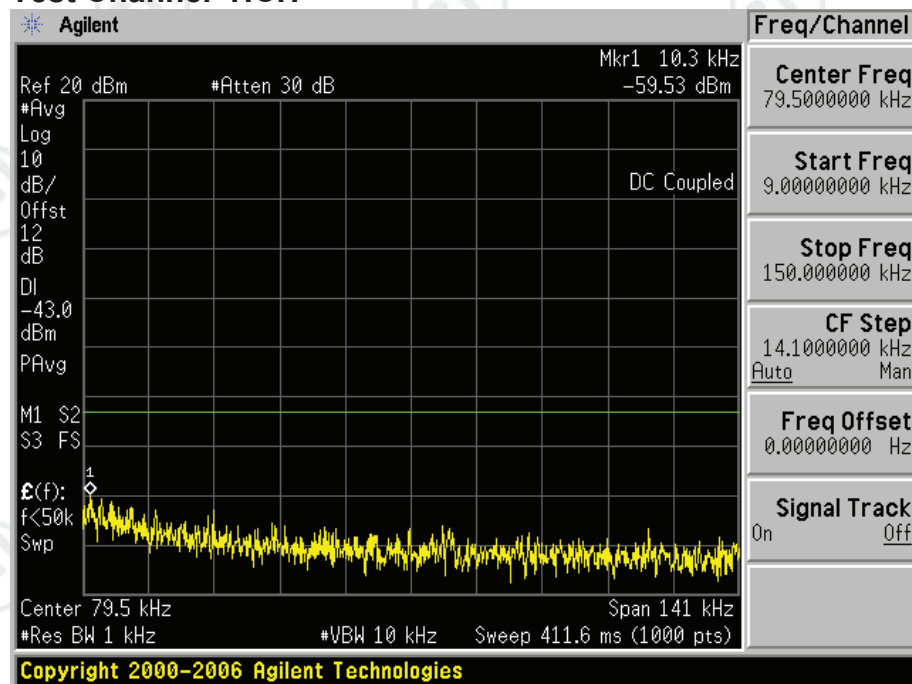


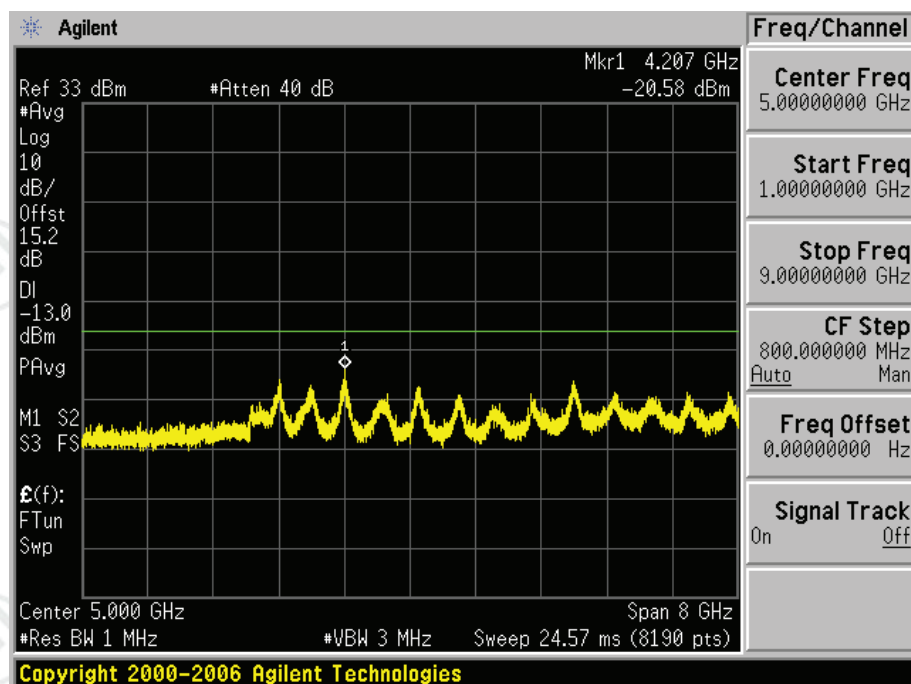
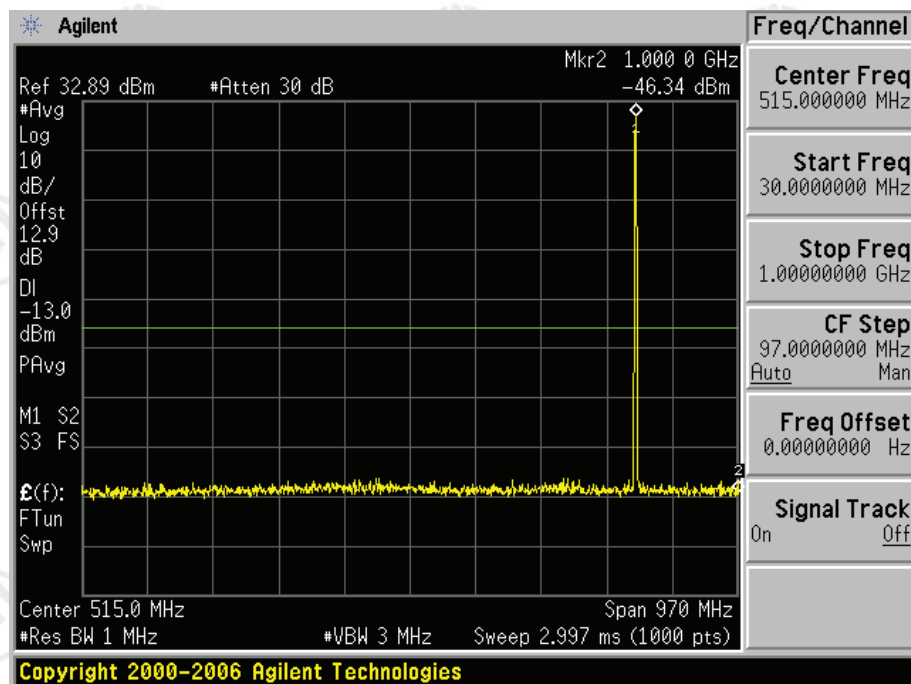
Test Channel=MCH





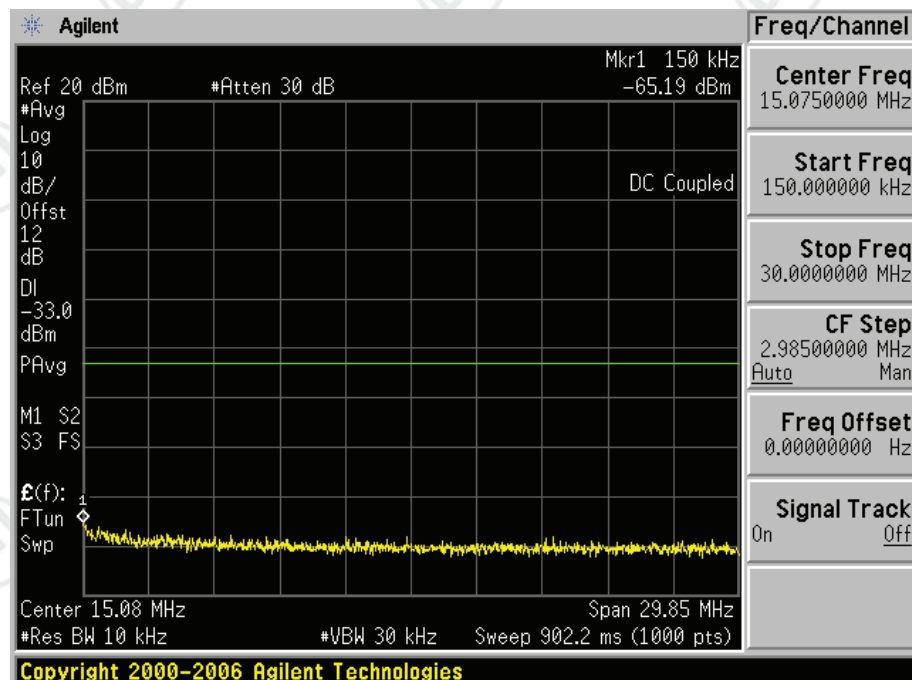
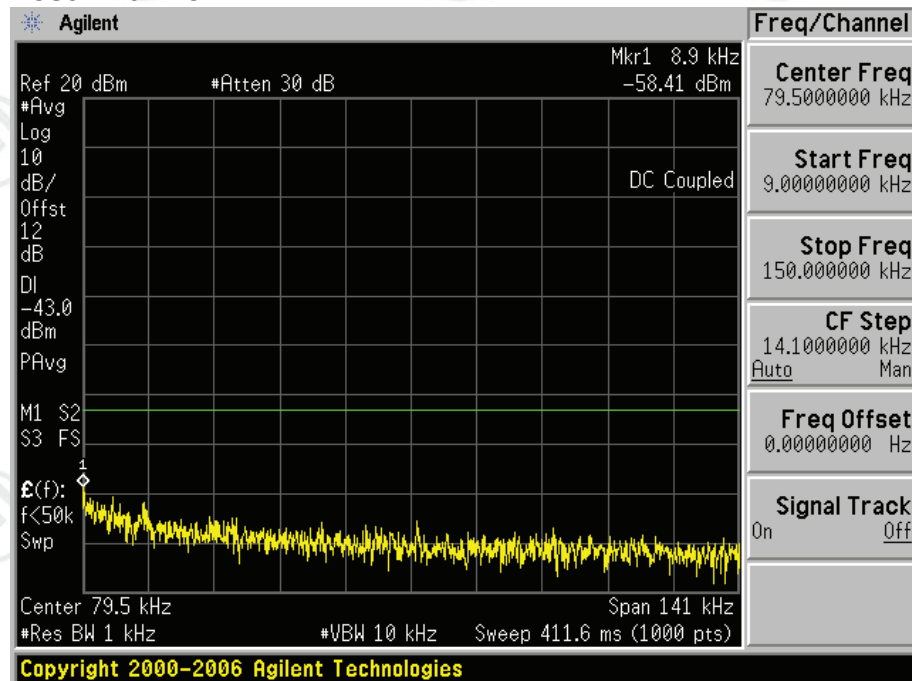
Test Channel=HCH

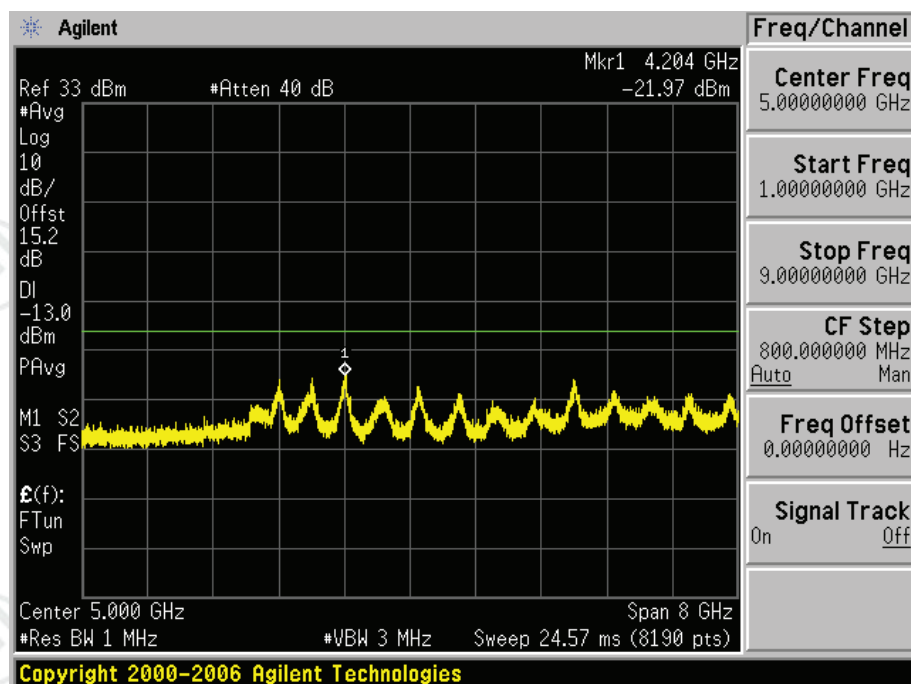
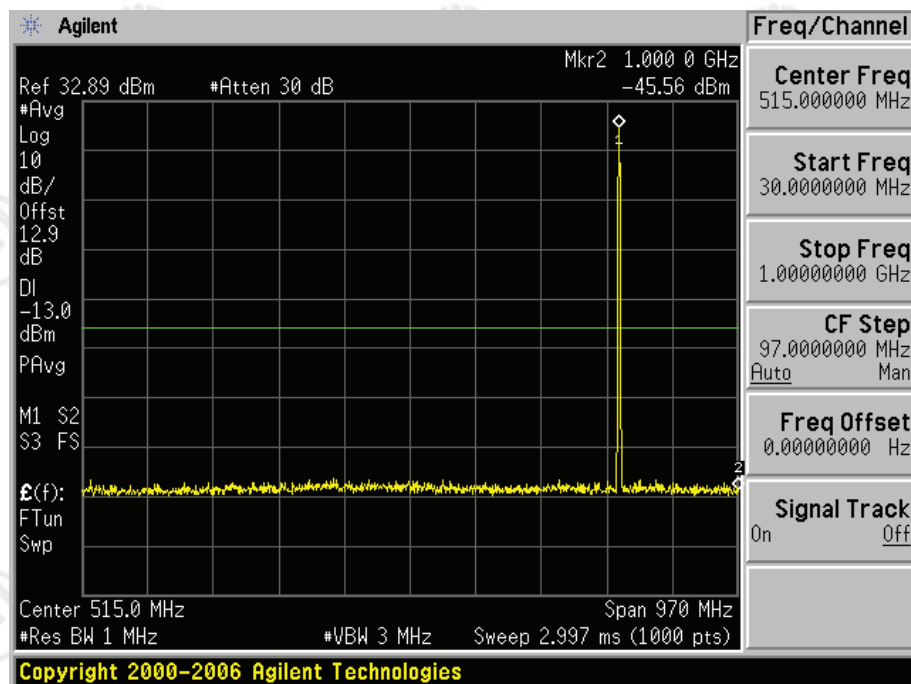




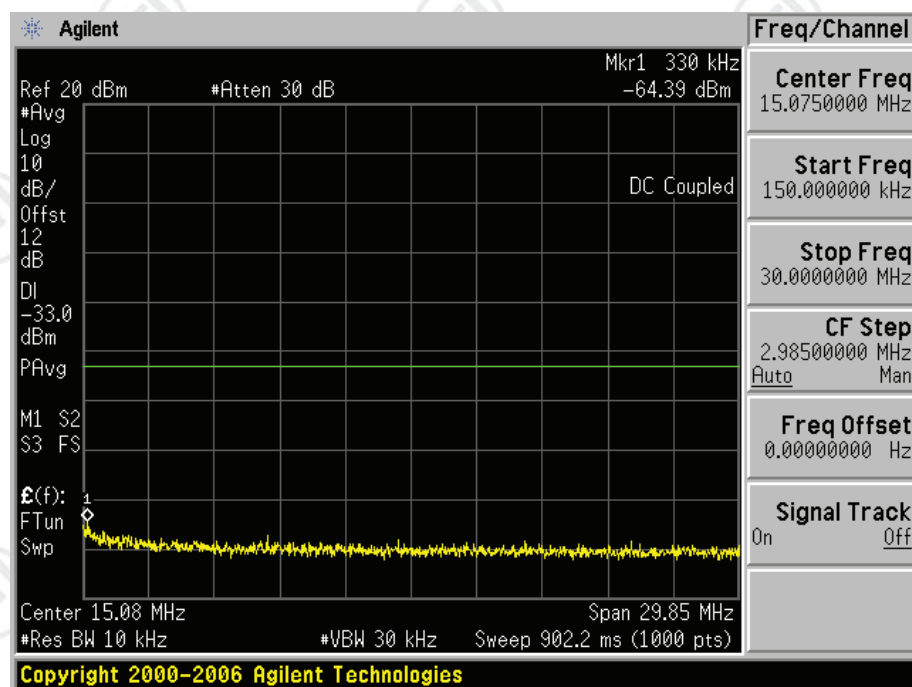
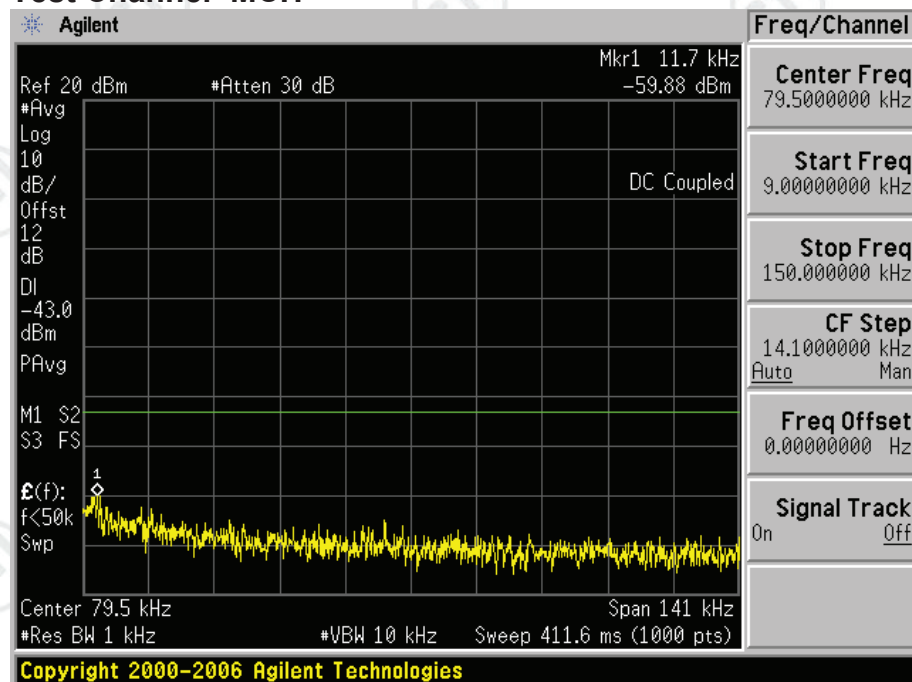
Test Mode=GSM/TM2

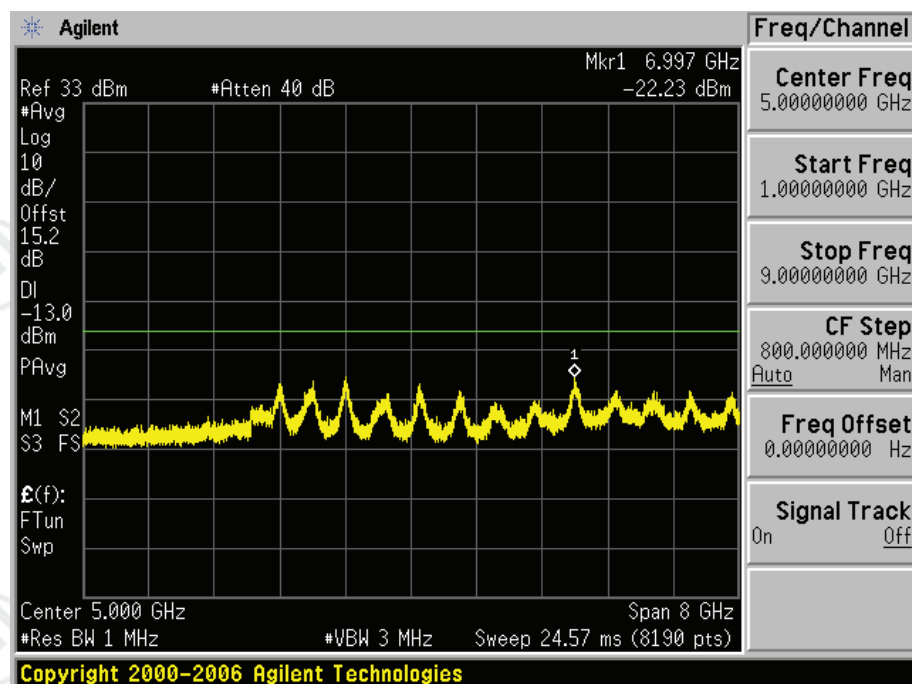
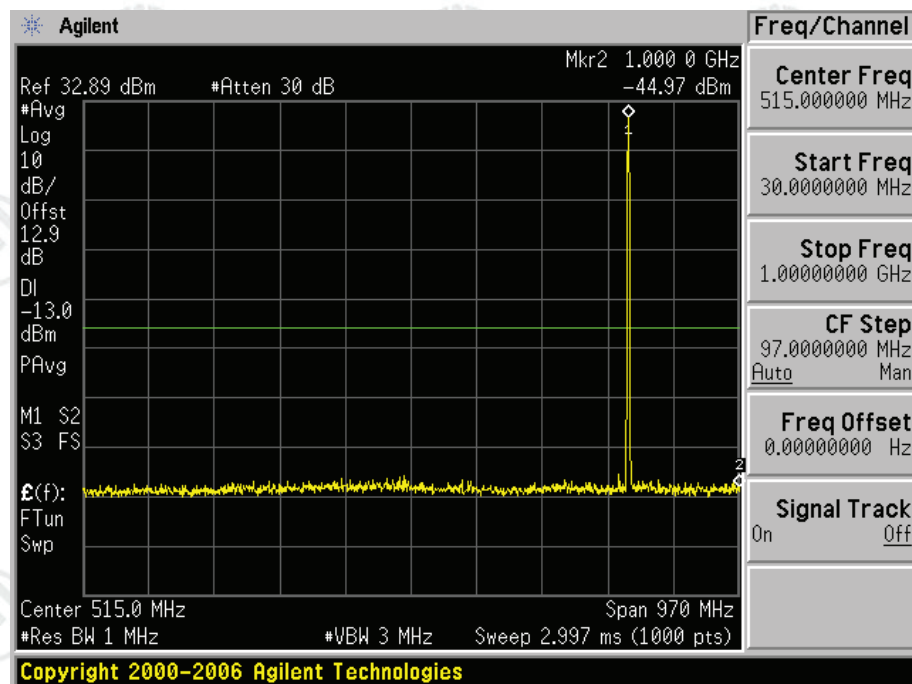
Test Channel=LCH



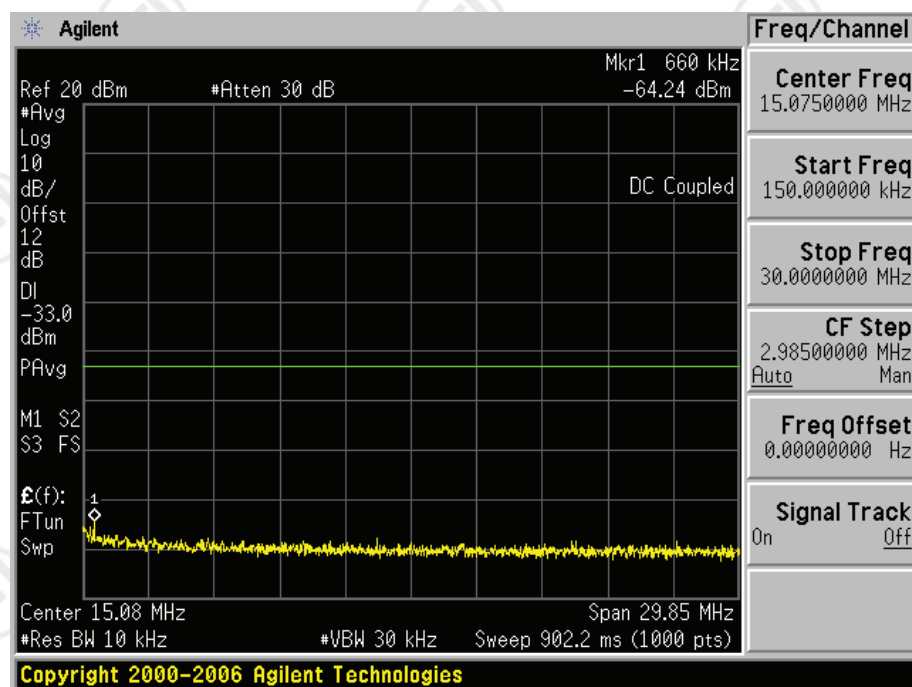
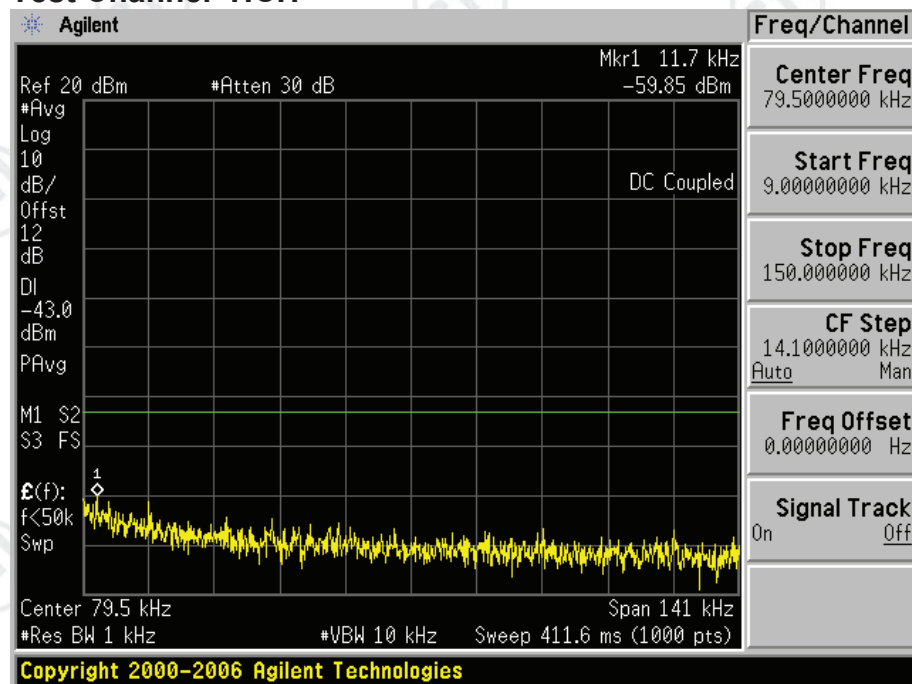


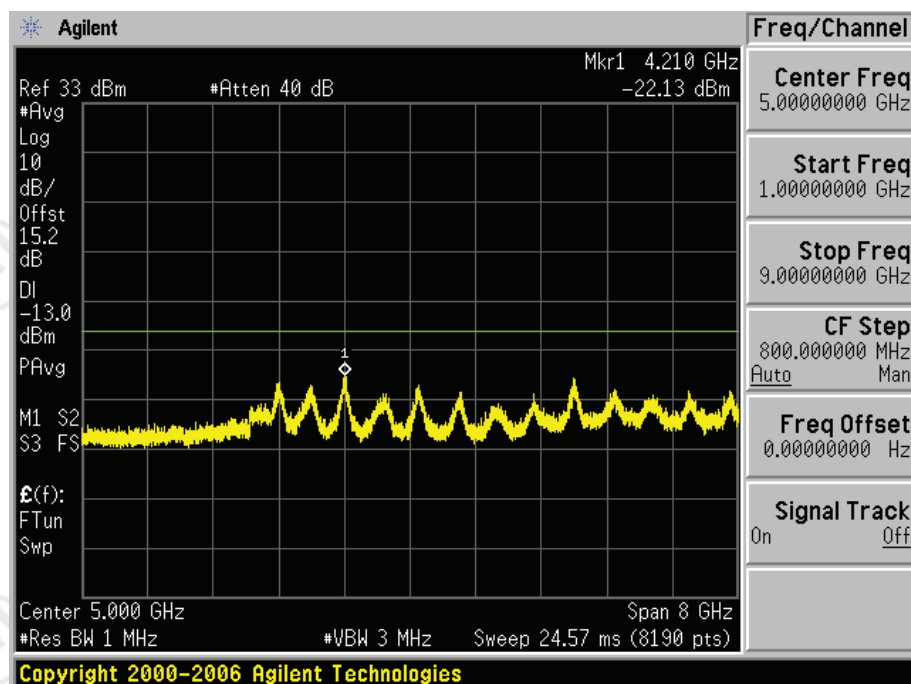
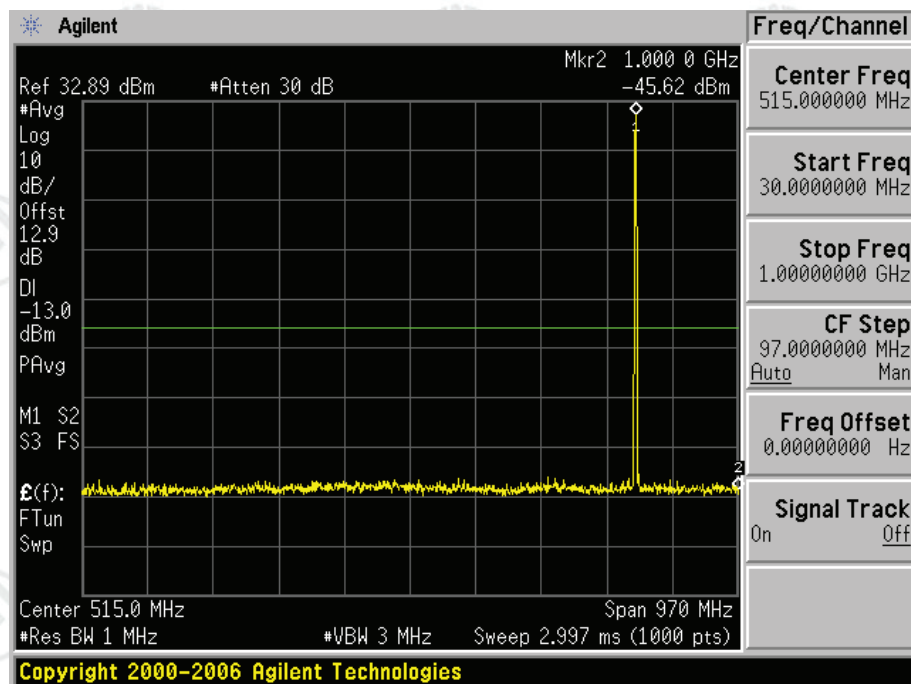
Test Channel=MCH





Test Channel=HCH

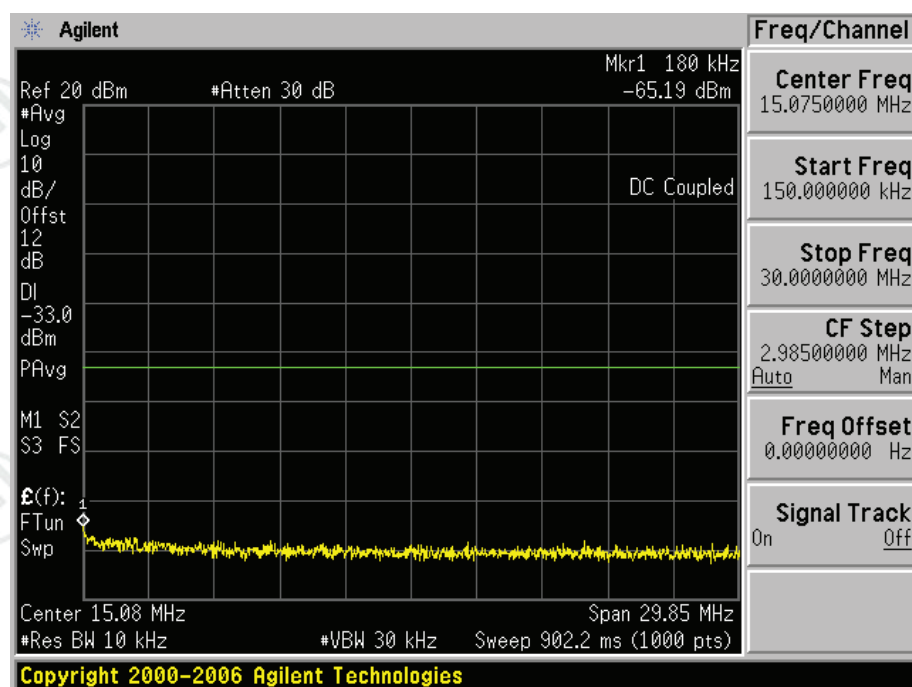
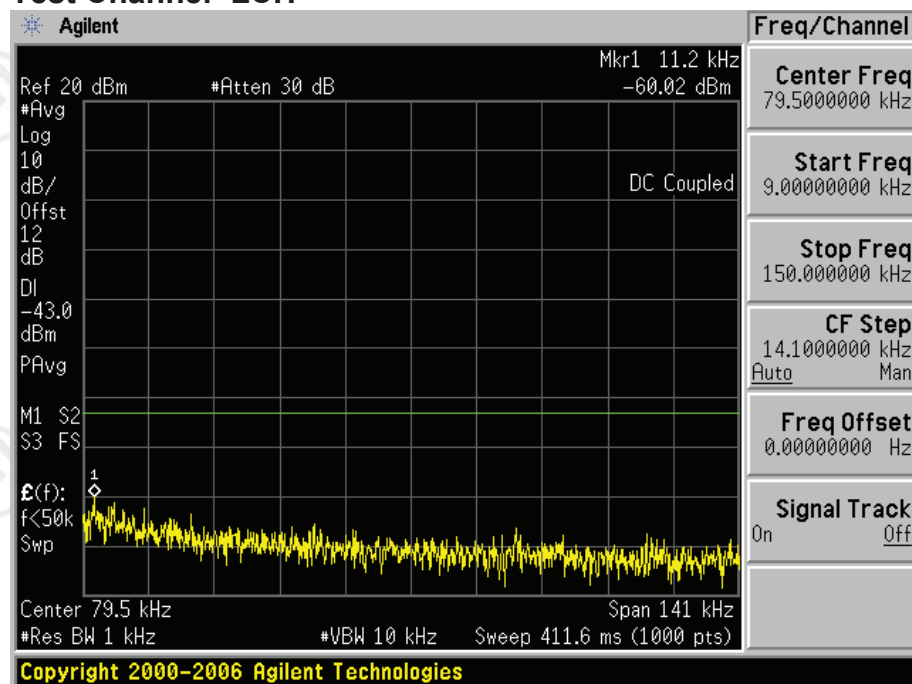


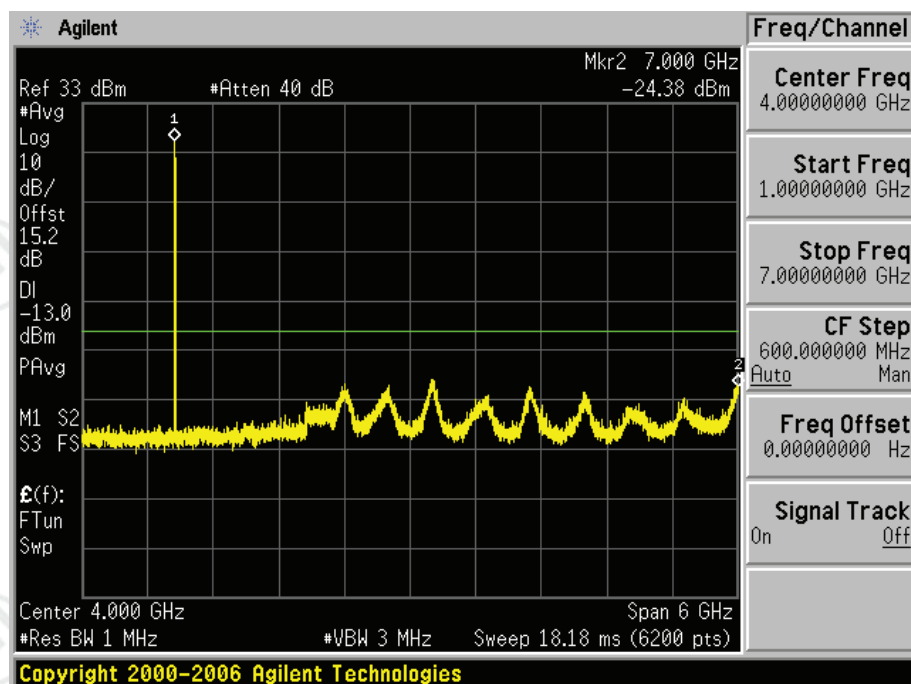
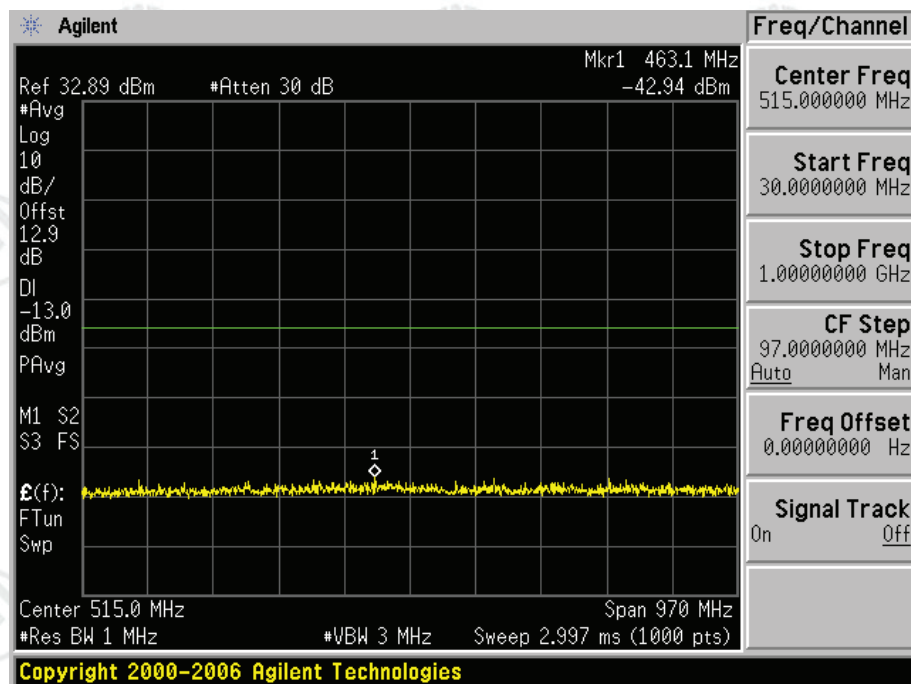


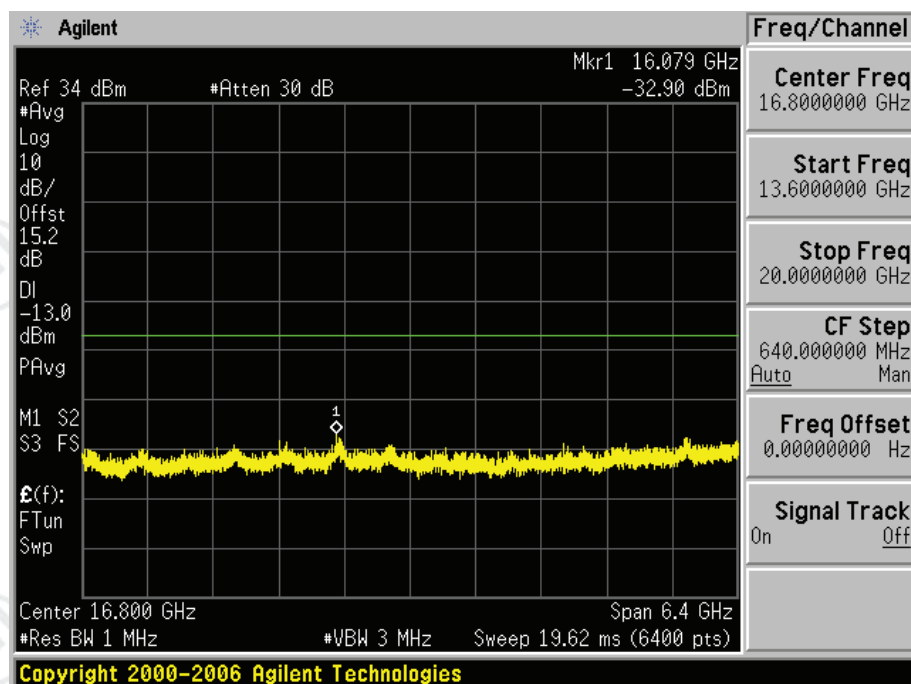
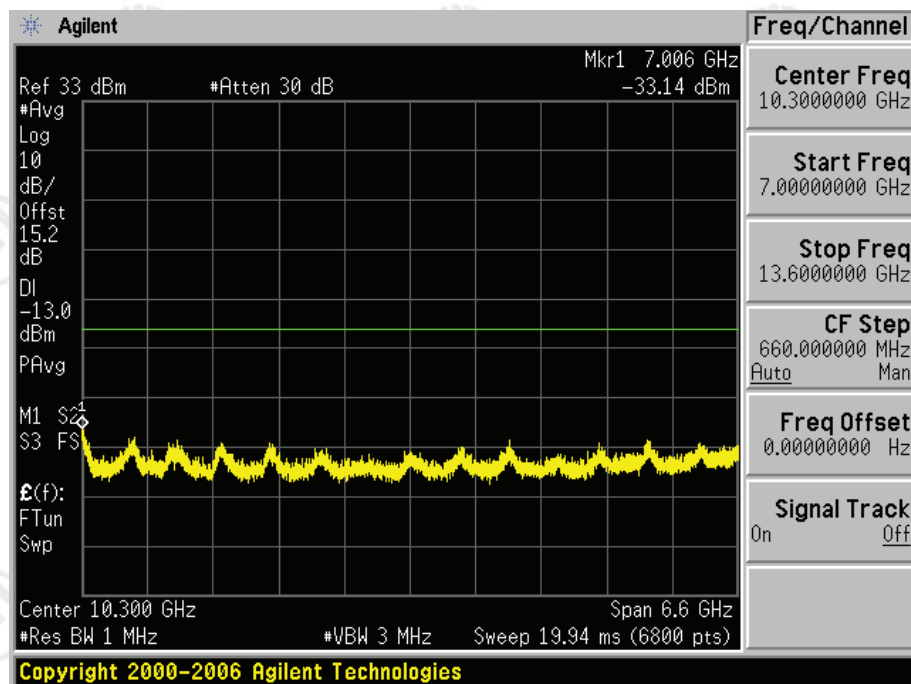
Test Band=GSM1900

Test Mode=GSM/TM1

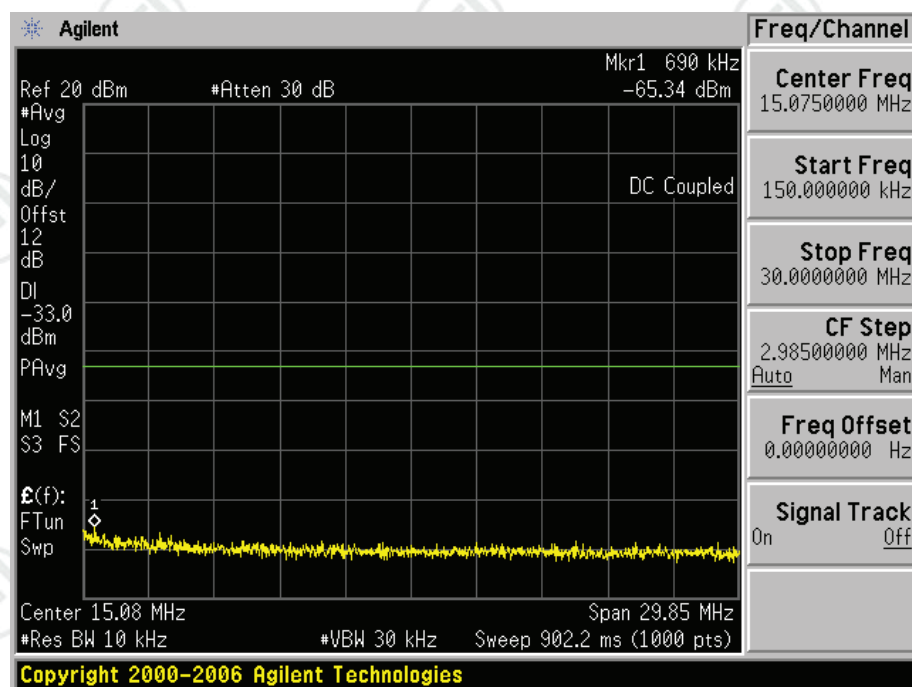
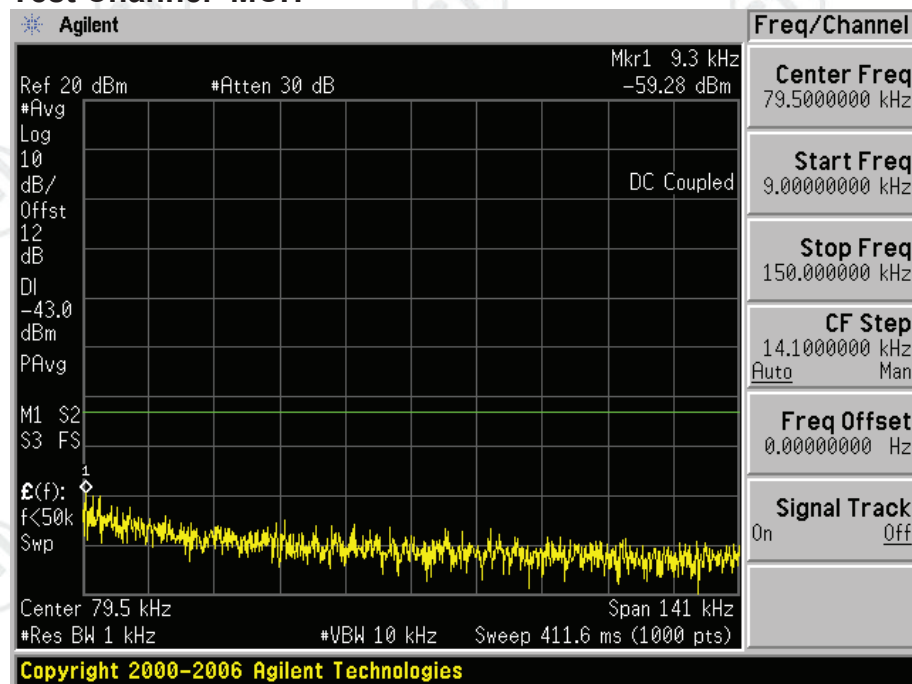
Test Channel=LCH

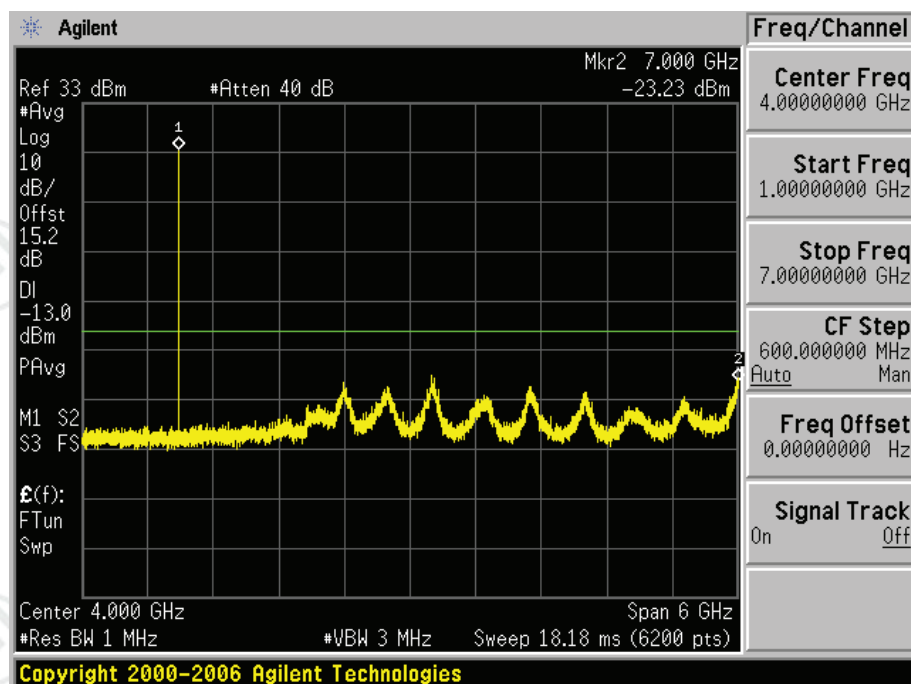
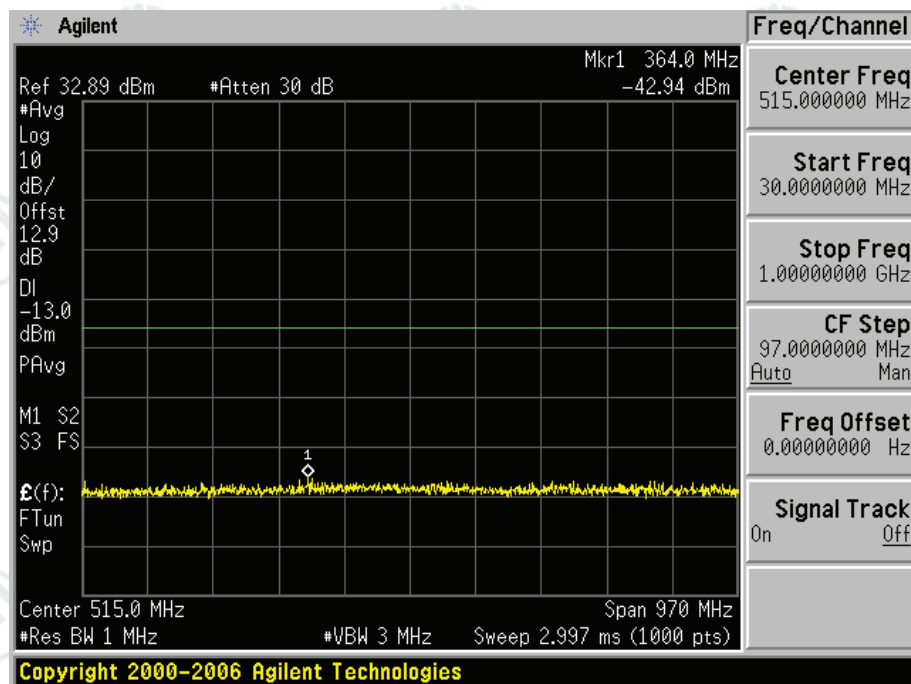


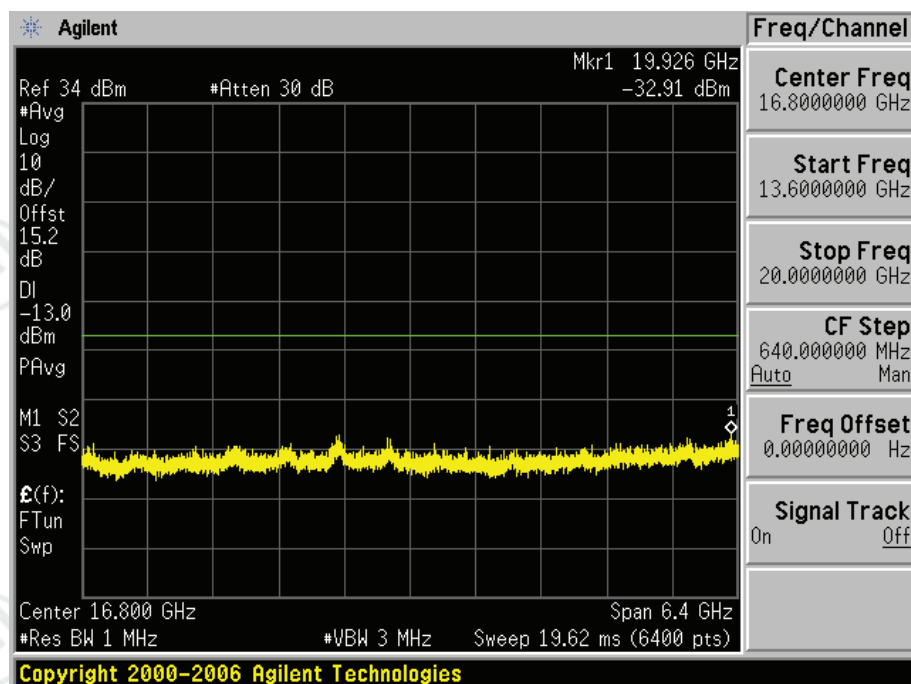
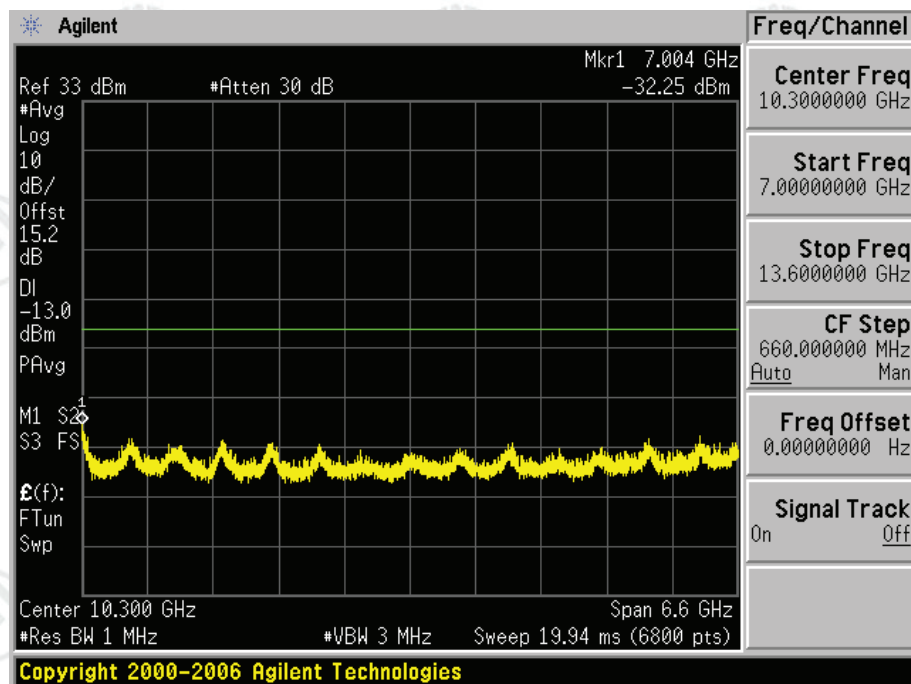




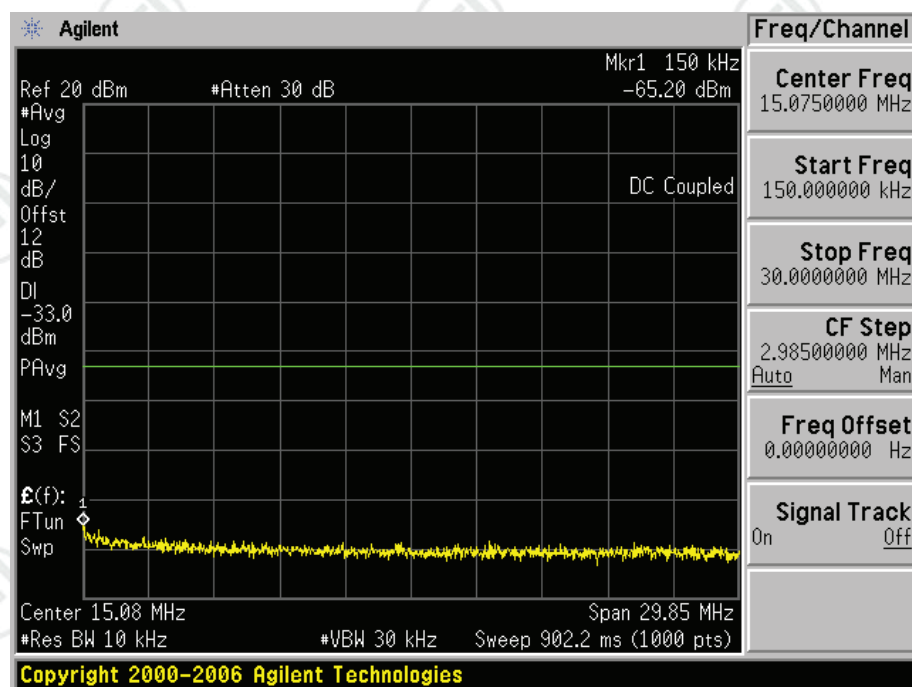
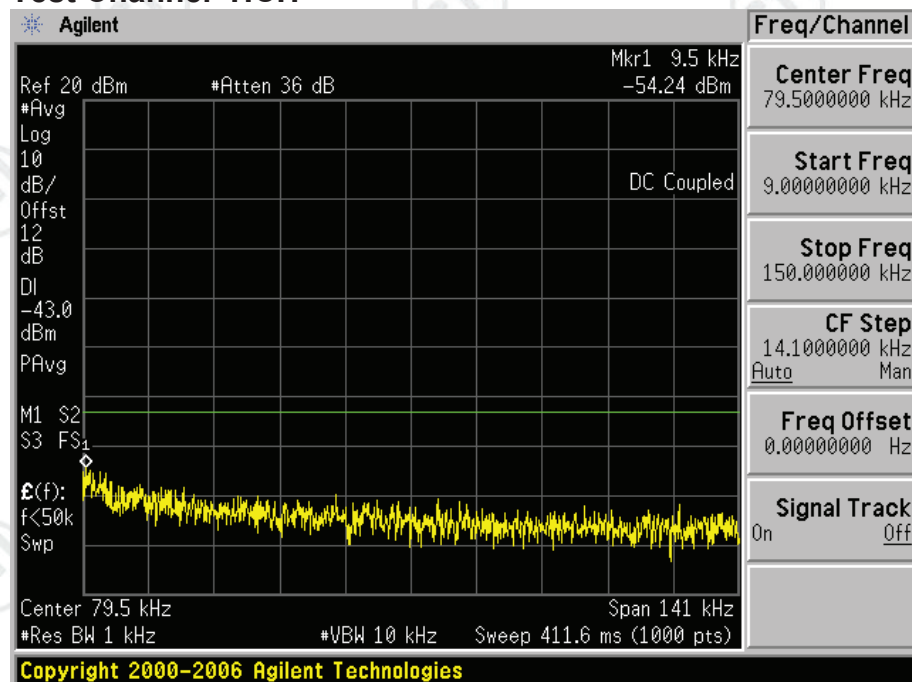
Test Channel=MCH

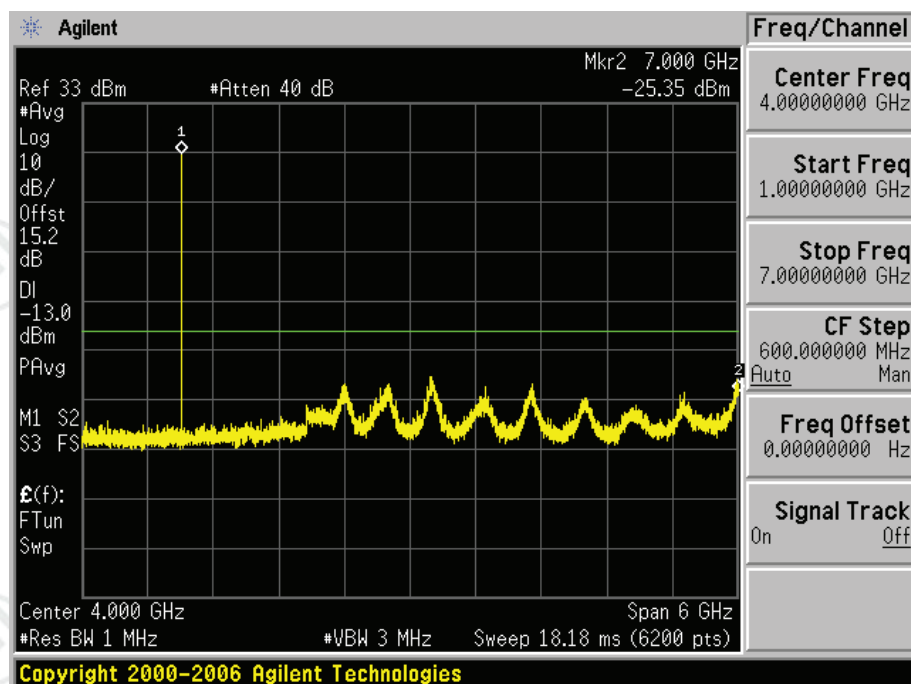
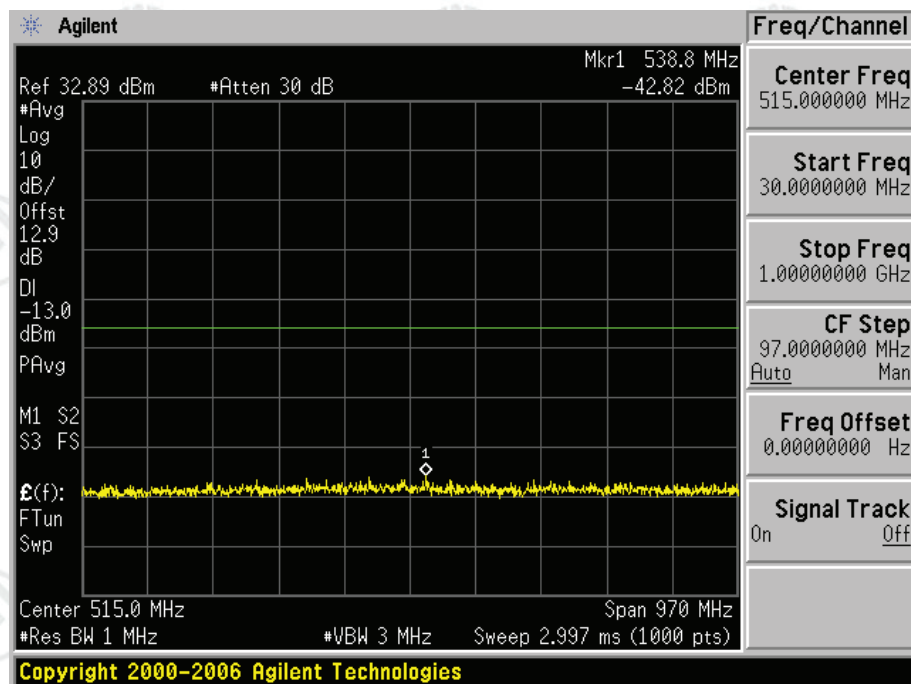


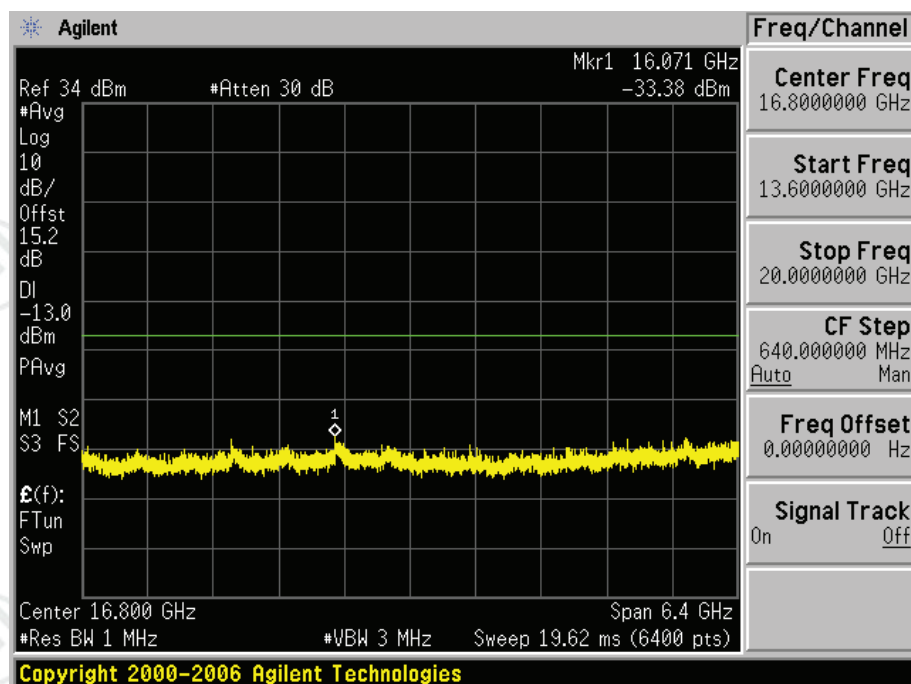
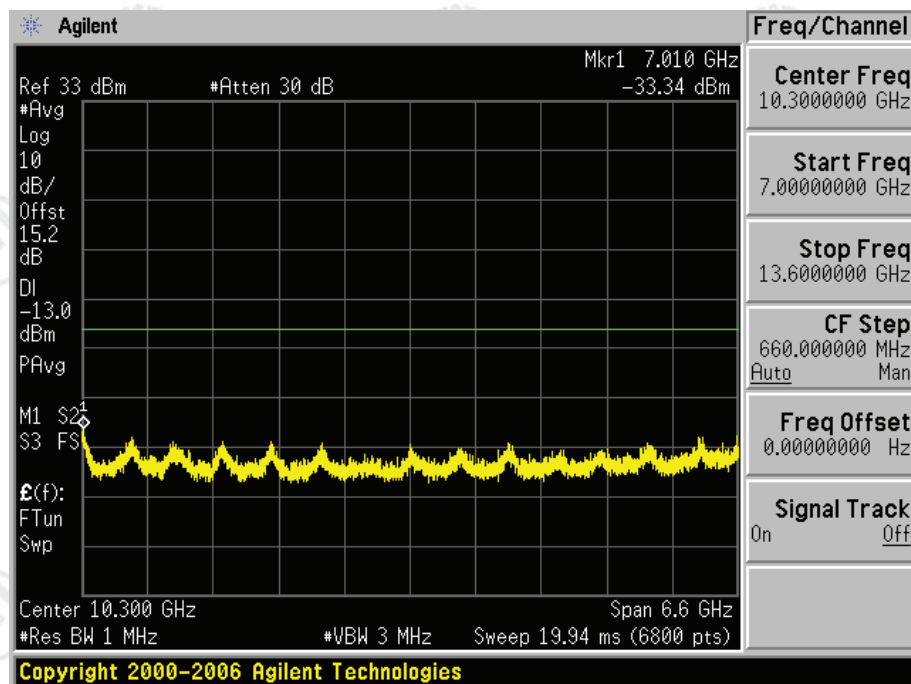




Test Channel=HCH

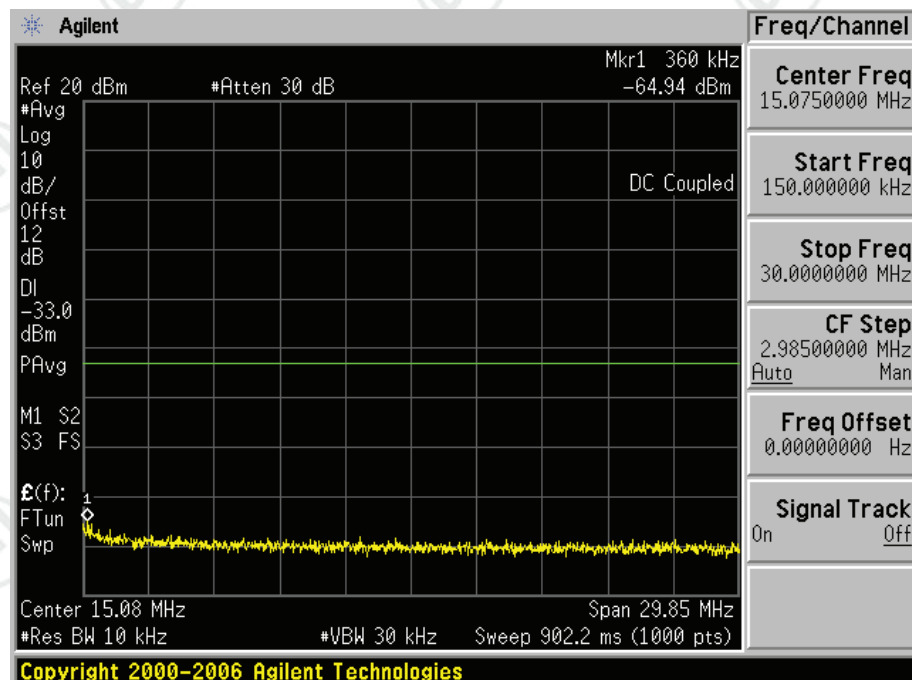
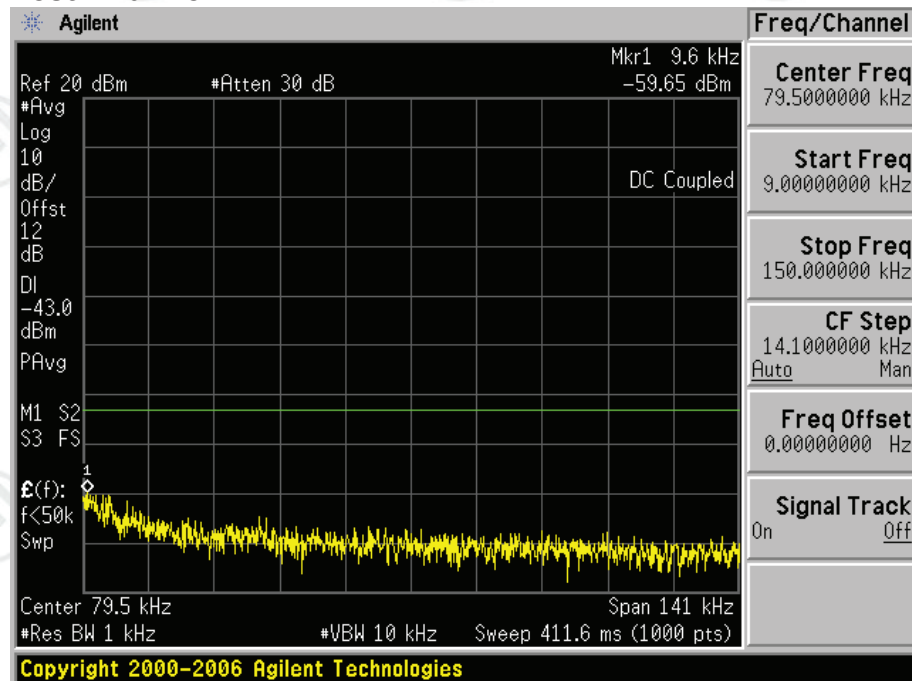


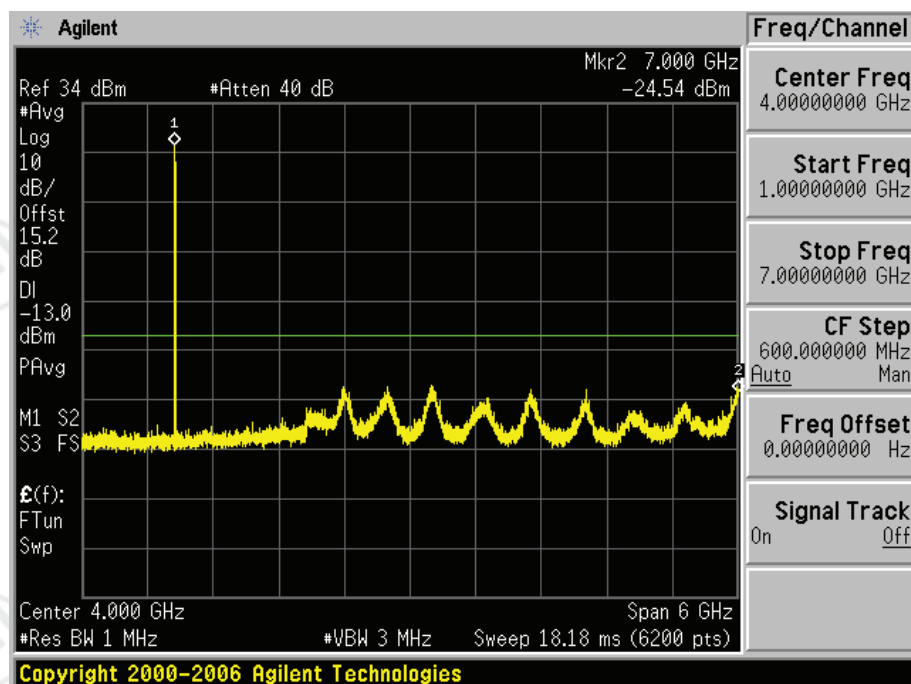
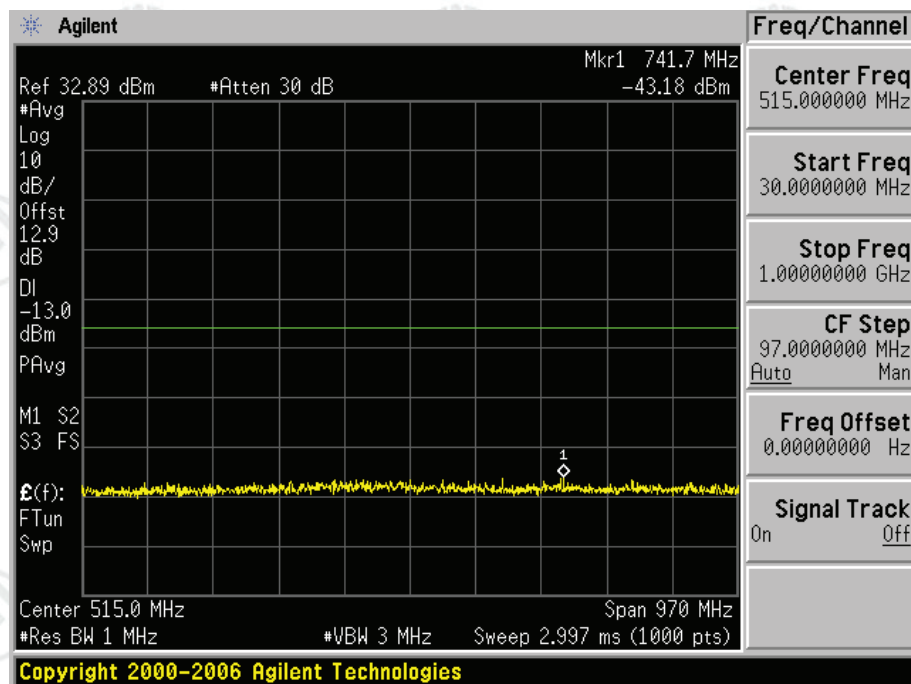


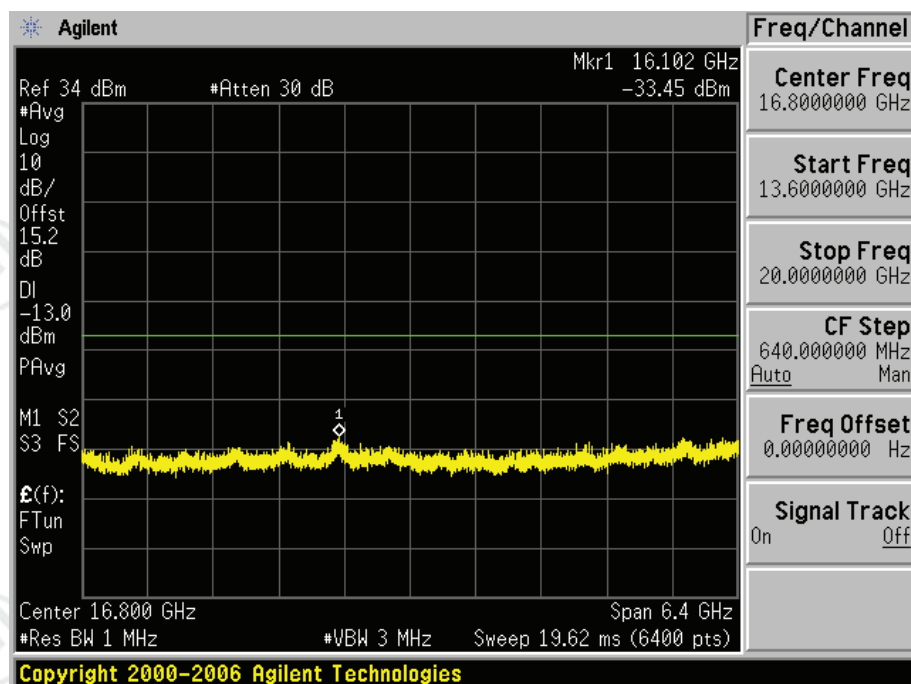
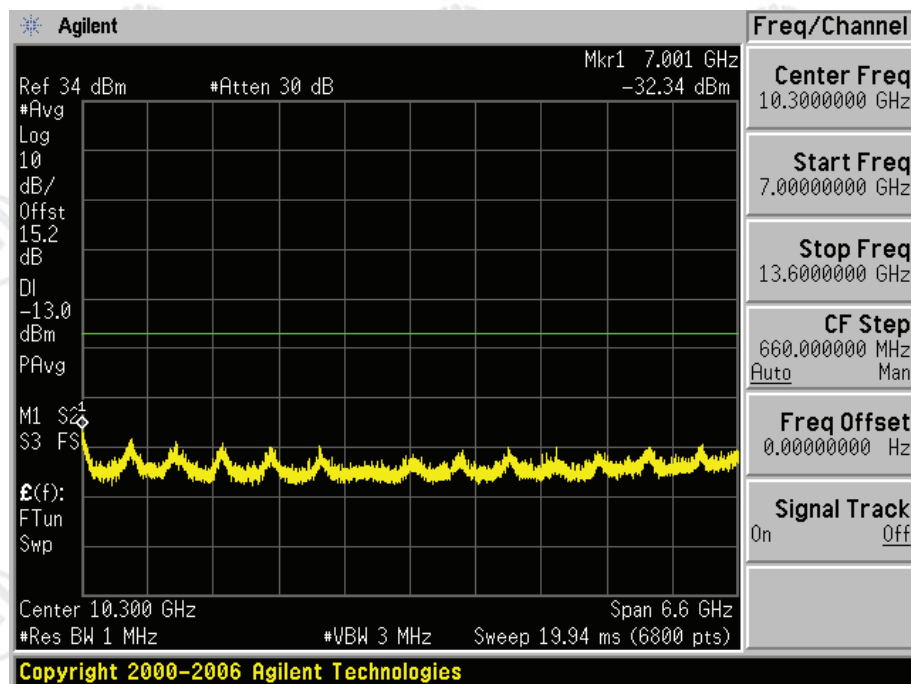


Test Mode=GSM/TM2

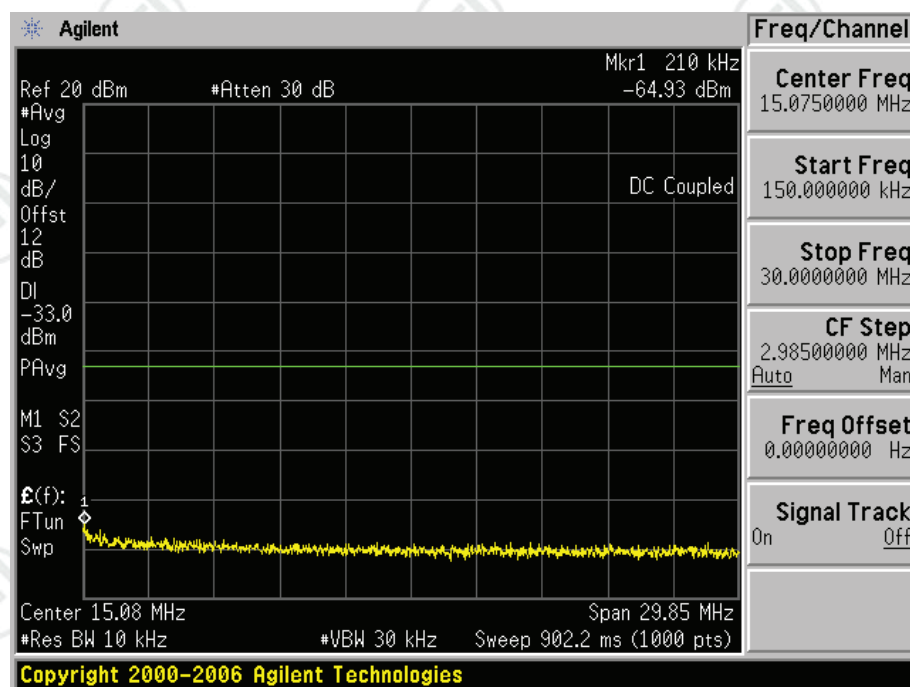
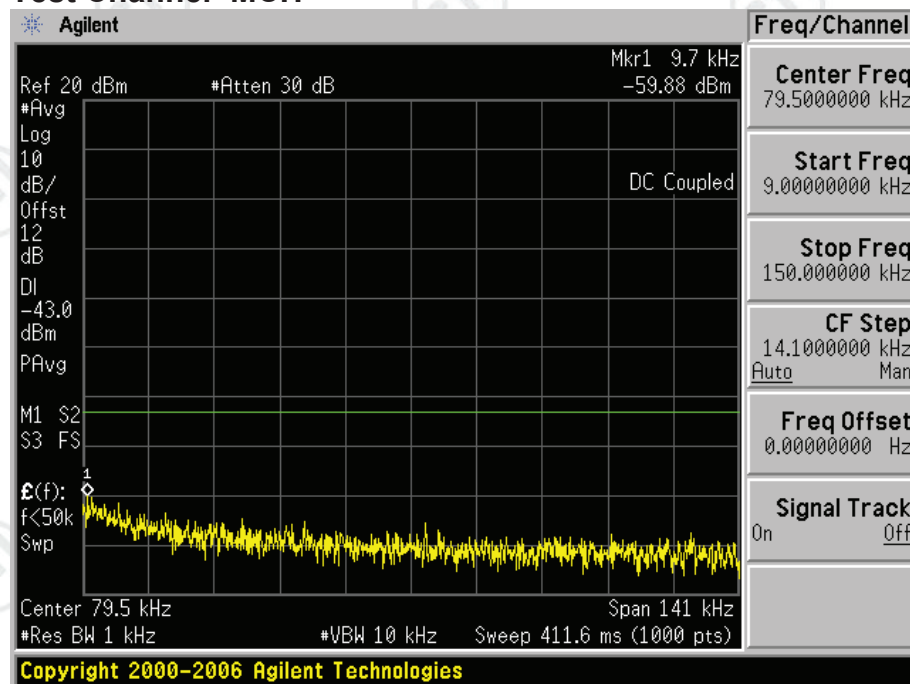
Test Channel=LCH

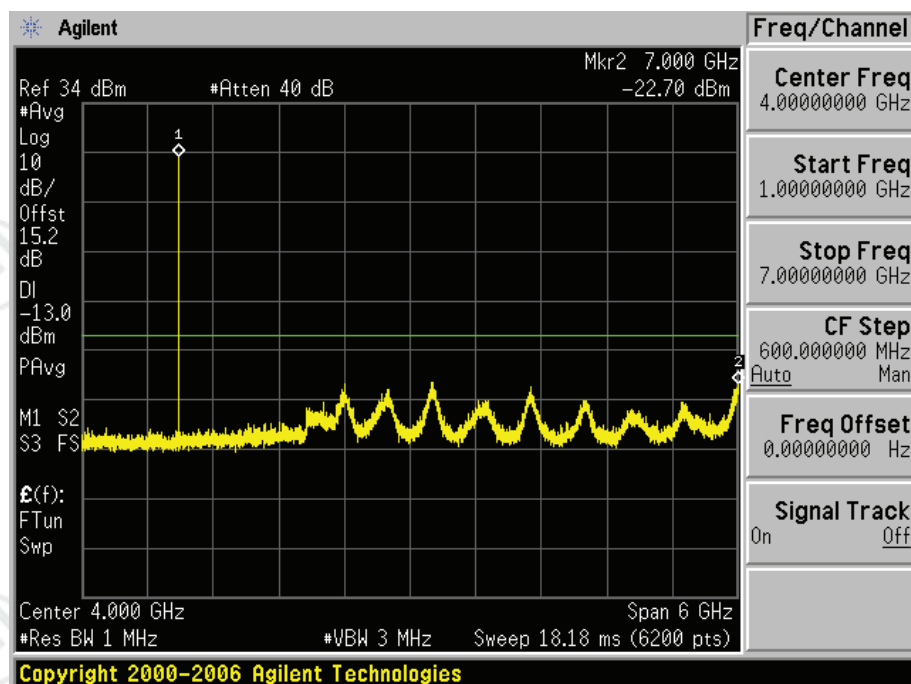
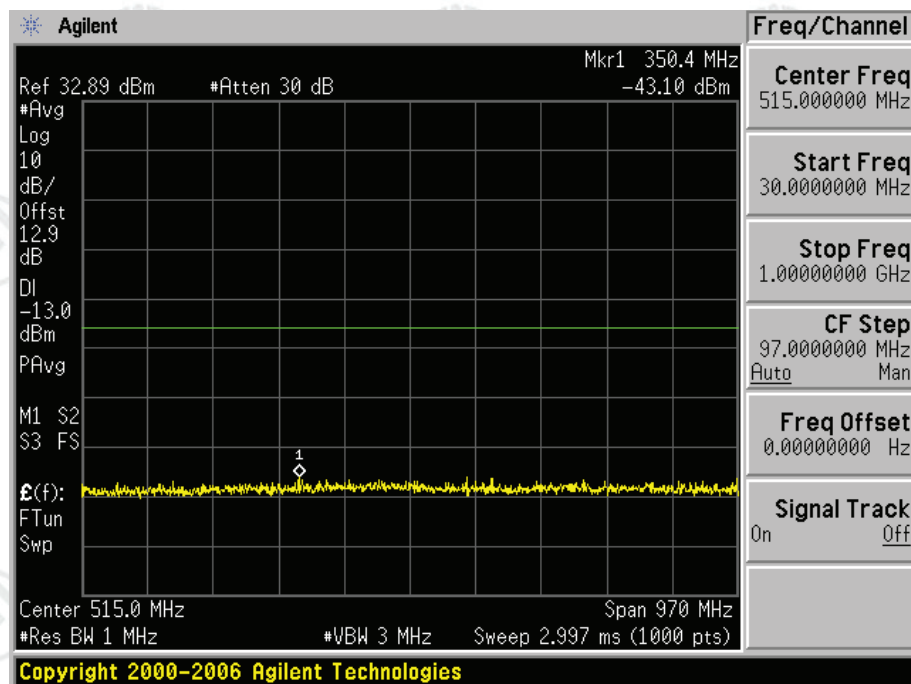


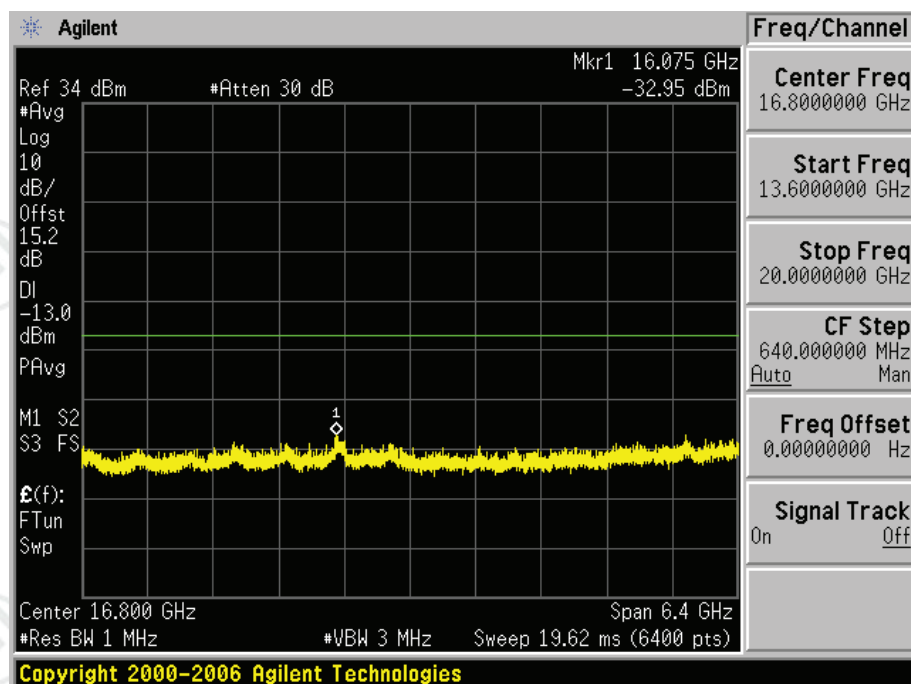
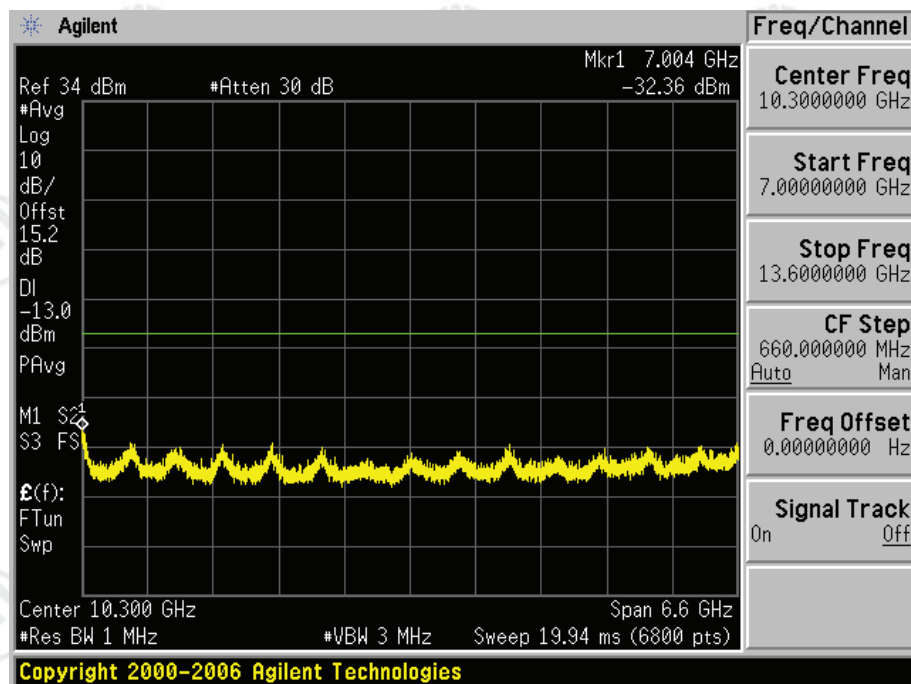




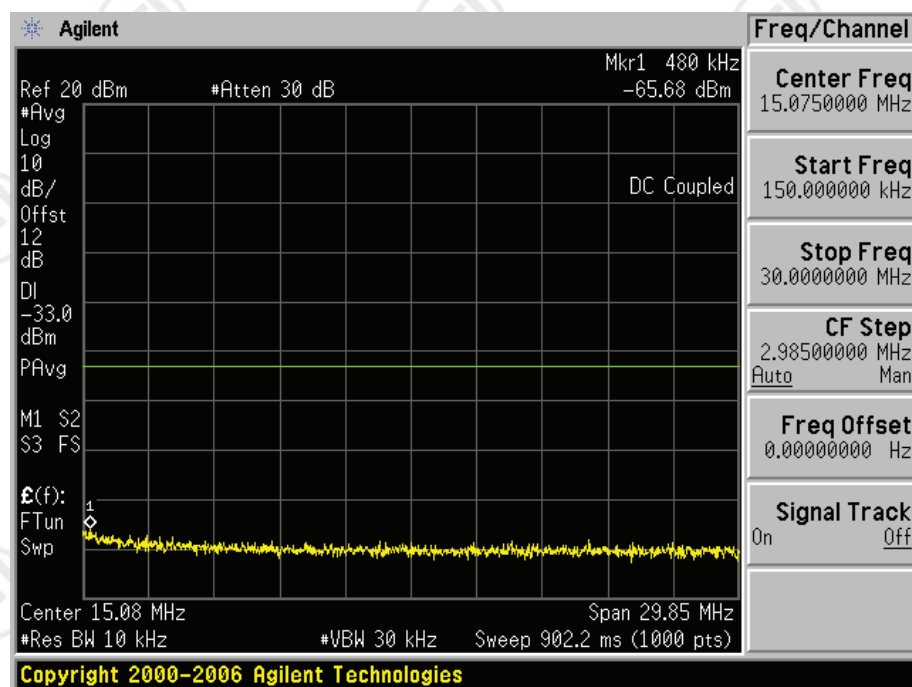
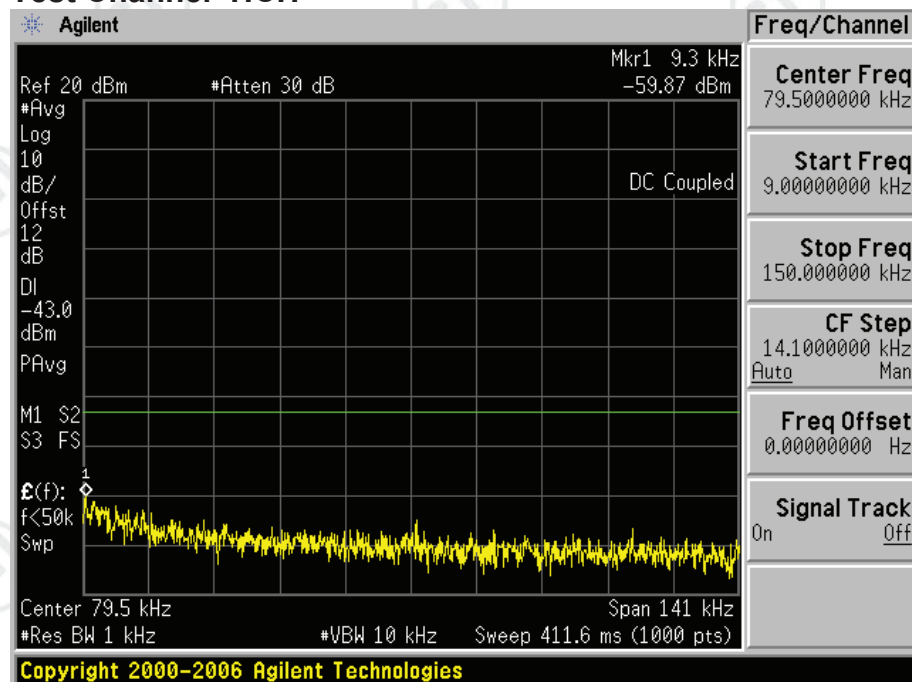
Test Channel=MCH

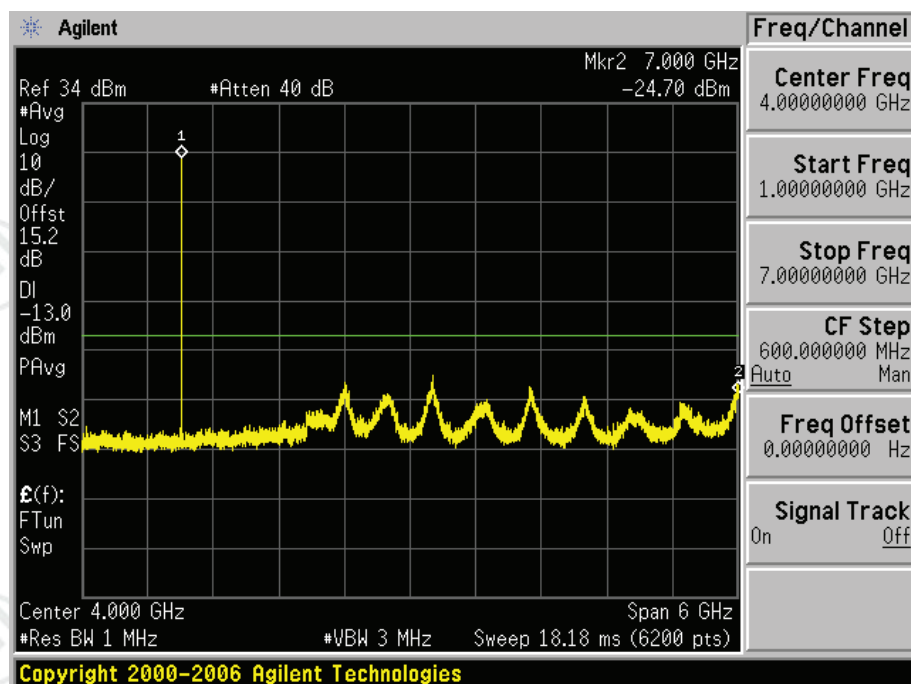
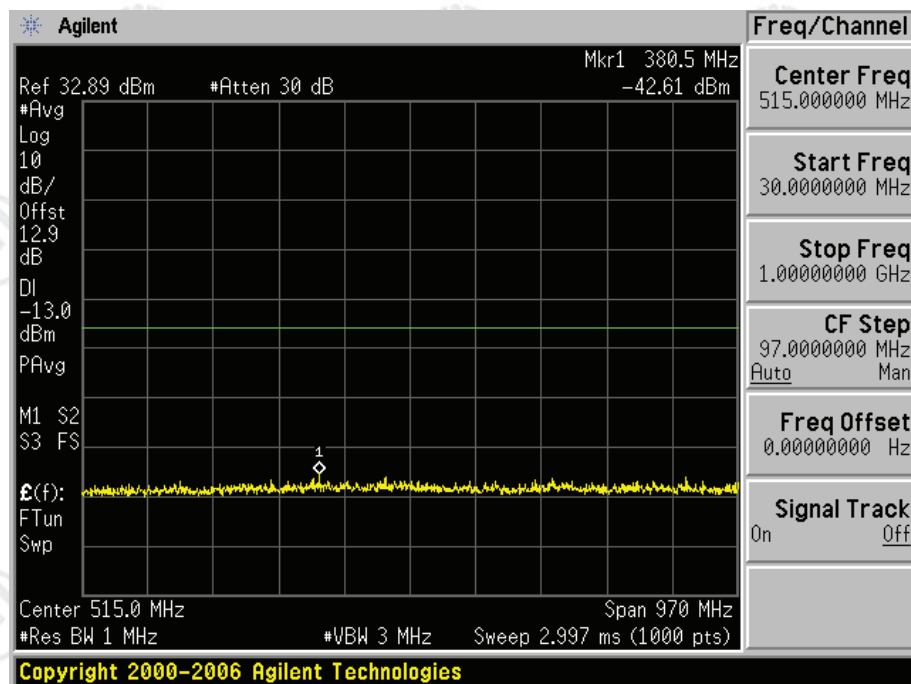


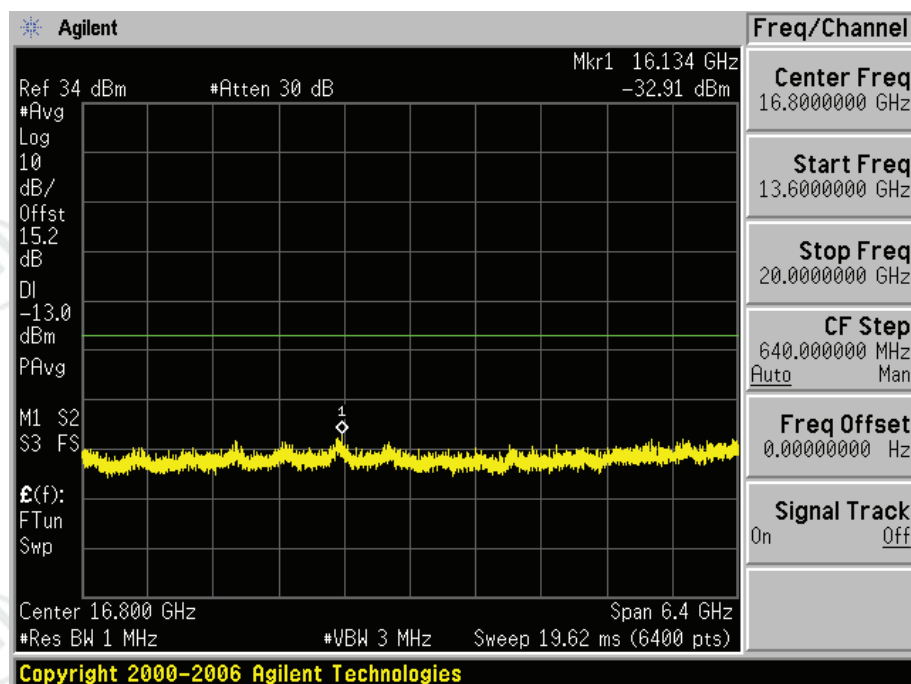
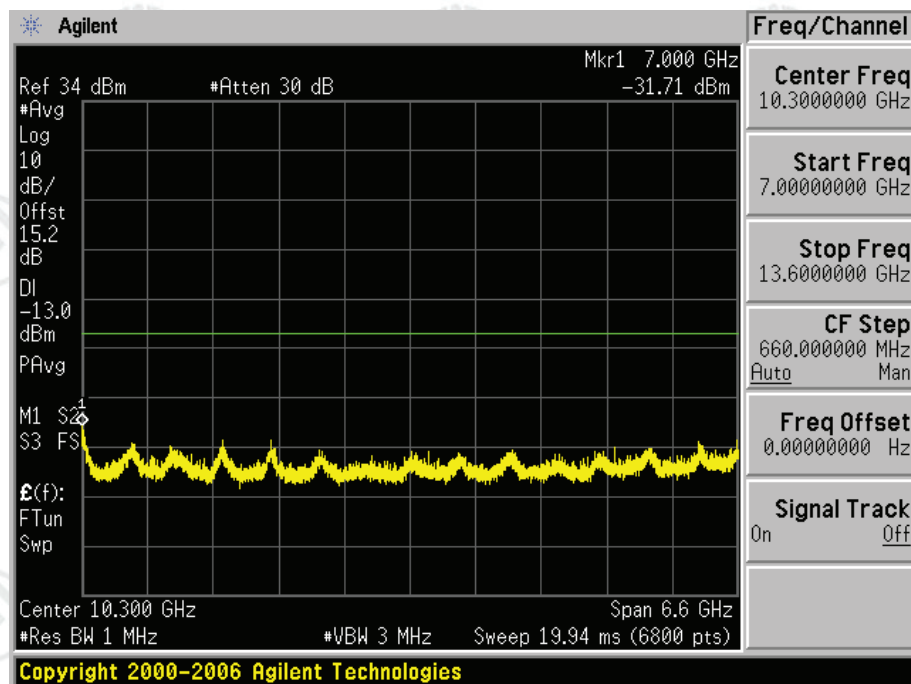




Test Channel=HCH





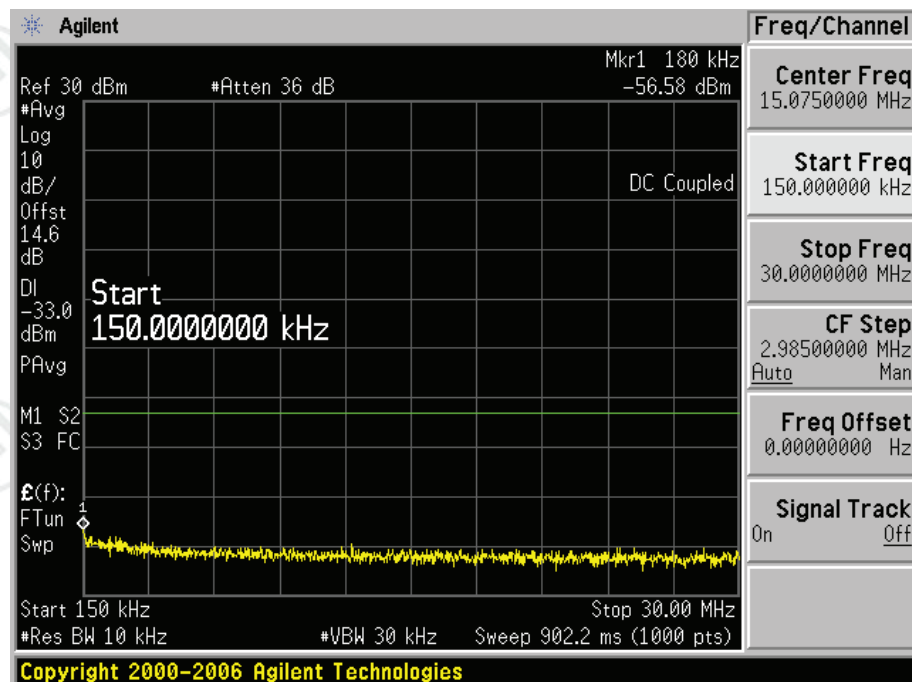
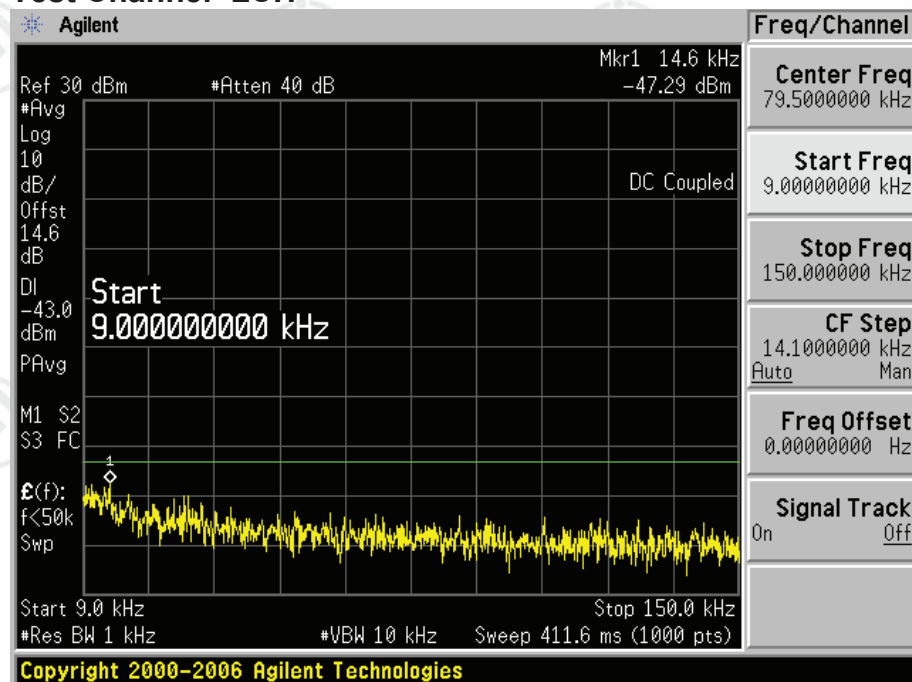


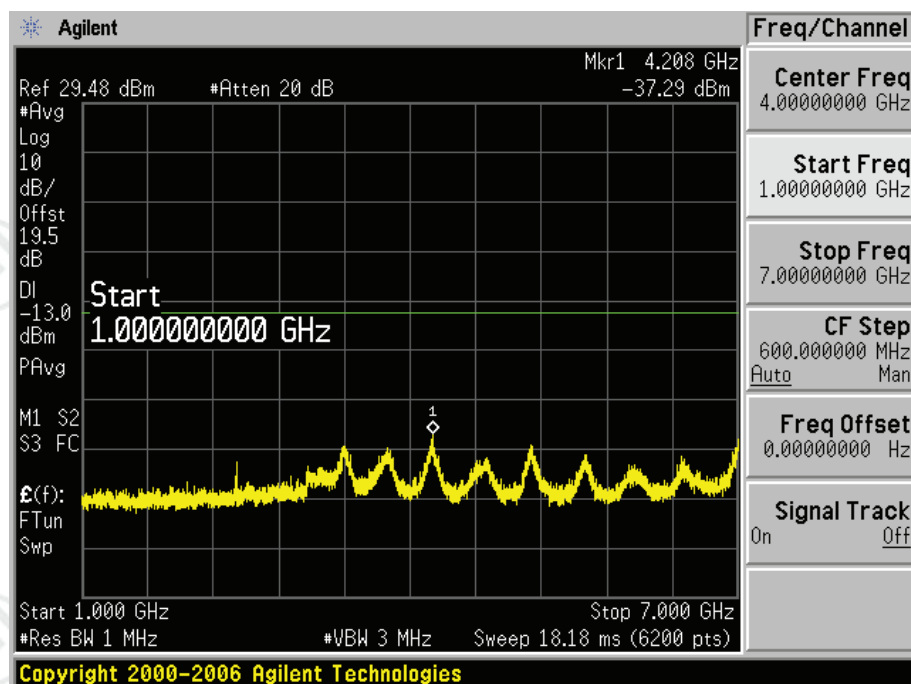
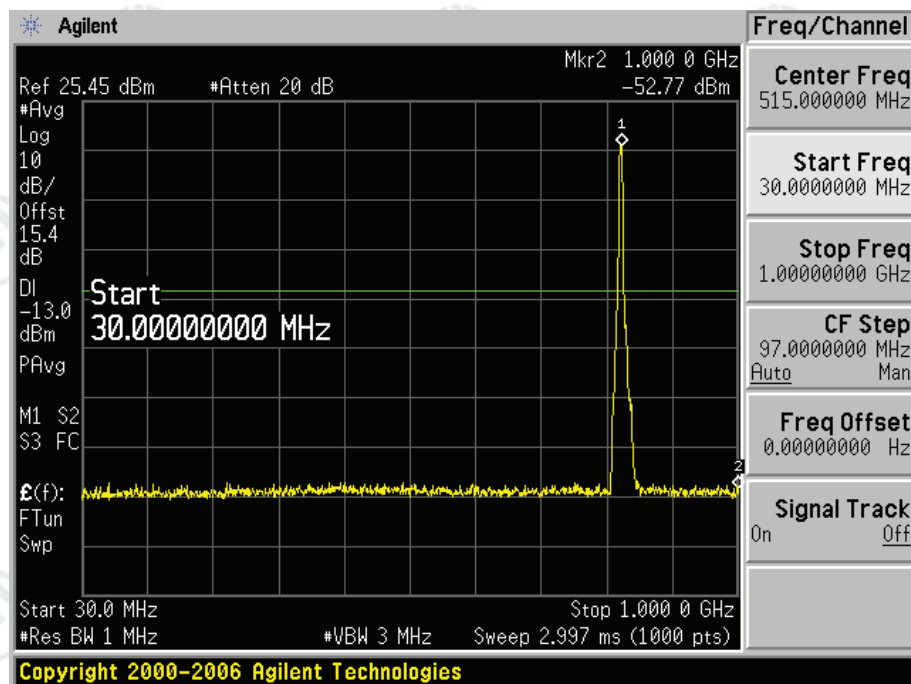
For WCDMA

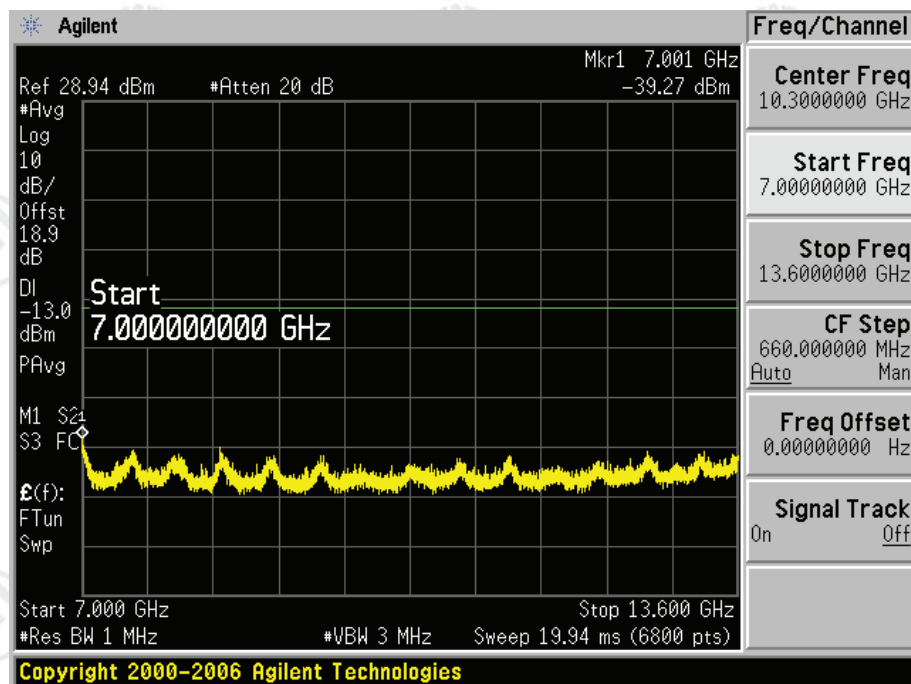
Test Band=WCDMA850

Test Mode=UMTS/TM1

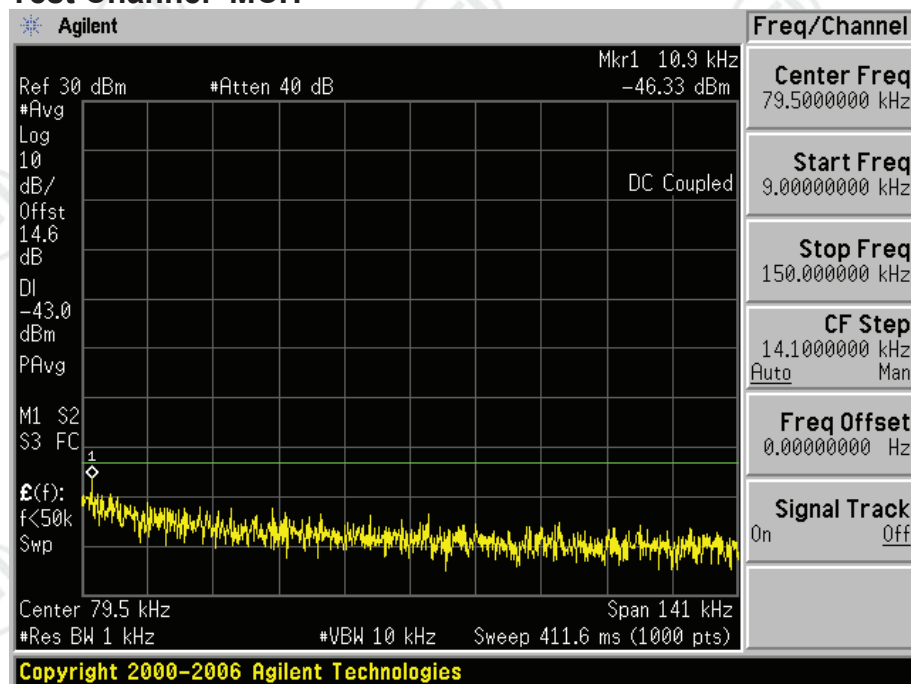
Test Channel=LCH

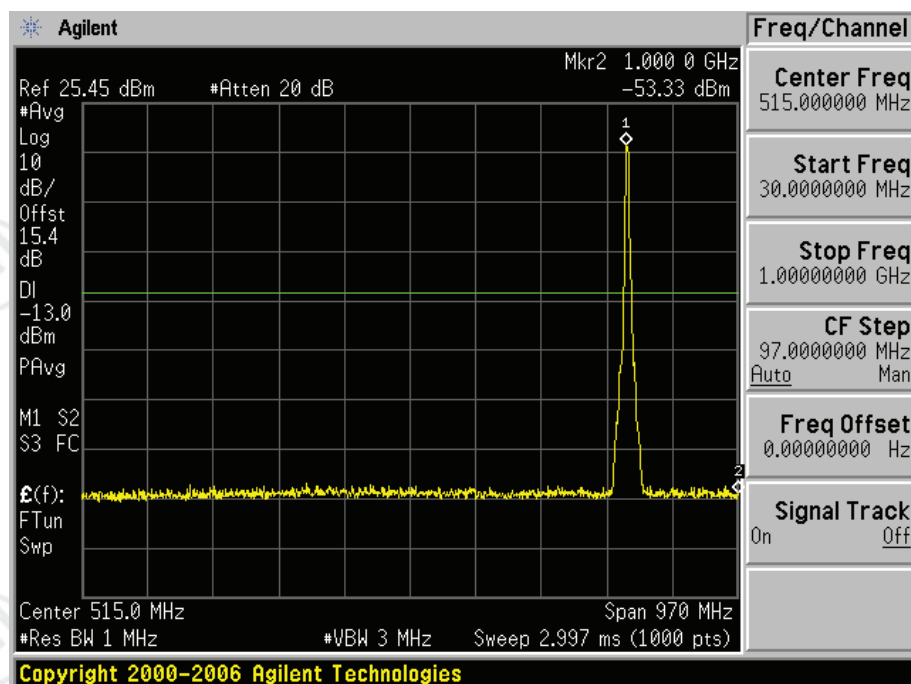
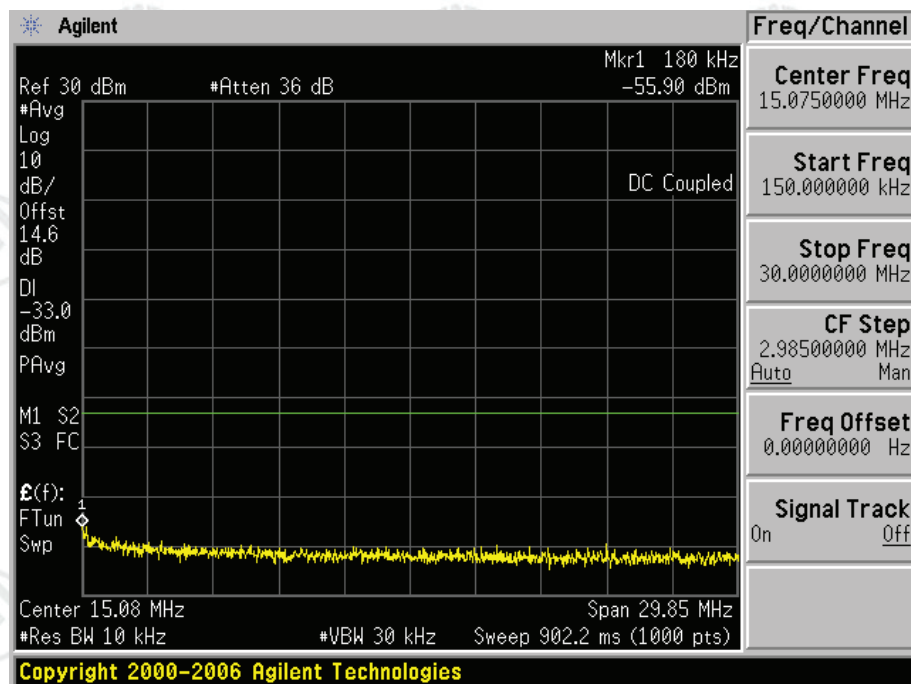


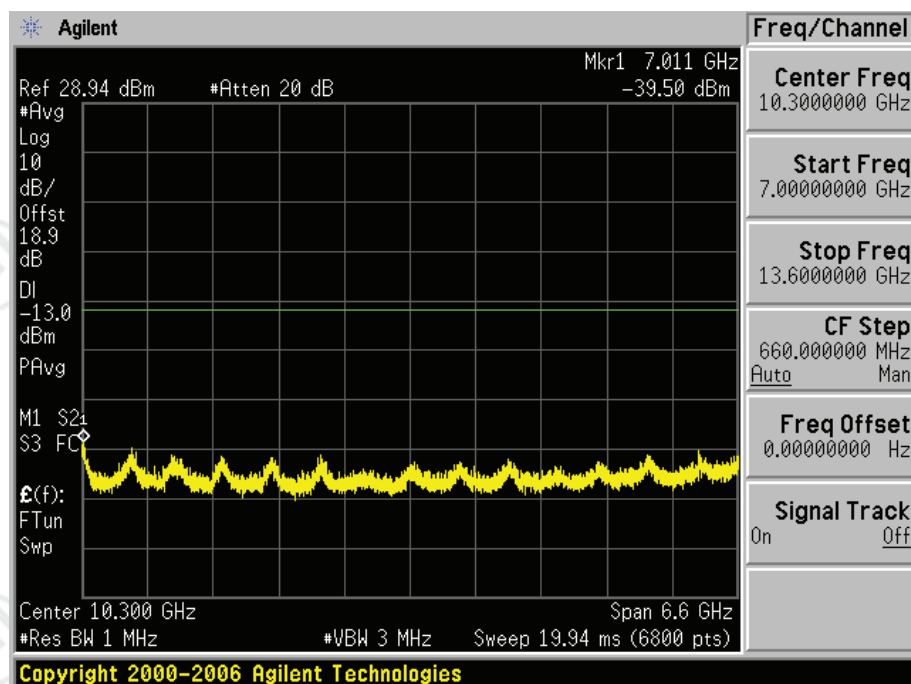
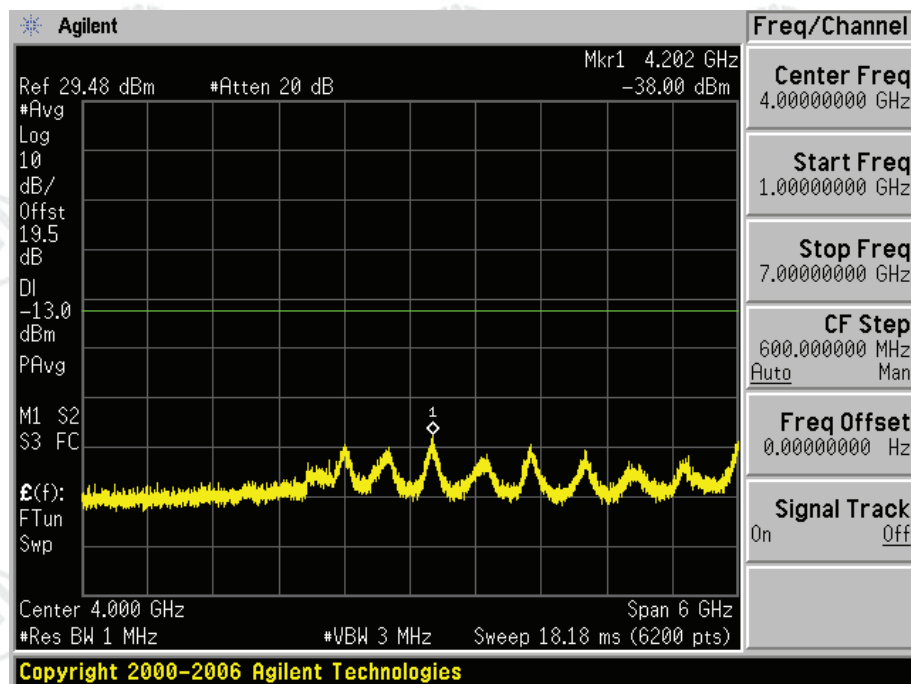




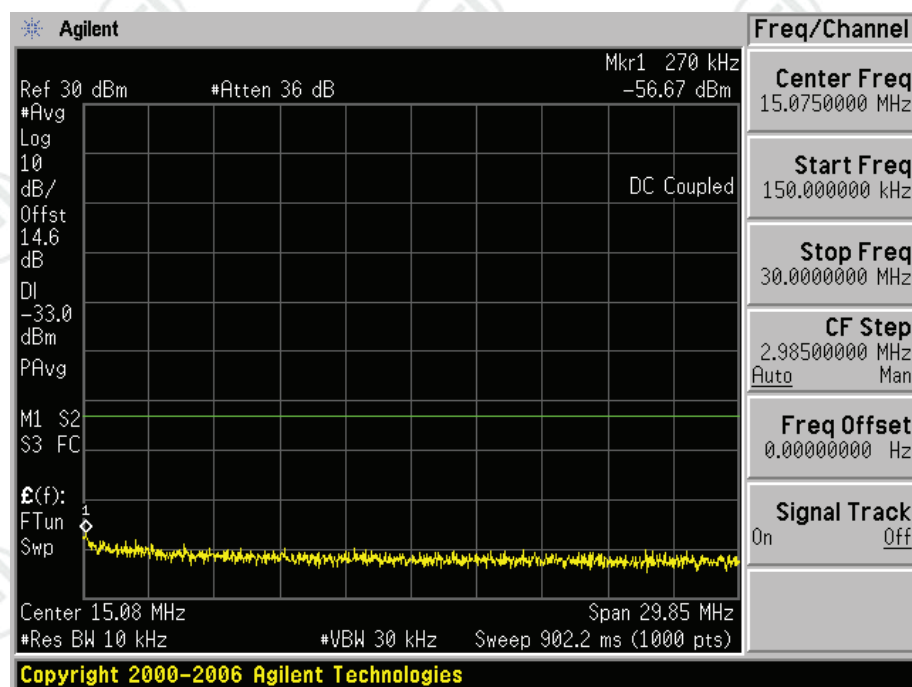
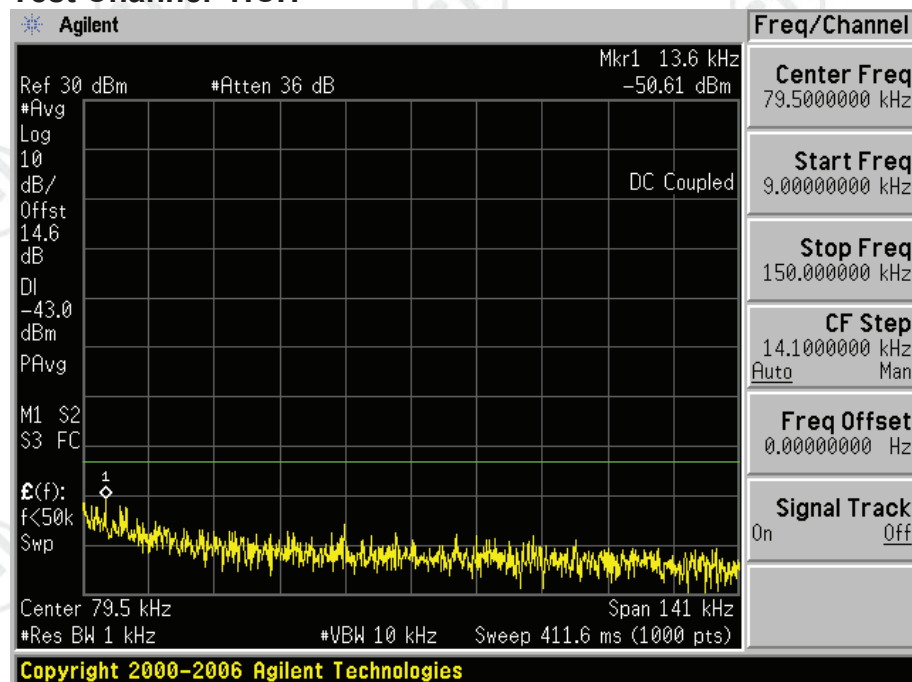
Test Channel=MCH

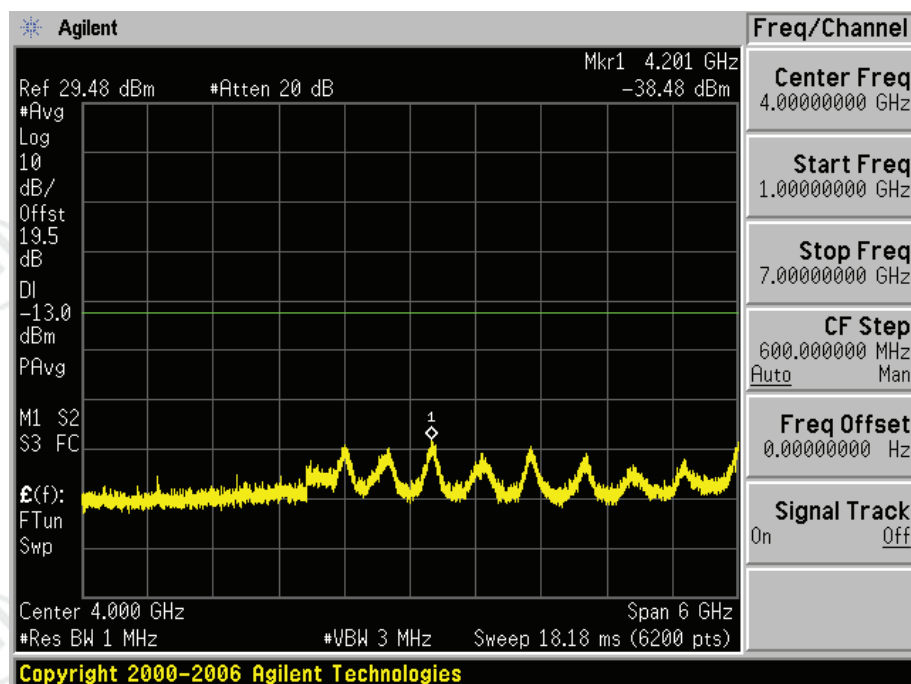
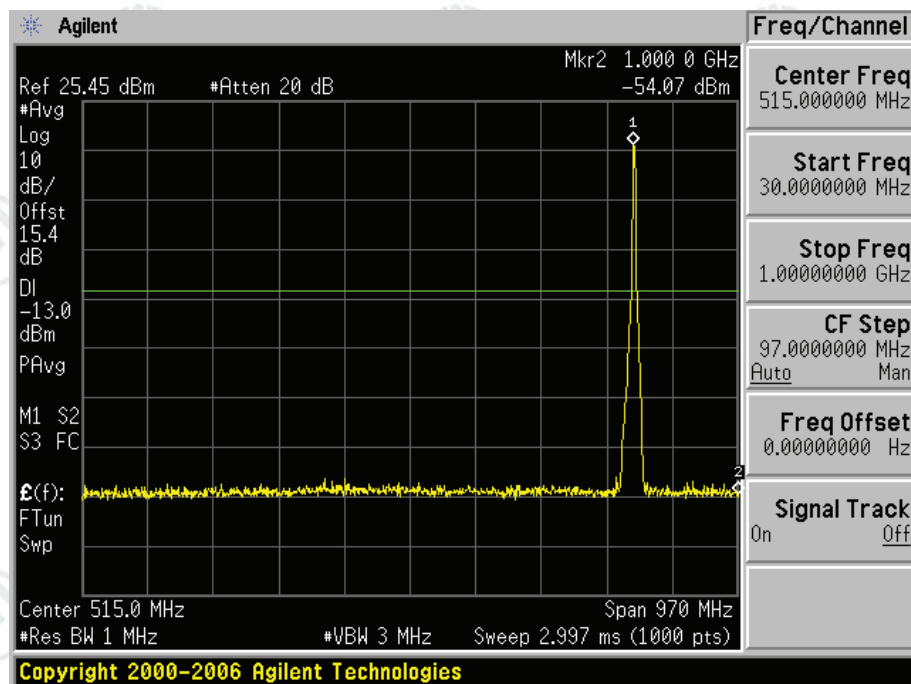


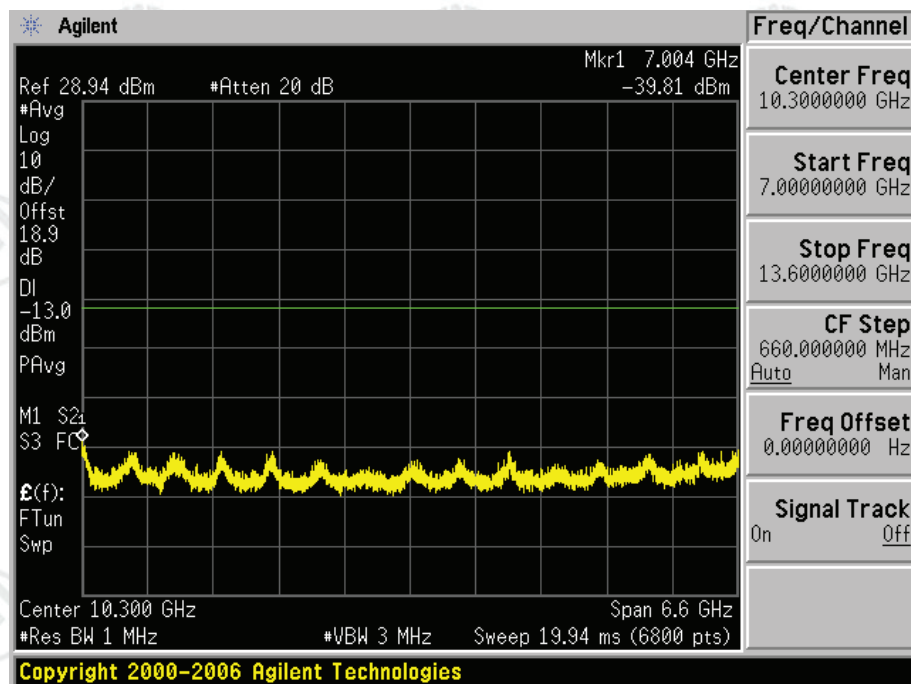




Test Channel=HCH



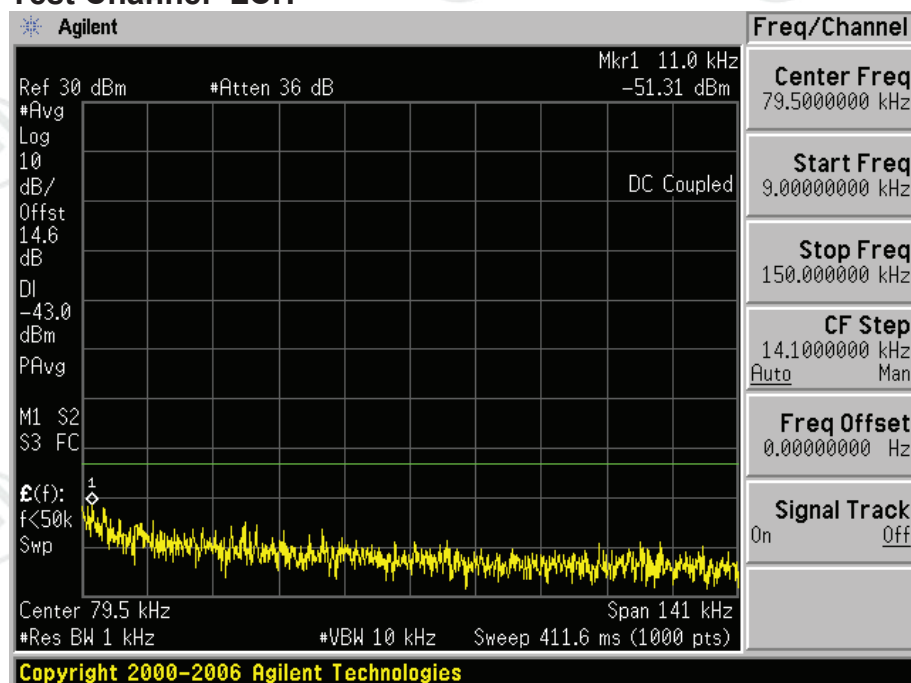


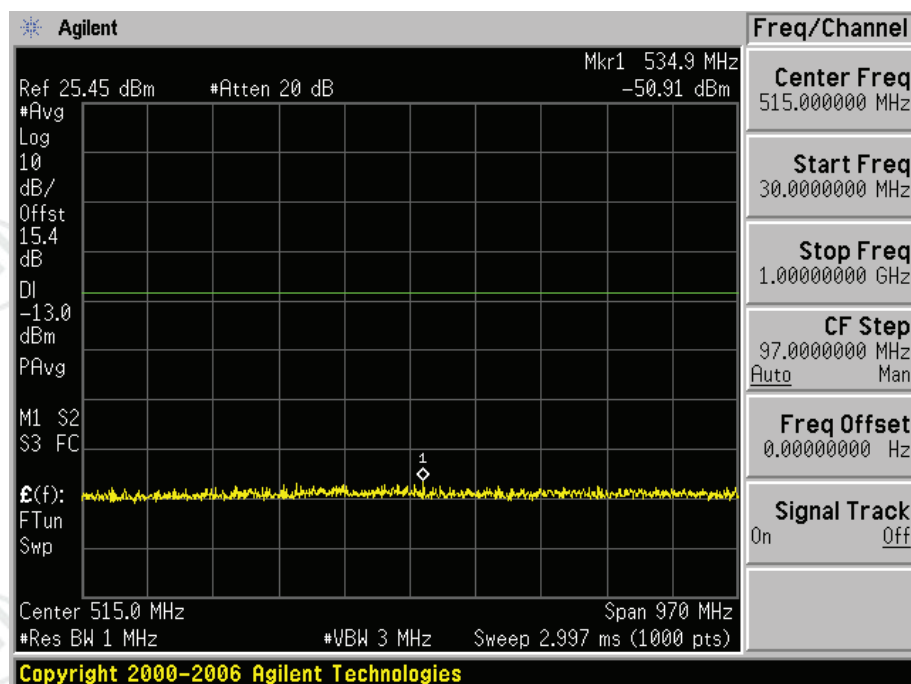
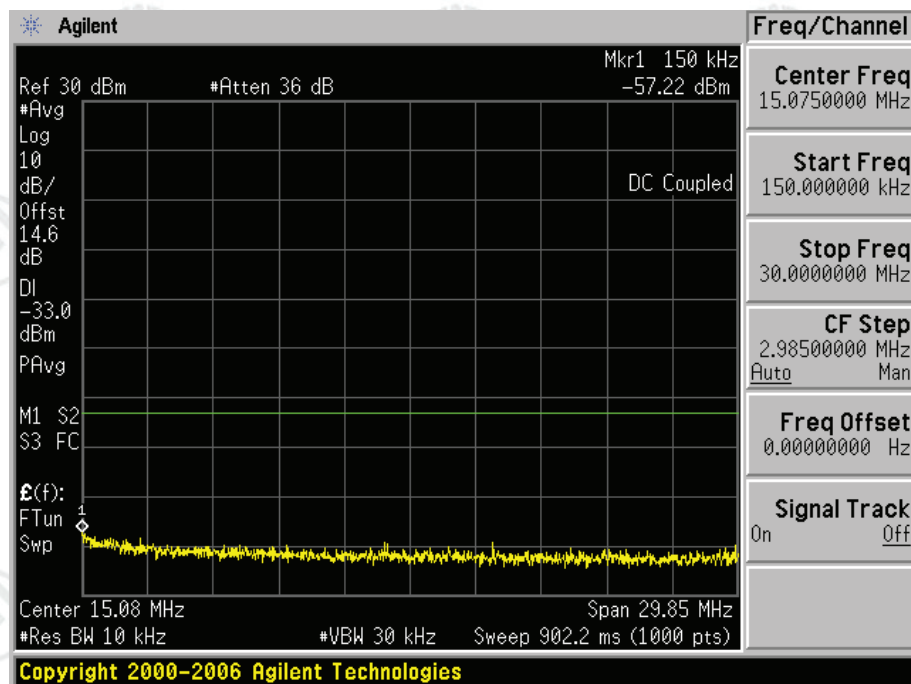


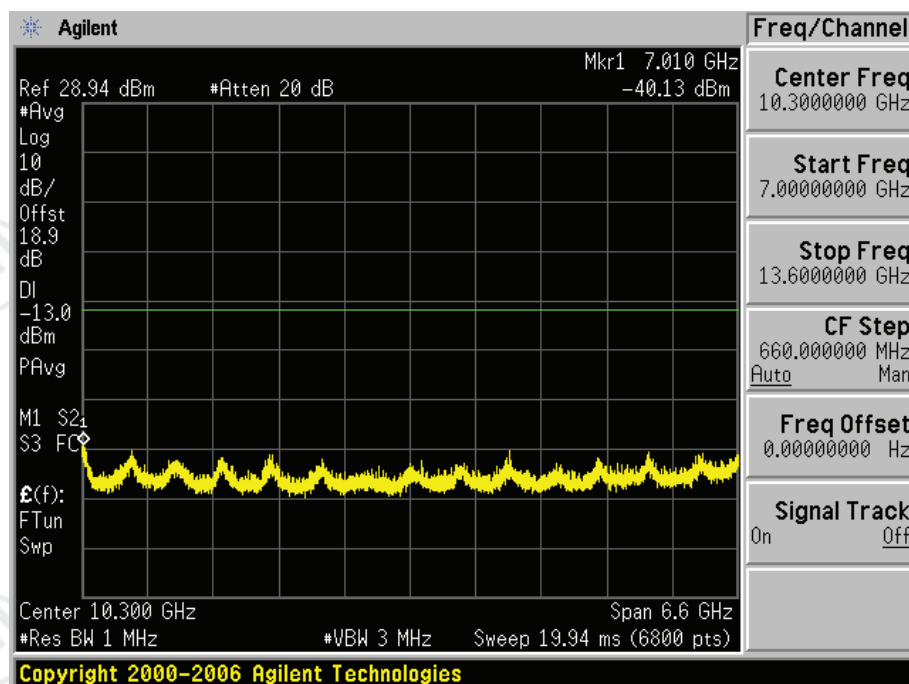
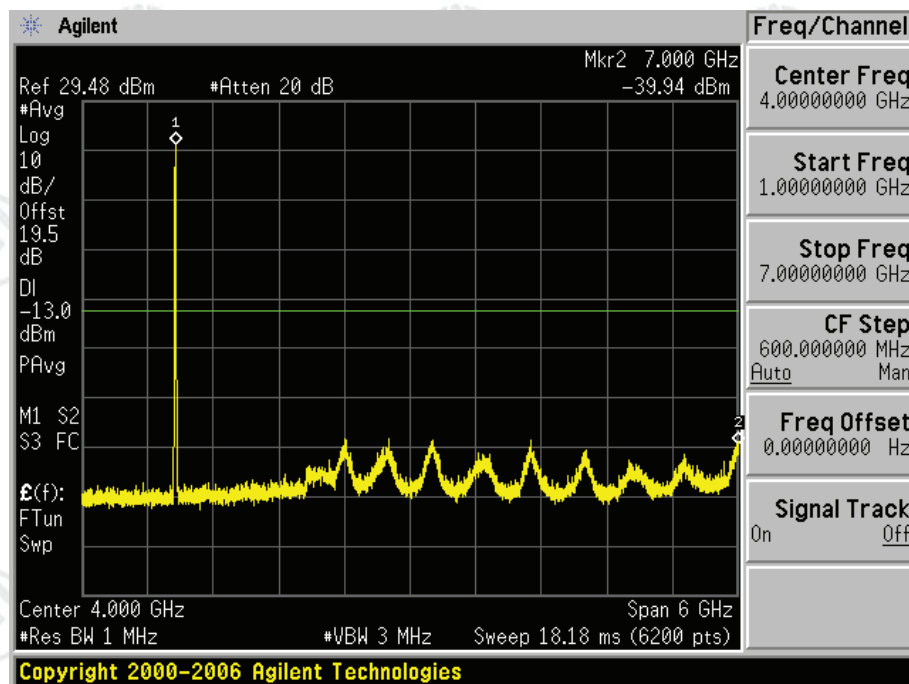
Test Band=WCDMA1900

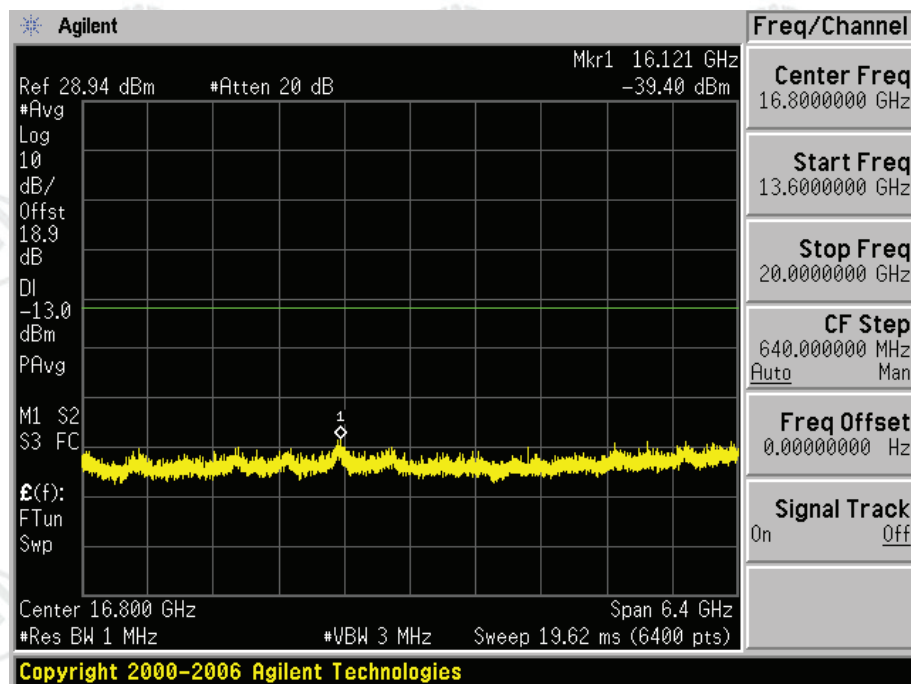
Test Mode=UMTS/TM1

Test Channel=LCH

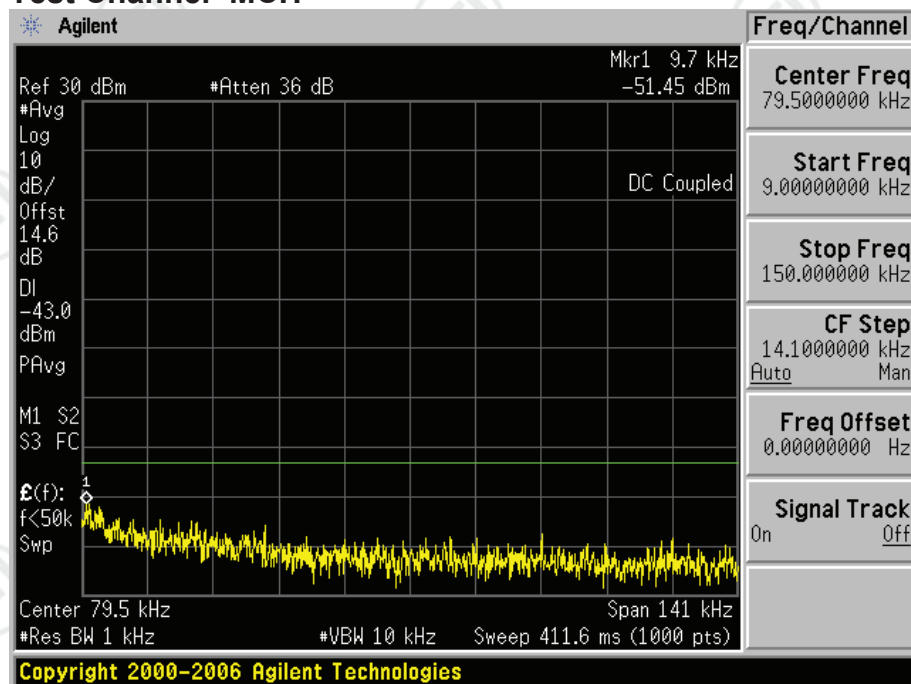


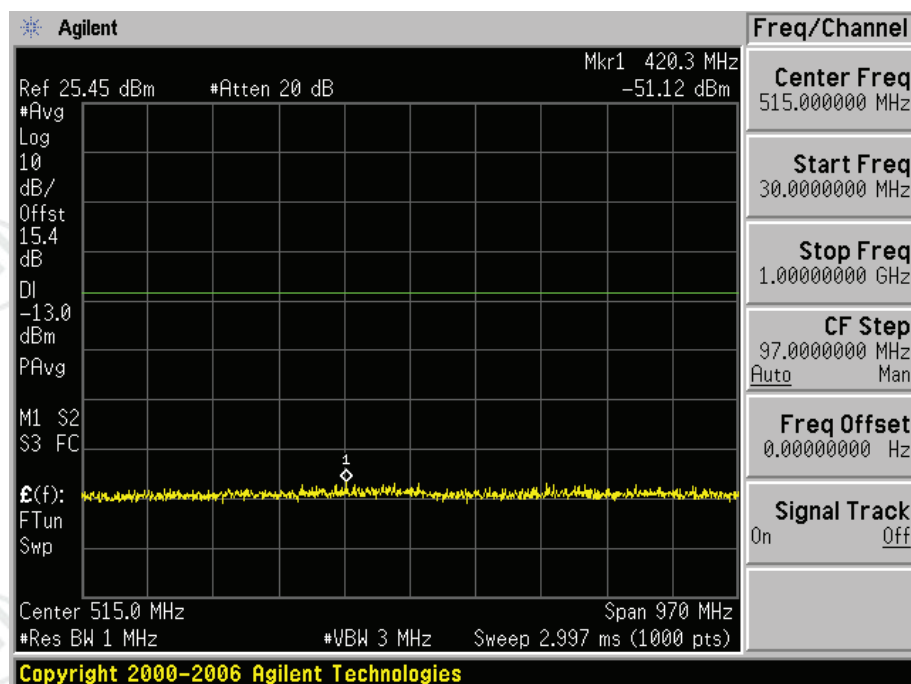
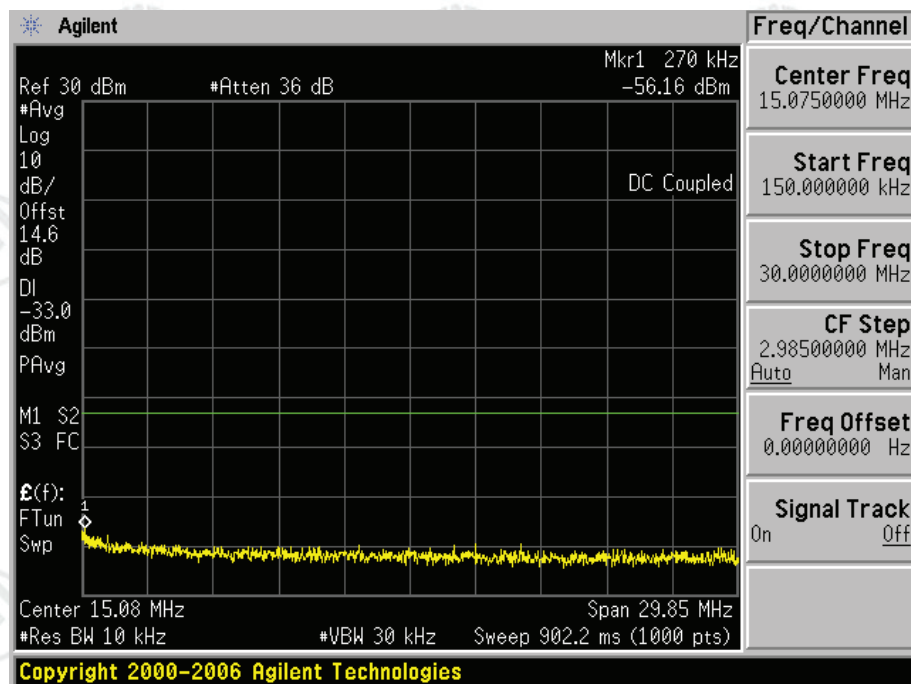


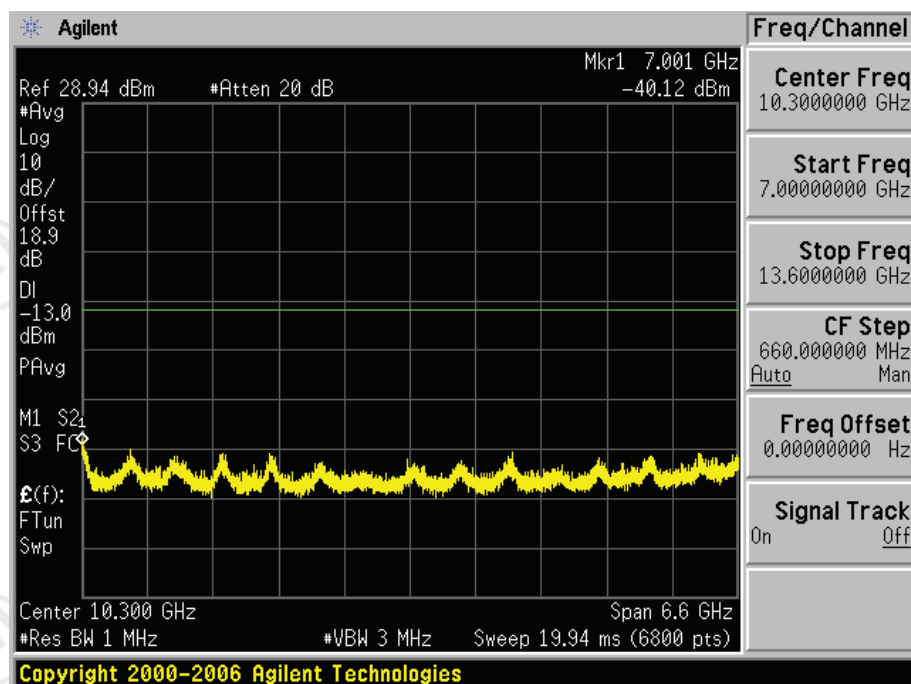
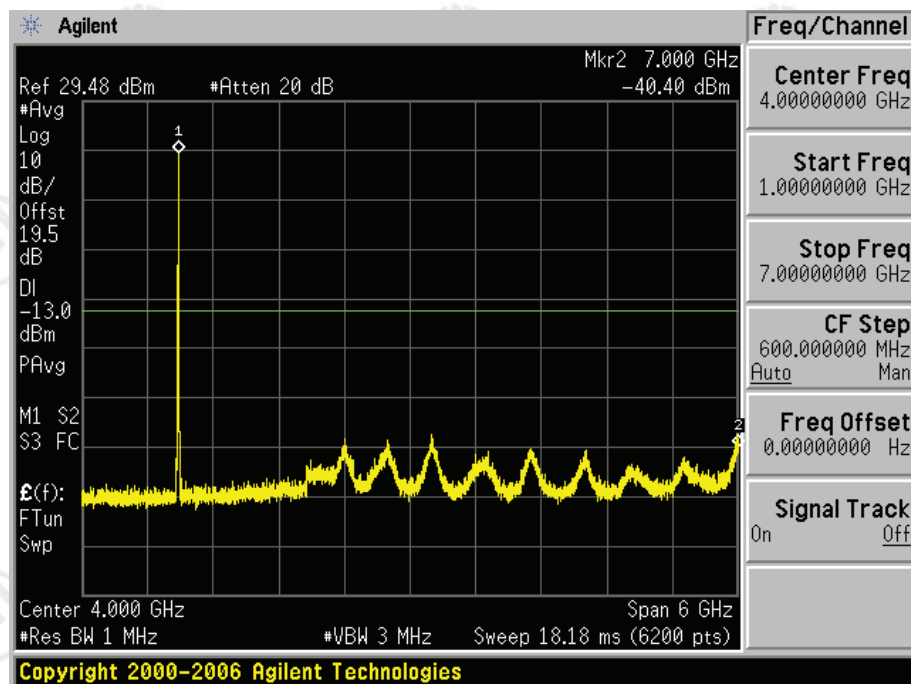


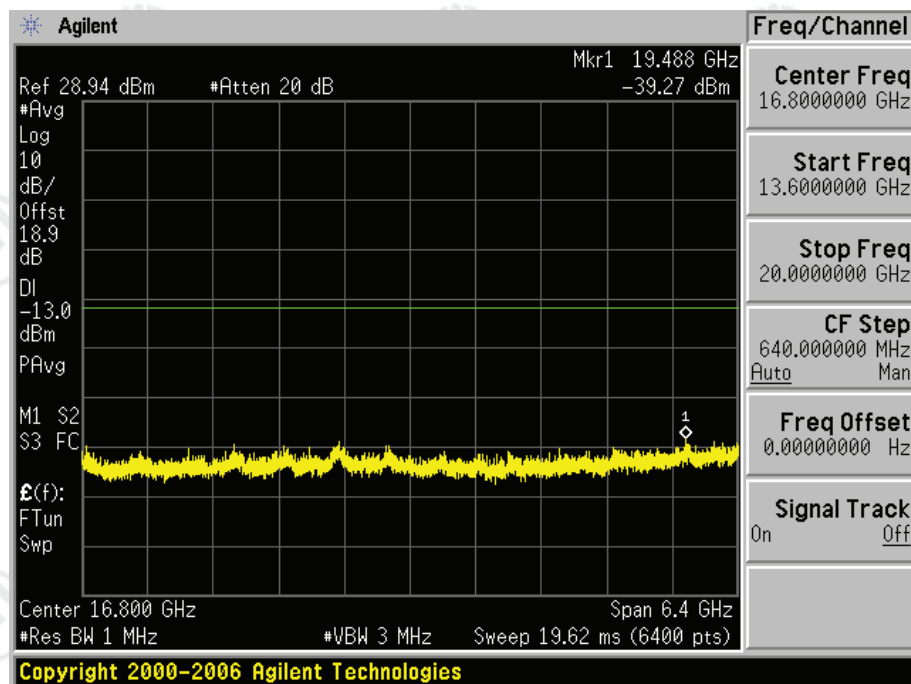


Test Channel=MCH

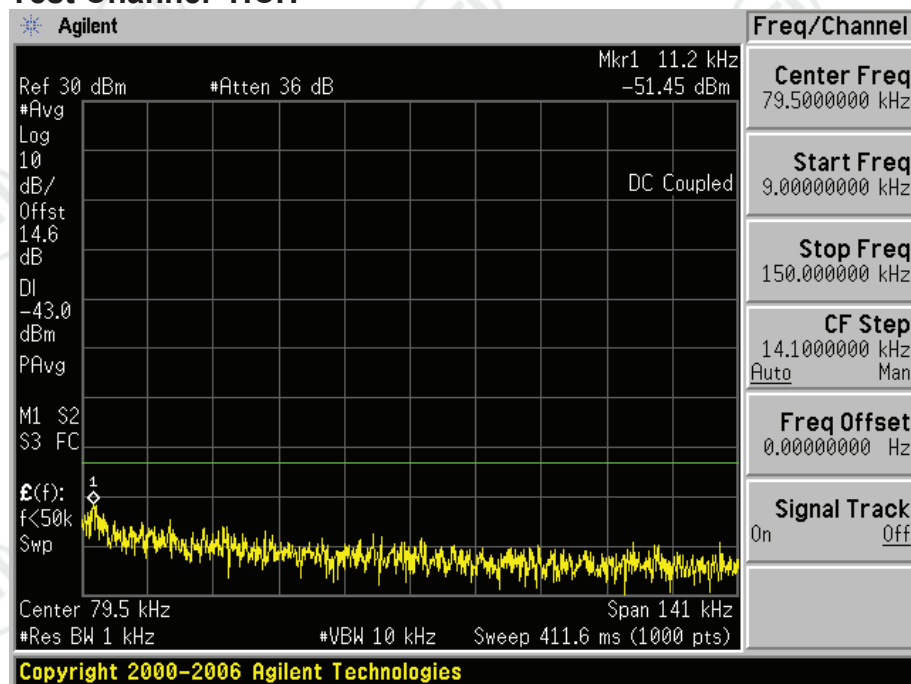


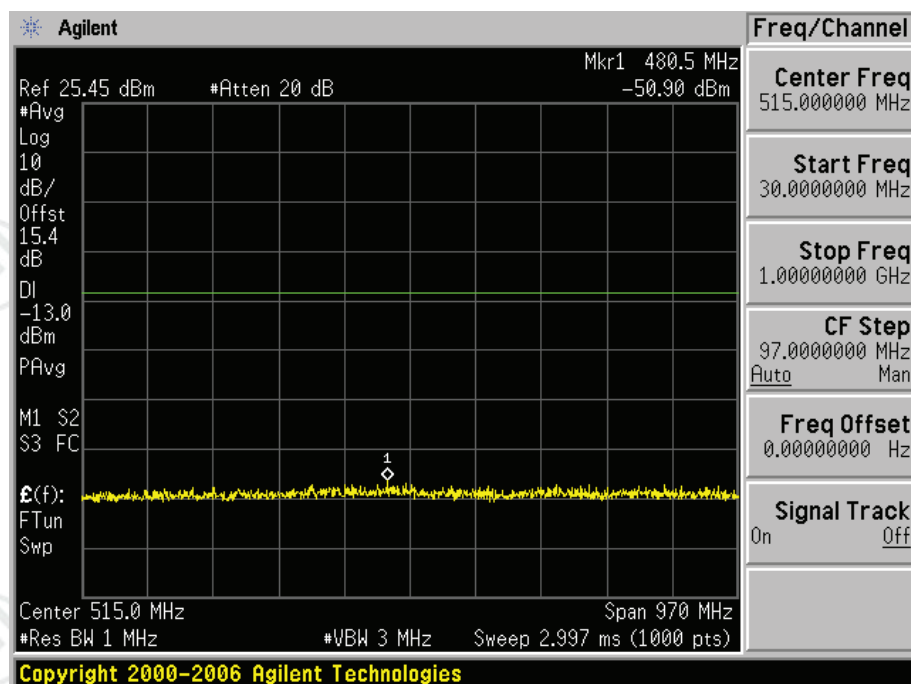
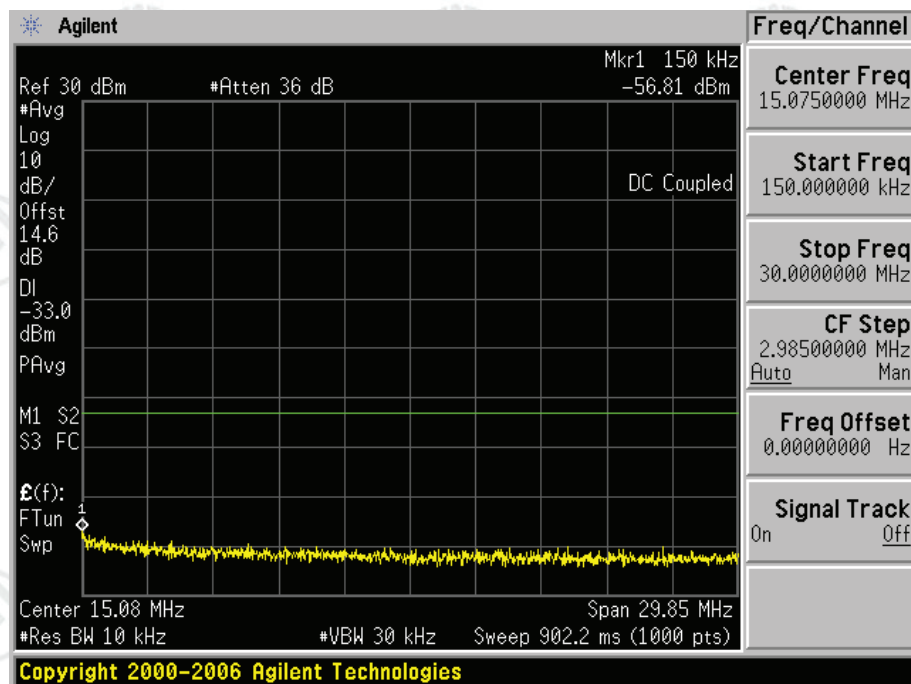


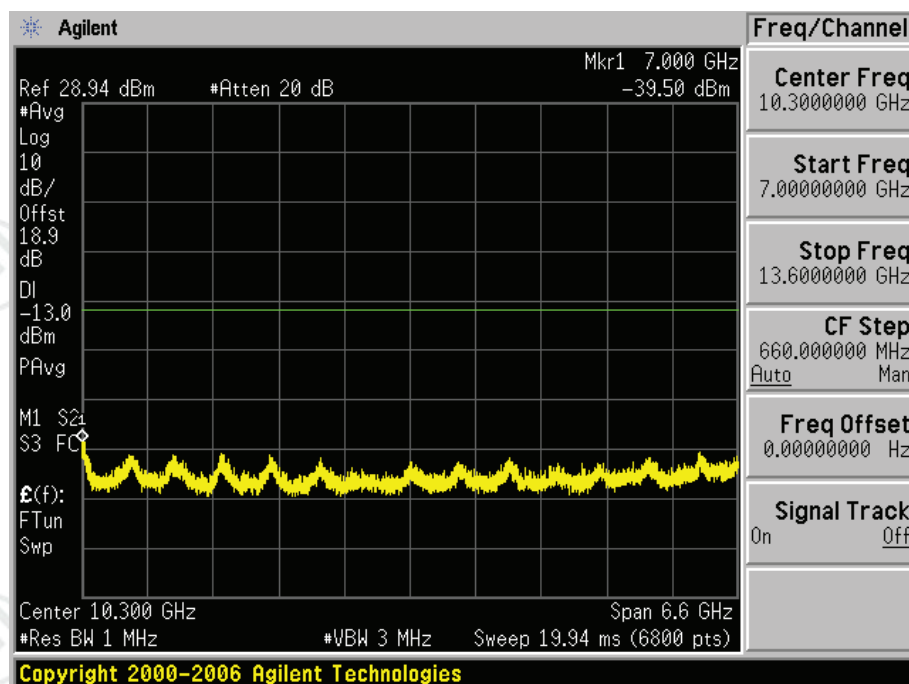
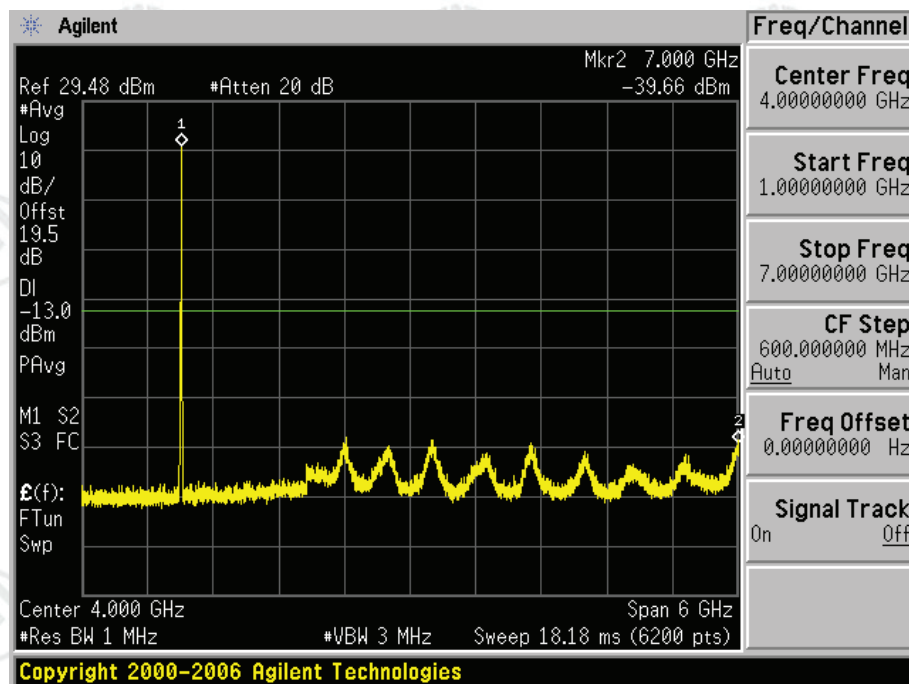


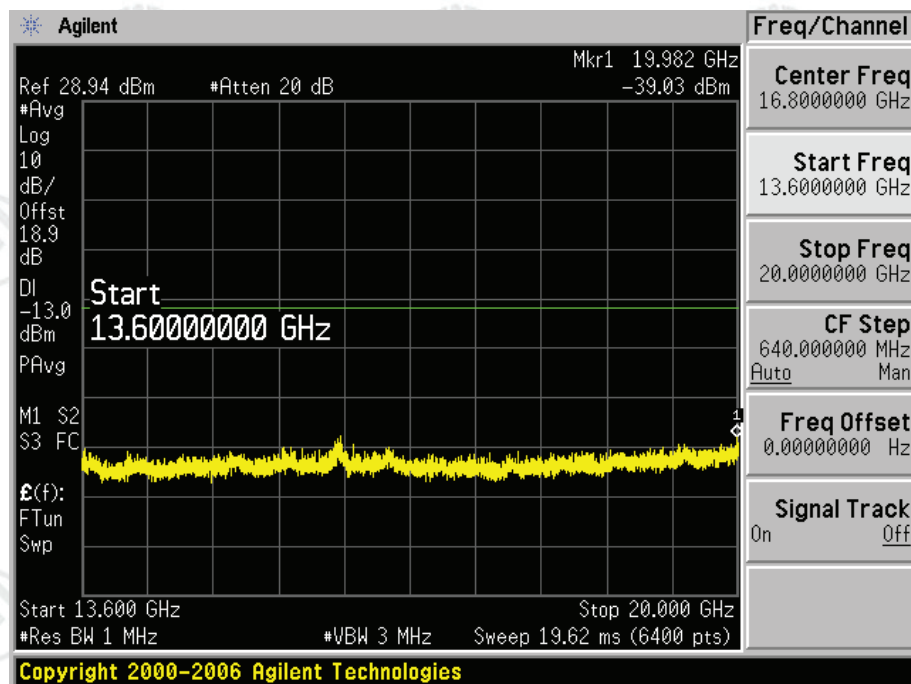


Test Channel=HCH









Appendix 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	3.06	0.00	±2.5	PASS
			TN	VN	11.12	0.01	±2.5	PASS
			TN	VH	4.21	0.01	±2.5	PASS
		MCH	TN	VL	5.31	0.01	±2.5	PASS
			TN	VN	5.46	0.01	±2.5	PASS
			TN	VH	11.06	0.01	±2.5	PASS
		HCH	TN	VL	7.34	0.01	±2.5	PASS
			TN	VN	-0.62	0.00	±2.5	PASS
			TN	VH	7.13	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	11.84	0.01	±2.5	PASS
			TN	VN	17.56	0.02	±2.5	PASS
			TN	VH	12.48	0.02	±2.5	PASS
		MCH	TN	VL	20.98	0.03	±2.5	PASS
			TN	VN	9.12	0.01	±2.5	PASS
			TN	VH	10.09	0.01	±2.5	PASS
		HCH	TN	VL	2.28	0.00	±2.5	PASS
			TN	VN	7.67	0.01	±2.5	PASS
			TN	VH	14.55	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	29.38	0.02	±2.5	PASS
			TN	VN	10.52	0.01	±2.5	PASS
			TN	VH	33.05	0.02	±2.5	PASS
		MCH	TN	VL	26.55	0.01	±2.5	PASS
			TN	VN	23.93	0.01	±2.5	PASS
			TN	VH	24.47	0.01	±2.5	PASS
		HCH	TN	VL	27.65	0.01	±2.5	PASS
			TN	VN	24.38	0.01	±2.5	PASS
			TN	VH	26.58	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	33.05	0.02	±2.5	PASS
			TN	VN	15.63	0.01	±2.5	PASS
			TN	VH	28.73	0.02	±2.5	PASS
		MCH	TN	VL	30.65	0.02	±2.5	PASS
			TN	VN	30.99	0.02	±2.5	PASS
			TN	VH	33.07	0.02	±2.5	PASS
		HCH	TN	VL	11.21	0.01	±2.5	PASS
			TN	VN	27.70	0.01	±2.5	PASS
			TN	VH	30.67	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
WCDMA 850	TM1	LCH	TN	VL	16.25	0.02	±2.5	PASS
			TN	VN	17.17	0.02	±2.5	PASS
			TN	VH	10.76	0.01	±2.5	PASS
		MCH	TN	VL	10.75	0.01	±2.5	PASS
			TN	VN	17.17	0.01	±2.5	PASS
			TN	VH	17.14	0.01	±2.5	PASS
		HCH	TN	VL	16.25	0.02	±2.5	PASS
			TN	VN	17.17	0.03	±2.5	PASS
			TN	VH	15.11	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
WCDMA 1900	TM1	LCH	TN	VL	35.02	0.02	±2.5	PASS
			TN	VN	35.12	0.02	±2.5	PASS
			TN	VH	35.48	0.02	±2.5	PASS
		MCH	TN	VL	39.14	0.02	±2.5	PASS
			TN	VN	39.12	0.02	±2.5	PASS
			TN	VH	40.97	0.02	±2.5	PASS
		HCH	TN	VL	38.68	0.02	±2.5	PASS
			TN	VN	38.61	0.02	±2.5	PASS
			TN	VH	43.49	0.02	±2.5	PASS

Frequency Error vs. Temperature:

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	TM1	LCH	VN	-30	12.24	0.01	±2.5	PASS
			VN	-20	8.21	0.01	±2.5	PASS
			VN	-10	19.06	0.02	±2.5	PASS
			VN	0	12.47	0.02	±2.5	PASS
			VN	10	13.30	0.02	±2.5	PASS
			VN	20	8.99	0.01	±2.5	PASS
			VN	30	8.00	0.01	±2.5	PASS
			VN	40	16.16	0.02	±2.5	PASS
			VN	50	9.72	0.01	±2.5	PASS
GSM850	TM1	MCH	VN	-30	6.51	0.01	±2.5	PASS
			VN	-20	7.97	0.01	±2.5	PASS
			VN	-10	8.93	0.01	±2.5	PASS
			VN	0	7.28	0.01	±2.5	PASS
			VN	10	8.08	0.01	±2.5	PASS
			VN	20	4.54	0.01	±2.5	PASS
			VN	30	10.87	0.01	±2.5	PASS
			VN	40	8.32	0.01	±2.5	PASS
			VN	50	9.60	0.01	±2.5	PASS
GSM850	TM1	HCH	VN	-30	8.09	0.01	±2.5	PASS
			VN	-20	8.73	0.01	±2.5	PASS
			VN	-10	9.65	0.01	±2.5	PASS
			VN	0	10.14	0.01	±2.5	PASS
			VN	10	0.74	0.00	±2.5	PASS
			VN	20	10.61	0.01	±2.5	PASS
			VN	30	9.27	0.01	±2.5	PASS
			VN	40	10.07	0.01	±2.5	PASS
			VN	50	10.31	0.01	±2.5	PASS

Test Band	Test Mode	Test Channel	Test Volt.	Test Temp.	Freq.Error (Hz)	Freq.vs.rated (ppm)	Limit (ppm)	Verdict
GSM850	TM2	LCH	VN	-30	16.32	0.02	±2.5	PASS
			VN	-20	11.82	0.01	±2.5	PASS
			VN	-10	10.95	0.01	±2.5	PASS
			VN	0	9.29	0.01	±2.5	PASS
			VN	10	11.75	0.01	±2.5	PASS
			VN	20	14.83	0.02	±2.5	PASS
			VN	30	5.44	0.01	±2.5	PASS
			VN	40	7.16	0.01	±2.5	PASS
			VN	50	12.06	0.01	±2.5	PASS
GSM850	TM2	MCH	VN	-30	9.22	0.01	±2.5	PASS
			VN	-20	8.84	0.01	±2.5	PASS
			VN	-10	10.26	0.01	±2.5	PASS
			VN	0	11.42	0.01	±2.5	PASS
			VN	10	13.00	0.02	±2.5	PASS
			VN	20	12.86	0.02	±2.5	PASS
			VN	30	8.51	0.01	±2.5	PASS
			VN	40	8.75	0.01	±2.5	PASS
			VN	50	9.24	0.01	±2.5	PASS
GSM850	TM2	HCH	VN	-30	17.71	0.02	±2.5	PASS
			VN	-20	5.97	0.01	±2.5	PASS
			VN	-10	6.32	0.01	±2.5	PASS
			VN	0	5.73	0.01	±2.5	PASS
			VN	10	10.09	0.01	±2.5	PASS
			VN	20	7.75	0.01	±2.5	PASS
			VN	30	15.21	0.02	±2.5	PASS
			VN	40	5.49	0.01	±2.5	PASS
			VN	50	4.40	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	TM1	LCH	VN	-30	10.39	0.01	±2.5	PASS
			VN	-20	28.19	0.02	±2.5	PASS
			VN	-10	28.05	0.02	±2.5	PASS
			VN	0	28.23	0.02	±2.5	PASS
			VN	10	12.78	0.01	±2.5	PASS
			VN	20	24.67	0.01	±2.5	PASS
			VN	30	27.42	0.01	±2.5	PASS
			VN	40	29.89	0.02	±2.5	PASS
			VN	50	25.83	0.01	±2.5	PASS
GSM1900	TM1	MCH	VN	-30	25.16	0.01	±2.5	PASS
			VN	-20	23.58	0.01	±2.5	PASS
			VN	-10	28.93	0.02	±2.5	PASS
			VN	0	26.24	0.01	±2.5	PASS
			VN	10	29.13	0.02	±2.5	PASS
			VN	20	27.45	0.01	±2.5	PASS
			VN	30	25.78	0.01	±2.5	PASS
			VN	40	25.20	0.01	±2.5	PASS
			VN	50	24.70	0.01	±2.5	PASS
GSM1900	TM1	HCH	VN	-30	43.41	0.02	±2.5	PASS
			VN	-20	23.37	0.01	±2.5	PASS
			VN	-10	24.65	0.01	±2.5	PASS
			VN	0	24.86	0.01	±2.5	PASS
			VN	10	29.35	0.02	±2.5	PASS
			VN	20	25.09	0.01	±2.5	PASS
			VN	30	27.54	0.01	±2.5	PASS
			VN	40	28.68	0.02	±2.5	PASS
			VN	50	28.35	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	32.95	0.02	±2.5	PASS
			VN	-20	16.37	0.01	±2.5	PASS
			VN	-10	29.88	0.02	±2.5	PASS
			VN	0	21.72	0.01	±2.5	PASS
			VN	10	24.31	0.01	±2.5	PASS
			VN	20	20.66	0.01	±2.5	PASS
			VN	30	39.76	0.02	±2.5	PASS
			VN	40	19.27	0.01	±2.5	PASS
			VN	50	32.55	0.02	±2.5	PASS
GSM1900	TM2	MCH	VN	-30	13.51	0.01	±2.5	PASS
			VN	-20	15.66	0.01	±2.5	PASS
			VN	-10	32.04	0.02	±2.5	PASS
			VN	0	13.78	0.01	±2.5	PASS
			VN	10	29.37	0.02	±2.5	PASS
			VN	20	27.64	0.01	±2.5	PASS
			VN	30	11.33	0.01	±2.5	PASS
			VN	40	29.69	0.02	±2.5	PASS
			VN	50	11.89	0.01	±2.5	PASS
GSM1900	TM2	HCH	VN	-30	29.68	0.02	±2.5	PASS
			VN	-20	32.31	0.02	±2.5	PASS
			VN	-10	12.47	0.01	±2.5	PASS
			VN	0	29.44	0.02	±2.5	PASS
			VN	10	13.50	0.01	±2.5	PASS
			VN	20	27.45	0.01	±2.5	PASS
			VN	30	32.01	0.02	±2.5	PASS
			VN	40	27.77	0.01	±2.5	PASS
			VN	50	31.43	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
WCDMA 850	TM1	LCH	VN	-30	17.62	0.02	±2.5	PASS
			VN	-20	13.05	0.02	±2.5	PASS
			VN	-10	19.68	0.02	±2.5	PASS
			VN	0	16.94	0.02	±2.5	PASS
			VN	10	13.73	0.02	±2.5	PASS
			VN	20	16.71	0.02	±2.5	PASS
			VN	30	13.96	0.02	±2.5	PASS
			VN	40	13.05	0.02	±2.5	PASS
			VN	50	12.82	0.02	±2.5	PASS
WCDMA850	TM1	MCH	VN	-30	11.73	0.01	±2.5	PASS
			VN	-20	5.24	0.01	±2.5	PASS
			VN	-10	4.54	0.01	±2.5	PASS
			VN	0	4.45	0.01	±2.5	PASS
			VN	10	4.73	0.01	±2.5	PASS
			VN	20	5.11	0.01	±2.5	PASS
			VN	30	5.12	0.01	±2.5	PASS
			VN	40	4.61	0.01	±2.5	PASS
			VN	50	4.31	0.01	±2.5	PASS
WCDMA 850	TM1	HCH	VN	-30	1.01	0.00	±2.5	PASS
			VN	-20	0.20	0.00	±2.5	PASS
			VN	-10	1.13	0.00	±2.5	PASS
			VN	0	0.91	0.00	±2.5	PASS
			VN	10	1.32	0.00	±2.5	PASS
			VN	20	1.73	0.00	±2.5	PASS
			VN	30	1.13	0.00	±2.5	PASS
			VN	40	2.11	0.00	±2.5	PASS
			VN	50	1.21	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	44.39	0.02	±2.5	PASS
			VN	-20	43.34	0.02	±2.5	PASS
			VN	-10	44.16	0.02	±2.5	PASS
			VN	0	48.47	0.02	±2.5	PASS
			VN	10	43.54	0.02	±2.5	PASS
			VN	20	45.87	0.02	±2.5	PASS
			VN	30	41.15	0.02	±2.5	PASS
			VN	40	46.78	0.02	±2.5	PASS
			VN	50	45.11	0.02	±2.5	PASS
WCDMA 1900	TM1	MCH	VN	-30	40.51	0.02	±2.5	PASS
			VN	-20	43.49	0.02	±2.5	PASS
			VN	-10	44.40	0.02	±2.5	PASS
			VN	0	43.72	0.02	±2.5	PASS
			VN	10	44.40	0.02	±2.5	PASS
			VN	20	42.80	0.02	±2.5	PASS
			VN	30	40.05	0.02	±2.5	PASS
			VN	40	45.78	0.02	±2.5	PASS
			VN	50	46.69	0.02	±2.5	PASS
WCDMA 1900	TM1	HCH	VN	-30	42.34	0.02	±2.5	PASS
			VN	-20	41.20	0.02	±2.5	PASS
			VN	-10	53.10	0.03	±2.5	PASS
			VN	0	46.01	0.02	±2.5	PASS
			VN	10	46.23	0.02	±2.5	PASS
			VN	20	48.52	0.03	±2.5	PASS
			VN	30	47.38	0.02	±2.5	PASS
			VN	40	49.90	0.03	±2.5	PASS
			VN	50	46.46	0.02	±2.5	PASS

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

Receiver Setup:	Frequency	Detector	RBW	VBW	Remark									
	30MHz-1GHz	peak	100kHz	300kHz	Peak									
	Above 1GHz	Peak	1MHz	3MHz	Peak									
Measurement Procedure:	Test procedure as below: 1) The EUT was powered ON and placed on a 0.8m high 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:	<table><tr><td>Mode</td><td>GSM 850/WCDMA/HSDPA /HSUPA Band V</td><td>GSM 1900/WCDMA/HSDPA /HSUPA Band V</td></tr><tr><td>Frequency</td><td>824 – 849MHz</td><td>1850 – 1910MHz</td></tr><tr><td>Limit</td><td>38.45dBm (7W)</td><td>33.01dBm (2W)</td></tr></table>					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)
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 (GSM)							
Channel/fc (MHz)	Height (cm)	Azimuth (deg)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
128/824.2	100	120	29.67	38.45	-8.78	Pass	H
	100	150	28.99	38.45	-9.46	Pass	V
190/836.6	100	211	30.12	38.45	-8.33	Pass	H
	100	181	29.98	38.45	-8.47	Pass	V
251/848.8	100	223	31.09	38.45	-7.36	Pass	H
	100	260	30.87	38.45	-7.58	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	100	112	28.88	38.45	-9.57	Pass	H
	100	260	28.67	38.45	-9.78	Pass	V
190/836.6	100	190	31.09	38.45	-7.36	Pass	H
	100	221	30.98	38.45	-7.47	Pass	V
251/848.8	100	219	31	38.45	-7.45	Pass	H
	100	128	30.97	38.45	-7.48	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	100	100	29.98	38.45	-8.47	Pass	H
	100	280	29.78	38.45	-8.67	Pass	V
4183/836.6	100	200	27.67	38.45	-10.78	Pass	H
	100	150	27.65	38.45	-10.8	Pass	V
4233/846.6	100	150	25.09	38.45	-13.36	Pass	H
	100	180	25.03	38.45	-13.42	Pass	V

GSM 1900 (GSM)							
Channel/fc (MHz)	Height (cm)	Azimuth (deg)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
512/1850.2	100	143	25.38	33.01	-7.63	Pass	H
	100	200	25.29	33.01	-7.72	Pass	V
661/1880.0	100	209	23.67	33.01	-9.34	Pass	H
	100	109	23.59	33.01	-9.42	Pass	V
810/1909.8	100	129	24.08	33.01	-8.93	Pass	H
	100	210	23.89	33.01	-9.12	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	100	129	25.38	33.01	-7.63	Pass	H
	100	121	25.08	33.01	-7.93	Pass	V
661/1880.0	100	167	23.65	33.01	-9.36	Pass	H
	100	218	23.56	33.01	-9.45	Pass	V
810/1909.8	100	211	23.98	33.01	-9.03	Pass	H
	100	108	23.87	33.01	-9.14	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	100	100	21.34	33.01	-11.67	Pass	H
	100	180	21.09	33.01	-11.92	Pass	V
9400/1880.0	100	175	22.67	33.01	-10.34	Pass	H
	100	150	22.59	33.01	-10.42	Pass	V
9538/1907.6	100	300	20.89	33.01	-12.12	Pass	H
	100	212	20.74	33.01	-12.27	Pass	V

Appendix H)Field strength of spurious radiation

Receiver Setup:	Frequency	Detector	RBW	VBW	Remark
	0.009MHz-30MHz	Peak	10kHz	30kHz	Peak
	30MHz-1GHz	Peak	100kHz	300kHz	Peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
Measurement Procedure:	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 0.8m high 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: $\text{ERP(dBm)} = \text{Pg(dBm)} - \text{cable loss (dB)} + \text{antenna gain (dBd)}$ $\text{EIRP(dBm)} = \text{Pg(dBm)} - \text{cable loss (dB)} + \text{antenna gain (dBi)}$ $\text{EIRP} = \text{ERP} + 2.15\text{dB}$ 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:	Attenuated at least 43+10log(P)				

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	100	250	-44.14	-13	-31.14	Pass	H
2472.6	100	200	-40.87	-13	-27.87	Pass	H

1648.4	100	298	-43.86	-13	-30.86	Pass	V
2472.6	100	193	-38.08	-13	-25.08	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	100	248	-45.16	-13	-32.16	Pass	H
2509.8	100	250	-41.05	-13	-28.05	Pass	H

1673.2	100	174	-44.87	-13	-31.87	Pass	V
2509.8	100	230	-39.09	-13	-26.09	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	100	250	-44.64	-13	-31.64	Pass	H
2546.4	100	200	-39.87	-13	-26.87	Pass	H

1697.6	100	195	-43.88	-13	-30.88	Pass	V
2546.4	100	205	-38.97	-13	-25.97	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	100	295	-46.15	-13	-33.15	Pass	H
2472.6	100	175	-40.06	-13	-27.06	Pass	H

1648.4	100	250	-45.88	-13	-32.88	Pass	V
2472.6	100	217	-40.88	-13	-27.88	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	100	295	-48.26	-13	-35.26	Pass	H
2509.8	100	177	-42.26	-13	-29.26	Pass	H

1673.2	100	150	-47.88	-13	-34.88	Pass	V
2509.8	100	230	-41.88	-13	-28.88	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	100	250	-46.26	-13	-33.26	Pass	H
2546.4	100	195	-41.06	-13	-28.06	Pass	H

1697.6	100	193	-45.88	-13	-32.88	Pass	V
2546.4	100	217	-42	-13	-29	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	100	173	-50.87	-13	-37.87	Pass	H
2479.2	100	195	-42.84	-13	-29.84	Pass	H

1652.8	100	230	-49.87	-13	-36.87	Pass	V
2479.2	100	327	-44.97	-13	-31.97	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	100	350	-49.84	-13	-36.84	Pass	H
2509.8	100	170	-44.08	-13	-31.08	Pass	H

1673.2	100	205	-48.08	-13	-35.08	Pass	V
2509.8	100	179	-42.88	-13	-29.88	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	100	150	-48.06	-13	-35.06	Pass	H
2539.8	100	217	-43.16	-13	-30.16	Pass	H

1693.2	100	284	-50.1	-13	-37.1	Pass	V
2539.8	100	250	-44.88	-13	-31.88	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	100	239	-44.13	-13	-31.13	Pass	H
5550.6	100	284	-50.09	-13	-37.09	Pass	H

3700.4	100	150	-43.27	-13	-30.27	Pass	V
5550.6	100	270	-50.81	-13	-37.81	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	100	250	-44.06	-13	-31.06	Pass	H
5640.0	100	170	-51.08	-13	-38.08	Pass	H

3760.0	100	150	-43.97	-13	-30.97	Pass	V
5640.0	100	170	-50.97	-13	-37.97	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	100	150	-44.75	-13	-31.75	Pass	H
5729.4	100	170	-50.06	-13	-37.06	Pass	H

3819.6	100	230	-43.08	-13	-30.08	Pass	V
5729.4	100	270	-51.08	-13	-38.08	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	100	176	-47.15	-13	-34.15	Pass	H
5550.6	100	195	-52.31	-13	-39.31	Pass	H

3700.4	100	219	-46.27	-13	-33.27	Pass	V
5550.6	100	228	-53.22	-13	-40.22	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	100	359	-47.06	-13	-34.06	Pass	H
5640.0	100	183	-52.16	-13	-39.16	Pass	H

3760.0	100	205	-45.08	-13	-32.08	Pass	V
5640.0	100	192	-50.08	-13	-37.08	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	100	179	-48.86	-13	-35.86	Pass	H
5729.4	100	150	-52.06	-13	-39.06	Pass	H

3819.6	100	195	-49.1	-13	-36.1	Pass	V
5729.4	100	200	-51.08	-13	-38.08	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	100	240	-49.86	-13	-36.86	Pass	H
5557.2	100	250	-54.06	-13	-41.06	Pass	H

3704.8	100	195	-50.98	-13	-37.98	Pass	V
5557.2	100	205	-53.08	-13	-40.08	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	100	239	-51.06	-13	-38.06	Pass	H
5640.0	100	177	-54.07	-13	-41.07	Pass	H

3760.0	100	217	-50.1	-13	-37.1	Pass	V
5640.0	100	150	-53.08	-13	-40.08	Pass	V

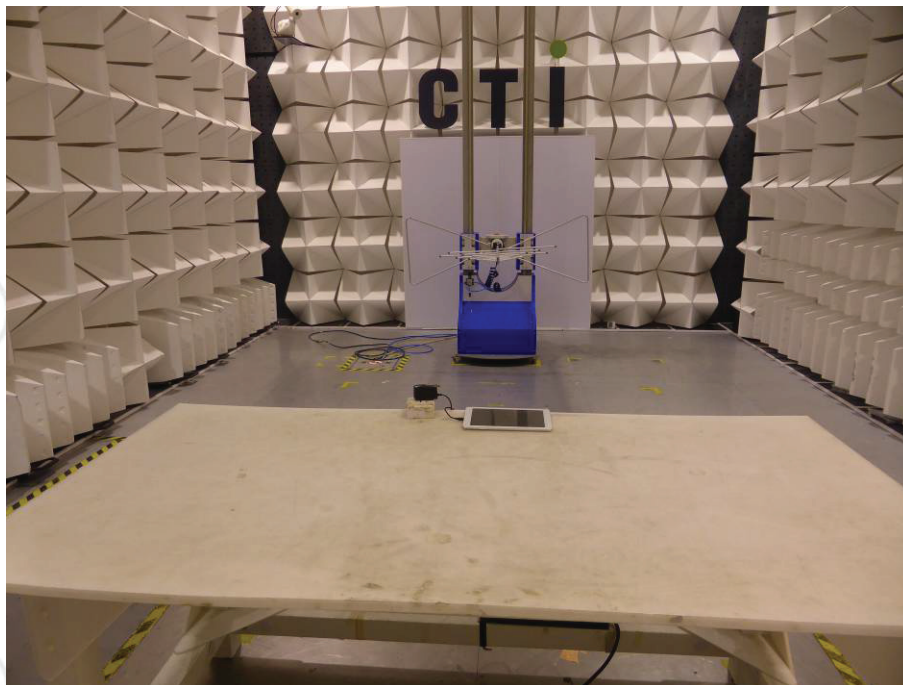
WCDMA band II (RMC 12.2K), 9538 channel/1907.6MHz(highest channel)							
Frequency (MHz)	Height (cm)	Azimuth (deg)	Spurious Emission Level (dBm)	Limit (dBm)	Over Limit (dB)	Result	Antenna Polaxis.
3815.2	100	150	-50.06	-13	-37.06	Pass	H
5722.8	100	306	-54.08	-13	-41.08	Pass	H
3815.2	100	207	-51.17	-13	-38.17	Pass	V
5722.8	100	239	-54.86	-13	-41.86	Pass	V

Note:

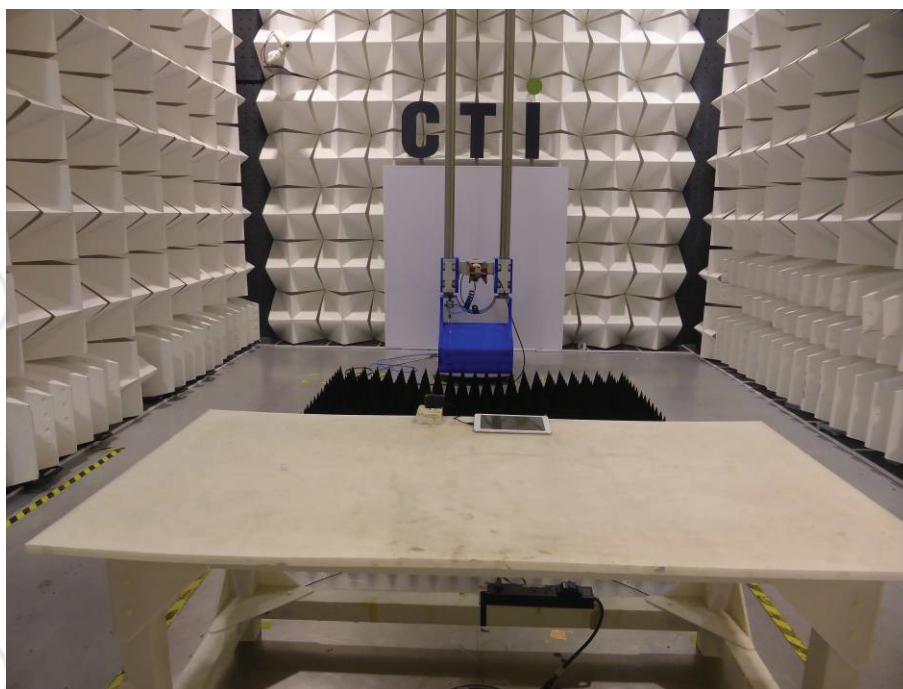
1) Scan from 9kHz to 25GHz, the disturbance above 13GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below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

PHOTOGRAPHS OF TEST SETUP

Test mode No.: E10



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



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

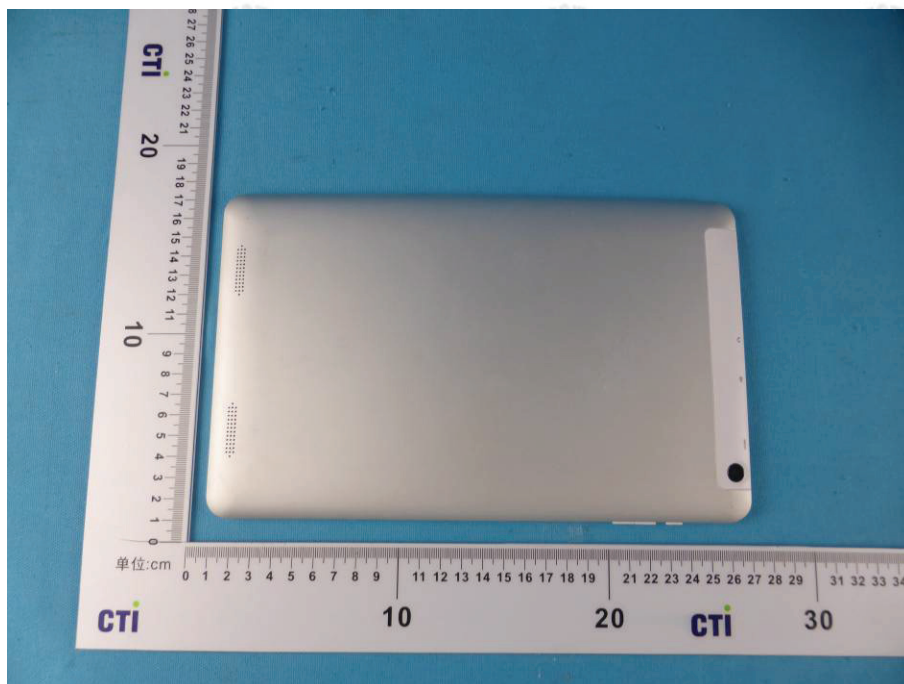
PHOTOGRAPHS OF EUT Constructional Details



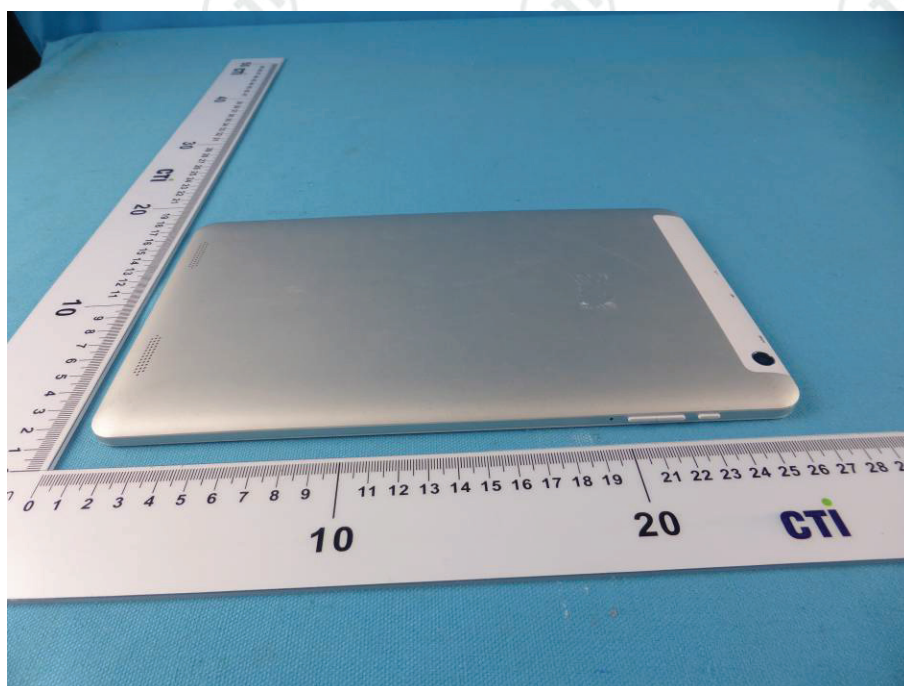
View of external EUT-1



View of external EUT-2



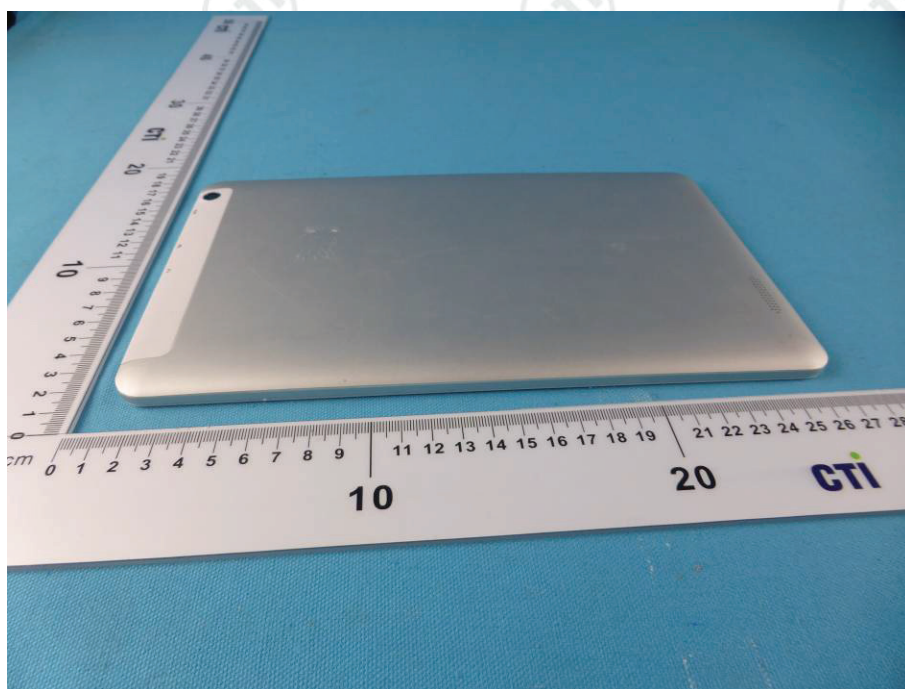
View of external EUT-3



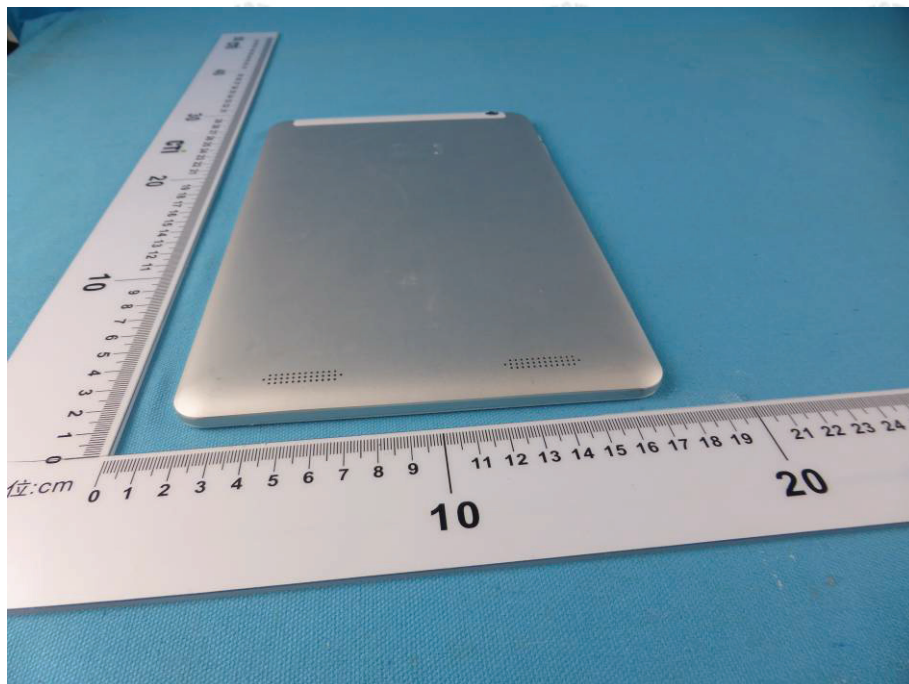
View of external EUT-4



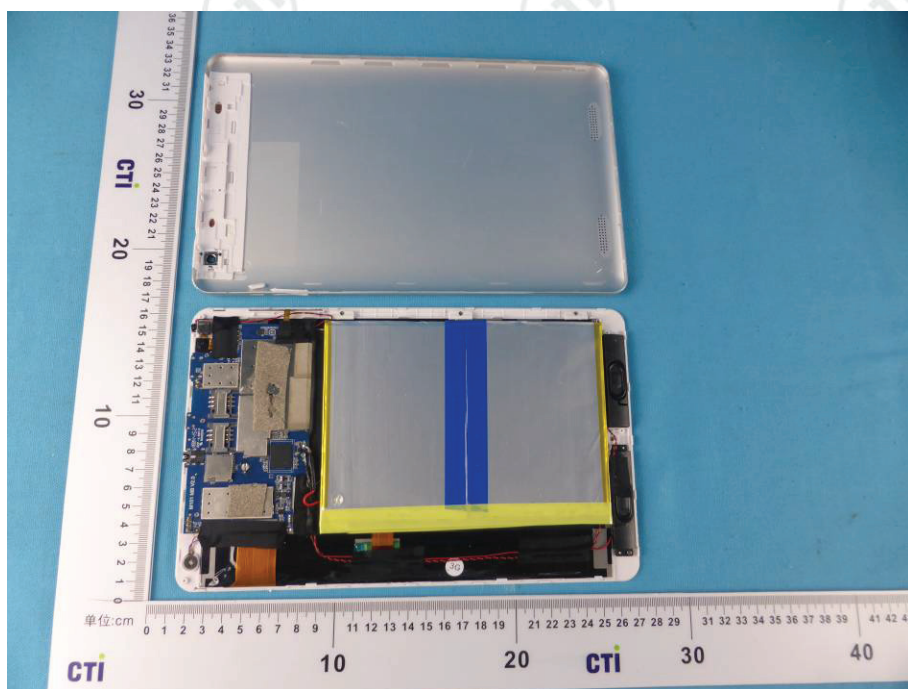
View of external EUT-5



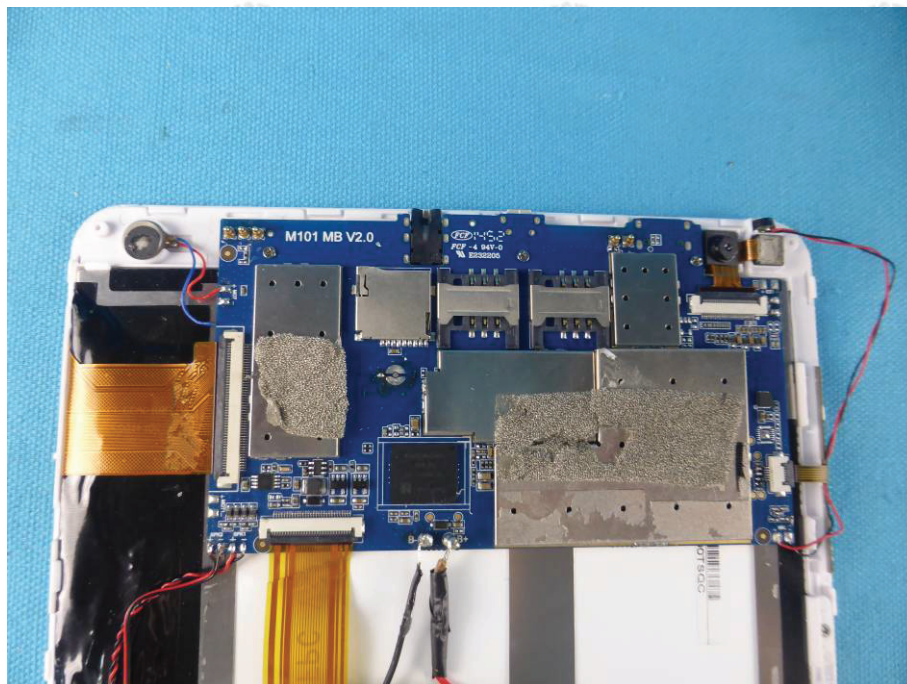
View of external EUT-6



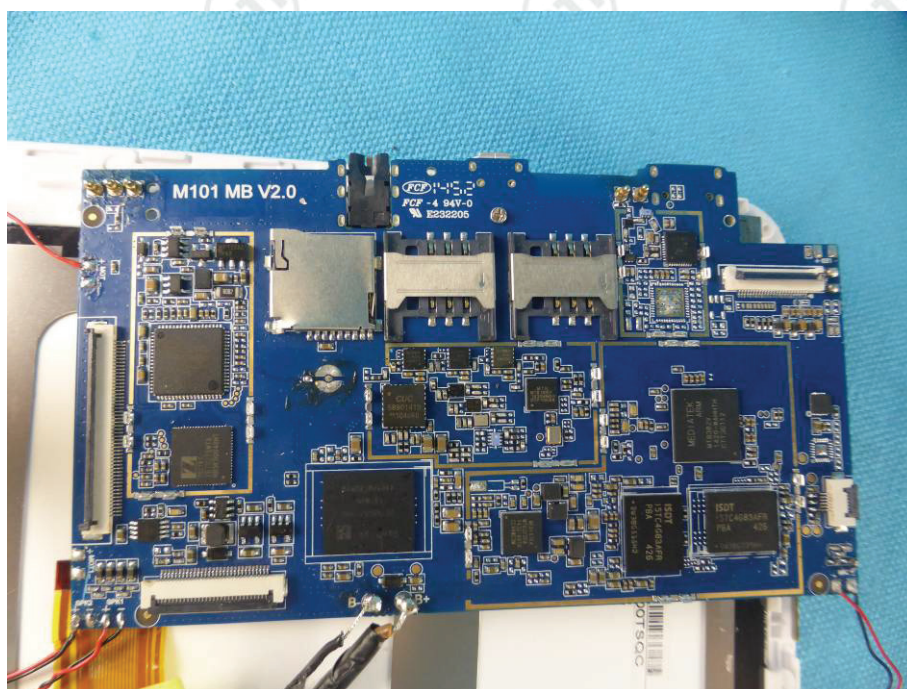
View of external EUT-7



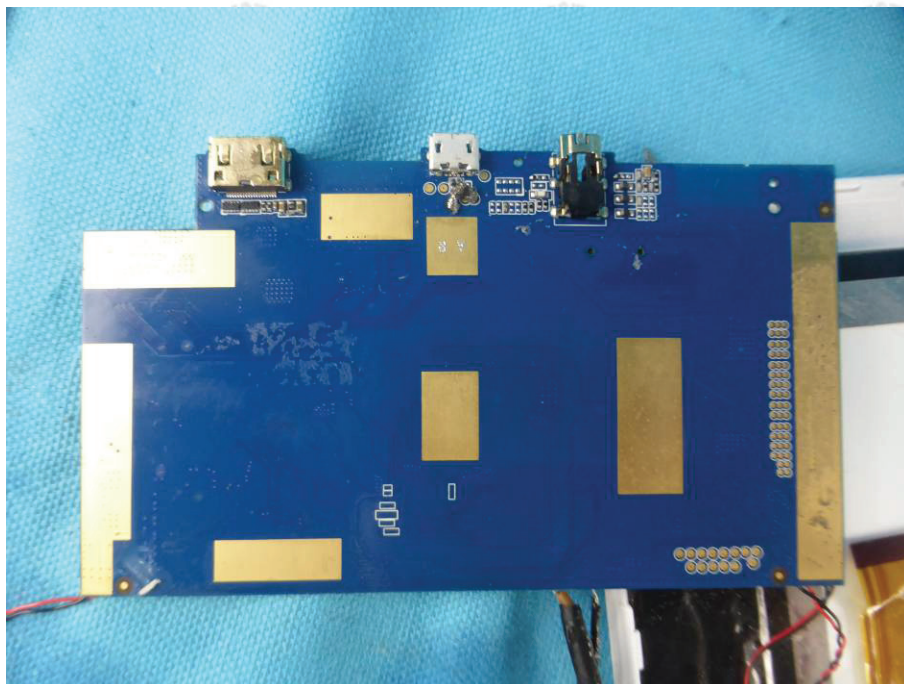
View of internal EUT-1



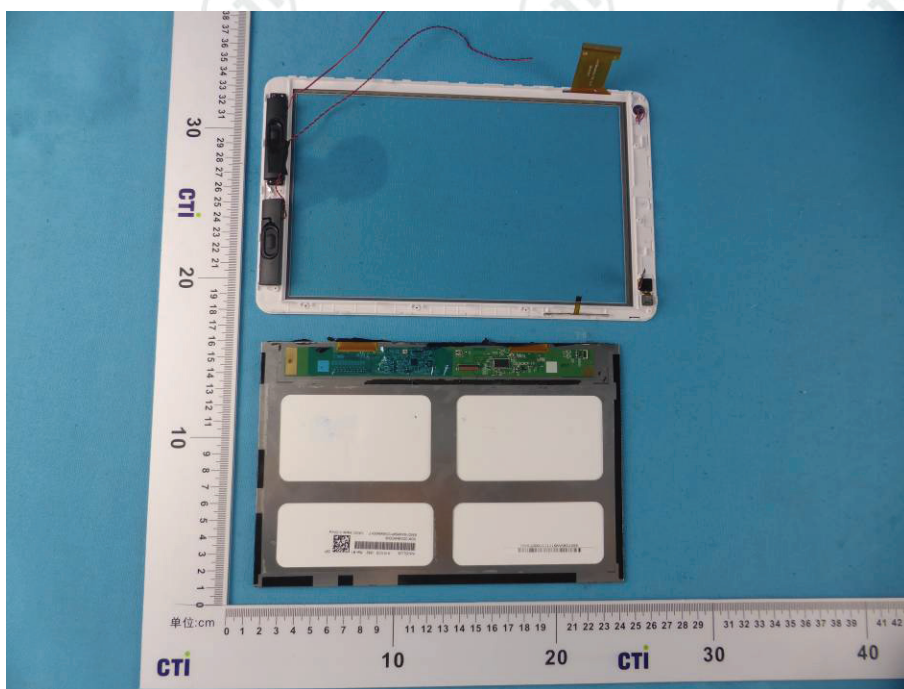
View of internal EUT-2



View of internal EUT-3



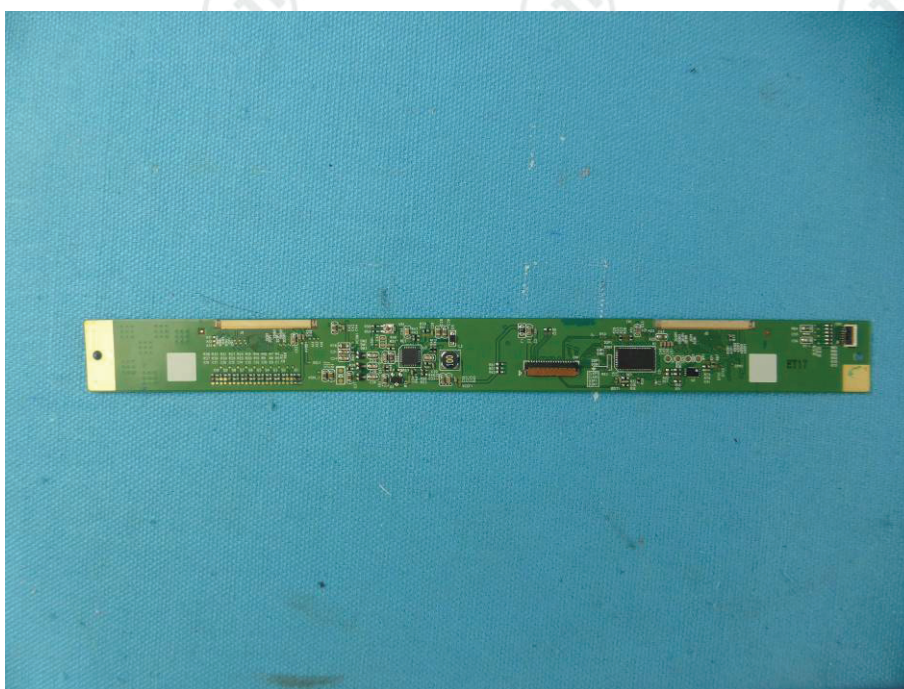
View of internal EUT-4



View of internal EUT-5



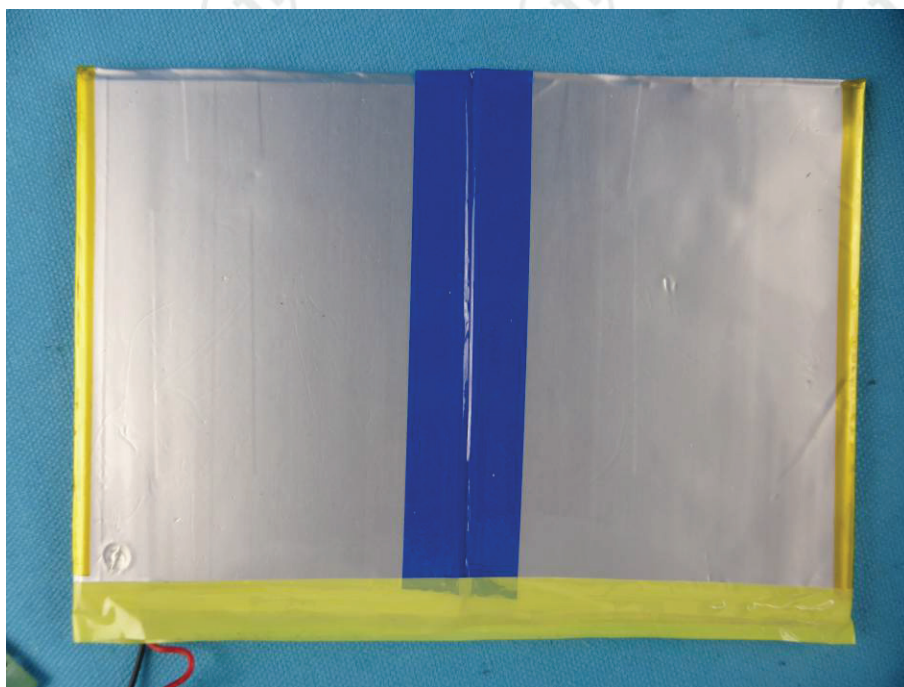
View of internal EUT-6



View of internal EUT-7



View of internal EUT-8



View of internal EUT-9

*** End of Report ***

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