FCC CFR47 PART 22 SUBPART H
FCC CFR47 PART 24 SUBPART E
INDUSTRY CANADA RSS-132 ISSUE 2
INDUSTRY CANADA RSS-133 ISSUE 5

CERTIFICATION TEST REPORT

FOR

PHONE WITH 802.11B/G/N AND BLUETOOTH 2.1+EDR

MODEL NUMBER: P160UNA

FCC ID: O8F-BROU
IC: O8F-BROU

REPORT NUMBER: 10U13357-2A

ISSUE DATE: JANUARY 18, 2011

Prepared for

PALM
950 MAUDE AVENUE
SUNNYVALE, CA 94085, U.S.A.

Prepared by

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NVLAP LAB CODE 200065-0

Revision History

Rev.	Issue Date	Revisions	Revised By
---	10/28/10	Initial Issue	T. Chan
A	01/18/11	Added KDB 680106 on Section 5.4	A. Zaffar

TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: PALM
950 MAUDE AVENUE
SUNNYVALE, CA 94085, U.S.A.

EUT DESCRIPTION: Phone with 802.11b/g/n and Bluetooth 2.1+EDR

MODEL: P160UNA

SERIAL NUMBER: BD2LN6809 (Conducted Unit), BD2LN6884 (Radiated Unit)

DATE TESTED: OCTOBER 19-22, 2010

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 22 Subpart H and Part 24 Subpart E	Pass
IC RSS-132 ISSUE 2, RSS-133 ISSUE 5	Pass

Compliance Certification Services (UL CCS) tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL CCS based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL CCS and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL CCS will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL CCS By:

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ENGINEERING MANAGER
UL CCS

Tested By:

CHIN PANG
EMC ENGINEER
UL CCS

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA-603-C, FCC CFR 47 Part 2, FCC CFR 47 Part 22, FCC CFR Part 24, and RSS-132 Issue 2, and RSS-133 Issue 5

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 Benicia Street, Fremont, California, USA.

UL CCS is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at http://www.ccsemc.com.

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	3.52 dB
Radiated Disturbance, 30 to 1000 MHz	4.94 dB

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is 850/900/1800/1900 MHz GSM/GPRS/EDGE and 850/1900/2100 WCDMA/HSDPA/HSUPA phone with 802.11b/g/n and Bluetooth v2.1+EDR.

GENERAL INFORMATION

Power Requirements	100-240 VAC / 50-60 Hz
List of frequencies generated or used by the EUT	1GHz

ACCESSORIES

The EUT was constructed and using the following accessories:

AC Adapter 1	Brand Name	Palm	P/N: 157-10124-00
	Power Rating	I/P: 100-240 Vac, 0.2 A, O/P: 5 Vdc, 1000 mA	
AC Adapter 2	Brand Name	Palm	P/N: 157-10130-00
	Power Rating	I/P: 100-240 Vac, 0.2 A, O/P: 5 Vdc, 1000 mA	
Inductive Charger	Brand Name	Palm	P/N: 157-10123-00
	Power Rating	I/P: 5 Vdc, 1000 mA	
Battery 1	Brand Name	Palm	P/N: 157-10150-00
	Power Rating	3.7Vdc, 920 mAh	Type: Rechargeable Li-ion battery
Battery 2	Brand Name	Palm	P/N: 157-10151-00
	Power Rating	3.7Vdc, 920 mAh	Type: Rechargeable Li-ion battery
Audio adapter	Brand Name	Palm	P/N: 180-10815-00
Earphone	Brand Name	Palm	P/N: 180-10632-00
USB Cable	Brand Name	Palm	P/N: 180-10647-00
USB cable with adapter	Brand Name	Palm	P/N: 180-10816-00

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum ERP & EIRP output powers as follows:

Cellular Band

Frequency range (MHz)	Modulation	Conducted		ERP	
		dBm	mW	dBm	mW
824.2 – 848.80	GPRS	33.20	2089.3	30.20	1047.1
824.2 – 848.80	EGPRS	27.30	537.0	25.80	380.2
826.4 – 846.6	UMTS, REL99	27.57	571.5	23.90	245.5
826.4 – 846.6	UMTS, HSDPA	27.47	558.5	23.50	223.9

PCS Band

Frequency range (MHz)	Modulation	Conducted		EIRP	
		dBm	mW	dBm	mW
1850.20 – 1909.8	GPRS	30.20	1047.1	32.10	1621.8
1850.20 – 1909.8	EGPRS	24.80	302.0	28.90	776.2
1852.4 – 1907.6	UMTS, REL99	26.60	457.1	27.30	537.0
1852.4 – 1907.6	UMTS, HSDPA	25.70	371.5	24.90	309.0

5.3. SOFTWARE AND FIRMWARE

The EUT is linked with Agilent Communication Test Set.

5.4. WORST-CASE CONFIGURATION AND MODE

Based on the following investigation results, see Section 7. RF POWER OUTPUT VERIFCATION. The highest peak power and enhanced data rate is the worst-case scenario for all measurements.

Worst case modes:

- Cellular & PCS bands for GSM
  - GPRS (GSMK)
  - EGPRS (8PSK)
- Band V & Band II for UMTS (WCDMA)
  - Rel 99
  - Rel 6 HSDPA Subtest 1

For the fundamental investigation, since the EUT is a portable device that has three orientations; therefore X, Y and Z orientations have been investigated, also with AC/DC adapter, and inductive charging dock position, and the worst case was found to be at Y orientation without AC/DC adapter.

The worst-case configuration has been evaluated on EUT with antenna @ Y-position for both 850MHz and 1900MHz bands by comparing the fundamental ERP / EIRP output power.

For the AC line conducted test, both worst configurations were tested as EUT with AC/DC adapter and EUT with inductive charging dock.

KDB 680106 "Client Device Considerations" was considered and evaluation performed as applicable to this device. The inductive charger has been certified under FCC ID: O8F-TST1. IC: 3905A-TST1. EUT is working in charging mode with the inductive charger. The inductive back cover is not removable. For more information, please refer to this inductive charger FCC ID/ IC ID.

DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
DC Power Supply	Agilent / HP	E3610A	KR24104150	NA
Communication Test Set	Agilent	E5515C	GB46160222	NA
Directiional Coupler	Amplifier Reseach	DC7144A	NA	NA
EarPhone	Palm	NA	NA	NA

I/O CABLES (CONDUCTED TEST)

I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	2	US 115V	Un-shielded	2m	NA
2	RF In/Out	1	Directional Coupler	Un-shielded	1m	NA
3	RF In/Out	1	Communication Test Set	Un-shielded	1.2m	NA
4	RF In/Out	1	Phone	Un-shielded	0.1m	NA

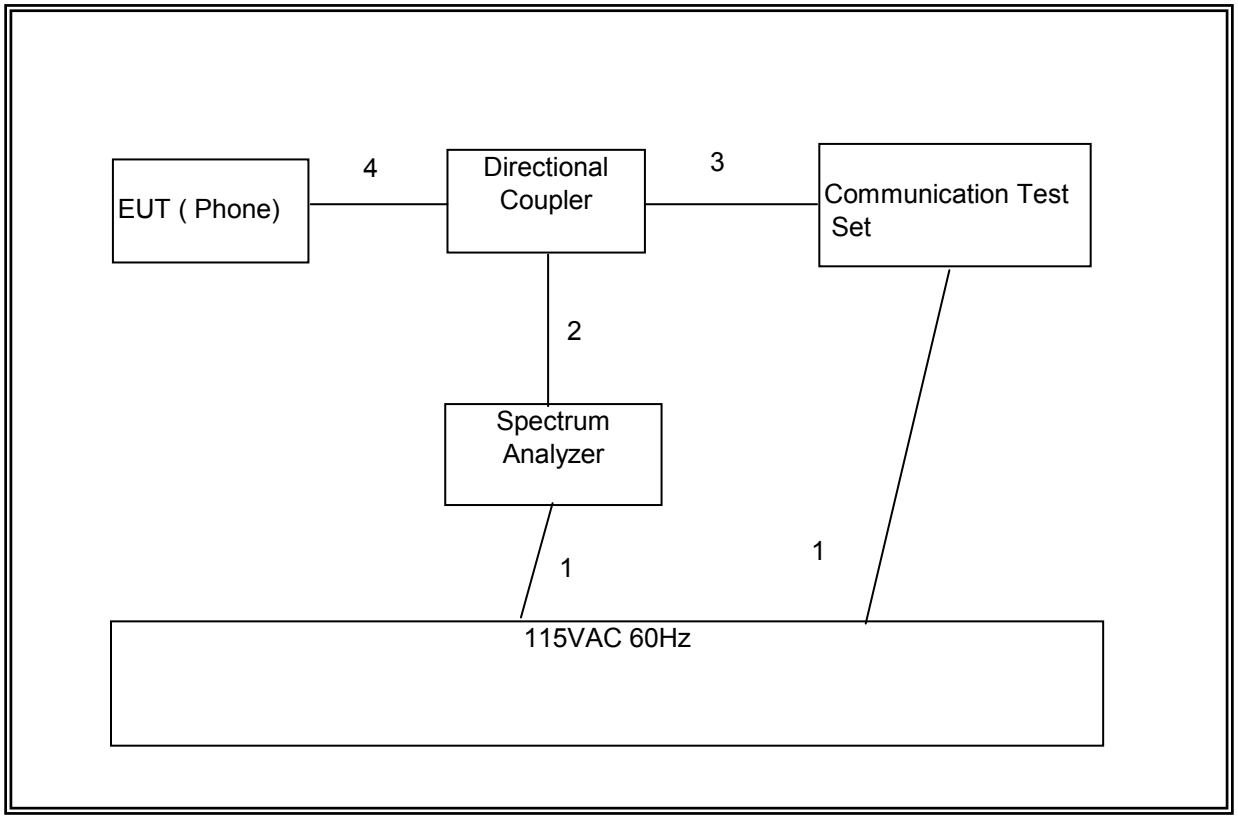
I/O CABLE LIST						
Cable No.	Port	# of Identical Ports	Connector Type	Cable Type	Cable Length	Remarks
1	AC	1	US 115V	Un-shielded	2m	NA
2	DC	1	DC	Un-shielded	None	NA
3	Audio	1	Earphone	Un-shielded	1m	NA
4	RF In/Out	1	Horn	Un-shielded	4m	NA

I/O CABLES (RADIATED TEST)

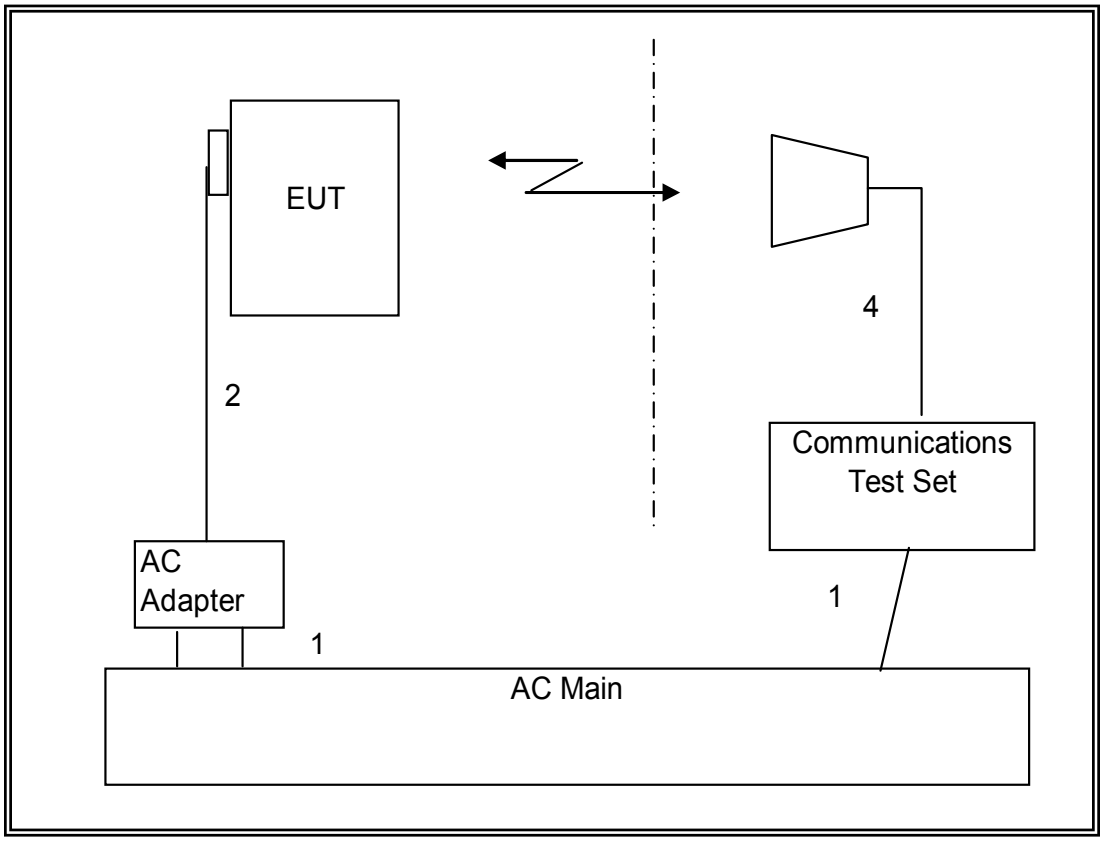
TEST SETUP

The EUT is a stand alone device. A link is established between the EUT and the CMU200 communications test set.

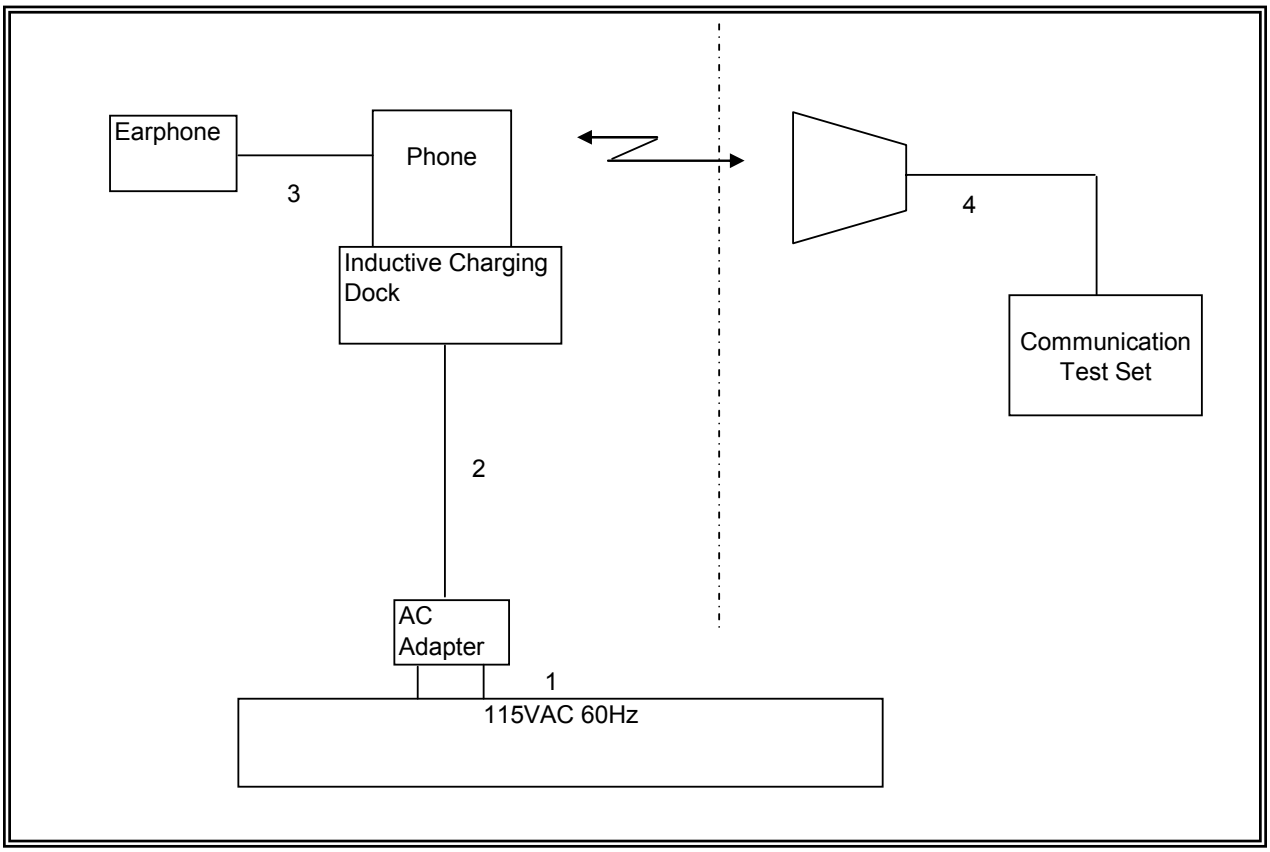
SETUP DIAGRAM FOR CONDUCTED TESTS



SETUP DIAGRAM FOR RADIATED TESTS



SETUP DIAGRAM FOR EUT WITH INDUCTIVE CHARGING DOCK



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

TEST EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Asset**	**Cal Due**
Preamplifier, 26.5 GHz	Agilent / HP	8449B	C01063	07/14/11
Antenna, Horn, 18 GHz	EMCO	3115	C00783	06/29/11
Antenna, Bilog, 2 GHz	Sunol Sciences	JB1	C01011	07/12/11
Spectrum Analyzer, 26.5 GHz	Agilent / HP	E4440A	C01178	08/30/11
Communications Test Set	Agilent / HP	E5515C	C01086	06/17/11
Peak Power Meter	Agilent / HP	E4416A	C00963	12/04/11
Peak / Average Power Sensor	Agilent / HP	E9327A	C00964	01/07/12
Temperature / Humidity Chamber	Thermotron	SE 600-10-10	C00930	04/06/11
Highpass Filter, 2.7 GHz	Micro-Tronics	HPM13194	N02687	CNR
Highpass Filter, 1.5 GHz	Micro-Tronics	HPM13193	N02688	CNR
Signal Generator, 20 GHz	Agilent / HP	83732B	C00774	07/14/12
Antenna, Tuned Dipole 400~1000	ETS	3121C DB4	C00993	07/10/11

7. PROCEDURE USED TO ESTABLISH TEST SIGNAL

RULE PART(S)

FCC: §2.1046
IC: RSS-132, 4.4; RSS-133, 6.4

LIMITS

For reporting purposes only

TEST PROCEDURE

The transmitter output was connected to a CMU200 Communication Test Set and configured to operate at maximum power in a call. The peak power was measured using the spectrum analyzer at three equally spaced operating frequencies for each band. The RBW was set to 300 KHz for the GSM and EDGE measurements and 5 MHz for the UMTS (WCDMA) measurements.

MODES TESTED

- GSM – GSM/GPRS (GSMK) & EGPRS (8PSK) modes.
- UMTS (W-CDMA) - Rel 99, Rel 6 HSDPA and HSPA (HSDPA & HSUPA)

RESULTS

7.1. GSM

RF CONDUCTED POWER OUTPUT

GSM (GMSK)

Band	Ch No.	f (MHz)	Avg burst Pwr (dBm)
GSM850	128	824.2	33.0
	190	836.6	33.1
	251	848.8	33.2
GSM1900	512	1850.2	30.4
	661	1880	30.4
	810	1909.8	30.2

GPRS (GMSK) - Coding Scheme: CS1

Band	Ch No.	f (MHz)	Avg burst Pwr (dBm)				Avg burst Pwr (dBm)			
			1 slot	Frame Avg Pwr	2 slot	Frame Avg Pwr	3 slot	Frame Avg Pwr	4 slot	**Frame Avg Pwr**
GSM850	128	824.2	32.9	23.9	31.4	25.4	28.8	24.5	28.3	25.3
	190	836.6	33.0	24.0	31.2	25.2	28.9	24.6	28.3	25.3
	251	848.8	33.2	24.2	31.4	25.4	28.8	24.5	28.6	25.6
GSM1900	512	1850.2	30.2	21.2	30.4	24.4	29.8	25.5	26.8	23.8
	661	1880	30.2	21.2	30.4	24.4	29.9	25.6	27.1	24.1
	810	1909.8	30.2	21.2	30.3	24.3	29.8	25.5	27.1	24.1

EGPRS (8PSK) - Coding Scheme: MCS5

Band	Ch No.	f (MHz)	Avg burst Pwr (dBm)				Avg burst Pwr (dBm)			
			1 slot	Frame Avg Pwr	2 slot	Frame Avg Pwr	3 slot	Frame Avg Pwr	4 slot	Frame Avg Pwr
GSM850	128	824.2	27.3	18.3	27.1	21.1	27.2	22.9	27.0	24.0
	190	836.6	27.3	18.3	27.1	21.1	27.2	22.9	27.0	24.0
	251	848.8	27.3	18.3	27.1	21.1	27.2	22.9	27.0	24.0
GSM1900	512	1850.2	24.7	15.7	24.5	18.5	24.8	20.5	24.5	21.5
	661	1880	24.8	15.8	24.7	18.7	24.9	20.6	24.7	21.7
	810	1909.8	24.7	15.7	24.5	18.5	24.8	20.5	24.5	21.5

Note: Worst-case mode for Multi-slot class

- Multi-slot class 10: 2 slot for GPRS850/1900
- Multi-slot class 12: 4 slot for GPRS850, 3 slot for GPRS1900

7.2. UMTS RELEASE 99

The following tests were completed according to the test requirements outlined in section 5.2 of the 3GPP TS34.121-1 V7.5.0 specification. The EUT supports power Class 3, which has a nominal maximum output power of 24 dBm (+1.7/-3.7). A summary of these settings are illustrated below:

	Mode	Rel99
	Subtest	-
WCDMA General Settings	Loopback Mode	Test Mode 1
	Rel99 RMC	12.2kbps RMC
	HSDPA FRC	Not Applicable
	HSUPA Test	Not Applicable
	Power Control Algorithm	Algorithm2
	βc	Not Applicable
	βd	Not Applicable
	βec	Not Applicable
	βc/βd	8/15
	βhs	Not Applicable
	βed	Not Applicable

Results

Rel 99 (12.2kps RMC)

Band	Mode	UL Ch No.	DL Ch No.	f (MHz)	Output Power (dBm)
					Peak
UMTS850 (Band V)	Rel 99 12.2kps RMC	4132	4357	826.4	27.51
		4183	4408	836.6	27.55
		4233	4458	846.6	**27.57**
UMTS1900 (Band II)	Rel 99 12.2kps RMC	9262	9662	1852.4	**26.80**
		9400	9800	1880.0	26.50
		9538	9938	1907.6	26.50

7.3. UMTS HSDPA

The following 4 Sub-tests were completed according to Release 6 procedures in section 5.2 of 3GPP TS34.121. A summary of these settings are illustrated below:

	Mode	Rel6 HSDPA	Rel6 HSDPA	Rel6 HSDPA	Rel6 HSDPA
	Subtest	1	2	3	4
WCDMA General Settings	Loopback Mode	Test Mode 1			
	Rel99 RMC	12.2kbps RMC			
	HSDPA FRC	H-Set1			
	HSUPA Test	Not Applicable			
	Power Control Algorithm	Algorithm 2			
	βc	2/15	12/15	15/15	15/15
	βd	15/15	15/15	8/15	4/15
	Bd (SF)	64			
	βec	-	-	-	-
	βc/βd	2/15	12/15	15/8	15/4
	βhs	4/15	24/15	30/15	30/15
	βed	Not Applicable			
	CM (dB)	0	1	1.5	1.5
	MPR (dB)	0	0	0.5	0.5
HSDPA Specific Settings	DACK	8			
	DNAK	8			
	DCQI	8			
	Ack-Nack repetition factor	3			
	CQI Feedback (Table 5.2B.4)	4ms			
	CQI Repetition Factor (Table 5.2B.4)	2			
	Ahs = βhs/βc	30/15			

RESULTS

REL 6 HSDPA

Band	Mode	UL Ch No.	DL Ch No.	f (MHz)	Output Power (dBm)
					Peak
UMTS850 (Band V)	Subtest 1	4132	4357	826.4	27.27
		4183	4408	836.6	27.23
		4233	4458	846.6	**27.47**
	Subtest 2	4132	4357	826.4	27.06
		4183	4408	836.6	27.22
		4233	4458	846.6	27.16
	Subtest 3	4132	4357	826.4	26.98
		4183	4408	836.6	27.10
		4233	4458	846.6	27.18
	Subtest 4	4132	4357	826.4	27.10
		4183	4408	836.6	26.52
		4233	4458	846.6	27.36
UMTS1900 (Band II)	Subtest 1	9262	9662	1852.4	26.30
		9400	9800	1880.0	**26.50**
		9538	9938	1907.6	26.10
	Subtest 2	9262	9662	1852.4	26.00
		9400	9800	1880.0	26.00
		9538	9938	1907.6	25.95
	Subtest 3	9262	9662	1852.4	26.00
		9400	9800	1880.0	26.00
		9538	9938	1907.6	26.00
	Subtest 4	9262	9662	1852.4	26.00
		9400	9800	1880.0	26.00
		9538	9938	1907.6	26.05

7.4. RF POWER OUTPUT – UMTS Rel 6 HSPA (HSDPA & HSUPA)

The following 5 Sub-Tests were completed according to the test requirements outlined in section 5.2B of the 3GPP TS34.121-1 V7.5.0 specification. All TX RMS and Peak power requirements were met according to table 5.2B.5 and achieved through the outlined test procedure in section 5.2B.4.2. A summary of these settings are illustrated below:

	Mode	Rel6 HSUPA	Rel6 HSUPA	Rel6 HSUPA	Rel6 HSUPA	Rel6 HSUPA
	Subtest	1	2	3	4	5
WCDMA General Settings	Loopback Mode	Test Mode 1				
	Rel99 RMC	12.2kbps RMC				
	HSDPA FRC	H-Set1				
	HSUPA Test	HSUPA Loopback				
	Power Control Algorithm	Algorithm2				
	βc	11/15	6/15	15/15	2/15	15/15
	βd	15/15	15/15	9/15	15/15	15/15
	βec	209/225	12/15	30/15	2/15	24/15
	βc/βd	11/15	6/15	15/9	2/15	15/15
	βhs	22/15	12/15	30/15	4/15	30/15
	βed	1309/225	94/75	47/15	56/75	134/15
	CM (dB)	1.0	3.0	2.0	3.0	1.0
	MRP (dB)	0	2	1	2	0
HSDPA Specific Settings	DACK	8				
	DNAK	8				
	DCQI	8				
	Ack-Nack repetition factor	3				
	CQI Feedback (Table 5.2B.4)	4ms				
	CQI Repetition Factor (Table 5.2B.4)	2				
	Ahs = βhs/βc	30/15				
HSUPA Specific Settings	D E-DPCCH	6	8	8	5	7
	DHARQ	0	0	0	0	0
	AG Index	20	12	15	17	21
	ETFCI (from 34.121 Table C.11.1.3)	75	67	92	71	81
	Associated Max UL Data Rate kbps	242.1	174.9	482.8	205.8	308.9
	Reference E_TFCIs	E-TFCI 11 E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO 23 E-TFCI 75 E-TFCI PO 26 E-TFCI 81 E-TFCI PO 27		E-TFCI 11 E-TFCI PO 4 E-TFCI 92 E-TFCI PO 18	E-TFCI 11 E-TFCI PO 4 E-TFCI 67 E-TFCI PO 18 E-TFCI 71 E-TFCI PO 23 E-TFCI 75 E-TFCI PO 26 E-TFCI 81 E-TFCI PO 27	

Result

RF POWER OUTPUT - REL 6 HSPA (HSDPA & HSUPA)					
Band	Subtest	UL Ch	DL Ch	Frequency	Conducted output power (dBm)
					Peak
UMTS850	1	4132	4357	826.4	27.28
		4183	4408	836.6	27.35
		4233	4458	846.6	**27.36**
	2	4132	4357	826.4	26.20
		4183	4408	836.6	26.10
		4233	4458	846.6	26.15
	3	4132	4357	826.4	26.58
		4183	4408	836.6	26.60
		4233	4458	846.6	26.55
	4	4132	4357	826.4	26.06
		4183	4408	836.6	26.10
		4233	4458	846.6	26.00
	5	4132	4357	826.4	27.15
		4183	4408	836.6	27.10
		4233	4458	846.6	27.15
UMTS1900	1	9262	9662	1852.4	26.56
		9400	9800	1880.0	26.54
		9538	9938	1907.6	**26.55**
	2	9262	9662	1852.4	25.45
		9400	9800	1880.0	25.30
		9538	9938	1907.6	25.31
	3	9262	9662	1852.4	25.75
		9400	9800	1880.0	25.70
		9538	9938	1907.6	25.77
	4	9262	9662	1852.4	25.10
		9400	9800	1880.0	25.25
		9538	9938	1907.6	25.20
	5	9262	9662	1852.4	26.20
		9400	9800	1880.0	26.25
		9538	9938	1907.6	26.25

8. CONDUCTED TEST RESULTS

8.1. OCCUPIED BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the -26 dB bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal –26 dB bandwidth function is utilized.

RESULTS

CELL,GPRS Modulation

Channel	Frequency (MHz)	99% BW (kHz)	-26dB BW (kHz)
Low	824.20	245.775	305.025
Middle	836.60	239.574	284.727
High	848.80	245.314	292.571

CELL,EGPRS Modulation

Channel	Frequency (MHz)	99% BW (kHz)	-26dB BW (kHz)
Low	824.20	229.406	287.025
Middle	836.60	235.743	293.988
High	848.80	228.411	297.436

PCS, GPRS Modulation

Channel	Frequency (MHz)	99% BW (kHz)	-26dB BW (kHz)
Low	1850.20	234.082	309.999
Middle	1880.00	237.141	309.625
High	1909.80	236.189	303.401

PCS, EGPRS Modulation

Channel	Frequency (MHz)	99% BW (kHz)	-26dB BW (kHz)
Low	1850.20	244.526	297.087
Middle	1880.00	238.159	293.707
High	1909.80	242.506	273.263

CELL,UMTS REL 99 Modulation

Channel	Frequency (MHz)	99% BW (MHz)	-26dB BW (MHz)
Low	826.40	4.164	4.615
Middle	836.60	4.192	4.490
High	846.60	4.173	4.472

CELL,UMTS HSDPA Modulation

Channel	Frequency (MHz)	99% BW (MHz)	-26dB BW (MHz)
Low	826.40	4.158	4.576
Middle	836.60	4.175	4.594
High	846.60	4.142	4.627

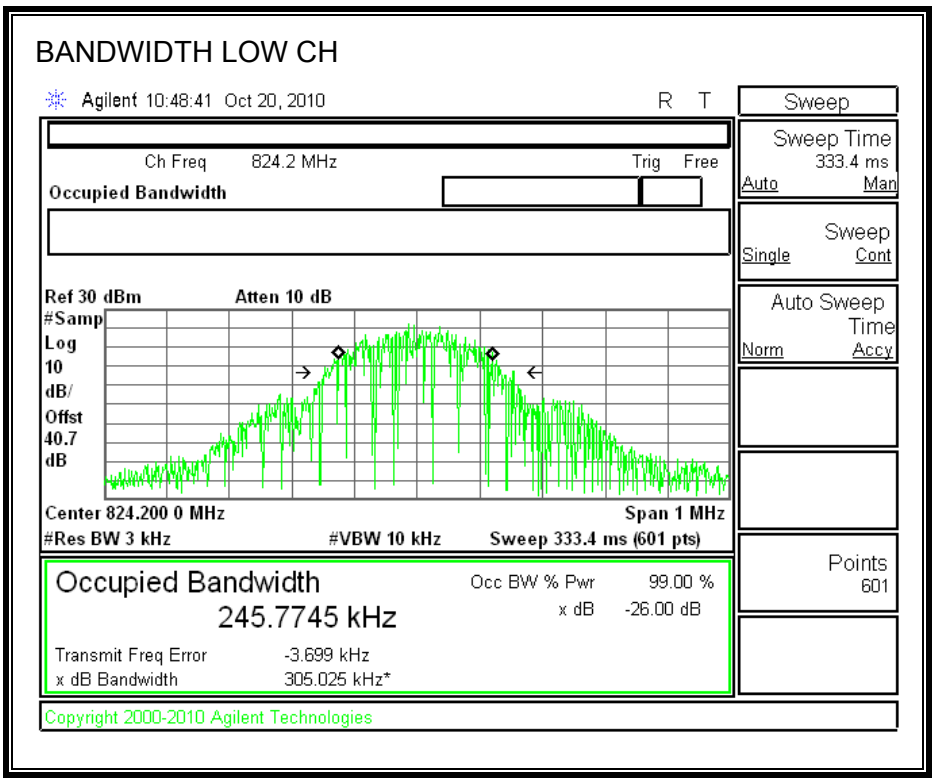
PCS, UMTS, REL99 Modulation

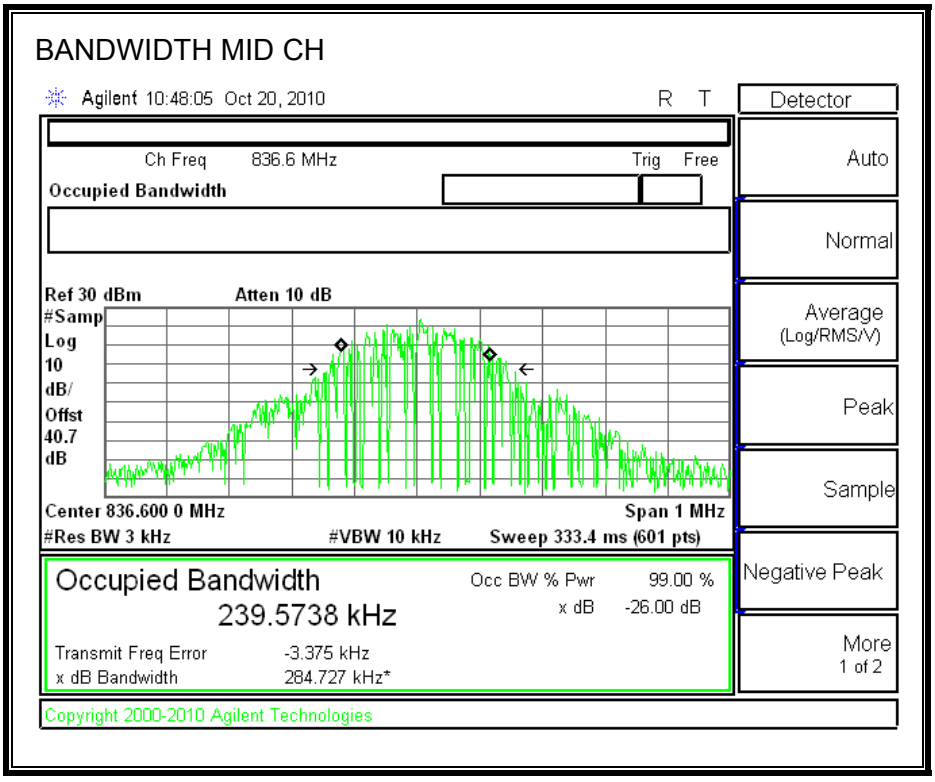
Channel	Frequency (MHz)	99% BW (MHz)	-26dB BW (MHz)
Low	1852.40	4.144	4.593
Middle	1880.00	4.140	4.468
High	1907.60	4.204	4.602

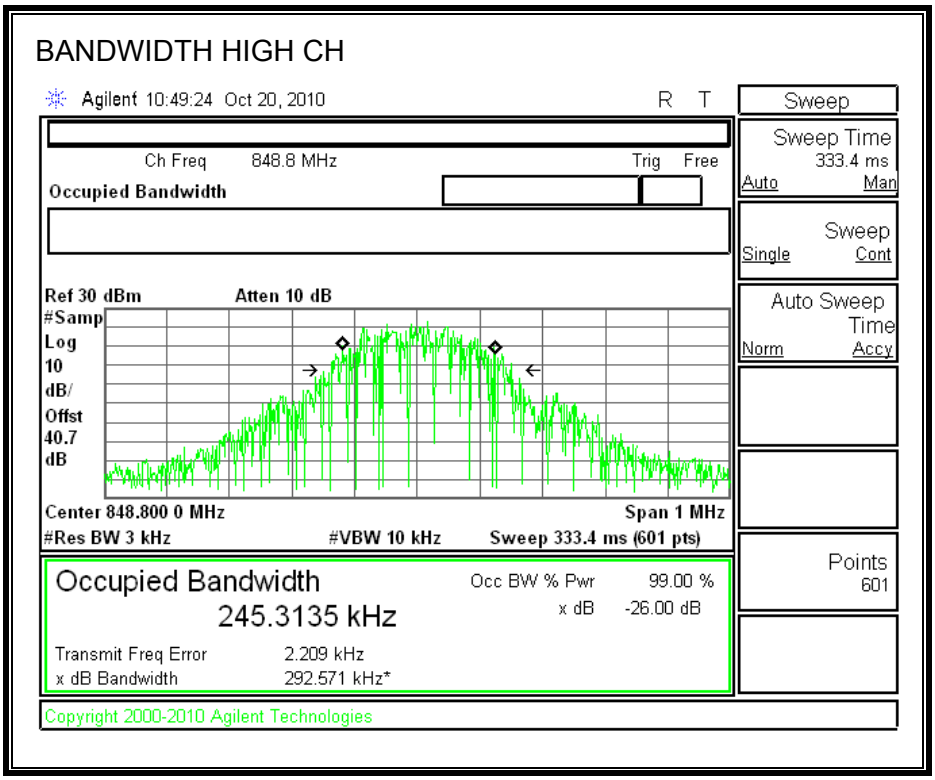
PCS, UMTS, HSDPA Modulation

Channel	Frequency (MHz)	99% BW (MHz)	-26dB BW (MHz)
Low	1852.40	4.169	4.603
Middle	1880.00	4.160	4.571
High	1907.60	4.161	4.599

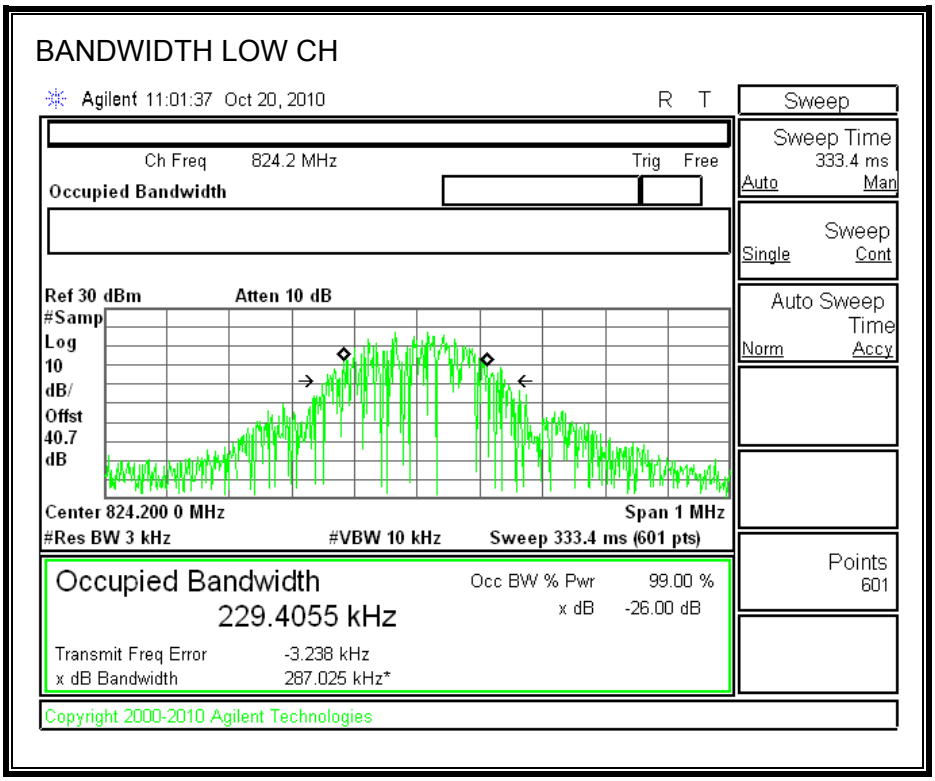
CELL, GPRS850 BANDWIDTH



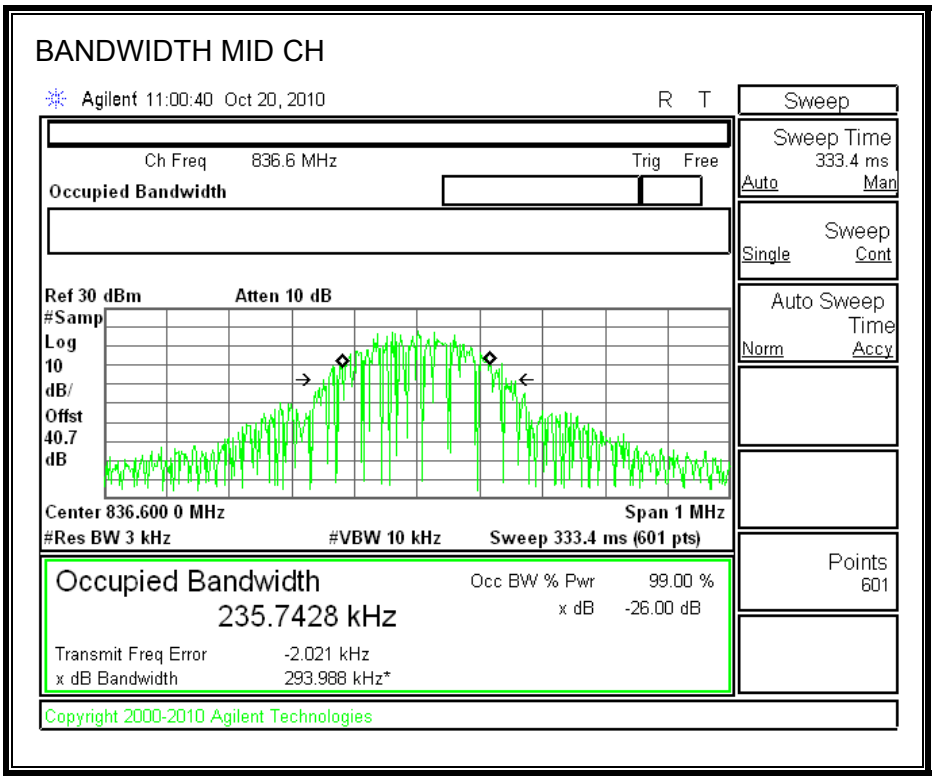




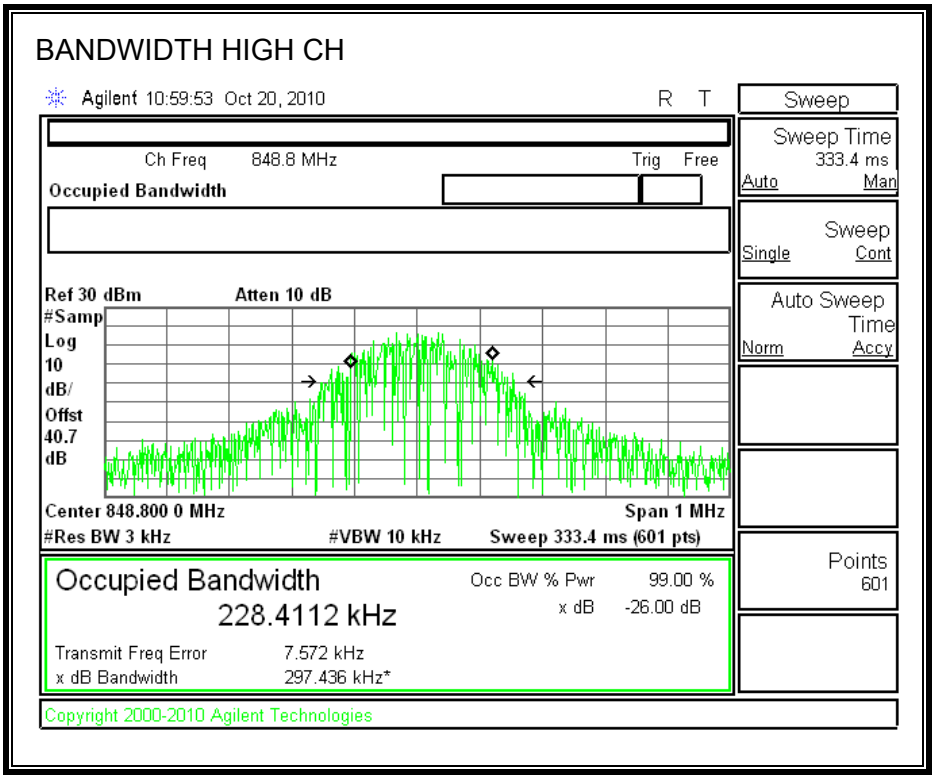
CELL, EGPRS850 BANDWIDTH



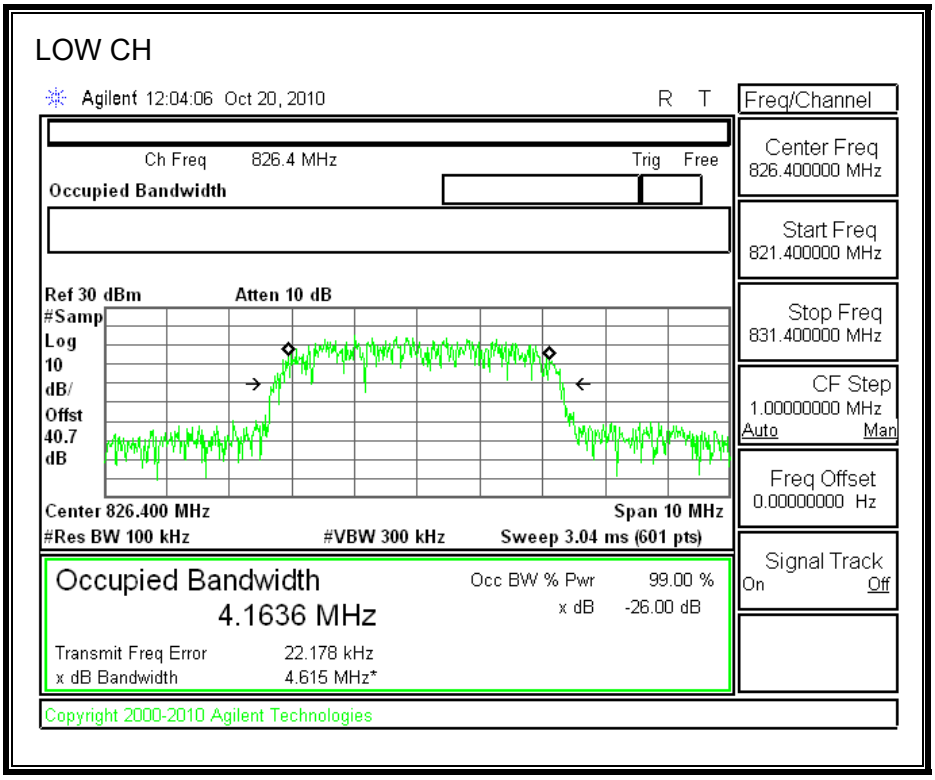
BANDWIDTH MID CH



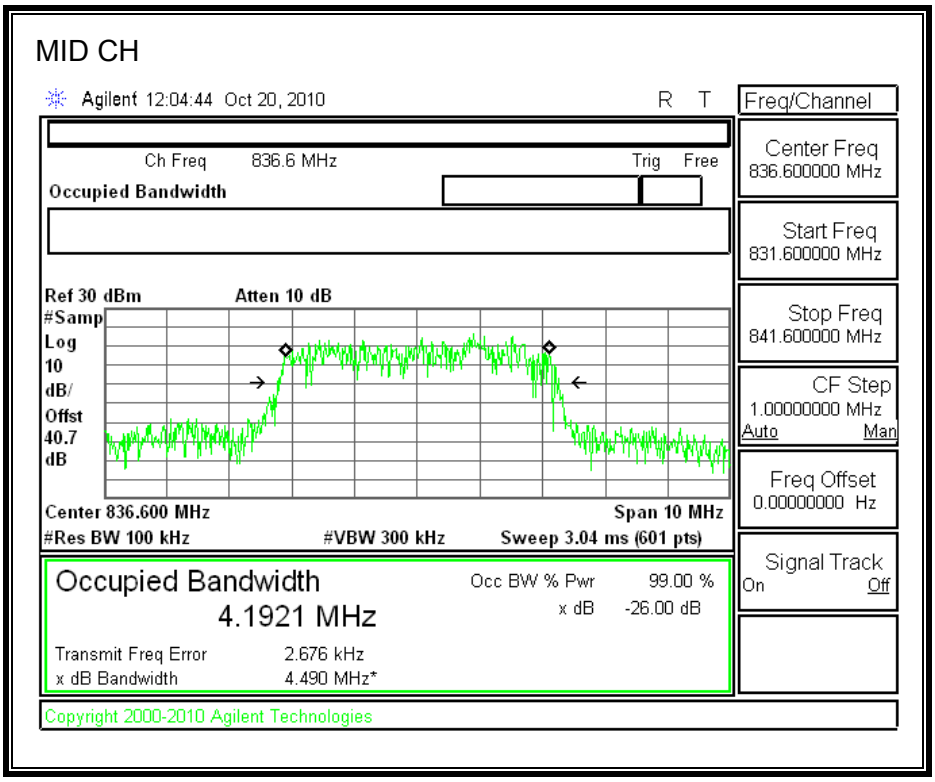
BANDWIDTH HIGH CH



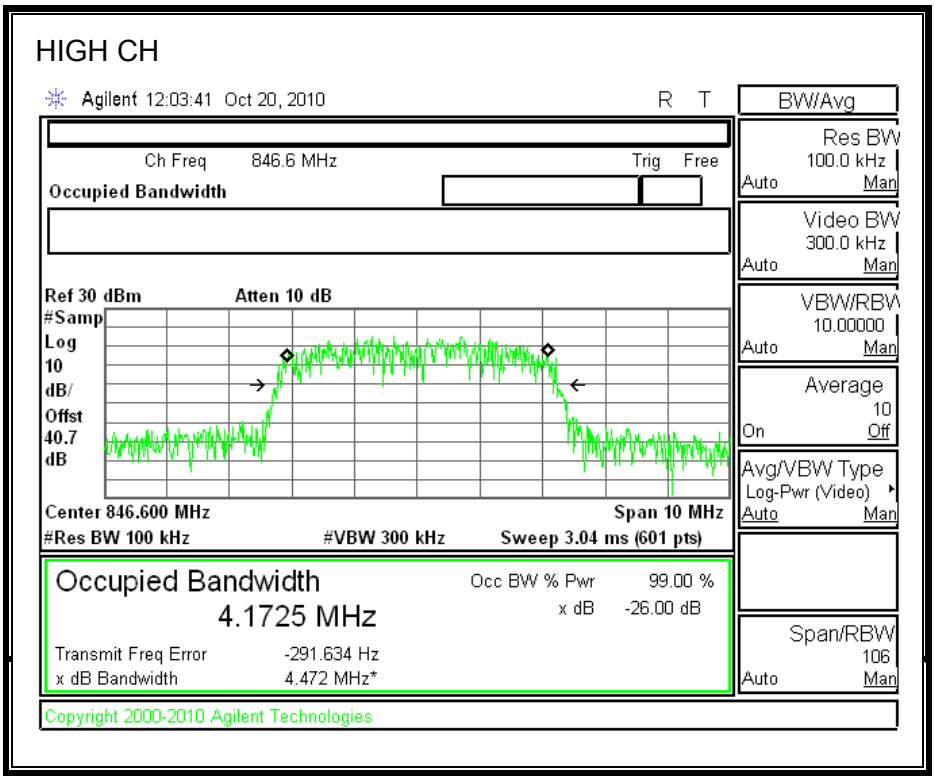
UMTS REL99 Cellular Band



MID CH

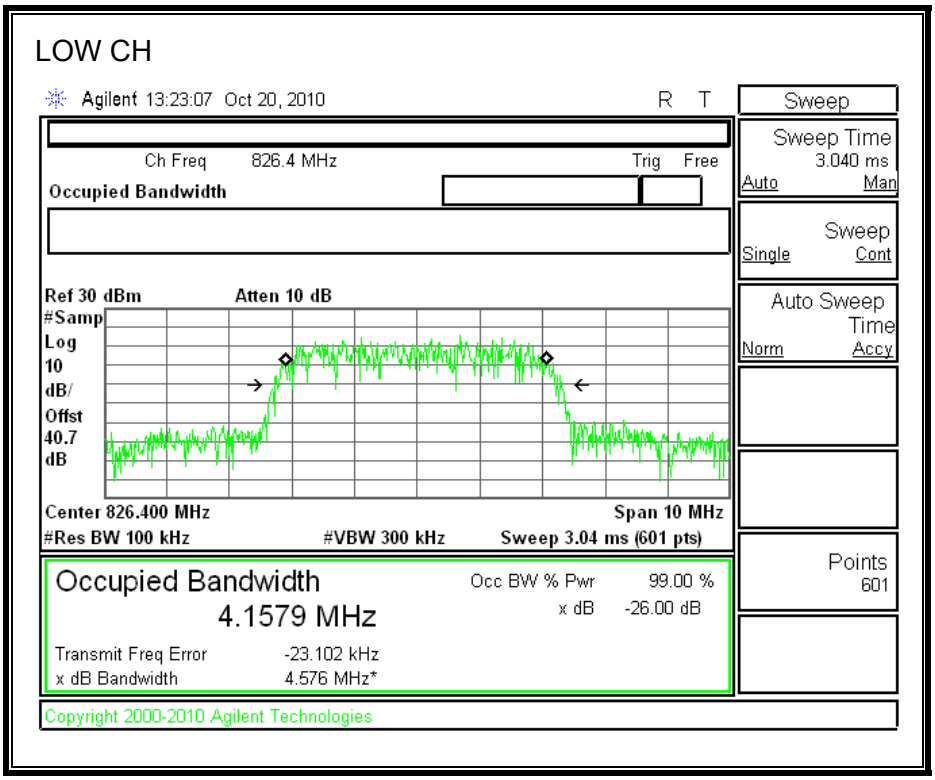


HIGH CH

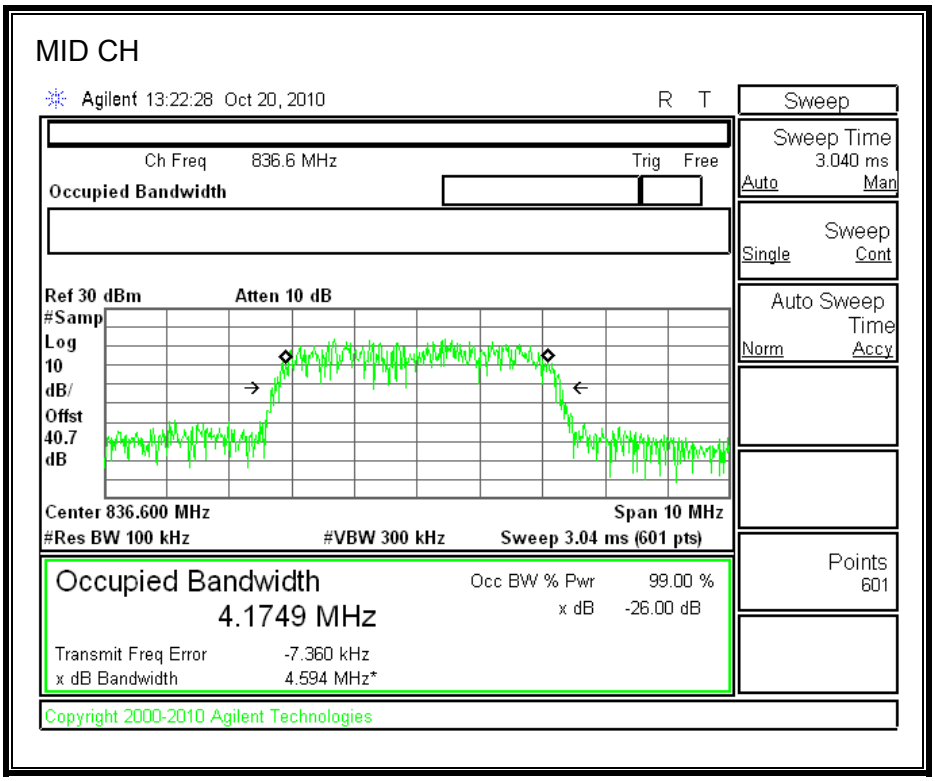


UMTS HSDPA Cellular Band

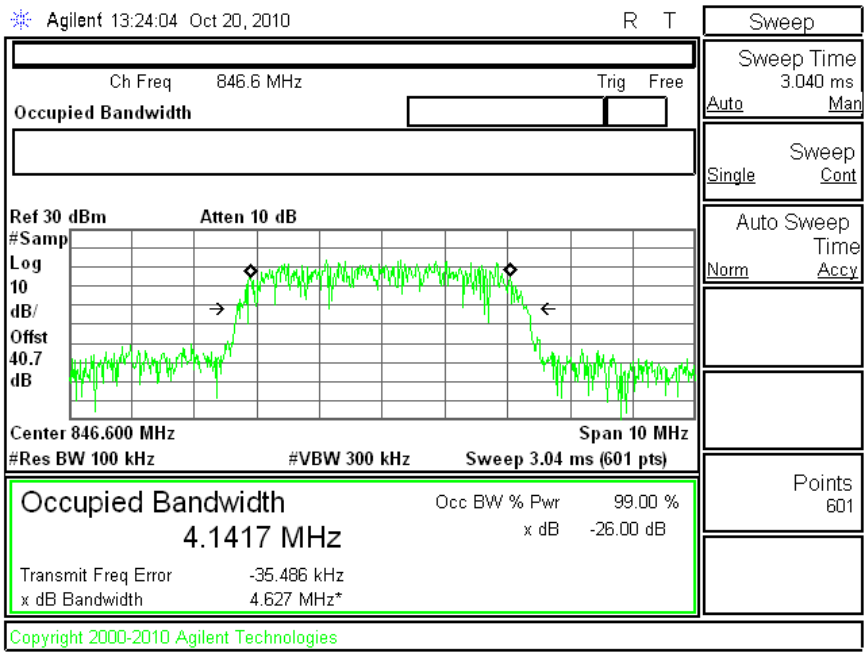
LOW CH



MID CH

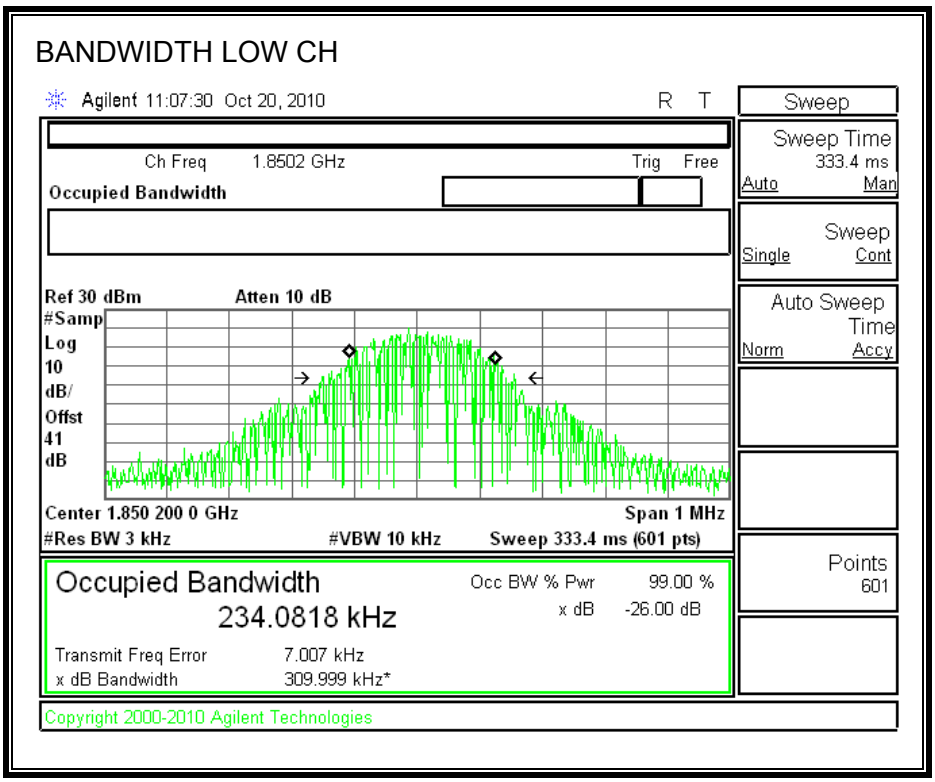


HIGH CH

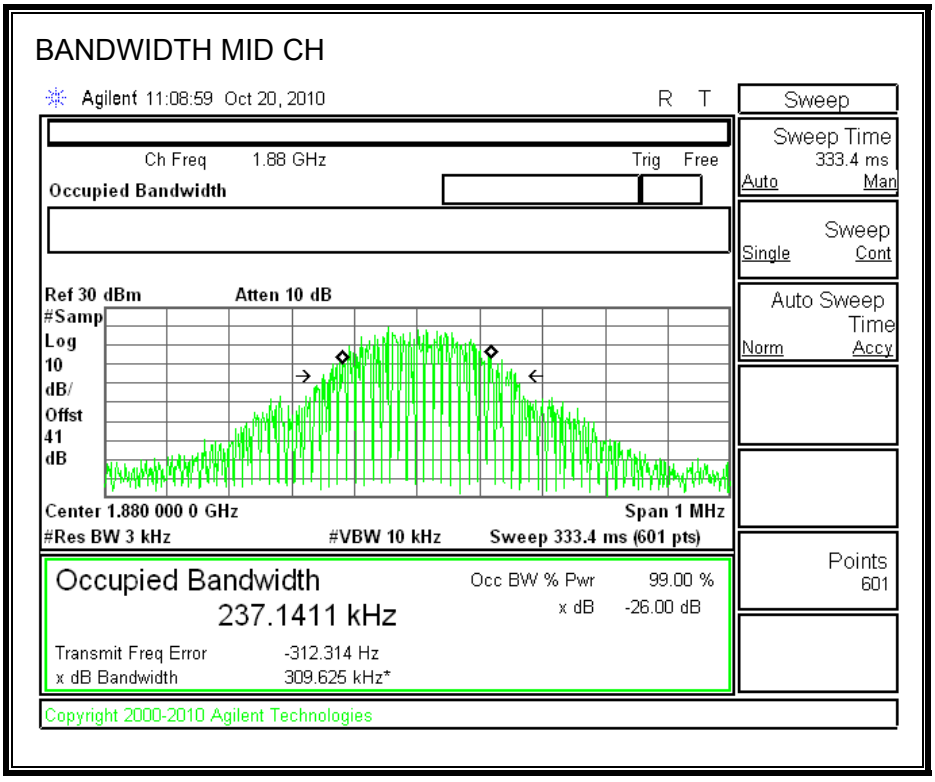


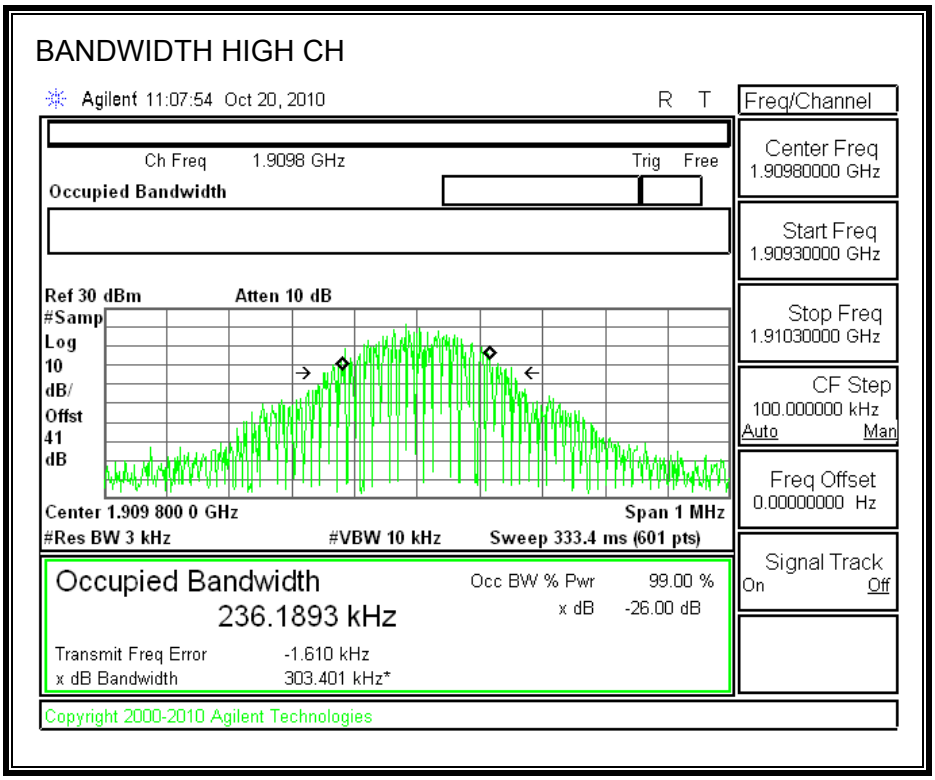
PCS, GSM1900 BANDWIDTH

BANDWIDTH LOW CH

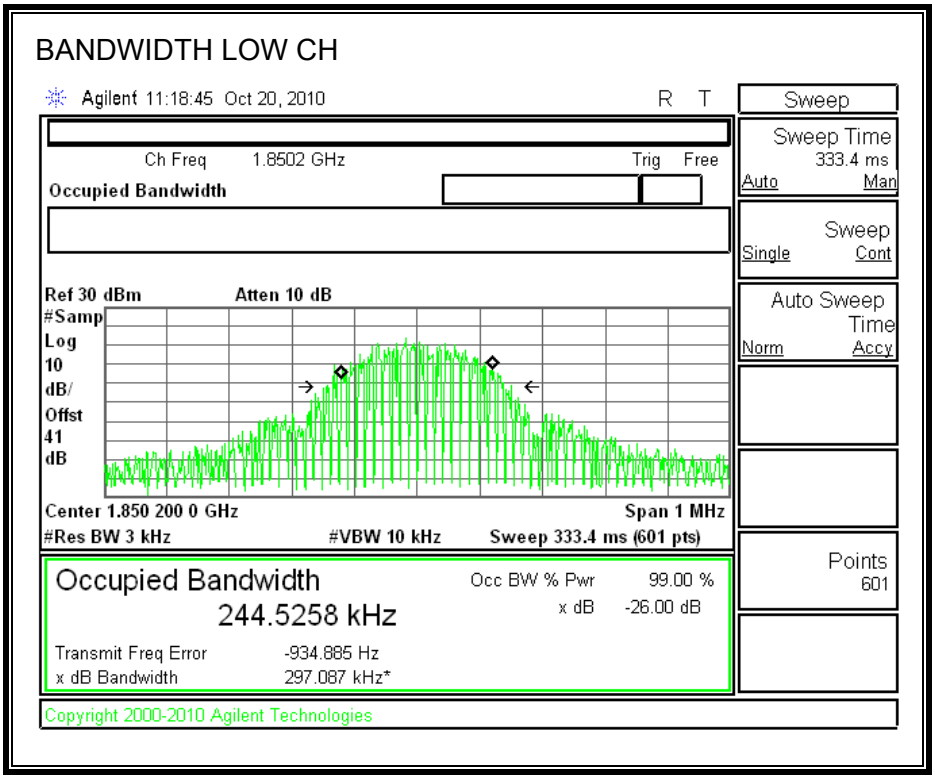


BANDWIDTH MID CH

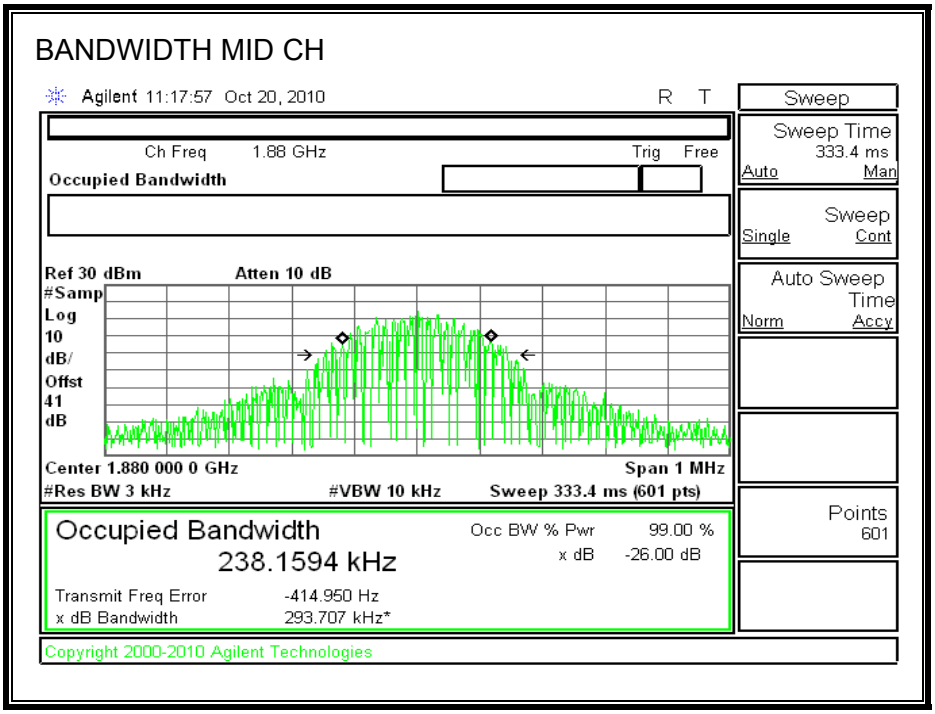




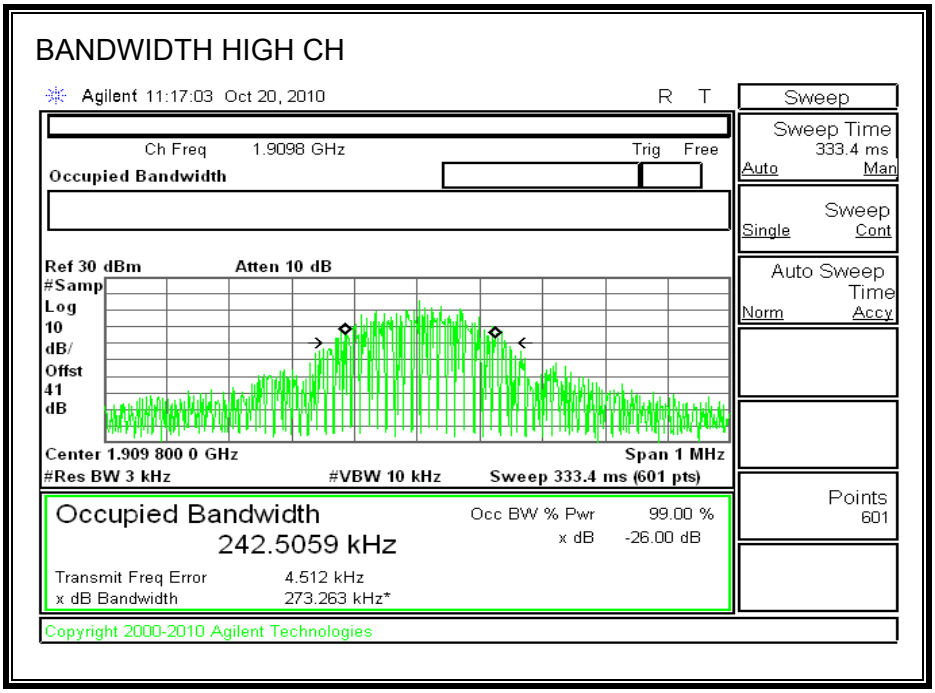
PCS, EGPRS1900 BANDWIDTH



BANDWIDTH MID CH

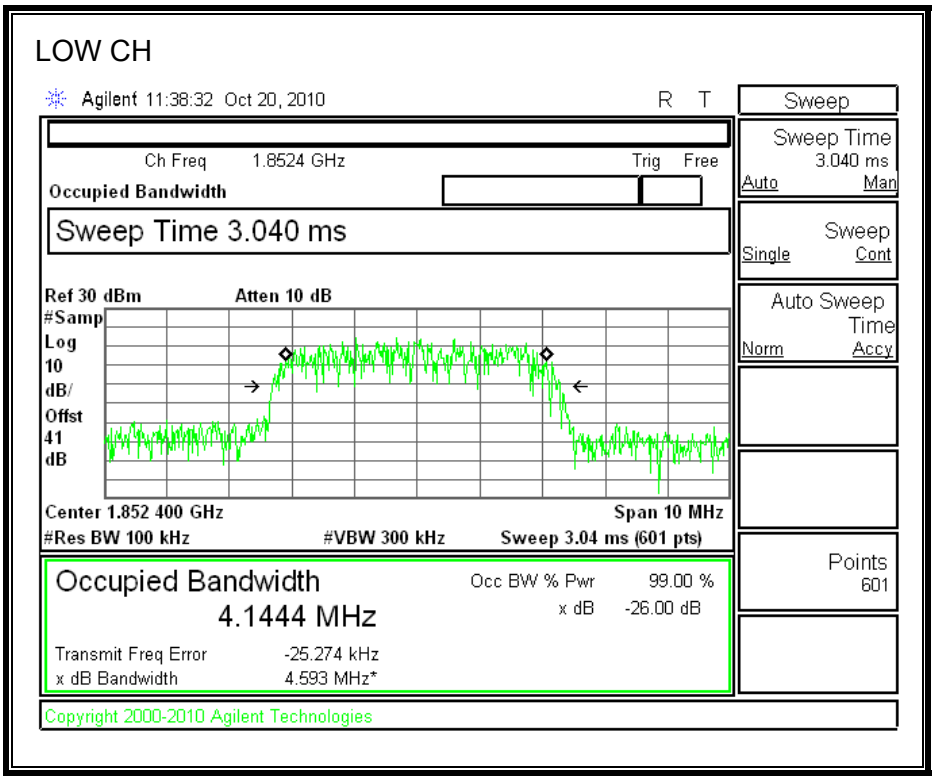


BANDWIDTH HIGH CH

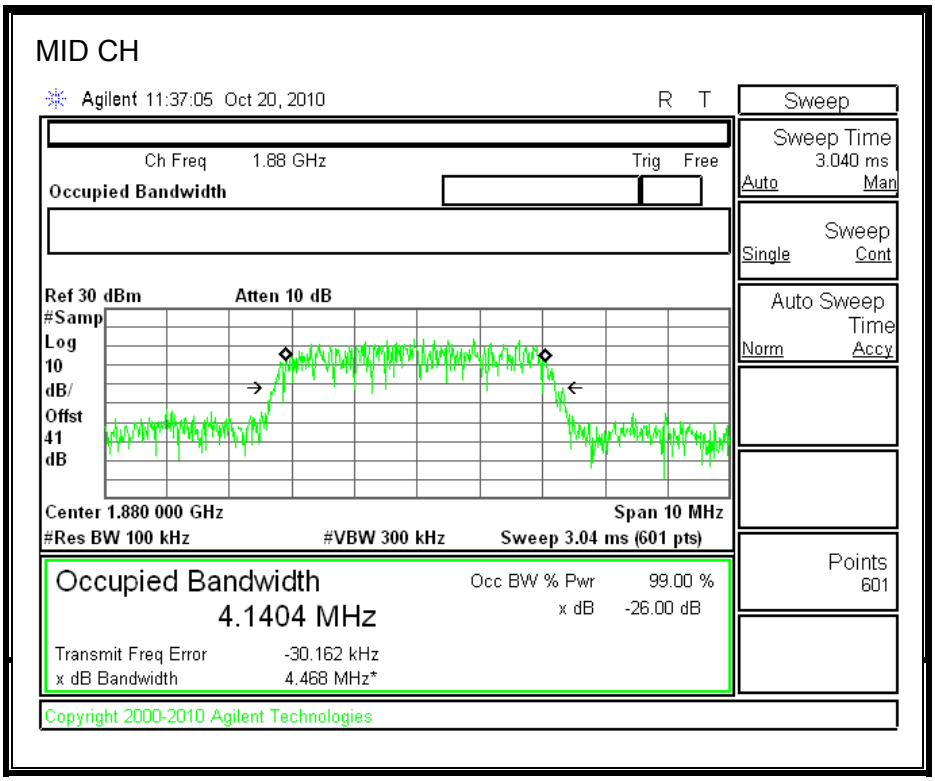


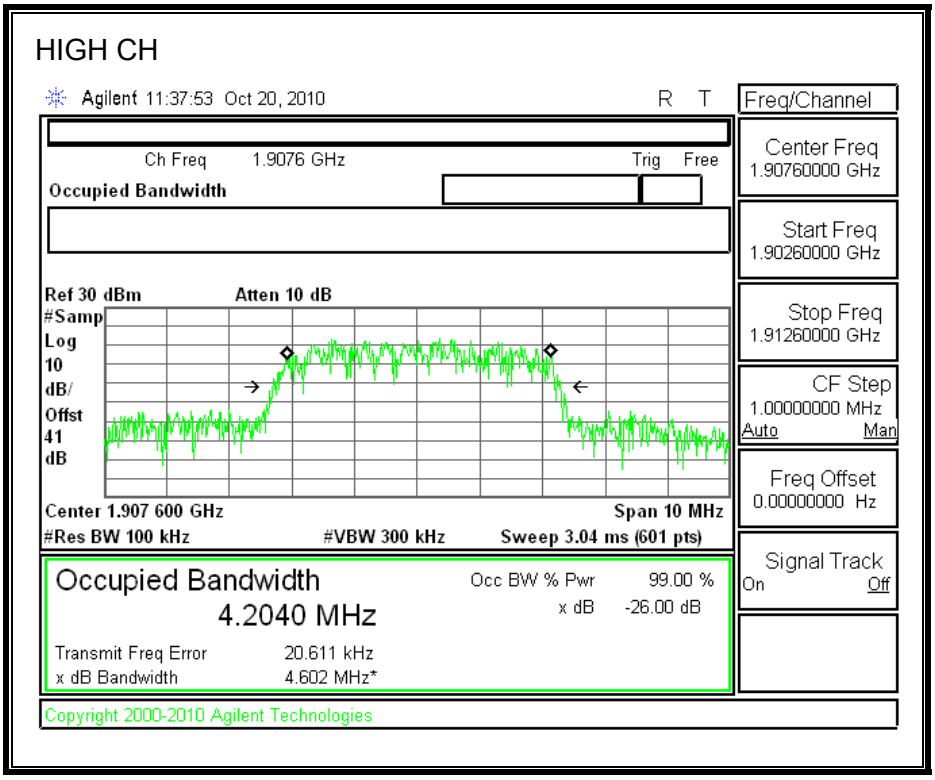
UMTS REL99 PCS Band

LOW CH

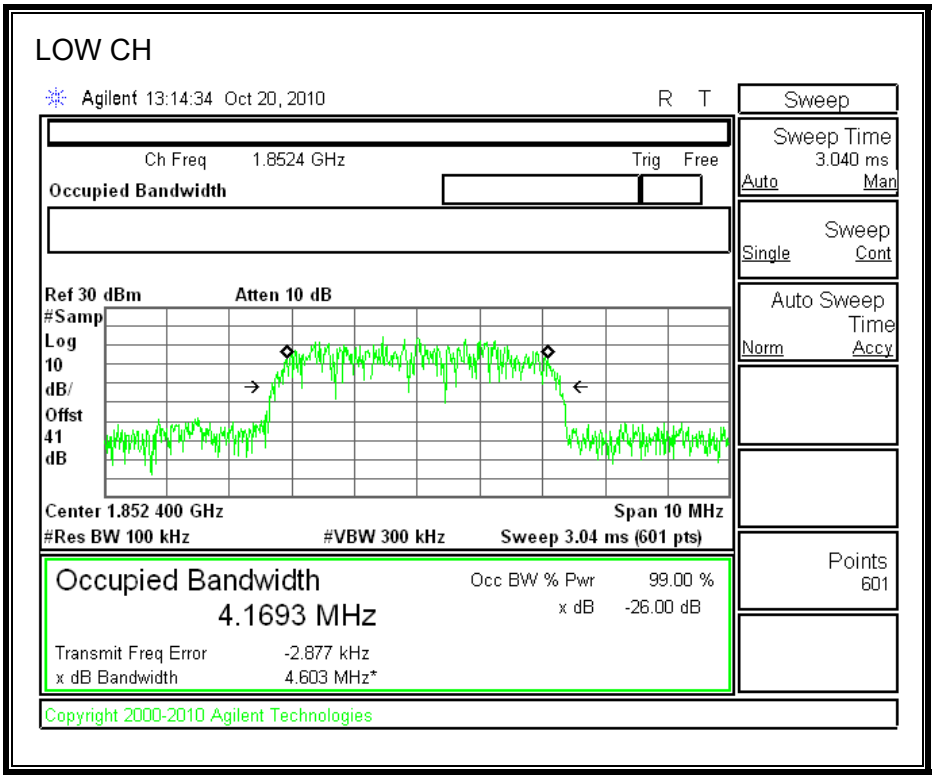


MID CH





UMTS HSDPA PCS Band



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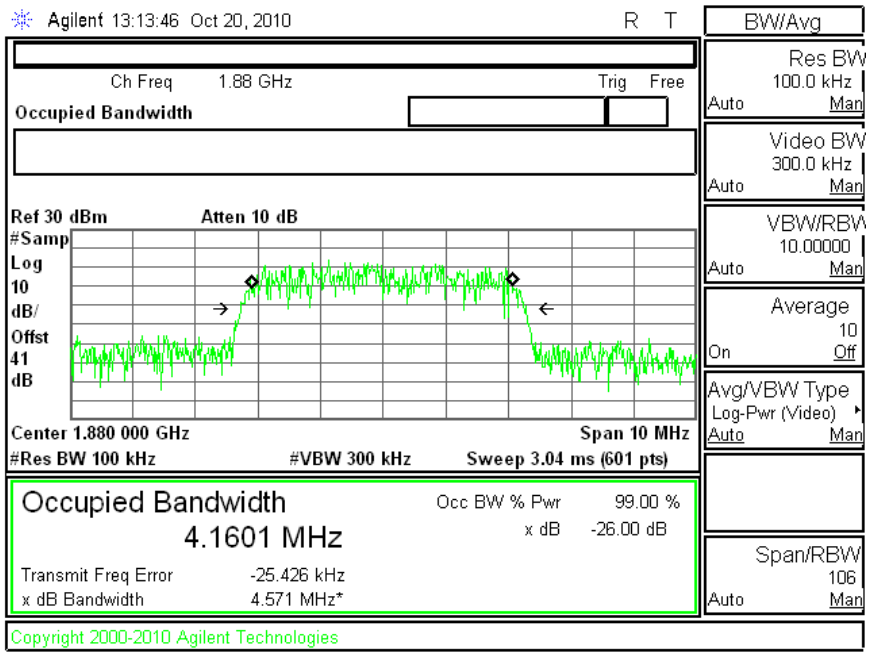
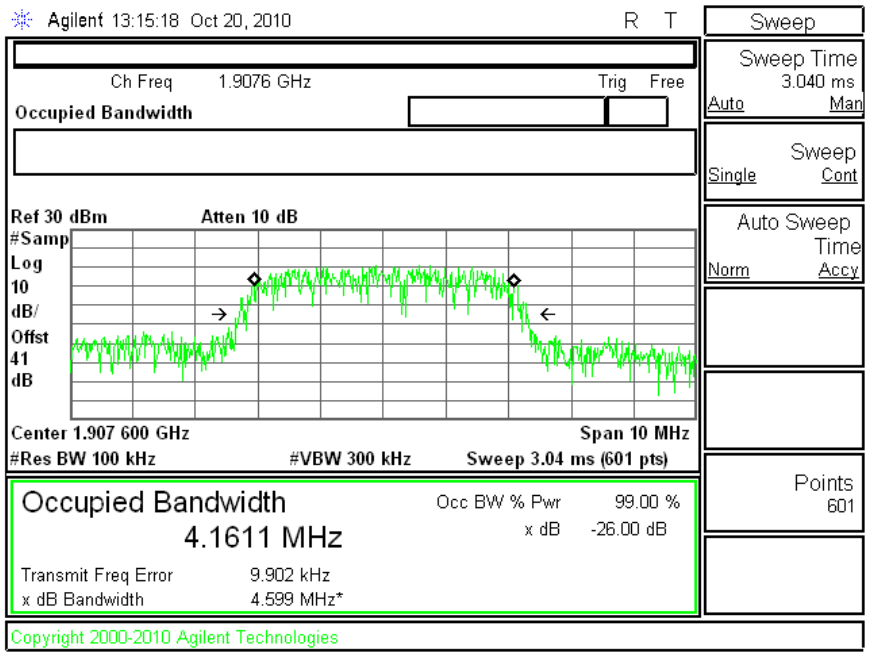


HIGH CH



8.2. SPURIOUS EMISSION AT ANTENNA TERMINAL

LIMIT

§22.917 (e) and §24.238 (a), The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB

TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 3.2.13 & FCC 22.917 (h)

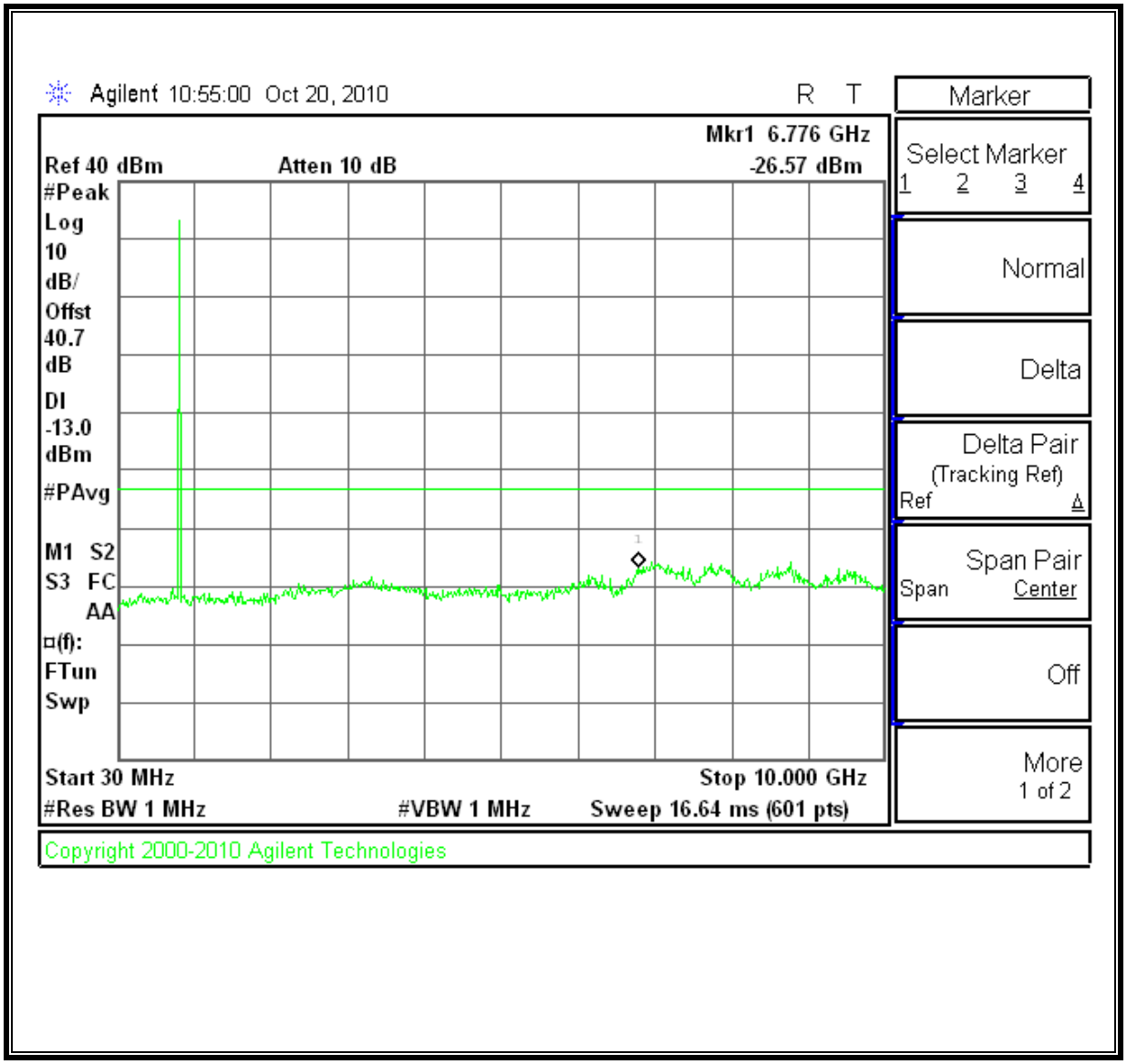
MODES TESTED

- Cellular & PCS bands for GSM
  - GPRS (GSMK)
  - EGPRS (8PSK)
- Band V & Band II for UMTS (WCDMA)
  - Rel 99
  - Rel 6 HSDPA Subtest 1

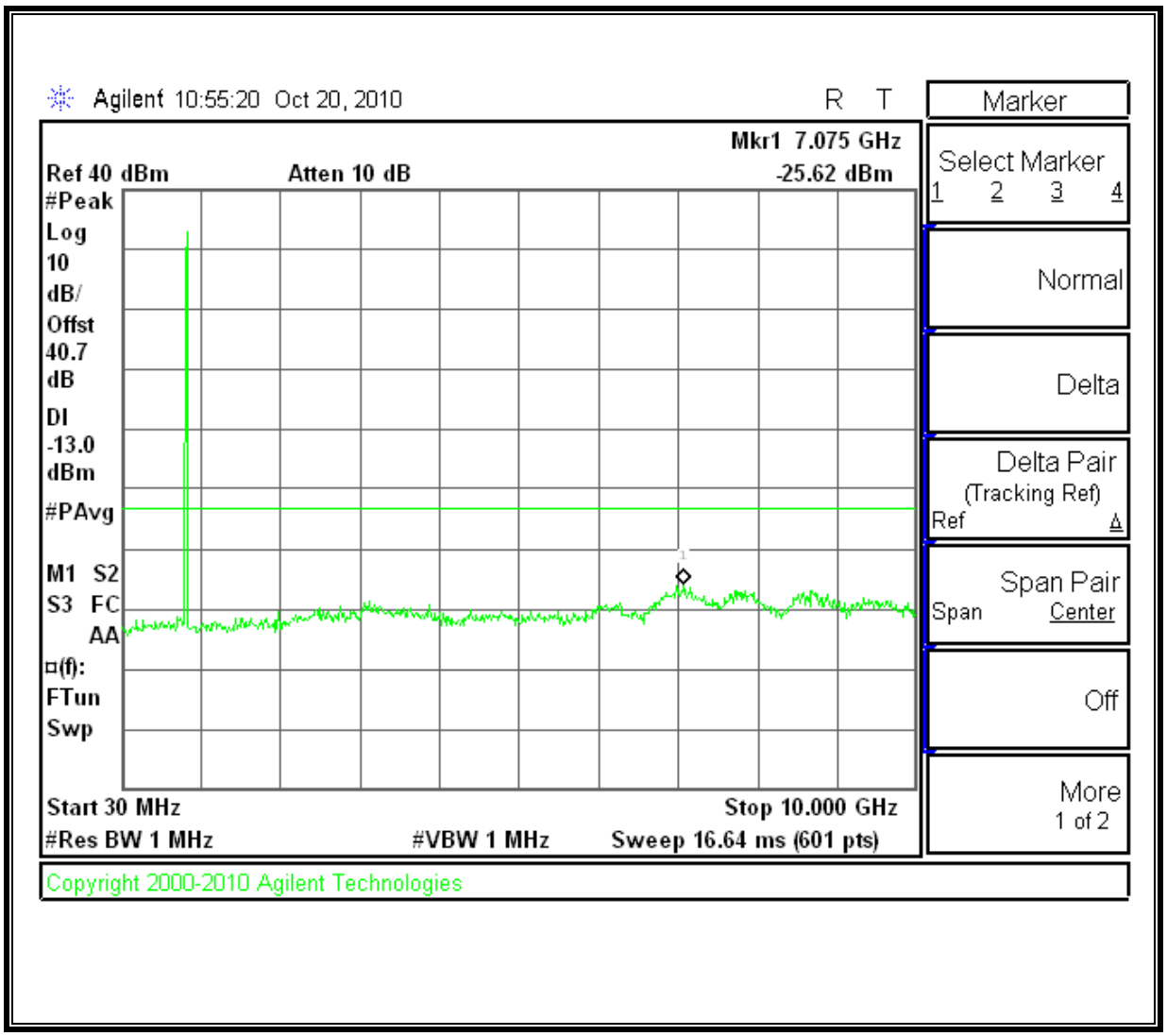
RESULTS

CELL, GPRS850 MODULATION:

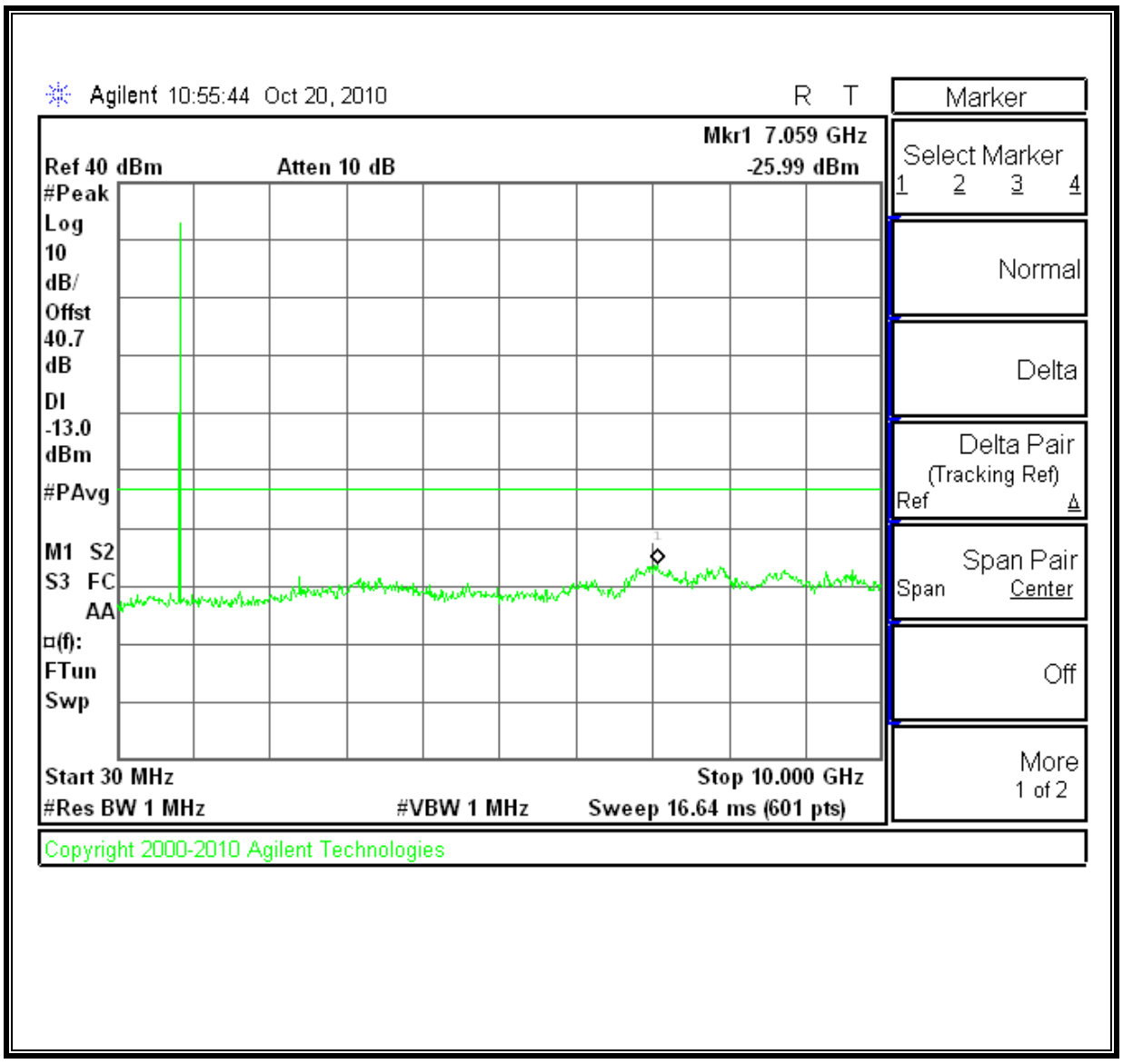
Low Channel, Out-Of-Band Emissions



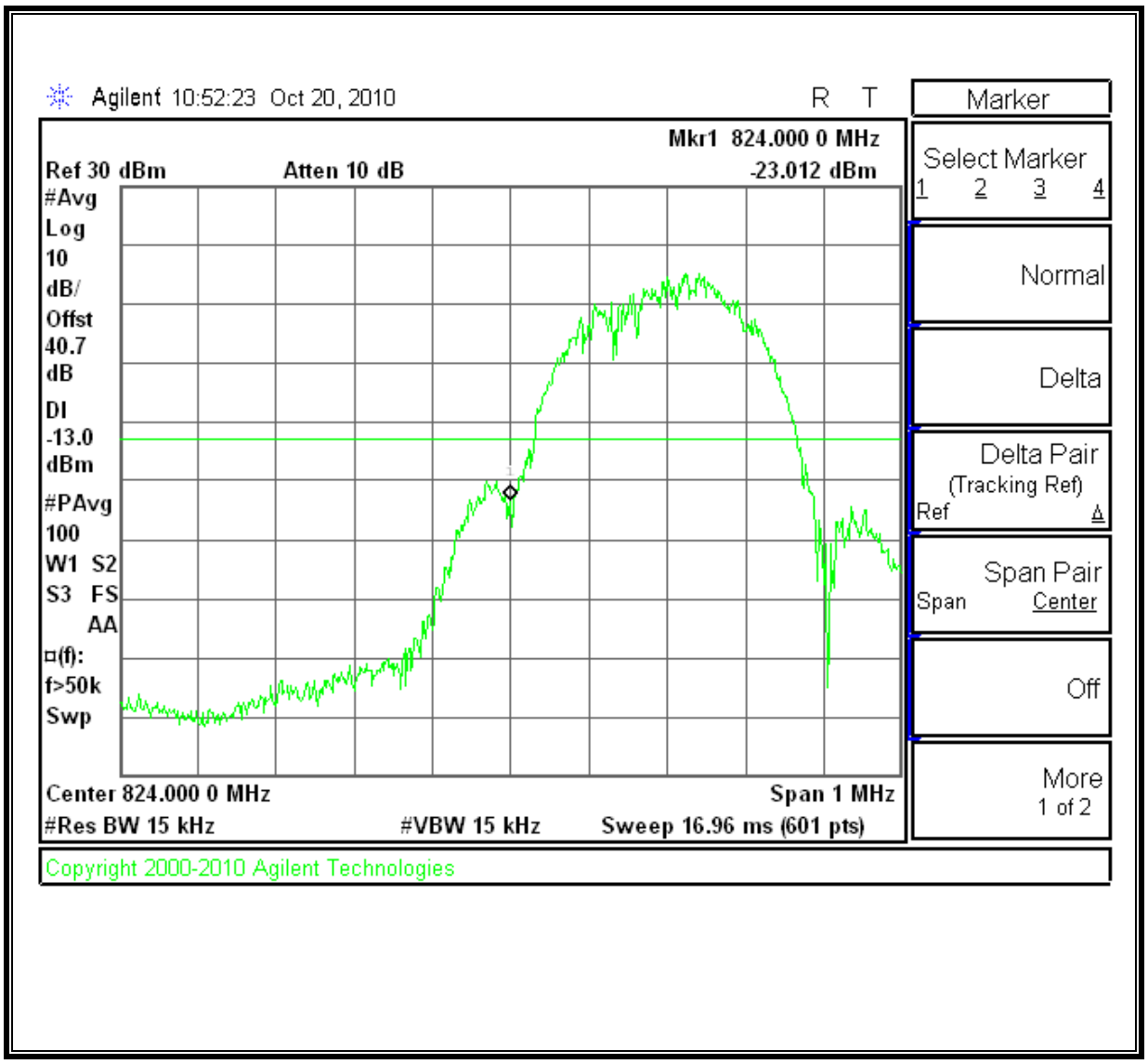
Mid Channel, Out-Of-Band Emissions



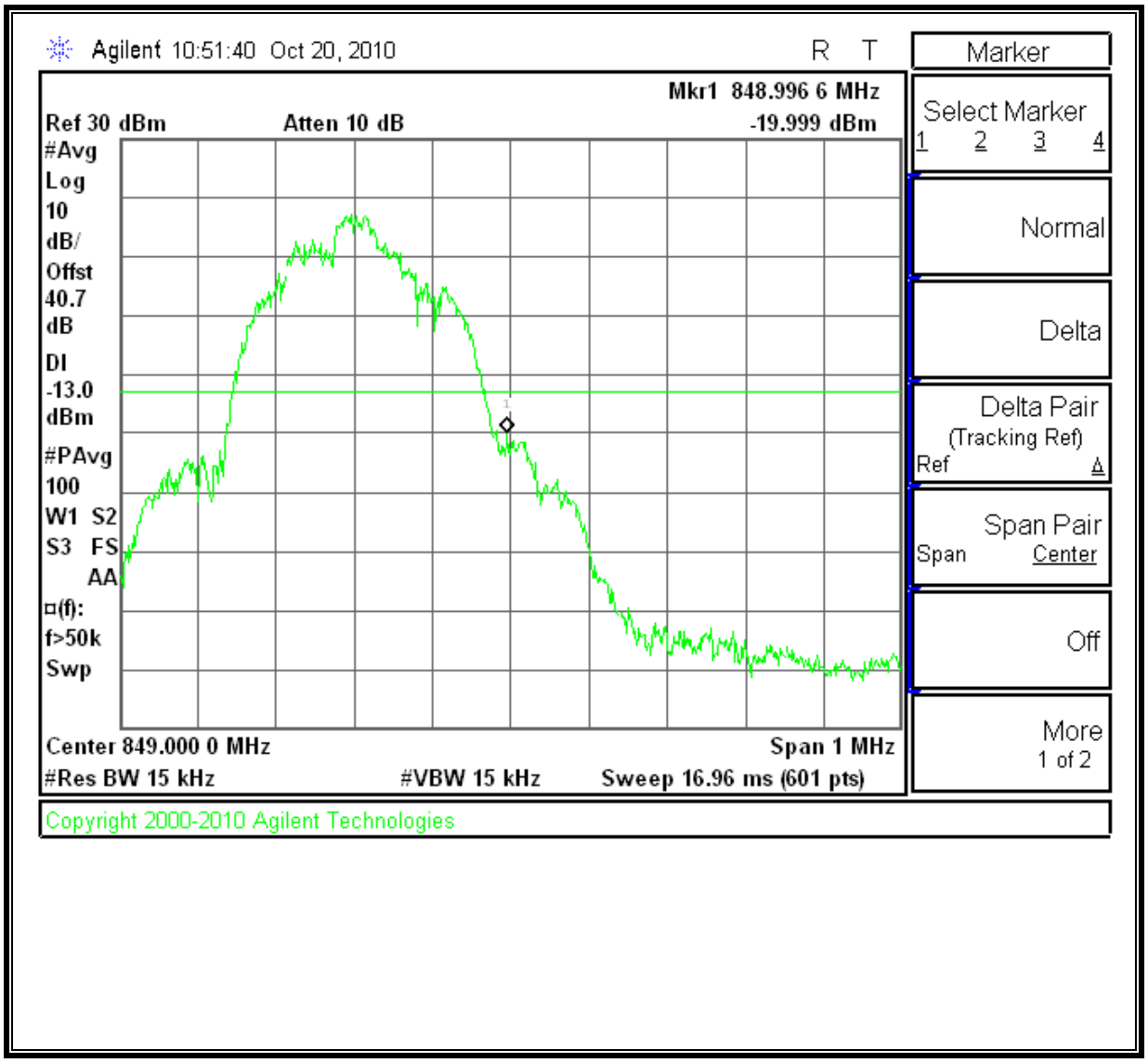
High Channel, Out-Of-Band Emissions



Low Channel Band Edge

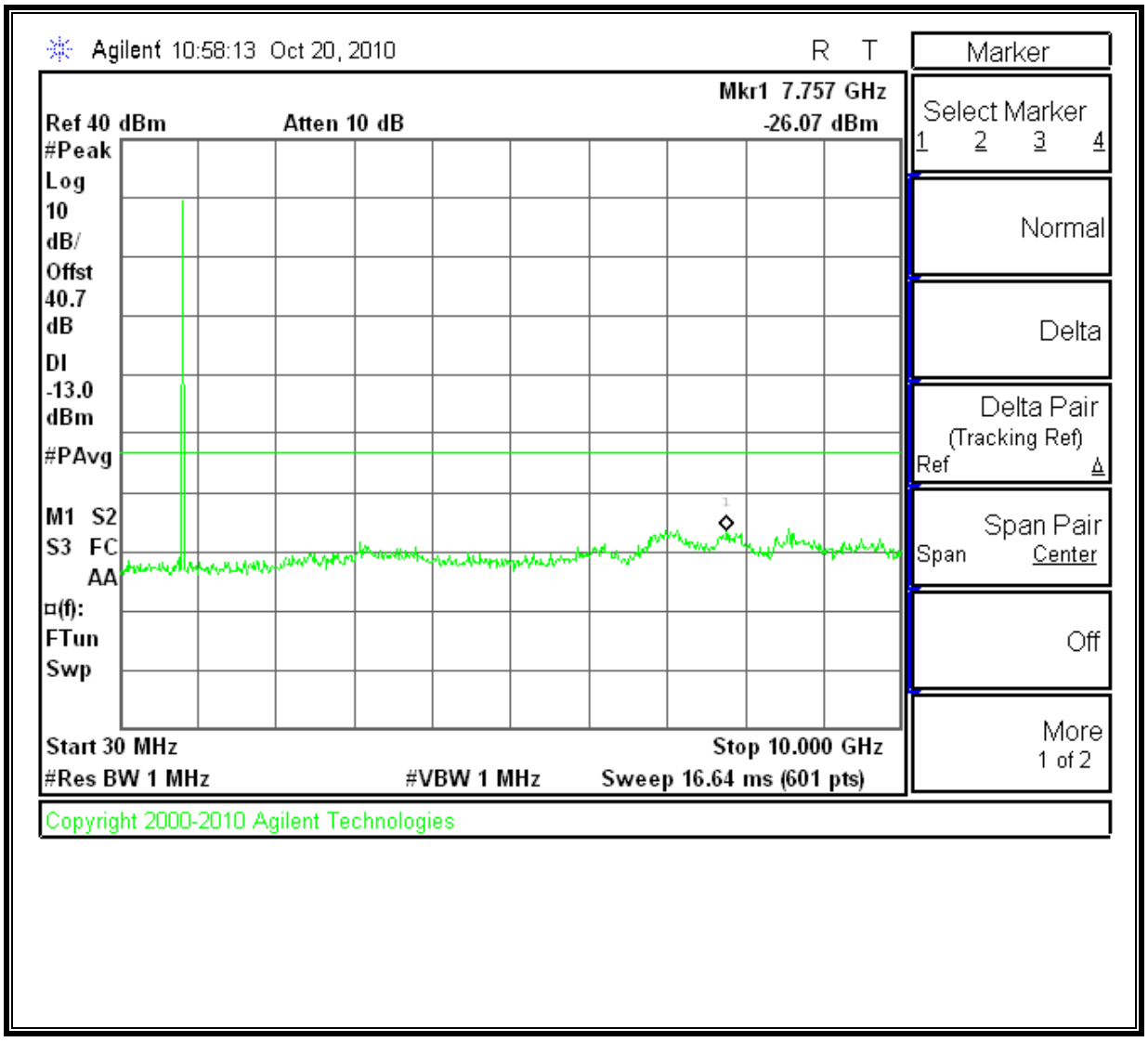


High Channel Band Edge

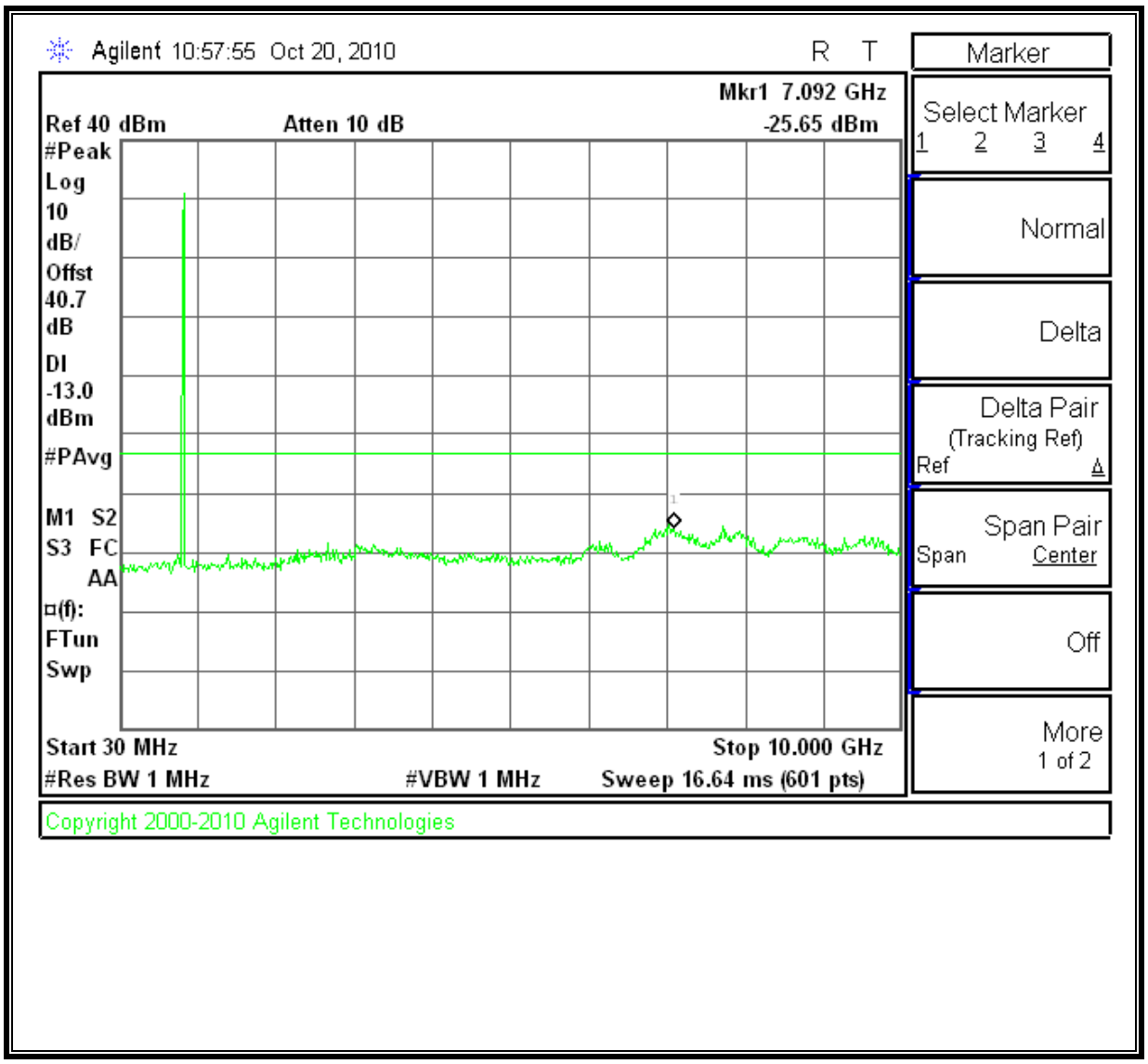


CELL, EGPRS MODULATION:

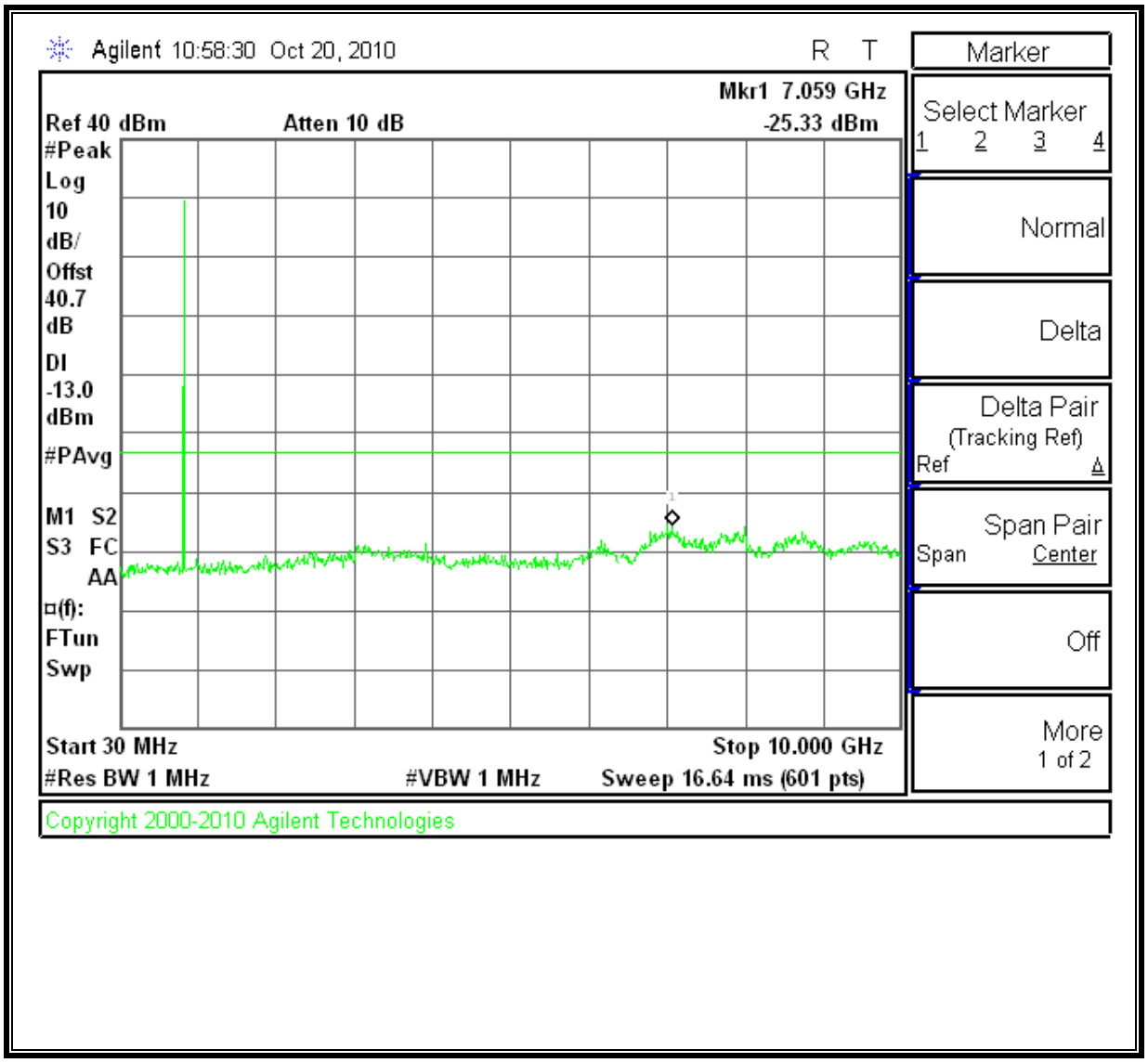
Low Channel, Out-Of-Band Emissions



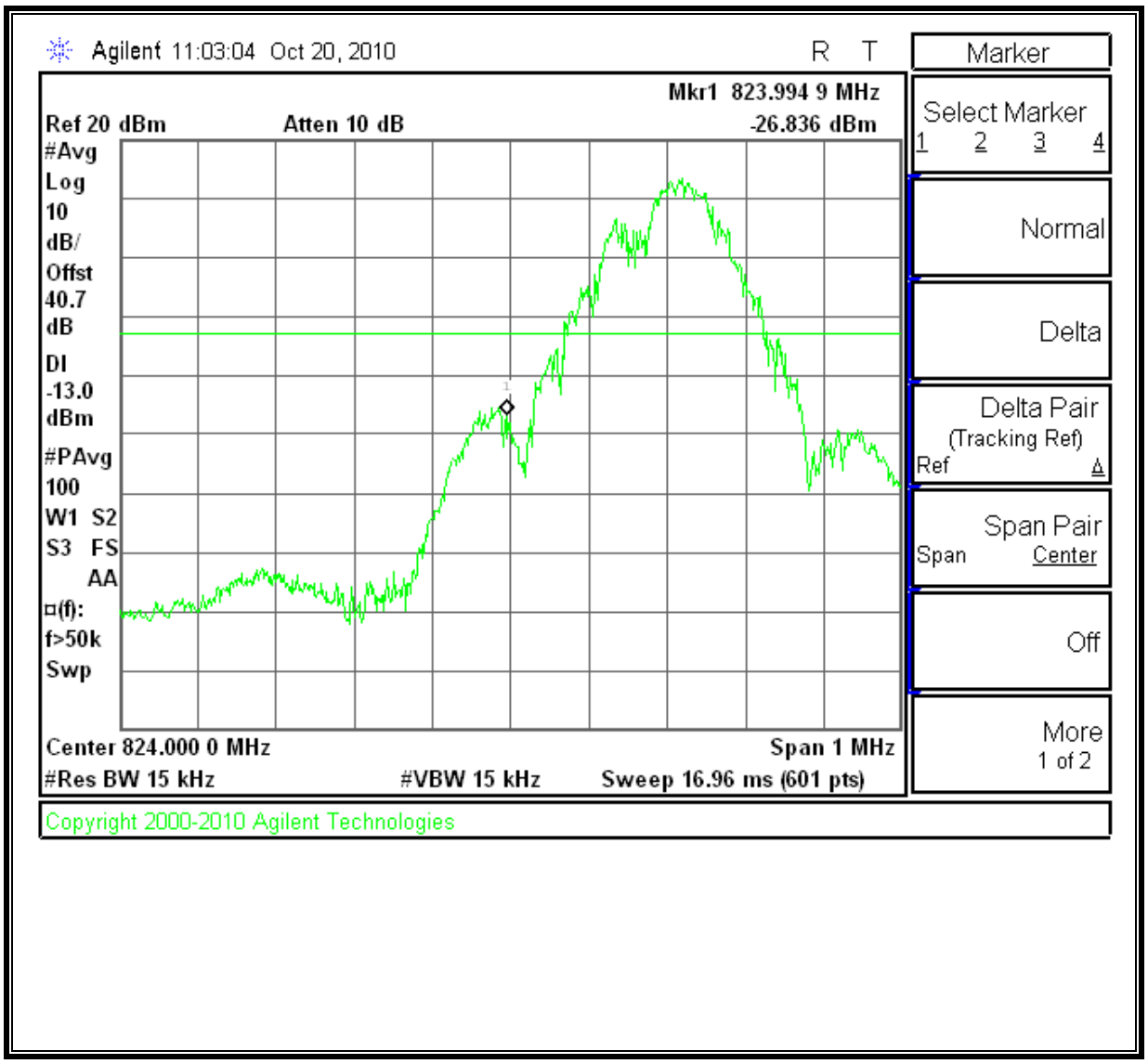
Mid Channel, Out-Of-Band Emissions



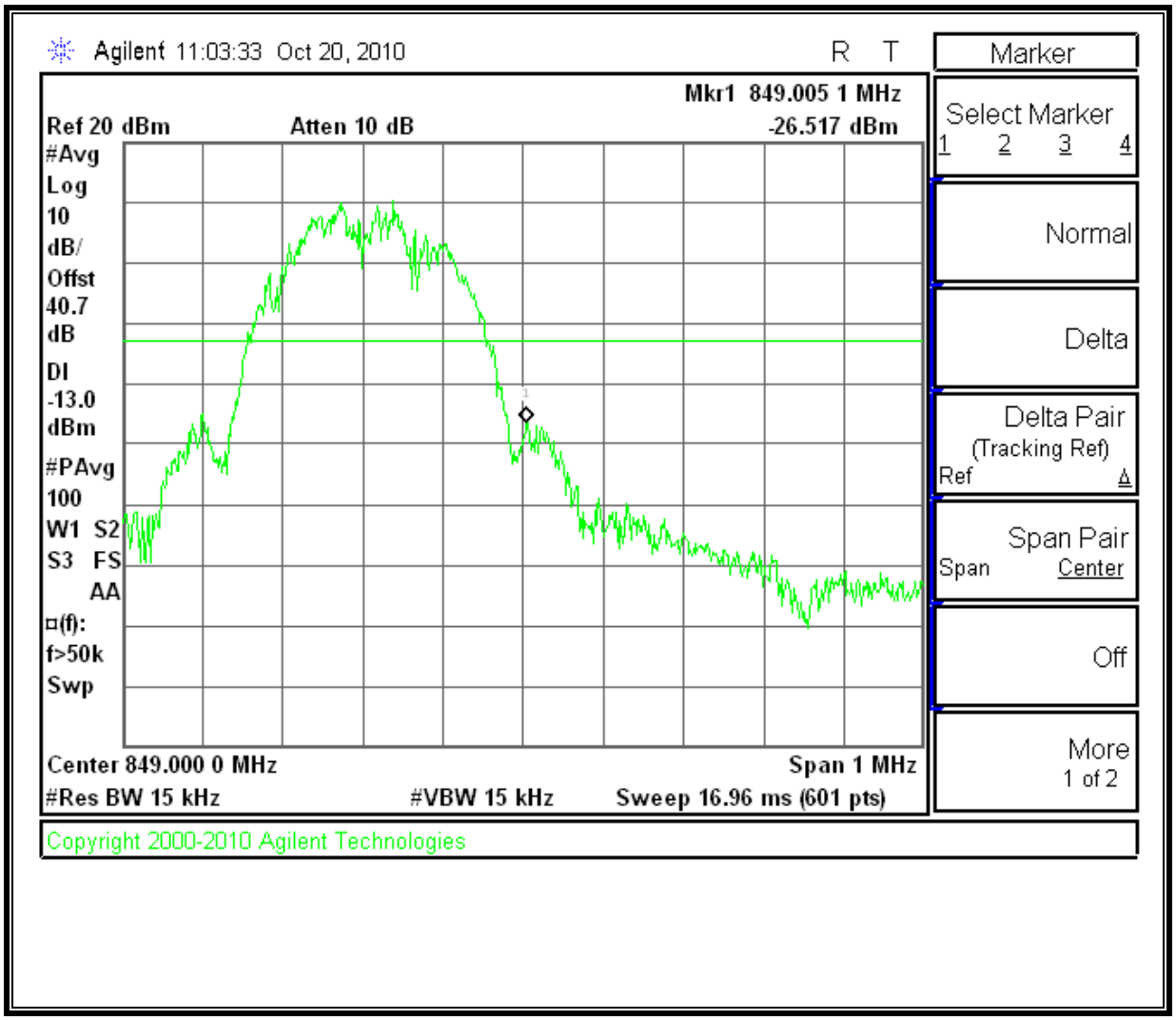
High Channel, Out-Of-Band Emissions



Low Channel Band Edge

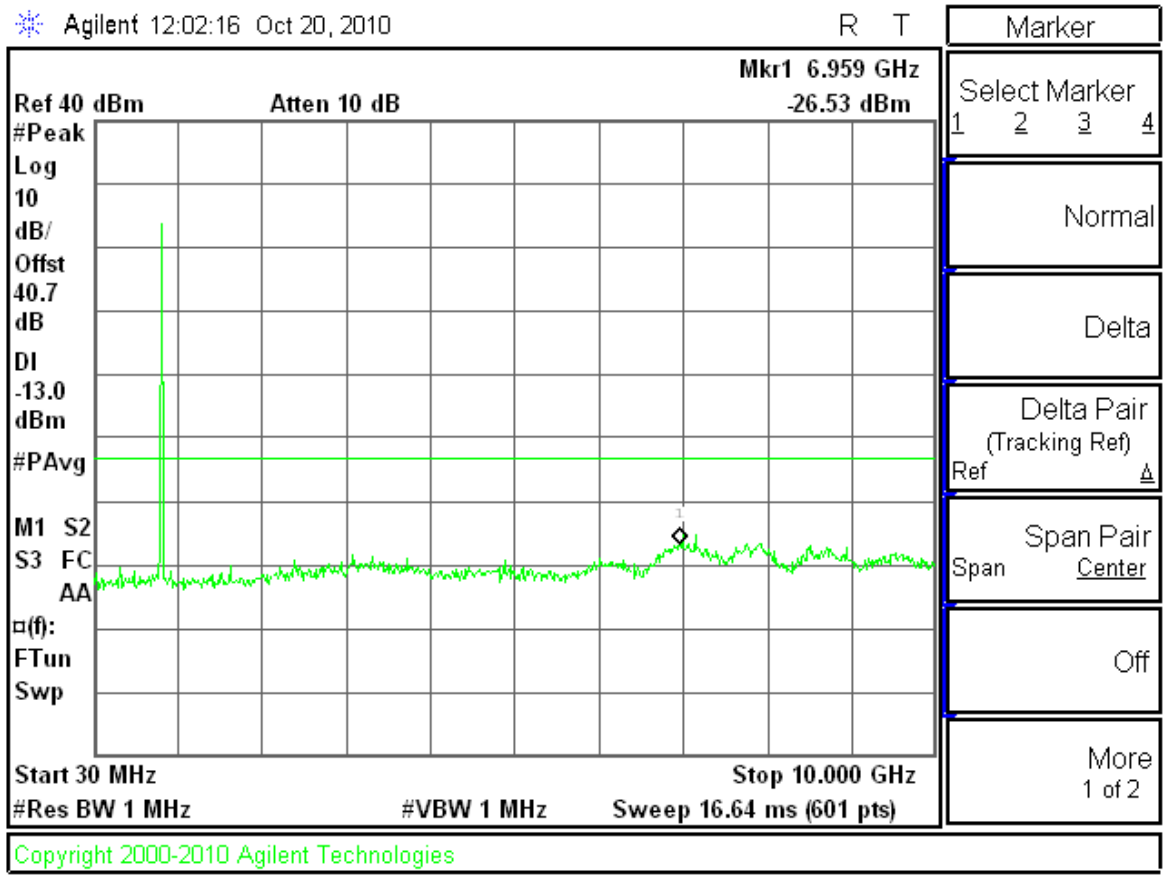


High Channel Band Edge

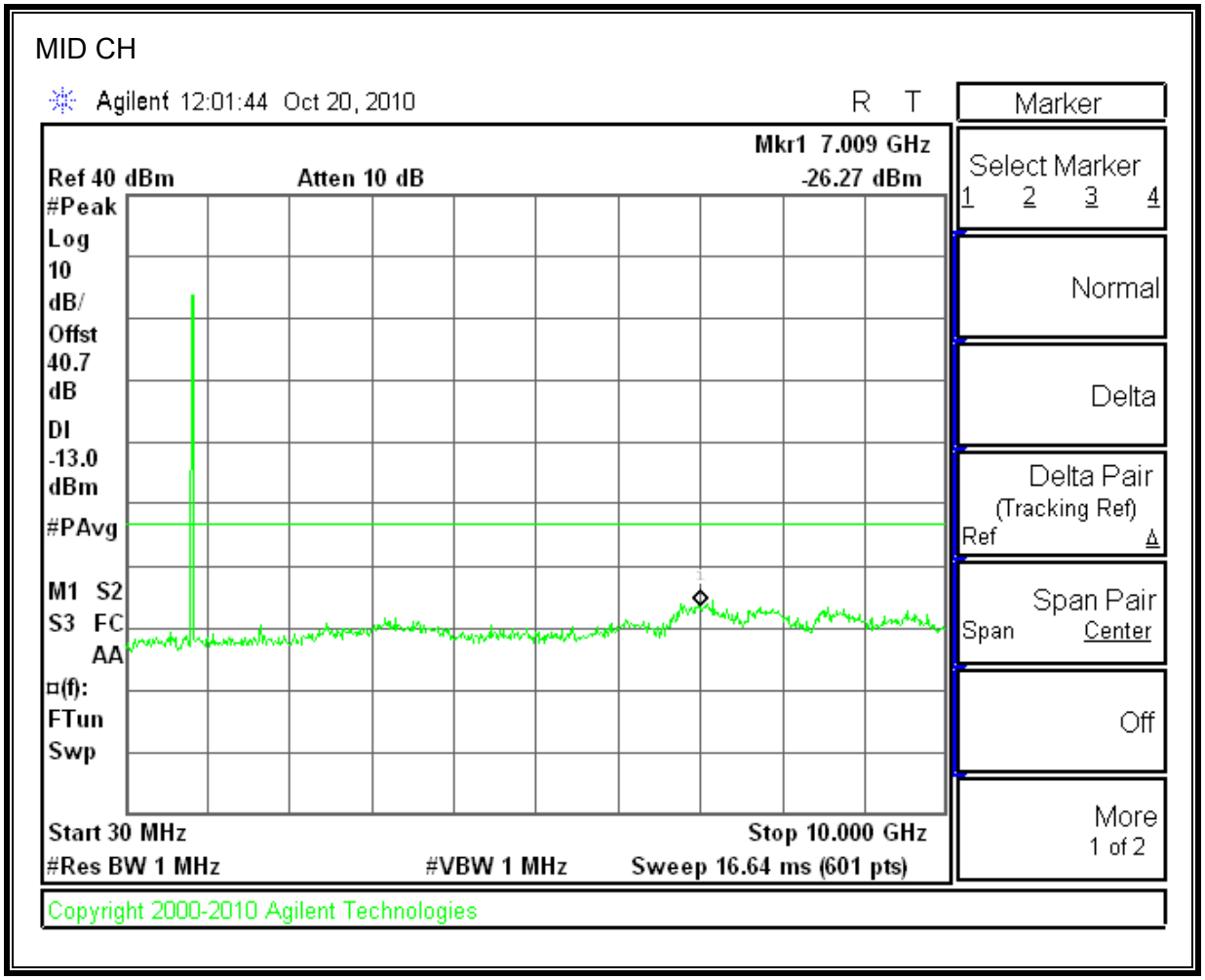


UMTS REL99 CELL BAND

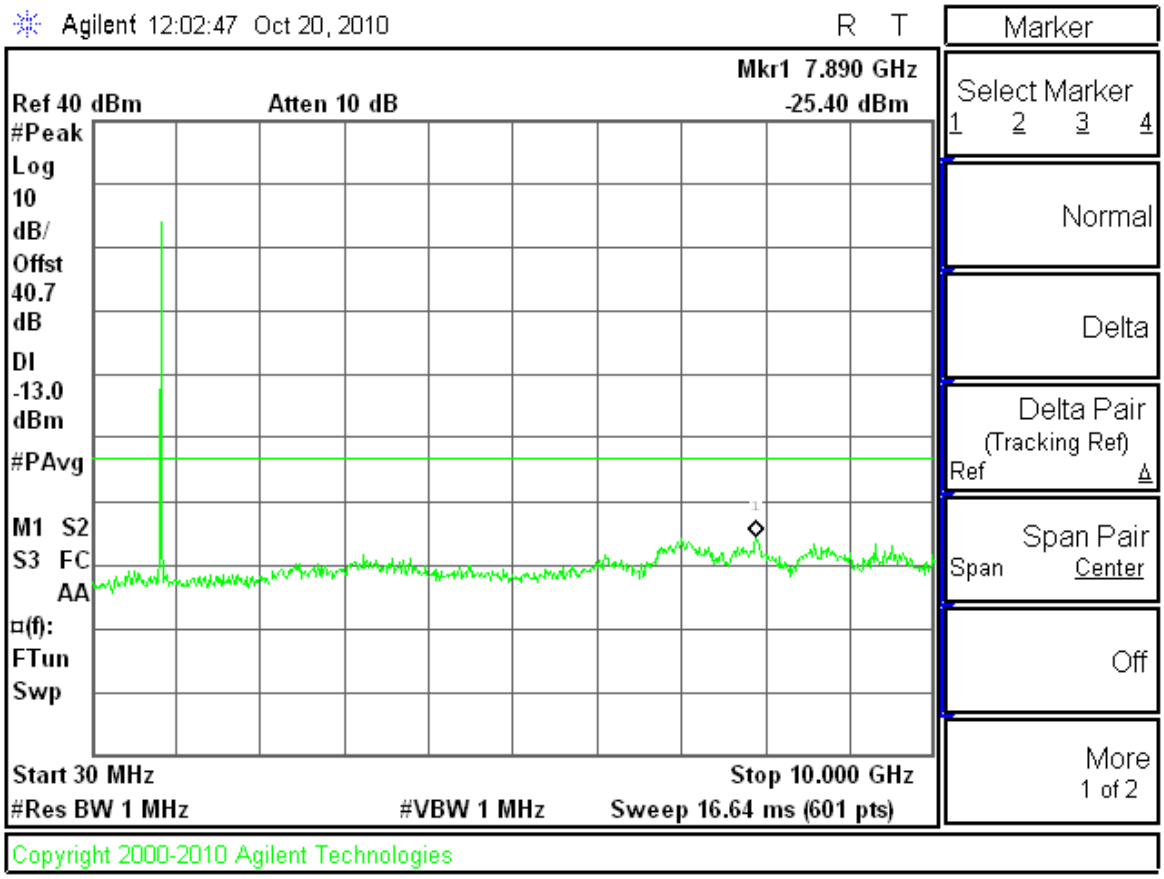
LOW CH



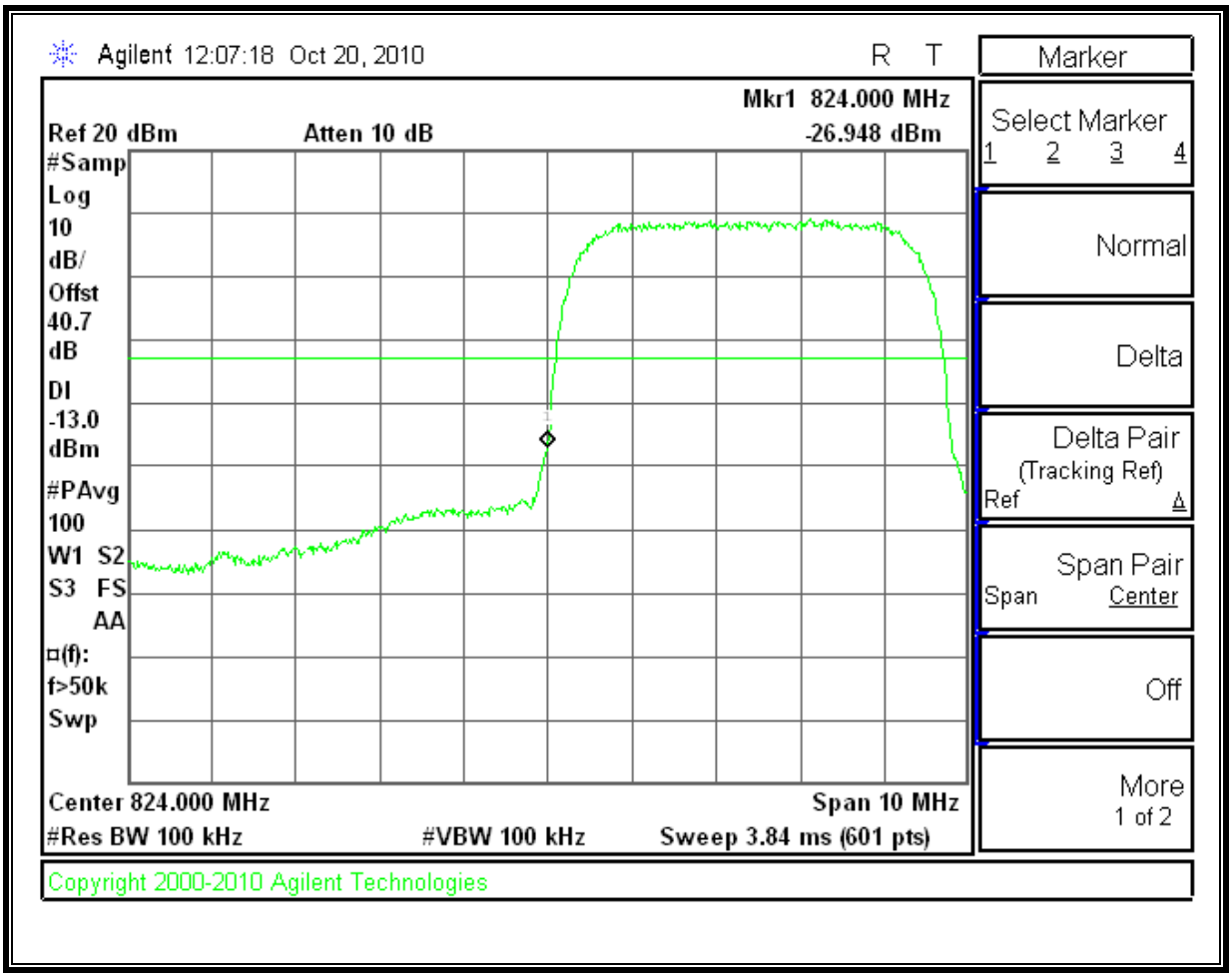
MID CH



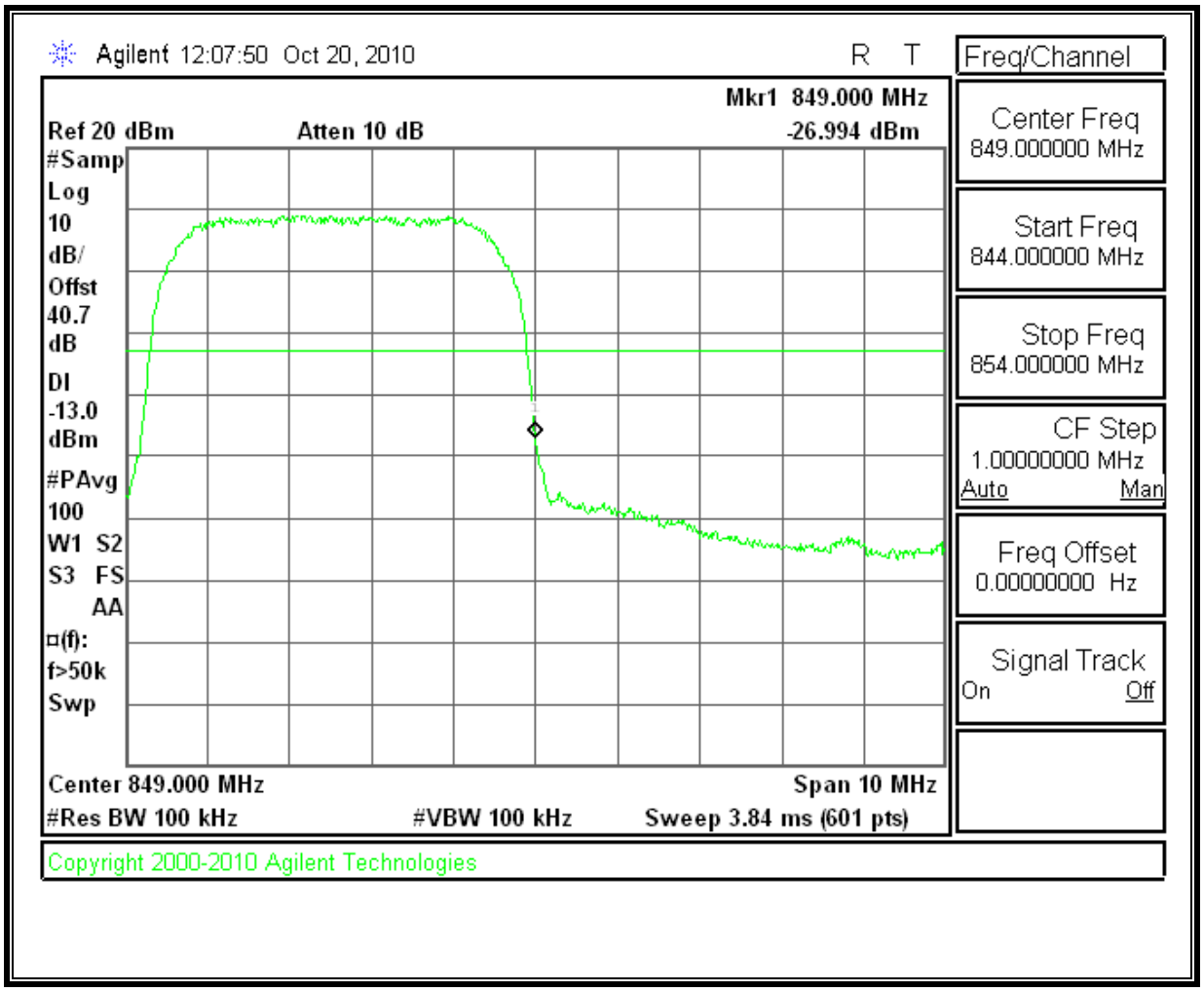
HIGH CH



UMTS, REL99 LOW Channel Band Edge

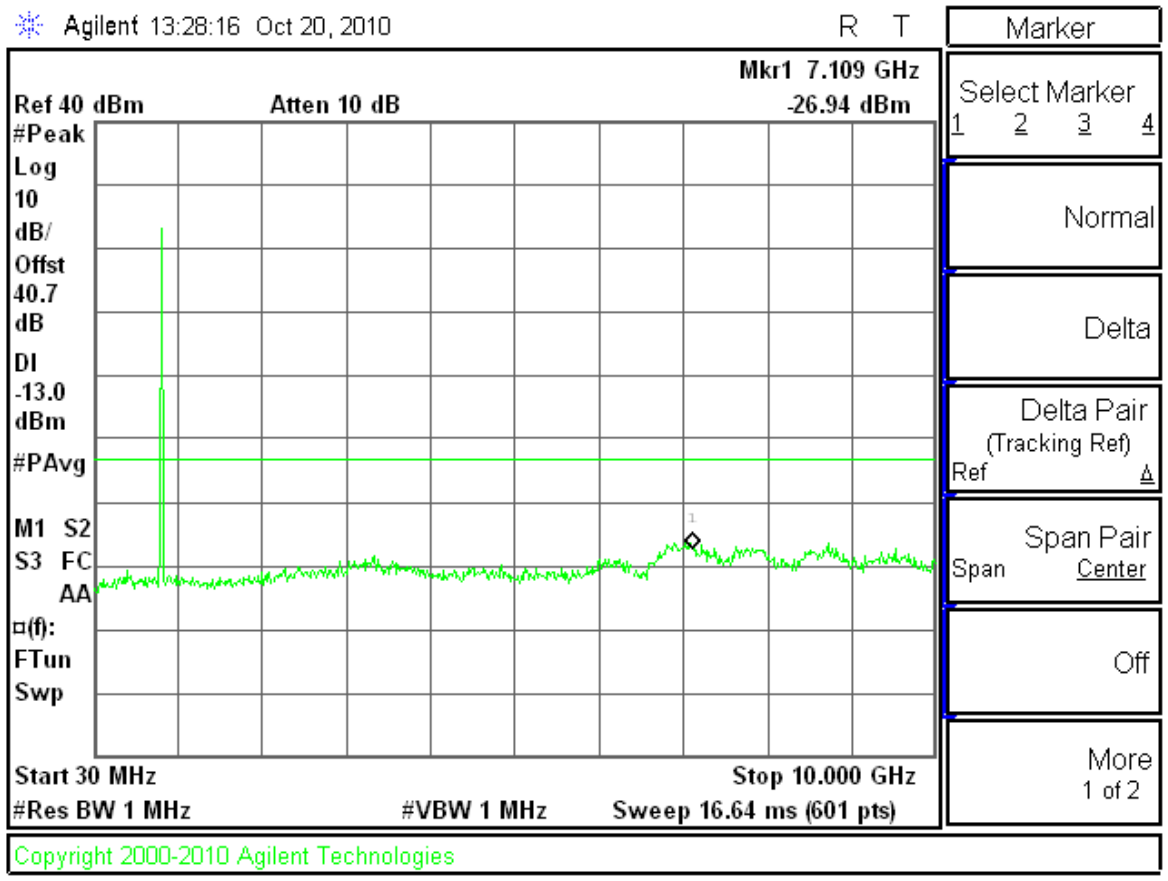


High Channel Band Edge

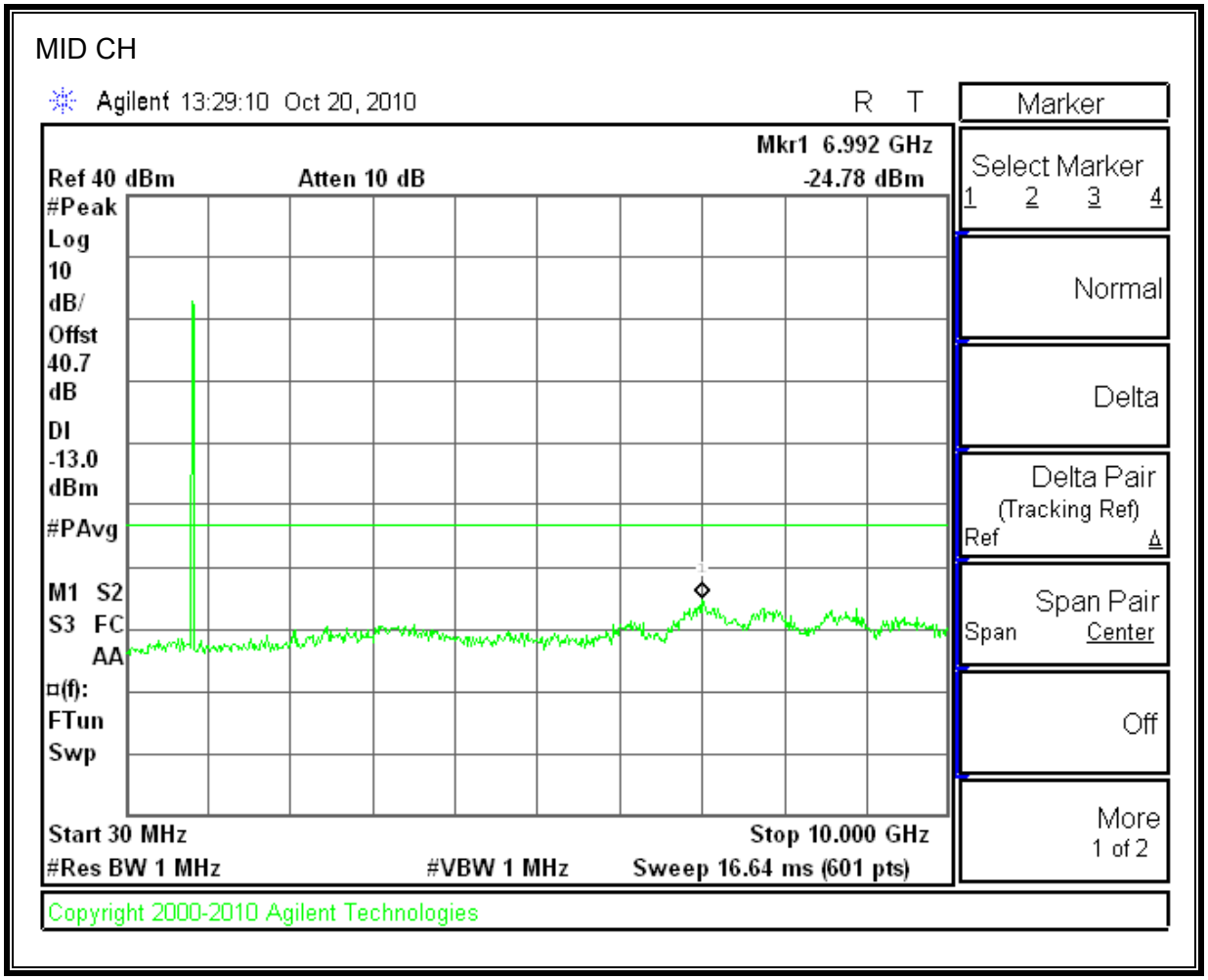


UMTS HSDPA Mode (Cellular Band)

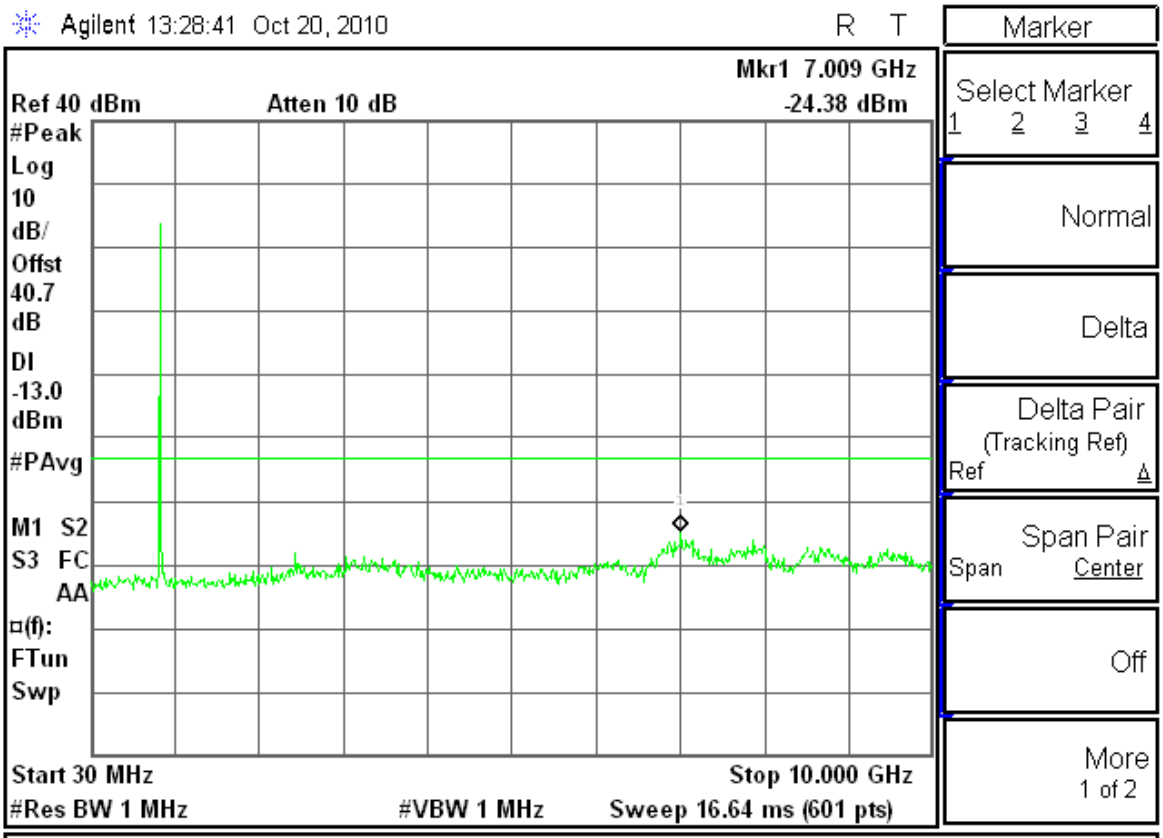
LOW CH



MID CH

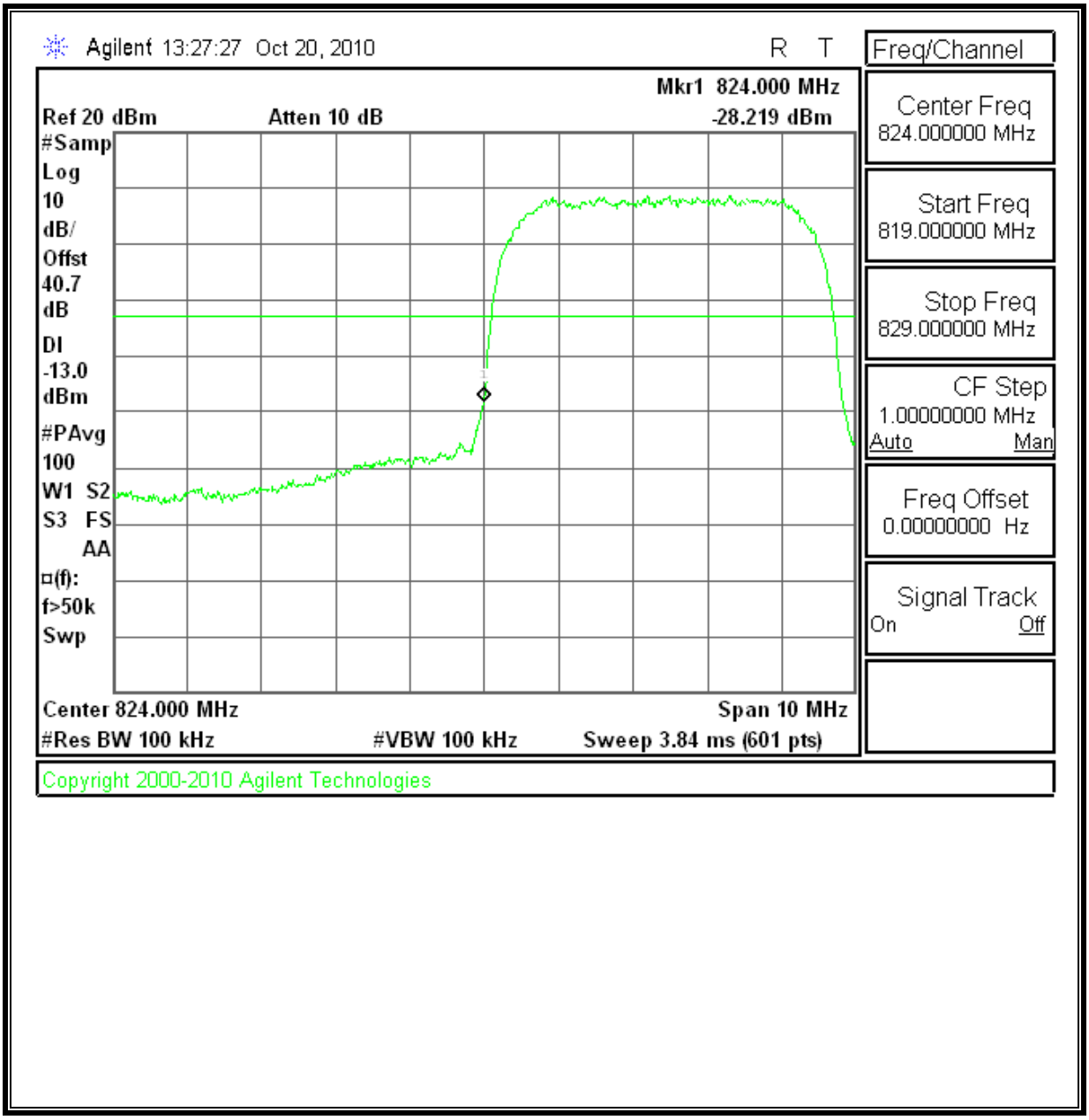


HIGH CH

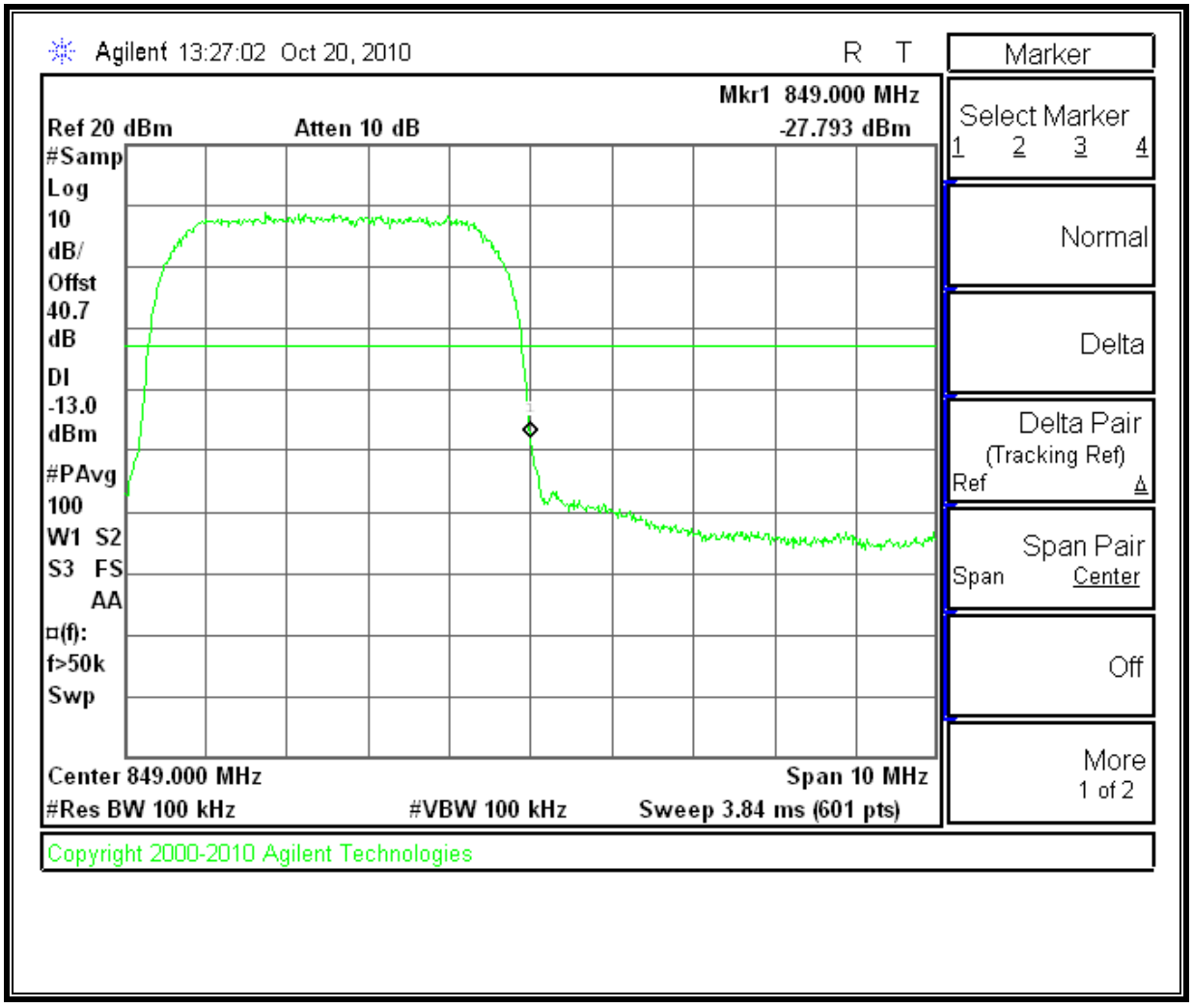


UMTS HSDPA CELL BAND

Low Channel Band Edge

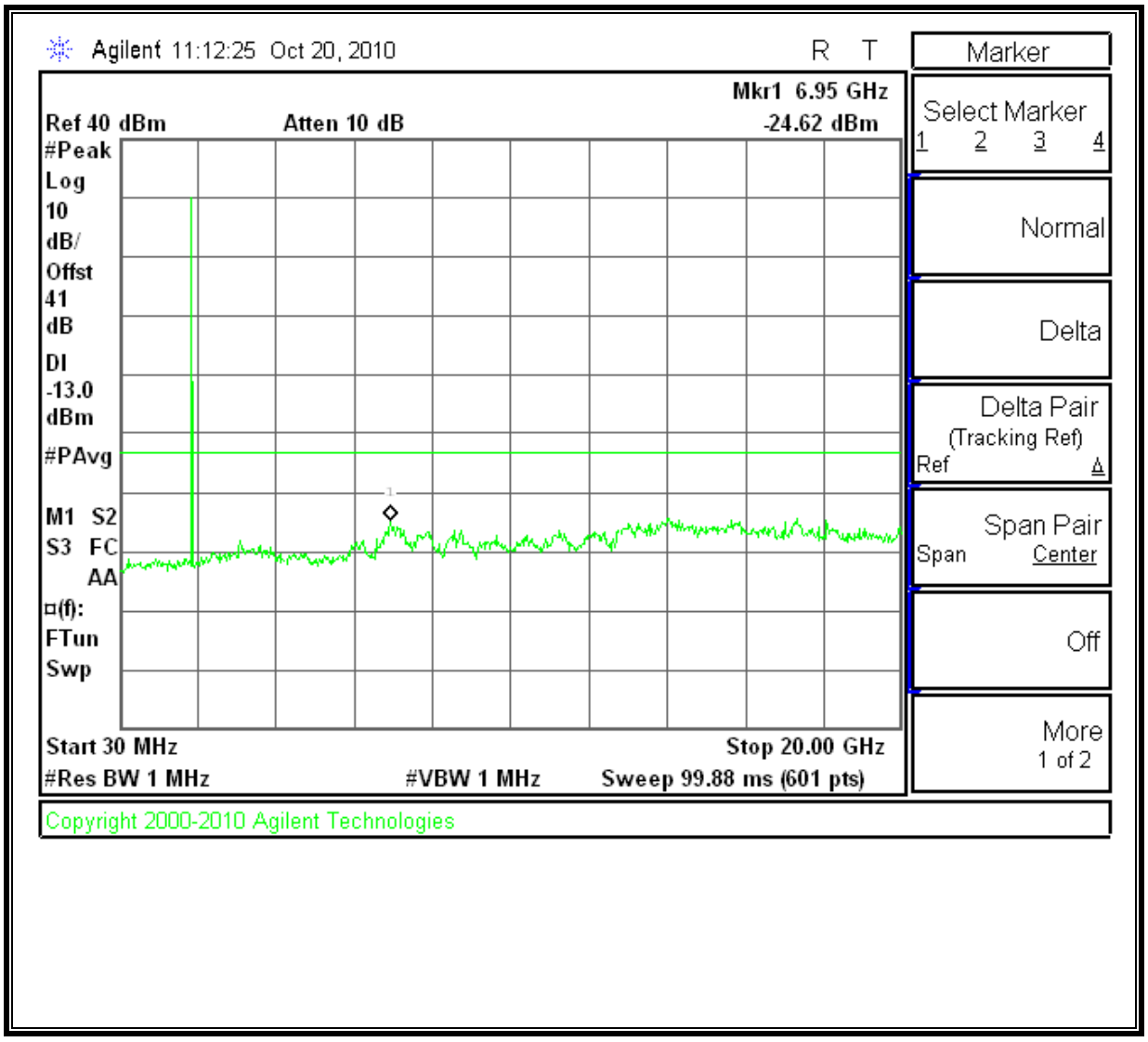


High Channel Band Edge

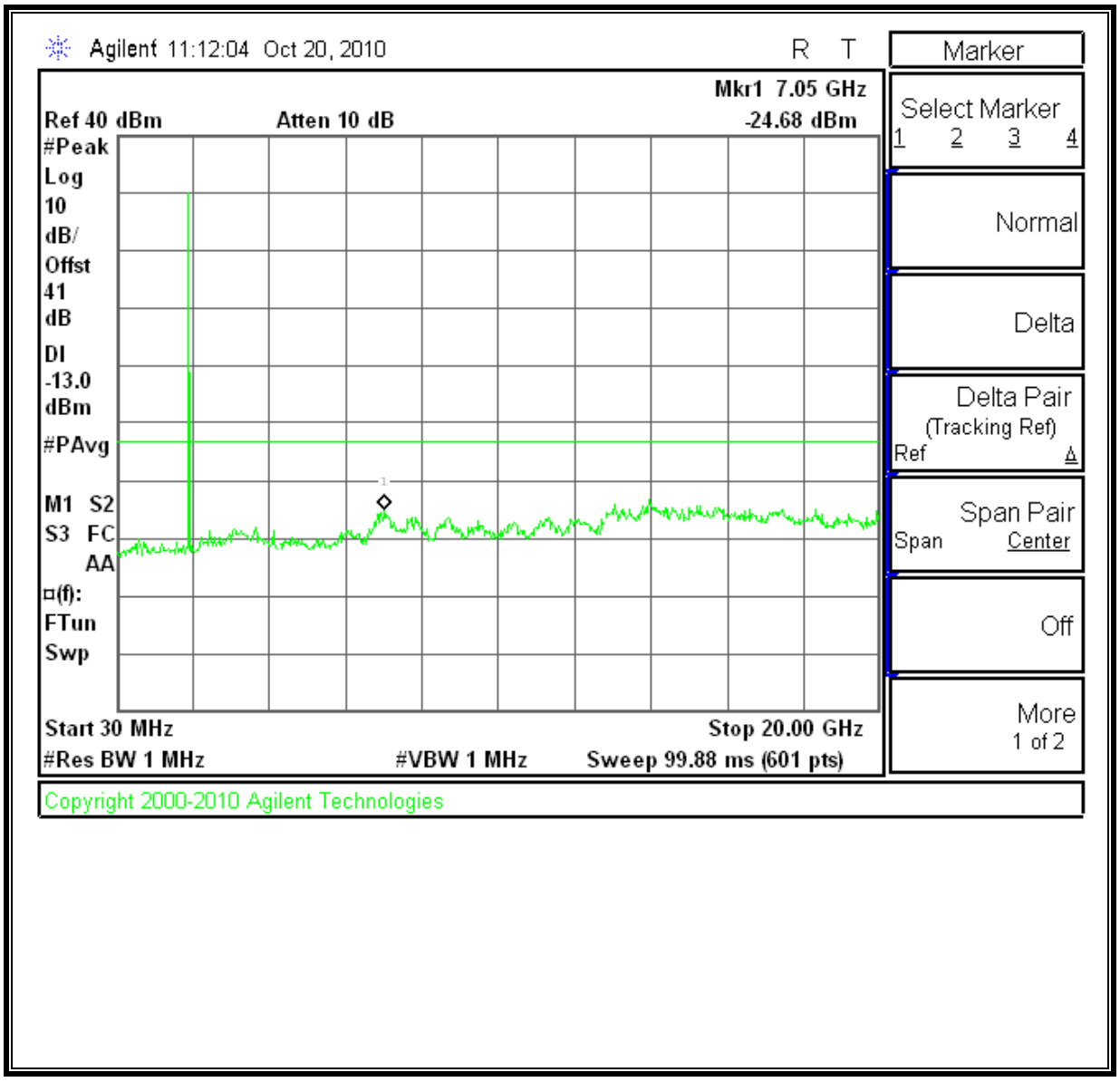


PCS GPRS1900 MODULATION RESULTS

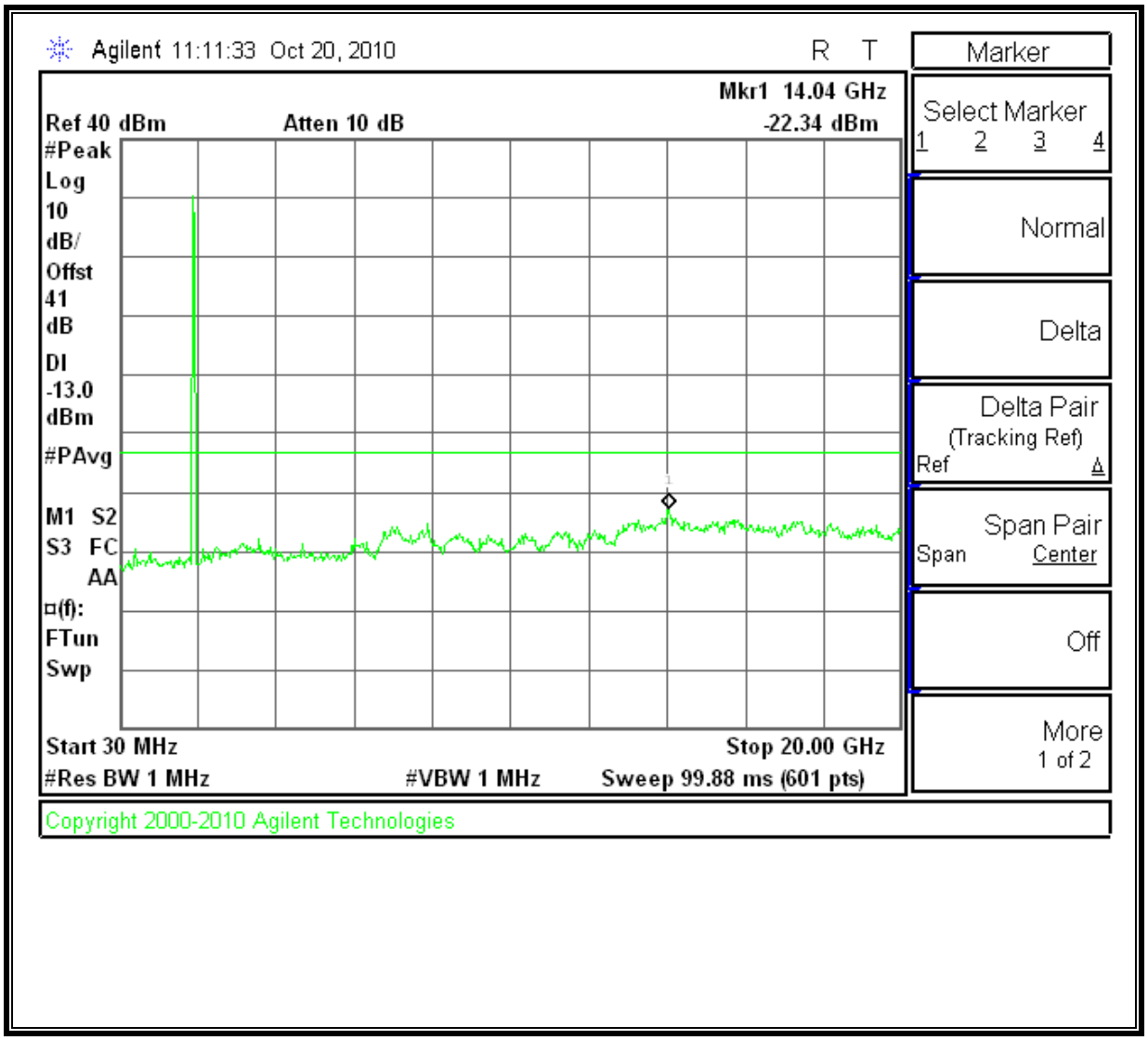
Low Channel, Out-Of-Band Emissions



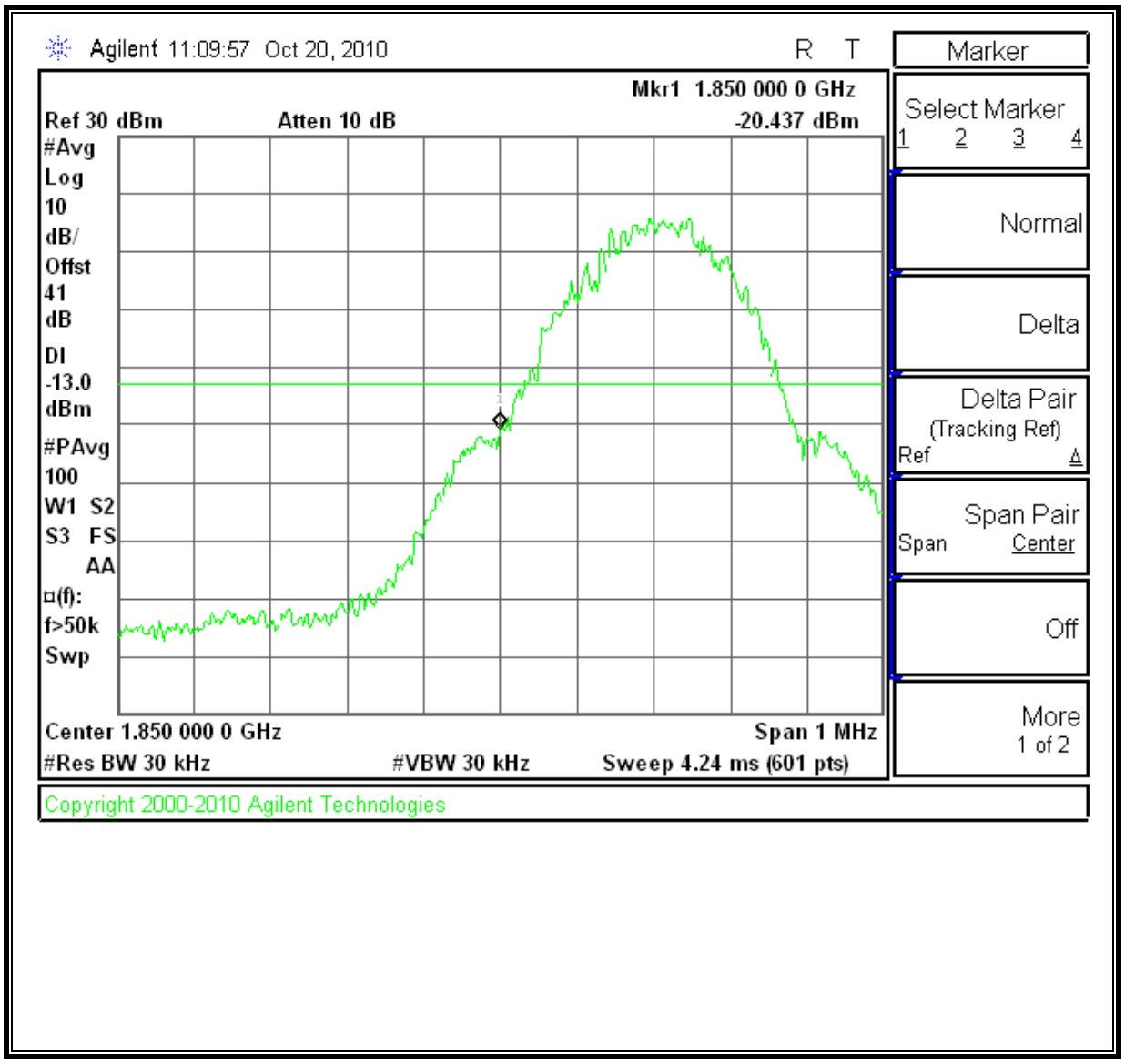
Mid Channel, Out-Of-Band Emissions



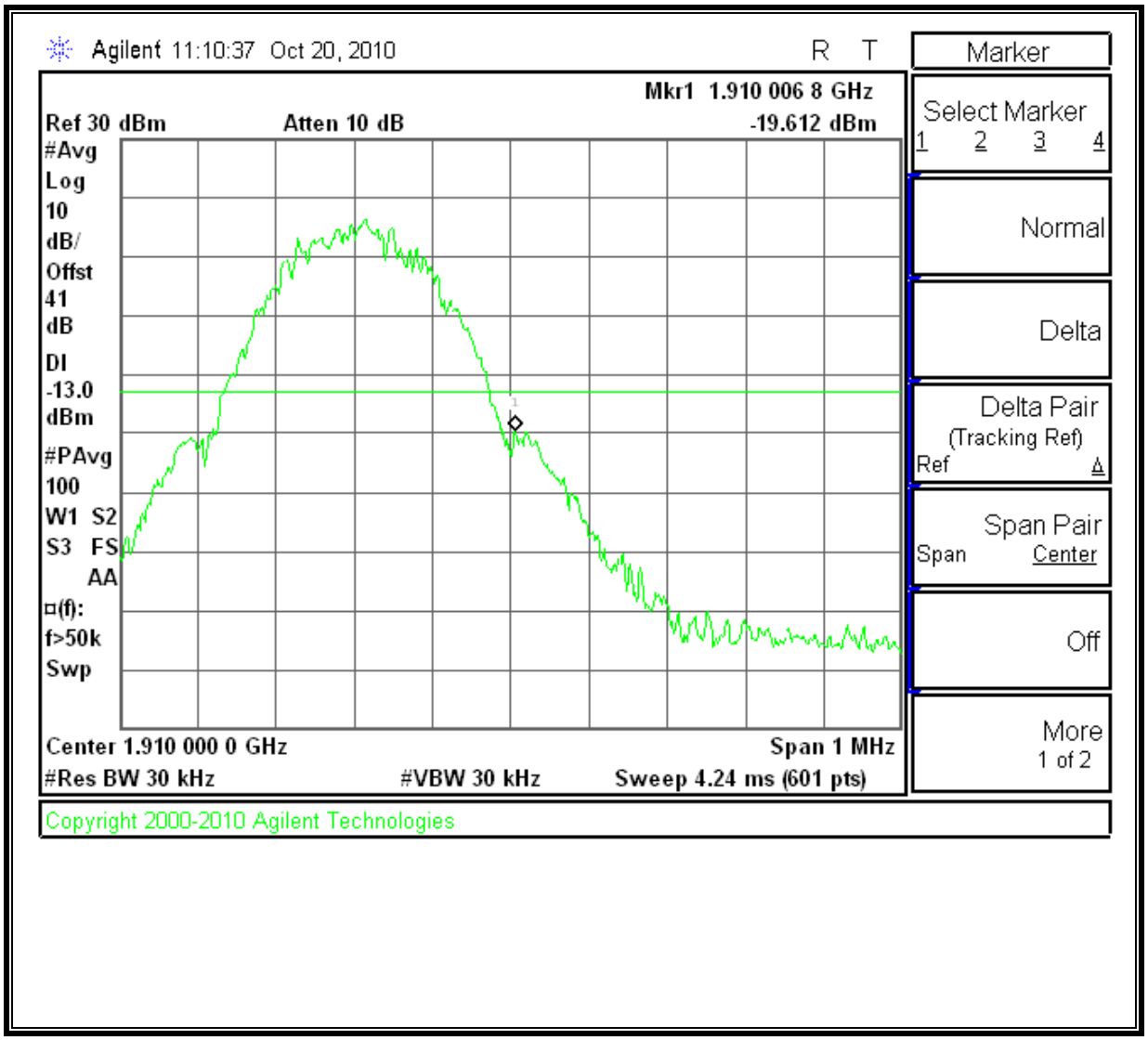
High Channel, Out-Of-Band Emissions



Low Channel Band Edge

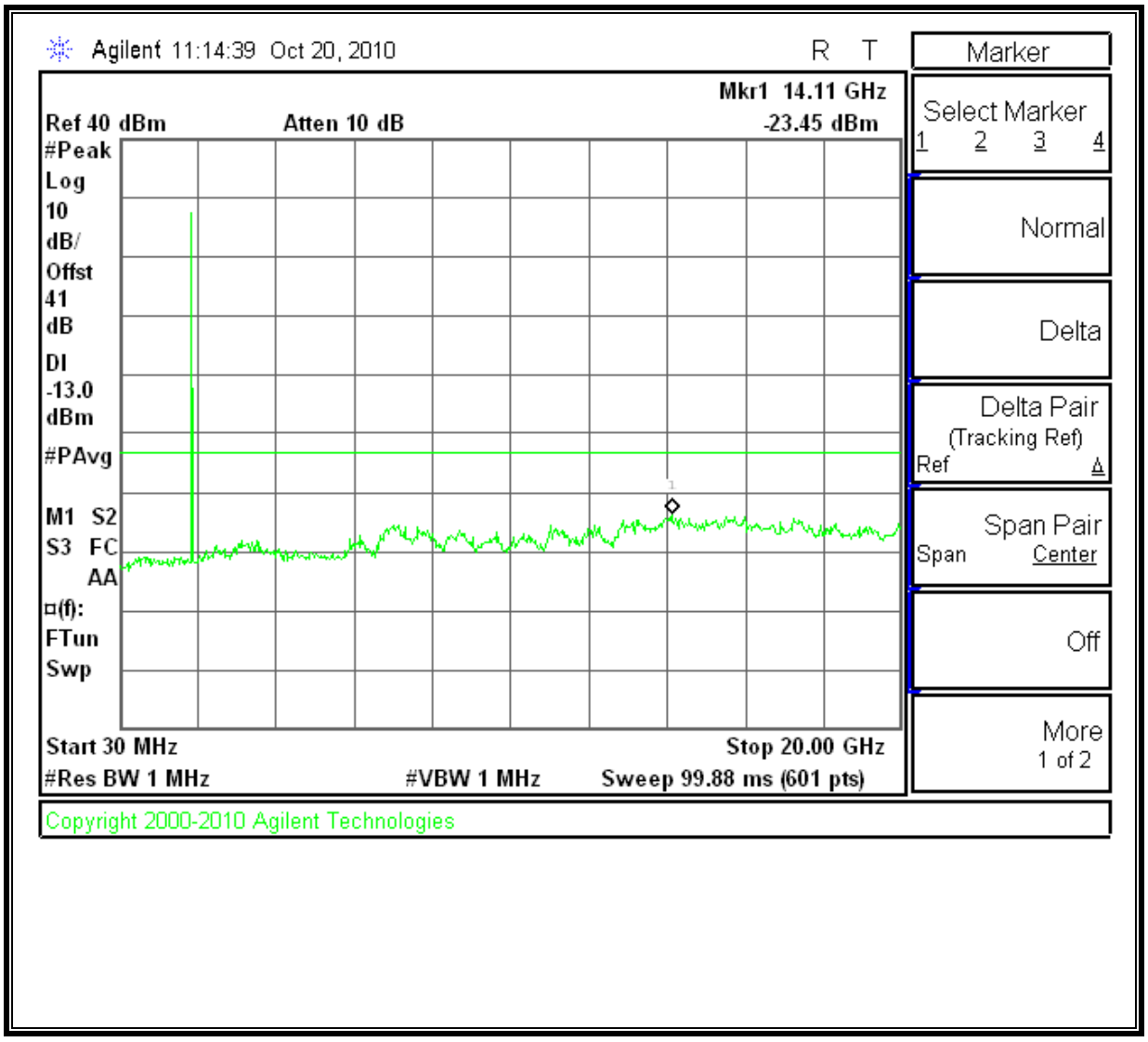


High Channel Band Edge

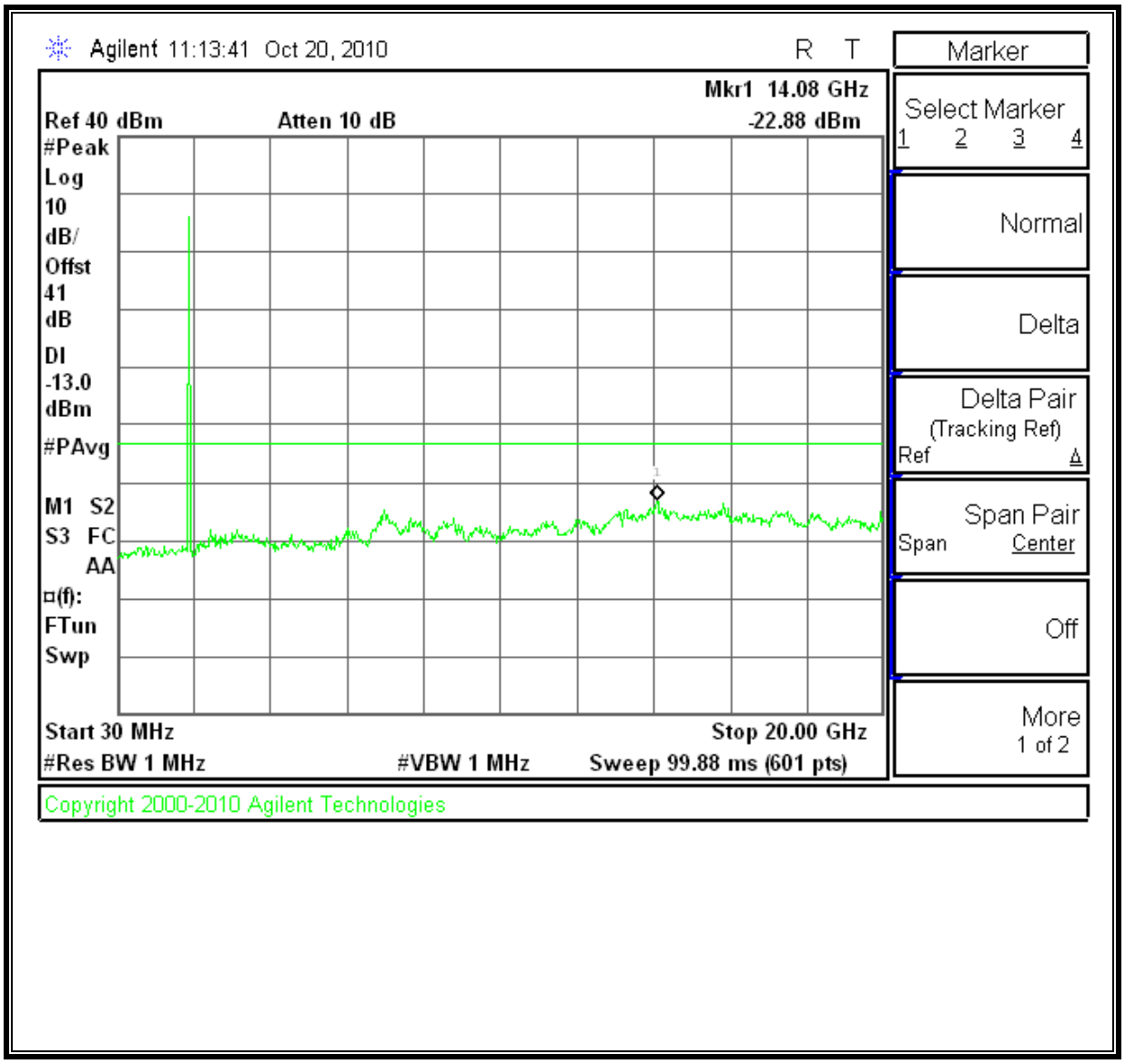


PCS EGPRS1900 MODULATION RESULTS

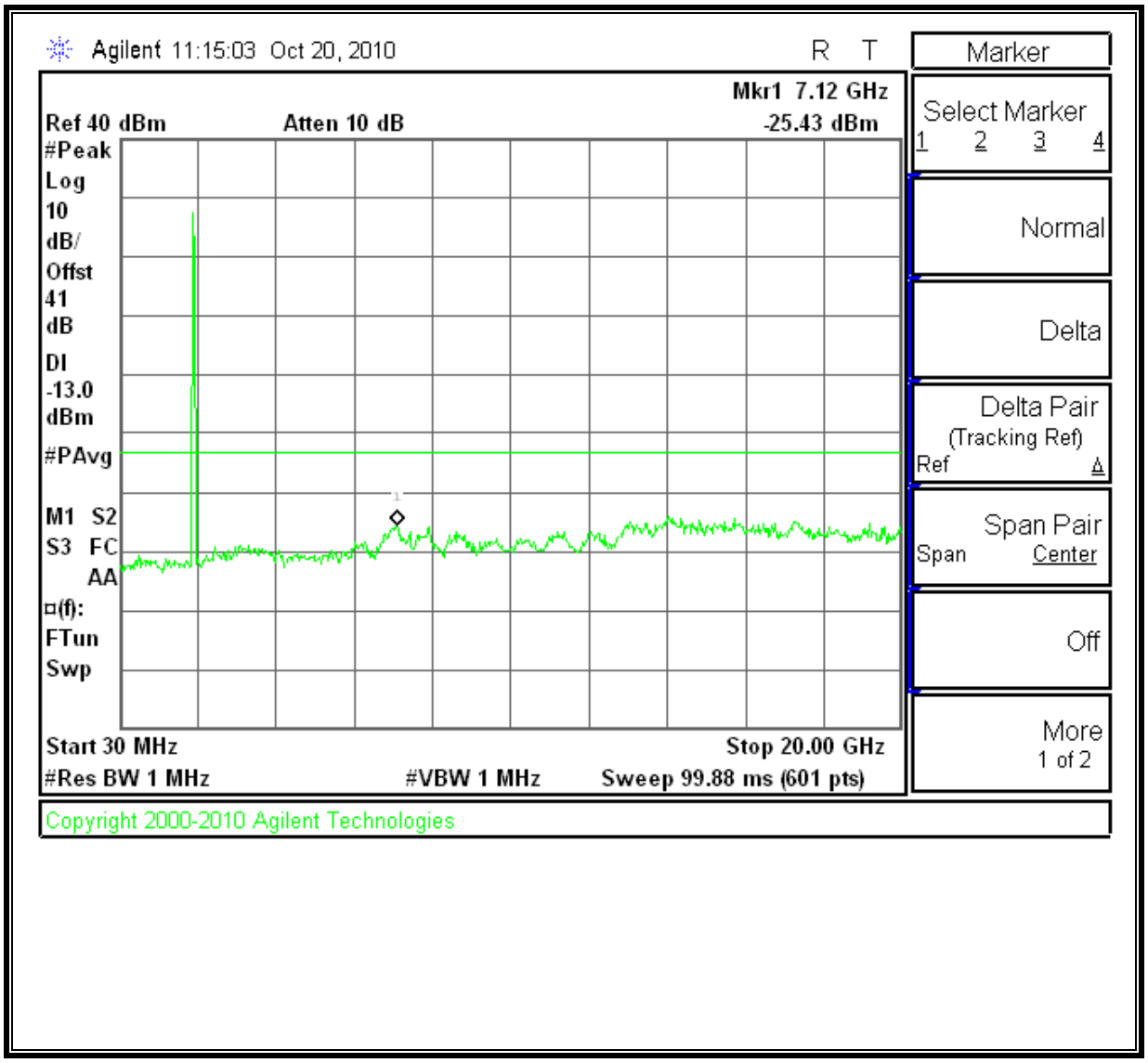
Low Channel, Out-Of-Band Emissions



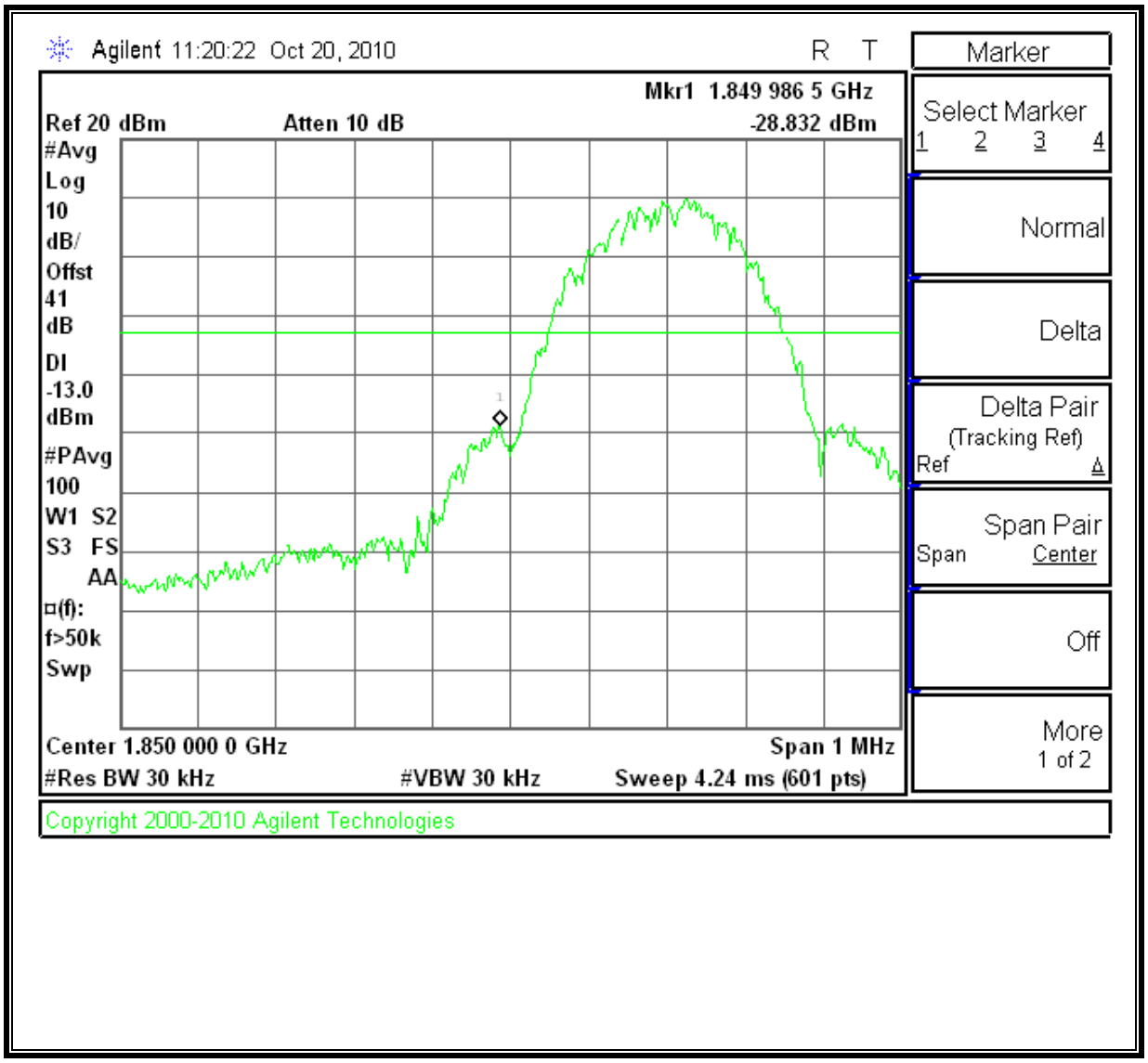
Mid Channel, Out-Of-Band Emissions



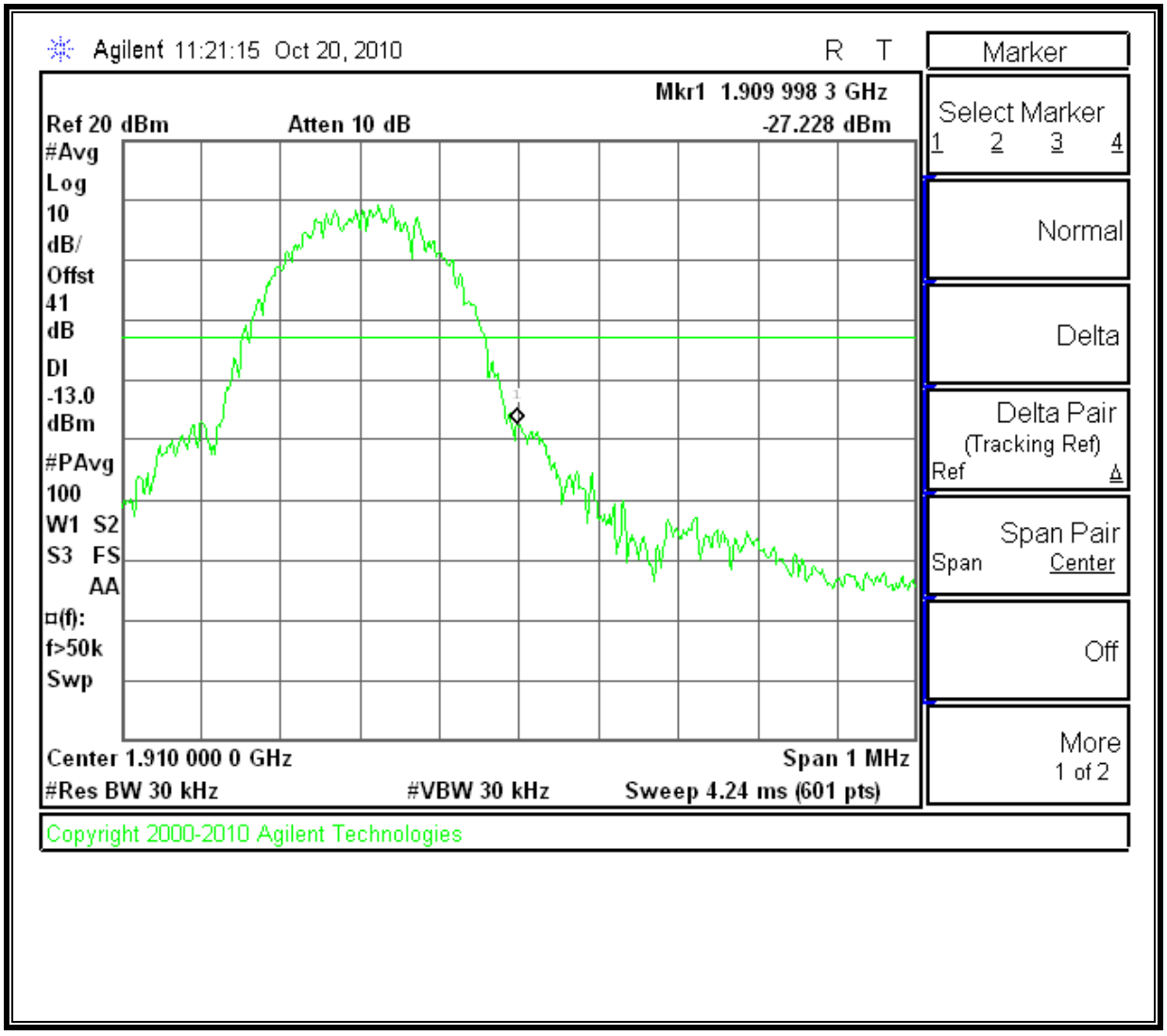
High Channel, Out-Of-Band Emissions



Low Channel Band Edge

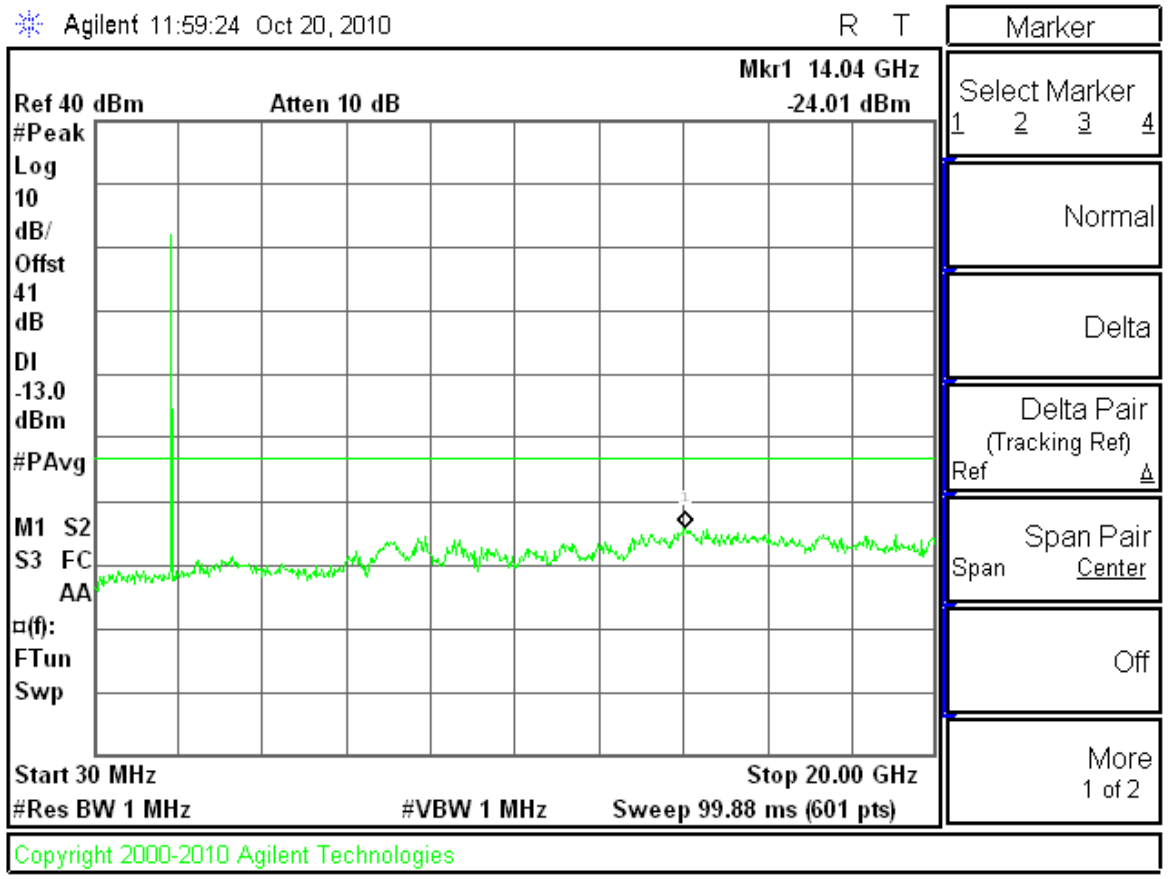


High Channel Band Edge

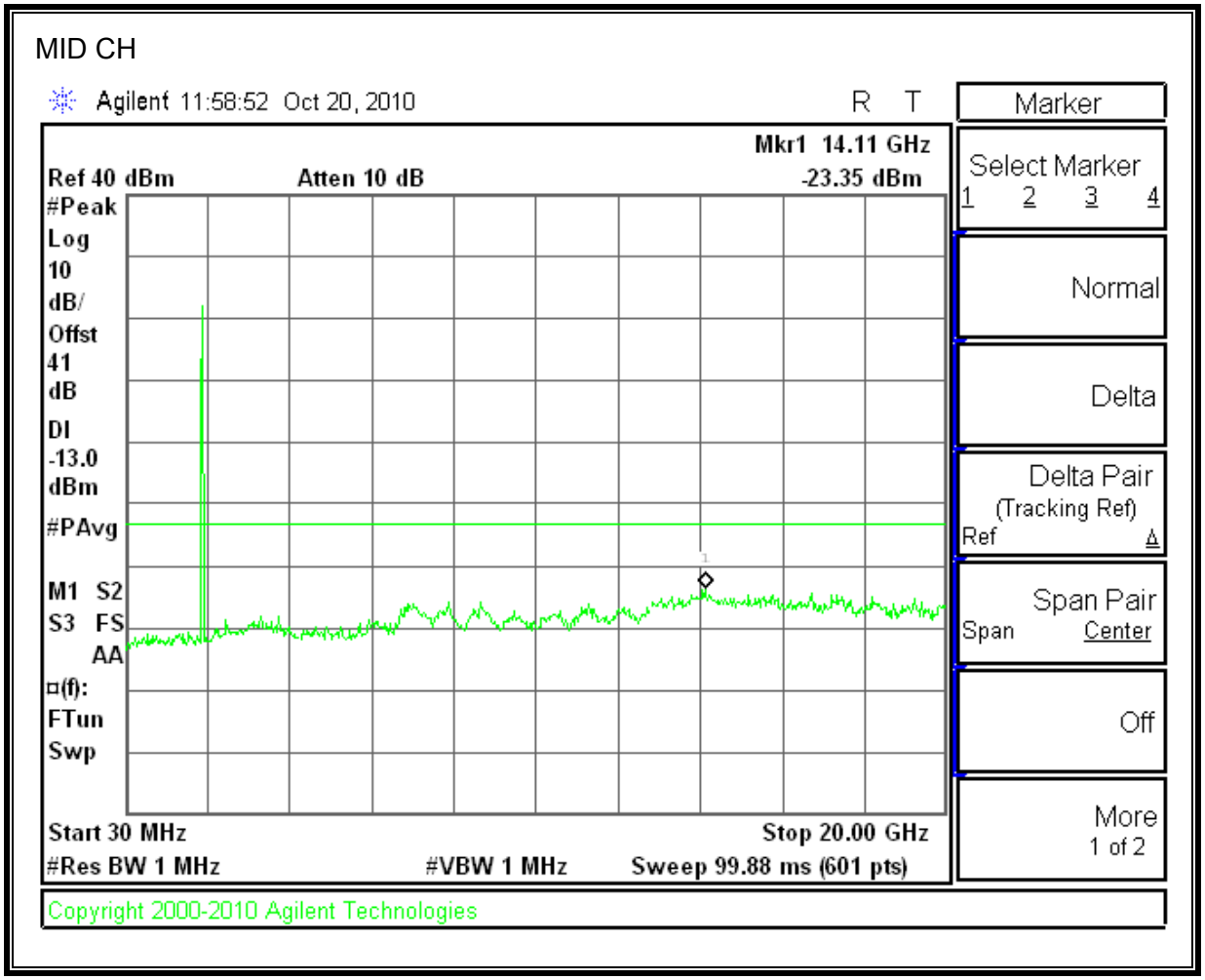


UMTS REL99 PCS BAND

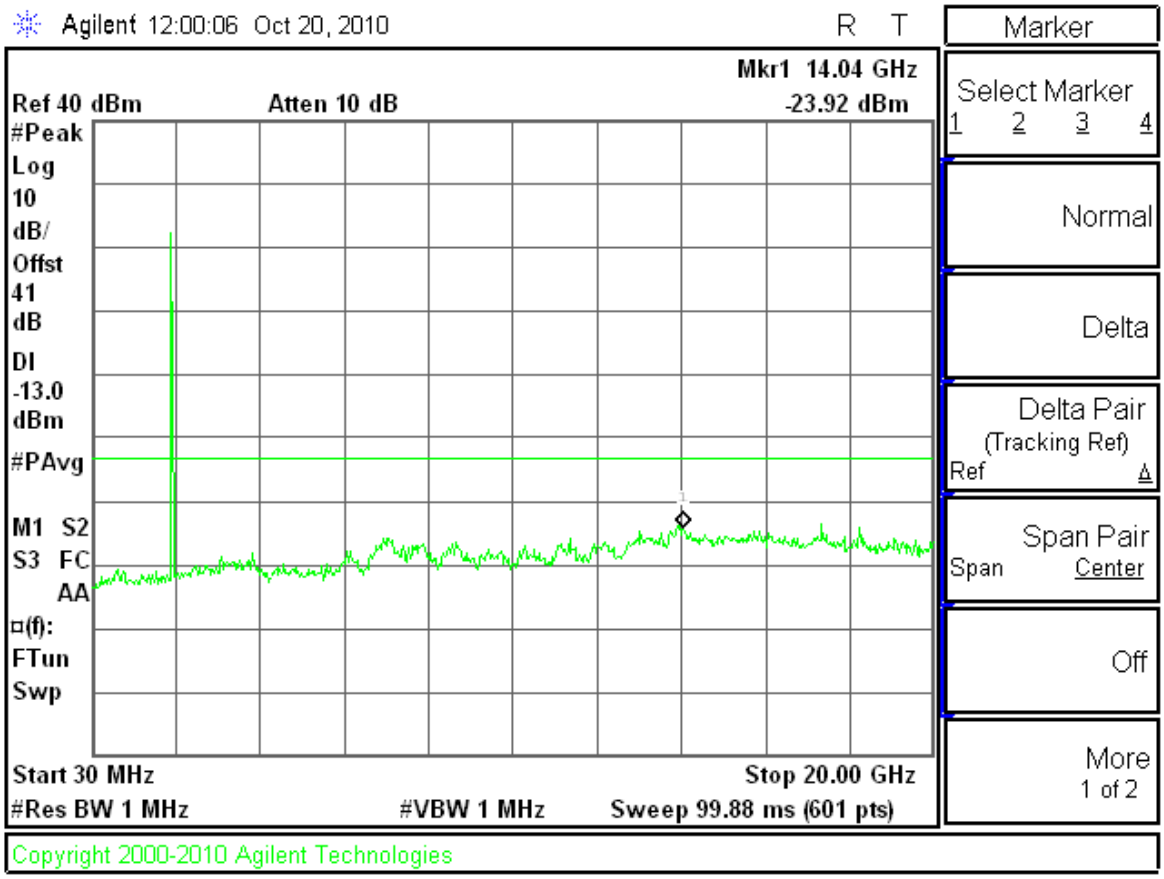
LOW CH



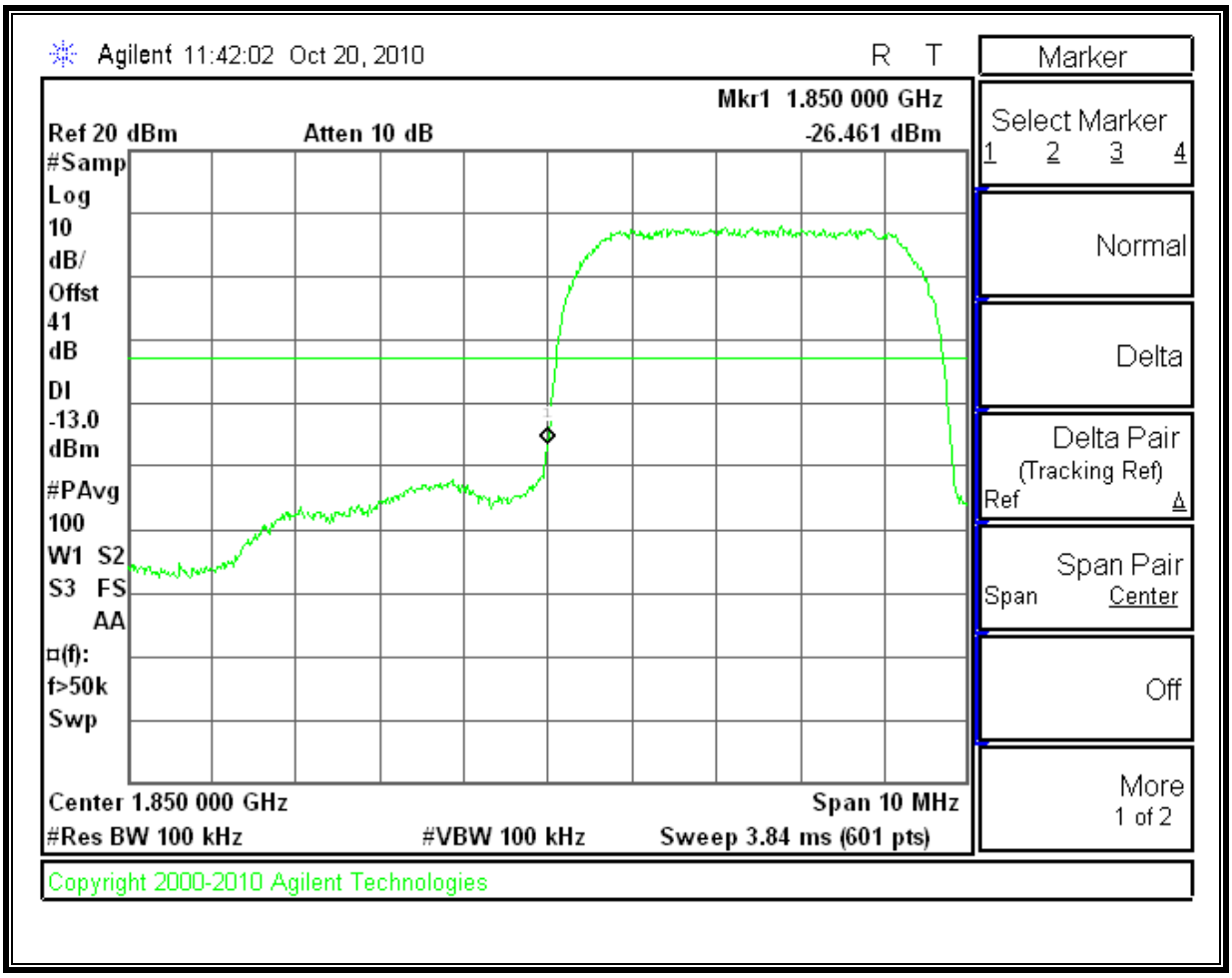
MID CH



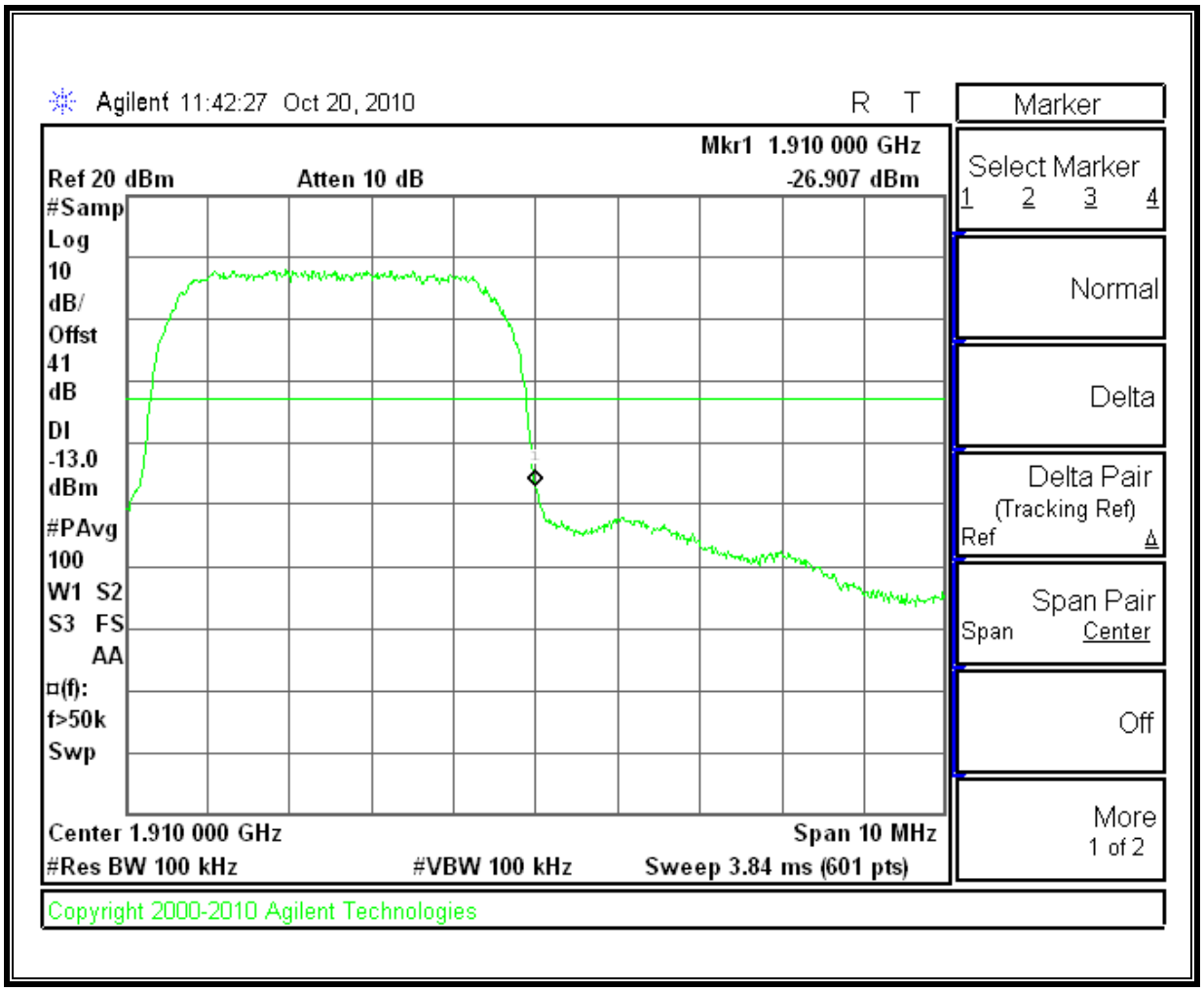
HIGH CH



UMTS, REL99 Low Channel Band Edge

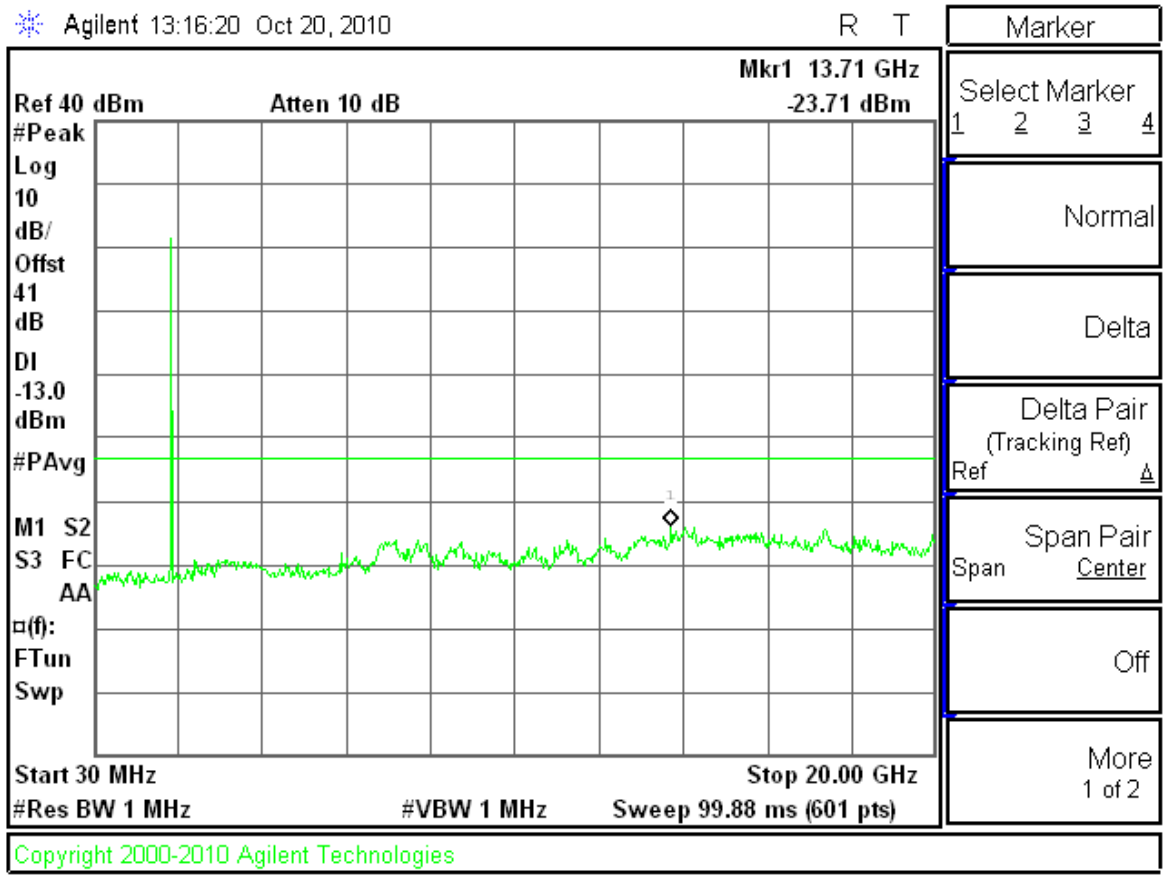


High Channel Band Edge

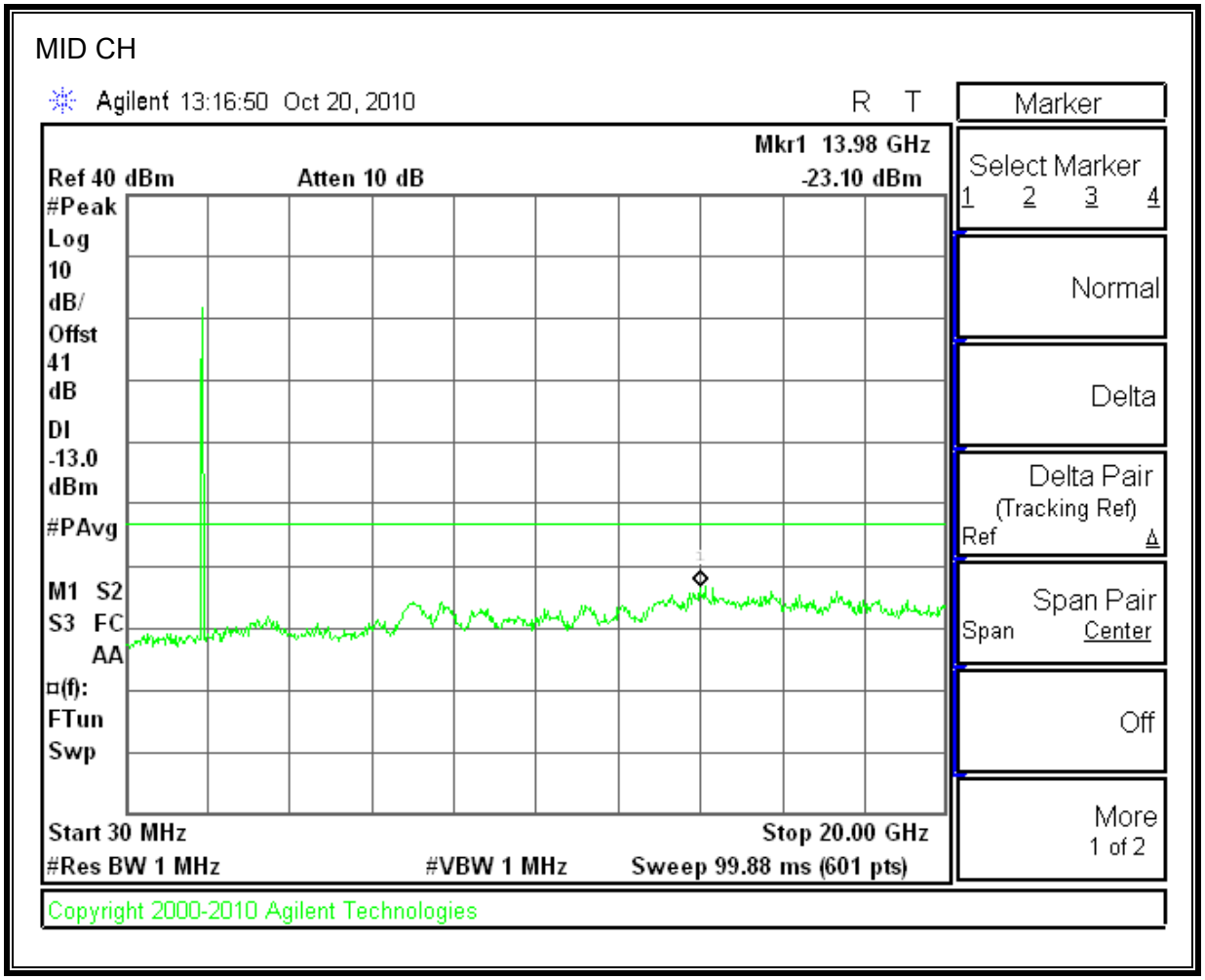


UMTS HSDPA PCS BAND

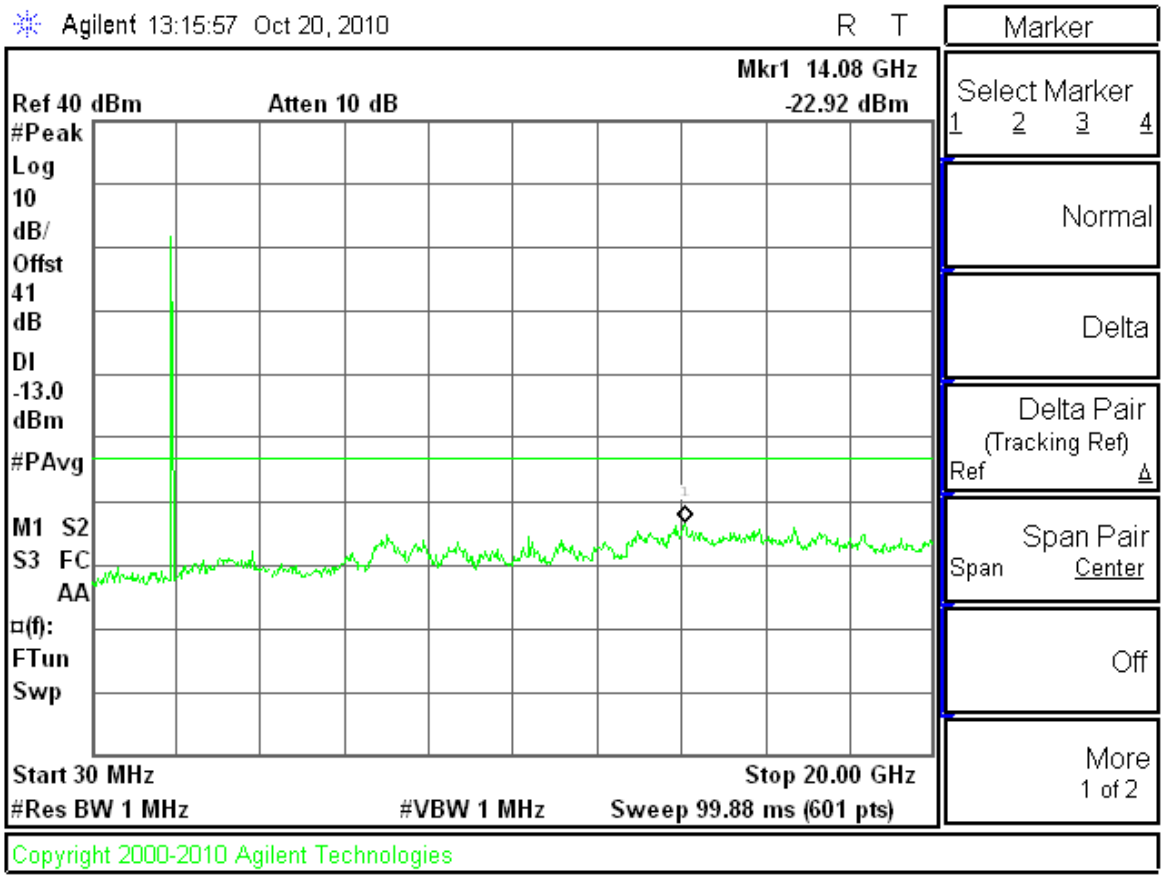
LOW CH



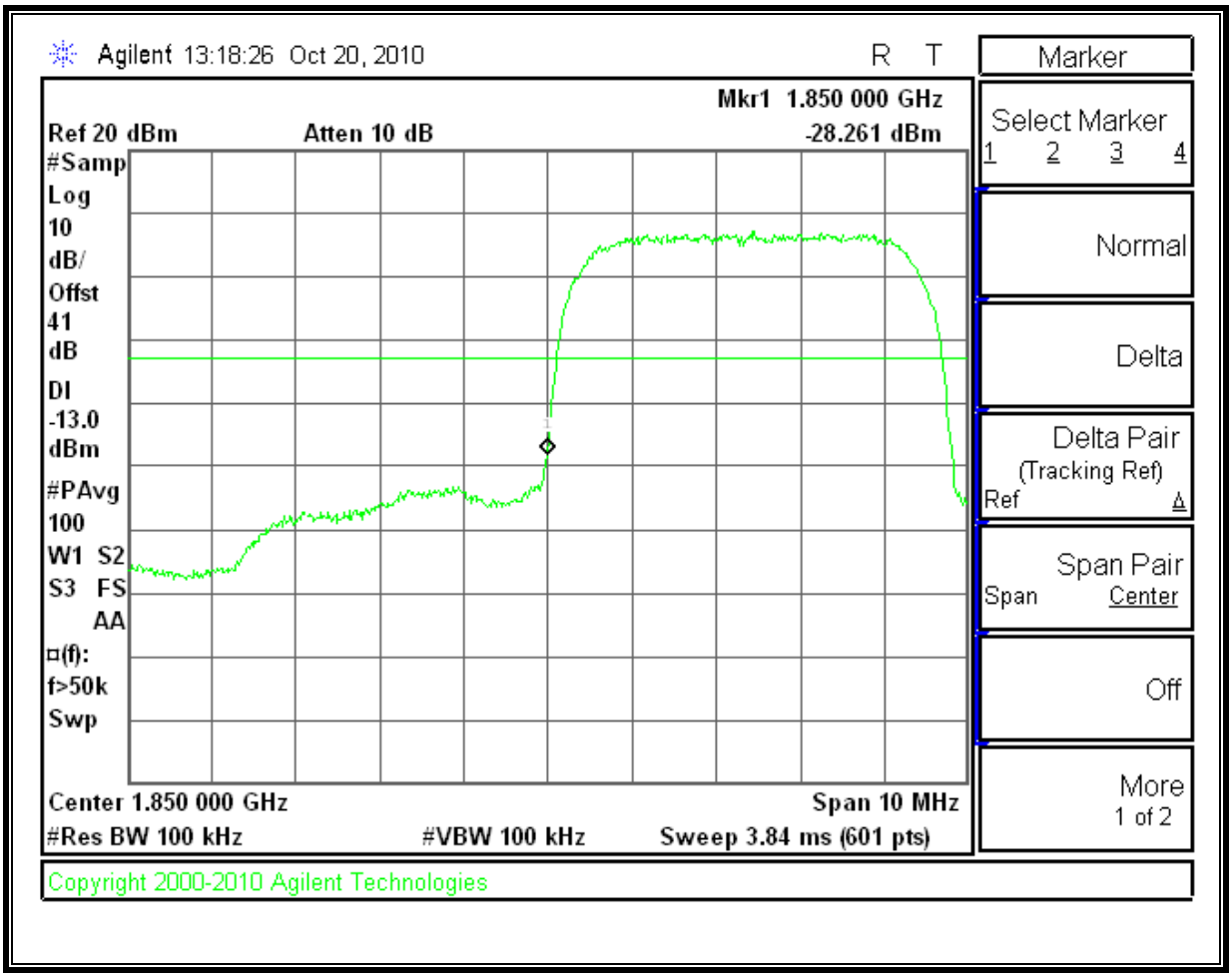
MID CH



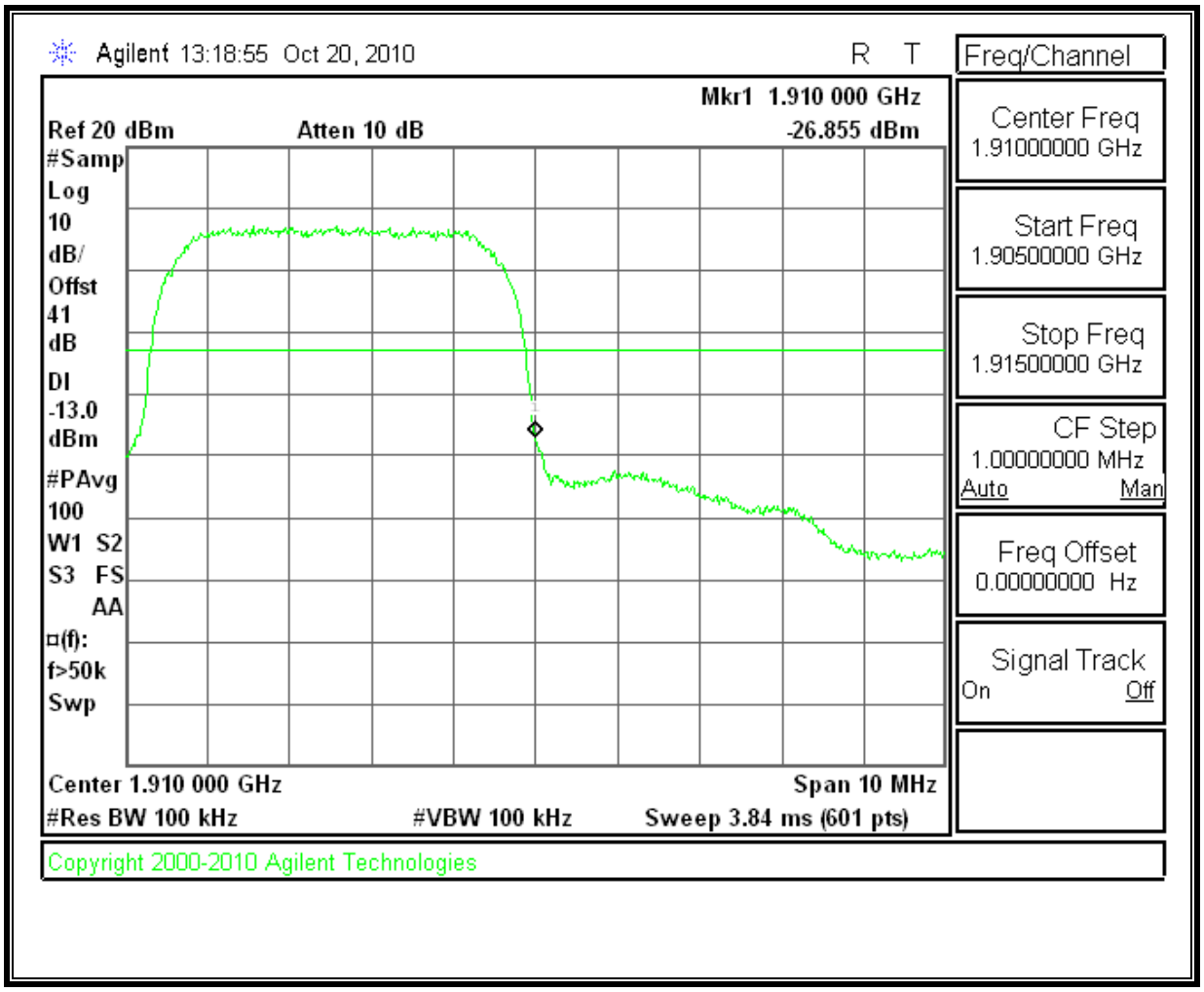
HIGH CH



UMTS, HSDPA Low Channel Band Edge



High Channel Band Edge



8.3. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §22.355, §24.235

LIMITS

- §22.355 - The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.
- §24.235 - The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

TEST PROCEDURE

Use CMU200 with Frequency Error measurement capability.

- Temp. = −20° to +50°C
- Voltage = 115 Vdc (85% - 115%)

Frequency Stability vs Temperature:
The EUT is place inside a temperature chamber. The temperature is set to 20ºC and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50ºC is reached.

Frequency Stability vs Voltage:
The peak frequency error is recorded (worst-case).

MODES TESTED

- Cellular & PCS bands for GSM
  - GPRS (GSMK)
  - EGPRS (8PSK)
- Band V & Band II for UMTS (WCDMA)
  - Rel 99
  - Rel 6 HSDPA Subtest 1

RESULTS

See the following pages.

CELL, GSM850 – MID CHANNEL

Reference Frequency: Cellular Mid Channel 837.00MHz @ 20ºC Limit: to stay +- 2.5 ppm = 2091.508 Hz				
DC Power Supply (Vdc)	Environment Temperature (ºC)	Frequency Deviation Measureed with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.70	50	836.601877	1.596	2.5
3.70	40	836.602012	1.434	2.5
3.70	30	836.602155	1.263	2.5
3.70	***20***	***836.603212***	***0***	2.5
3.70	10	836.603590	-0.452	2.5
3.70	0	836.603872	-0.789	2.5
3.70	-10	836.603982	-0.920	2.5
3.70	-20	836.604230	-1.217	2.5
3.70	-30	836.604533	-1.579	2.5

Reference Frequency: Cellular Mid Channel 837.000000MHz @ 20ºC Limit: to stay +- 2.5 ppm = 2091.508 Hz				
Power Supply (Vdc)	Environment Temperature (ºC)	Frequency Deviation Measureed with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.7	***20***	***836.603212***	***0***	***2.5***
3.4 (end point voltage)	20	836.603847	*-0.759*	2.5
4.2	20	836.602744	*0.559*	2.5

CELL, EGPRS850 – MID CHANNEL

Reference Frequency: Cellular Mid Channel 836.600MHz @ 20ºC Limit: to stay +- 2.5 ppm = 2091.500 Hz				
DC Power Supply (Vdc)	Environment Temperature (ºC)	Frequency Deviation Measureed with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.70	50	836.599894	0.127	2.5
3.70	40	836.599934	0.079	2.5
3.70	30	836.599972	0.033	2.5
3.70	***20***	***836.600000***	***0***	2.5
3.70	10	836.600012	-0.014	2.5
3.70	0	836.600024	-0.029	2.5
3.70	-10	836.600035	-0.042	2.5
3.70	-20	836.600097	-0.116	2.5
3.70	-30	836.600110	-0.131	2.5

Reference Frequency: Cellular Mid Channel 837.000000MHz @ 20ºC Limit: to stay +- 2.5 ppm = 2091.500 Hz				
Power Supply (Vdc)	Environment Temperature (ºC)	Frequency Deviation Measureed with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.7	***20***	***836.600000***	***0***	***2.5***
3.4 (end point voltage)	20	836.599897	*0.123*	2.5
4.2	20	836.600001	*-0.001*	2.5

PCS, GSM1900 – MID CHANNEL

Reference Frequency: PCS Mid Channel 1880.00000MHz @ 20ºC Limit: within the authorized block or +- 2.5 ppm = 4700.000 Hz				
Power Supply	**Environment**	**Frequency Deviation Measureed with Time Elapse**		
(Vdc)	**Temperature (*C)**	**(MHz)**	**Delta (ppm)**	**Limit (ppm)**
3.70	50	1879.99999	0.008	2.5
3.70	40	1879.99998	0.011	2.5
3.70	30	1880.00001	-0.003	2.5
3.70	***20***	***1880.00000***	***0***	***2.5***
3.70	10	***1880.00000***	0.000	2.5
3.70	0	1880.00007	-0.037	2.5
3.70	-10	1880.00007	-0.037	2.5
3.70	-20	1880.00002	-0.011	2.5
3.70	-30	1879.99998	0.011	2.5

Reference Frequency: PCS Mid Channel 1880.0000MHz @ 20ºC Limit: within the authorized block or +- 2.5 ppm = 4700.000 Hz				
Power Supply	**Environment**	**Frequency Deviation Measureed with Time Elapse**		
(Vdc)	**Temperature (*C)**	**(MHz)**	**Delta (ppm)**	**Limit (ppm)**
3.7	***20***	***1880.000000***	***0***	***2.5***
3.4 (end point voltage)	20	1880.000020	*-0.011*	2.5
4.2	20	1880.000040	*-0.021*	2.5

PCS, EGPRS1900 – MID CHANNEL

Reference Frequency: PCS Mid Channel 1880.00000MHz @ 20ºC Limit: within the authorized block or +- 2.5 ppm = 4700.000 Hz				
Power Supply	**Environment**	**Frequency Deviation Measureed with Time Elapse**		
(Vdc)	**Temperature (*C)**	**(MHz)**	**Delta (ppm)**	**Limit (ppm)**
3.70	50	1879.99995	0.024	2.5
3.70	40	1879.99997	0.018	2.5
3.70	30	1879.99998	0.009	2.5
3.70	***20***	***1880.00000***	***0***	***2.5***
3.70	10	1880.00010	-0.053	2.5
3.70	0	1880.00003	-0.016	2.5
3.70	-10	1880.00001	-0.005	2.5
3.70	-20	1879.99999	0.005	2.5
3.70	-30	1879.99998	0.011	2.5

Reference Frequency: PCS Mid Channel 1880.0000MHz @ 20ºC Limit: within the authorized block or +- 2.5 ppm = 4700.000 Hz				
Power Supply	**Environment**	**Frequency Deviation Measureed with Time Elapse**		
(Vdc)	**Temperature (*C)**	**(MHz)**	**Delta (ppm)**	**Limit (ppm)**
3.7	***20***	***1880.000000***	***0***	***2.5***
3.4 (end point voltage)	20	1879.999920	*0.043*	2.5
4.2	20	1880.000040	*-0.021*	2.5

CELL, UMTS REL 99 – MID CHANNEL

Reference Frequency: Cellular Mid Channel 836.600MHz @ 20ºC Limit: to stay +- 2.5 ppm = 2091.500 Hz				
DC Power Supply (Vdc)	Environment Temperature (ºC)	Frequency Deviation Measureed with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.70	50	836.599997	-0.014	2.5
3.70	40	836.599993	-0.010	2.5
3.70	30	836.599989	-0.005	2.5
3.70	***20***	***836.599985***	***0***	2.5
3.70	10	836.599984	0.001	2.5
3.70	0	836.599982	0.004	2.5
3.70	-10	836.599984	0.001	2.5
3.70	-20	836.599986	-0.001	2.5
3.70	-30	836.599983	0.002	2.5

Reference Frequency: Cellular Mid Channel 837.000000MHz @ 20ºC Limit: to stay +- 2.5 ppm = 2091.500 Hz				
Power Supply (Vdc)	Environment Temperature (ºC)	Frequency Deviation Measureed with Time Elapse		
		(MHz)	Delta (ppm)	Limit (ppm)
3.7	***20***	***836.599985***	***0***	***2.5***
3.4 (end point voltage)	20	836.599987	*-0.002*	2.5
4.2	20	836.599983	*0.002*	2.5

PCS UMTS REL 99 – MID CHANNEL

Reference Frequency: PCS Mid Channel 1880.01812MHz @ 20ºC Limit: within the authorized block or +- 2.5 ppm = 4700.045 Hz				
Power Supply	**Environment**	**Frequency Deviation Measureed with Time Elapse**		
(Vdc)	**Temperature (*C)**	**(MHz)**	**Delta (ppm)**	**Limit (ppm)**
3.70	50	1880.01777	0.187	2.5
3.70	40	1880.01785	0.141	2.5
3.70	30	1880.01794	0.094	2.5
3.70	***20***	***1880.01812***	***0***	***2.5***
3.70	10	1880.01837	-0.133	2.5
3.70	0	1880.01847	-0.187	2.5
3.70	-10	1880.01865	-0.282	2.5
3.70	-20	1880.01883	-0.378	2.5
3.70	-30	1880.01893	-0.431	2.5

Reference Frequency: PCS Mid Channel 1880.0000MHz @ 20ºC Limit: within the authorized block or +- 2.5 ppm = 4700.045 Hz				
Power Supply	**Environment**	**Frequency Deviation Measureed with Time Elapse**		
(Vdc)	**Temperature (*C)**	**(MHz)**	**Delta (ppm)**	**Limit (ppm)**
3.7	***20***	***1880.018120***	***0***	***2.5***
3.4 (end point voltage)	20	1880.017920	*0.106*	2.5
4.2	20	1880.018250	*-0.069*	2.5

9. RADIATED TEST RESULTS

9.1. RADIATED POWER (ERP & EIRP)

LIMIT

22.913(a) The ERP of mobile transmitters and auxiliary test transmitters must not exceed 7 Watts.

24.232(b) Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the power to the minimum necessary for successful communications.

TEST PROCEDURE

ANSI / TIA / EIA 603C Clause 2.2.17

MODES TESTED

- Cellular & PCS bands for GSM
  - GPRS (GSMK)
  - EGPRS (8PSK)
- Band V & Band II for UMTS (WCDMA)
  - Rel 99
  - Rel 6 HSDPA Subtest 1

RESULTS for Cellular Band (ERP)

Mode	Channel	f (MHz)	ERP(Inductive Backcover)		ERP (Inductive Charger)	
			dBm	mW	dBm	mW
GSM850	128	824.20	28.40	691.83	27.60	575.44
	190	836.60	30.20	1047.13	27.60	575.44
	251	848.80	29.70	933.25	27.30	537.03
EGPRS850	128	824.20	24.90	309.03	25.00	316.23
	190	836.60	25.50	354.81	25.20	331.13
	251	848.80	25.80	380.19	25.20	331.13

RESULTS for PCS Band (EIRP)

Mode	Channel	f (MHz)	EIRP(Inductive Backcover)		EIRP (Inductive Charger)	
			dBm	mW	dBm	mW
GSM1900	512	1850.20	32.10	1621.81	28.30	676.08
	661	1880.00	31.50	1412.54	28.50	707.95
	810	1909.80	31.30	1348.96	29.10	812.83
EGPRS1900	512	1850.20	28.90	776.25	25.40	346.74
	661	1880.00	28.50	707.95	25.60	363.08
	810	1909.80	28.00	630.96	25.90	389.05

Mode	Channel	f (MHz)	ERP(Inductive backcover)		ERP (Inductive Charger)	
			dBm	mW	dBm	mW
Rel 99	4132	826.40	23.40	218.78	24.40	275.42
	4180	836.60	23.90	245.47	24.60	288.40
	4230	846.60	23.50	223.87	24.40	275.42
HSDPA	4132	826.40	23.30	213.80	22.00	158.49
	4180	836.60	23.50	223.87	22.20	165.96
	4230	846.60	23.00	199.53	22.10	162.18

Mode	Channel	f (MHz)	EIRP(Inductive Cover)		EIRP (Inductive Charger)	
			dBm	mW	dBm	mW
Rel 99	9262	1852.40	27.30	537.03	25.70	371.54
	9400	1880.00	26.80	478.63	26.10	407.38
	9538	1907.60	26.20	416.87	26.20	416.87
HSDPA	9262	1852.40	26.70	467.74	24.70	295.12
	9400	1880.00	26.80	478.63	24.90	309.03
	9538	1907.60	26.20	416.87	24.80	302.00

EUT WITH INDUCTIVE BACKCOVER AT WORST POSITION

ERP for GPRS850 Mode (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/21/2010
Test Engineer: Chin Pang
Configuration: EUT Only
Mode: TX, GPRS 850
Worst Case: Z position

Test Equipment:
Receiving: Sunol T130, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch							
824.20	-10.0	V	32.6	22.6	38.5	-15.9	
824.20	-2.0	H	30.4	28.4	38.5	-10.1	
Mid Ch							
836.60	-9.7	V	32.7	23.0	38.5	-15.5	
836.60	-0.5	H	30.7	30.2	38.5	-8.2	
High Ch							
848.80	-11.2	V	32.0	20.8	38.5	-17.7	
848.80	-1.1	H	30.8	29.7	38.5	-8.7	

Rev. 1.24.7

ERP for EGPRS Mode (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/21/2010
Test Engineer: Chin Pang
Configuration: EUT Only
Mode: TX, EGPRS 850
Worst Case: Z position

Test Equipment:
Receiving: Sunol T130, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch							
824.20	-18.6	V	32.6	14.0	38.5	-24.5	
824.20	-5.5	H	30.4	24.9	38.5	-13.6	
Mid Ch							
836.60	-19.0	V	32.7	13.7	38.5	-24.8	
836.60	-5.2	H	30.7	25.5	38.5	-12.9	
High Ch							
848.80	-19.0	V	32.0	13.0	38.5	-25.5	
848.80	-5.0	H	30.8	25.8	38.5	-12.7	

Rev. 1.24.7

ERP for UMTS850 REL99 Mode (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT Only
Mode: TX, UMTS 850, Rel 99
Worst Case: Z position

Test Equipment:
Receiving: Sunol T130, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch							
824.20	-15.9	V	32.6	16.7	38.5	-21.8	
824.20	-7.0	H	30.4	23.4	38.5	-15.1	
Mid Ch							
836.60	-16.0	V	32.7	16.7	38.5	-21.8	
836.60	-6.8	H	30.7	23.9	38.5	-14.5	
High Ch							
848.80	-15.2	V	32.0	16.8	38.5	-21.7	
848.80	-7.3	H	30.8	23.5	38.5	-15.0	

Rev. 1.24.7

ERP for UMTS850 HSDPA Mode (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT Only
Mode: TX, UMTS 850, HSDPA

Test Equipment:
Receiving: Sunol T130, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch							
824.20	-16.5	V	32.6	16.1	38.5	-22.4	
824.20	-7.1	H	30.4	23.3	38.5	-15.2	
Mid Ch							
836.60	-16.4	V	32.7	16.3	38.5	-22.2	
836.60	-7.2	H	30.7	23.5	38.5	-14.9	
High Ch							
848.80	-16.5	V	32.0	15.5	38.5	-23.0	
848.80	-7.8	H	30.8	23.0	38.5	-15.5	

Rev. 1.24.7

EIRP for GSM1900 Mode (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/21/2010
Test Engineer: Chin Pang
Configuration: EUT Only
Mode: TX, GPRS 1900
Worst Position: Y

Test Equipment:
Receiving: Horn T59, and Camber B SMA Cables
Substitution: Horn T72 Substitution, 6ft SMA Cable (208947003) Warehouse

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch							
1.850	-8.1	V	40.2	32.1	33.0	-0.9	
1.850	-16.5	H	39.5	23.0	33.0	-10.0	
Mid Ch							
1.880	-8.8	V	40.3	31.5	33.0	-1.6	
1.880	-16.0	H	40.1	24.1	33.0	-8.9	
High Ch							
1.910	-8.9	V	40.2	31.3	33.0	-1.7	
1.910	-16.0	H	40.1	24.1	33.0	-8.9	

Rev. 1.24.7

EIRP EGPRS1900 Mode (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/21/2010
Test Engineer: Chin Pang
Configuration: EUT Only
Mode: TX, EGPRS 1900
Worst Position: Y

Test Equipment:
Receiving: Horn T59, and Camber B SMA Cables
Substitution: Horn T72 Substitution, 6ft SMA Cable (208947003) Warehouse

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch							
1.850	-11.3	V	40.2	28.9	33.0	-4.1	
1.850	-18.7	H	39.5	20.8	33.0	-12.2	
Mid Ch							
1.880	-11.8	V	40.3	28.5	33.0	-4.6	
1.880	-19.2	H	40.1	20.9	33.0	-12.1	
High Ch							
1.910	-12.2	V	40.2	28.0	33.0	-5.0	
1.910	-19.4	H	40.1	20.7	33.0	-12.3	

Rev. 1.24.7

EIRP for UMTS1900, REL99 Mode (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT Only
Mode: TX, UMTS1900, Rel 99
Worst Position: Y

Test Equipment:
Receiving: Horn T59, and Camber B SMA Cables
Substitution: Horn T72 Substitution, 6ft SMA Cable (208947003) Warehouse

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch							
1.852	-12.9	V	40.2	27.3	33.0	-5.7	
1.852	-18.0	H	39.5	21.5	33.0	-11.5	
Mid Ch							
1.880	-13.5	V	40.3	26.8	33.0	-6.3	
1.880	-18.3	H	40.1	21.8	33.0	-11.2	
High Ch							
1.908	-14.0	V	40.2	26.2	33.0	-6.8	
1.908	-17.0	H	40.1	23.1	33.0	-9.9	

Rev. 1.24.7

EIRP for UMTS1900, HSDPA Mode (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT Only
Mode: TX, UMTS1900, HSDPA
Worst Position: Y

Test Equipment:
Receiving: Horn T59, and Camber B SMA Cables
Substitution: Horn T72 Substitution, 6ft SMA Cable (208947003) Warehouse

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch							
1.852	-13.5	V	40.2	26.7	33.0	-6.3	
1.852	-21.4	H	39.5	18.1	33.0	-14.9	
Mid Ch							
1.880	-13.5	V	40.3	26.8	33.0	-6.3	
1.880	-21.8	H	40.1	18.3	33.0	-14.7	
High Ch							
1.908	-14.0	V	40.2	26.2	33.0	-6.8	
1.908	-21.7	H	40.1	18.4	33.0	-14.6	

Rev. 1.24.7

EUT WITH INDUCTIVE CHARGING DOCK

ERP for GPRS850 Mode (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/21/2010
Test Engineer: Chin Pang
Configuration: EUT with Charging Dock
Mode: TX, GPRS 850

Test Equipment:
Receiving: Sunol T130, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch							
824.20	-8.7	V	32.6	23.9	38.5	-14.6	
824.20	-2.8	H	30.4	27.6	38.5	-10.9	
Mid Ch							
836.60	-9.0	V	32.7	23.7	38.5	-14.8	
836.60	-3.1	H	30.7	27.6	38.5	-10.8	
High Ch							
848.80	-7.8	V	32.0	24.2	38.5	-14.3	
848.80	-3.5	H	30.8	27.3	38.5	-11.2	

Rev. 1.24.7

ERP for EGPRS Mode (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT with Charging Dock
Mode: TX, EGPRS 850

Test Equipment:
Receiving: Sunol T130, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch							
824.20	-13.7	V	32.6	18.9	38.5	-19.6	
824.20	-5.4	H	30.4	25.0	38.5	-13.5	
Mid Ch							
836.60	-13.1	V	32.7	19.6	38.5	-18.9	
836.60	-5.5	H	30.7	25.2	38.5	-13.2	
High Ch							
848.80	-12.5	V	32.0	19.5	38.5	-19.0	
848.80	-5.6	H	30.8	25.2	38.5	-13.3	

Rev. 1.24.7

ERP for UMTS850 REL99 Mode (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT with Charging Dock
Mode: TX, UMTS 850, Rel 99

Test Equipment:
Receiving: Sunol T130, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch							
824.20	-12.6	V	32.6	20.0	38.5	-18.5	
824.20	-6.0	H	30.4	24.4	38.5	-14.1	
Mid Ch							
836.60	-12.8	V	32.7	19.9	38.5	-18.6	
836.60	-6.1	H	30.7	24.6	38.5	-13.8	
High Ch							
848.80	-12.3	V	32.0	19.7	38.5	-18.8	
848.80	-6.4	H	30.8	24.4	38.5	-14.1	

Rev. 1.24.7

ERP for UMTS850 HSDPA Mode (Cellular Band)

High Frequency Substitution Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT with Charging Dock
Mode: TX, UMTS 850, HSDPA

Test Equipment:
Receiving: Sunol T130, and 3m Chamber N-type Cable (Setup this one for testing EUT)
Substitution: Dipole S/N: 00022117, 6ft SMA Cable (SN # 208947003) Warehouse.

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch							
824.20	-14.5	V	32.6	18.1	38.5	-20.4	
824.20	-8.4	H	30.4	22.0	38.5	-16.5	
Mid Ch							
836.60	-14.3	V	32.7	18.4	38.5	-20.1	
836.60	-8.5	H	30.7	22.2	38.5	-16.2	
High Ch							
848.80	-14.0	V	32.0	18.0	38.5	-20.5	
848.80	-8.7	H	30.8	22.1	38.5	-16.4	

Rev. 1.24.7

EIRP for GPRS1900 Mode (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/21/2010
Test Engineer: Chin Pang
Configuration: EUT with Charging Dock
Mode: TX, GPRS 1900

Test Equipment:
Receiving: Horn T59, and Camber B SMA Cables
Substitution: Horn T72 Substitution, 6ft SMA Cable (208947003) Warehouse

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch							
1.850	-16.4	V	40.2	23.8	33.0	-9.2	
1.850	-11.2	H	39.5	28.3	33.0	-4.7	
Mid Ch							
1.880	-17.1	V	40.3	23.2	33.0	-9.9	
1.880	-11.6	H	40.1	28.5	33.0	-4.5	
High Ch							
1.910	-16.8	V	40.2	23.4	33.0	-9.6	
1.910	-11.0	H	40.1	29.1	33.0	-3.9	

Rev. 1.24.7

EIRP for EGPRS1900 Mode (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/21/2010
Test Engineer: Chin Pang
Configuration: EUT on charging Dock
Mode: TX, EGPRS 1900

Test Equipment:
Receiving: Horn T59, and Camber B SMA Cables
Substitution: Horn T72 Substitution, 6ft SMA Cable (208947003) Warehouse

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch							
1.850	-18.0	V	40.2	22.2	33.0	-10.8	
1.850	-14.1	H	39.5	25.4	33.0	-7.6	
Mid Ch							
1.880	-18.2	V	40.3	22.1	33.0	-11.0	
1.880	-14.5	H	40.1	25.6	33.0	-7.4	
High Ch							
1.910	-18.1	V	40.2	22.1	33.0	-10.9	
1.910	-14.2	H	40.1	25.9	33.0	-7.1	

Rev. 1.24.7

EIRP for UMTS1900, REL99 Mode (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT with Charging Dock
Mode: TX, UMTS1900, Rel 99

Test Equipment:
Receiving: Horn T59, and Camber B SMA Cables
Substitution: Horn T72 Substitution, 6ft SMA Cable (208947003) Warehouse

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch							
1.852	-18.6	V	40.2	21.6	33.0	-11.4	
1.852	-13.8	H	39.5	25.7	33.0	-7.3	
Mid Ch							
1.880	-18.5	V	40.3	21.8	33.0	-11.3	
1.880	-14.0	H	40.1	26.1	33.0	-6.9	
High Ch							
1.908	-18.3	V	40.2	21.9	33.0	-11.1	
1.908	-13.9	H	40.1	26.2	33.0	-6.8	

Rev. 1.24.7

EIRP for UMTS1900, HSDPA Mode (PCS Band)

High Frequency Fundamental Measurement
Compliance Certification Services Chamber B

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT with Charging Dock
Mode: TX, UMTS1900, HSDPA

Test Equipment:
Receiving: Horn T59, and Camber B SMA Cables
Substitution: Horn T72 Substitution, 6ft SMA Cable (208947003) Warehouse

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Path Loss (dBm)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch							
1.852	-19.5	V	40.2	20.7	33.0	-12.3	
1.852	-14.8	H	39.5	24.7	33.0	-8.3	
Mid Ch							
1.880	-19.1	V	40.3	21.2	33.0	-11.9	
1.880	-15.2	H	40.1	24.9	33.0	-8.1	
High Ch							
1.908	-19.3	V	40.2	20.9	33.0	-12.1	
1.908	-15.3	H	40.1	24.8	33.0	-8.2	

Rev. 1.24.7

9.2. FIELD STRENGTH OF SPURIOUS RADIATION

RULE PART(S)

FCC: §2.1053, §22.917, §24.238

LIMIT

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

TEST PROCEDURE

For Cellular equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kHz or greater. In the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 100 kHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

For PCS equipment - Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 MHz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 MHz or 1 percent of emission bandwidth, as specified). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

MODES TESTED

- Cellular & PCS bands for GSM
  - GPRS (GSMK)
  - EGPRS (8PSK)
- Band V & Band II for UMTS (WCDMA)
  - Rel 99
  - Rel 6 HSDPA Subtest 1

RESULTS

EUT WITH INDUCTIVE COVER AT WORST POSITION

GPRS 850 (Cellular Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Palm
Project #: 10U13357
Date: 10/25/2010
Test Engineer: Chin Pang
Configuration: EUT at worst position with AC Adapter
Mode: TX, GPRS 850MHz

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T145 8449B	Filter 1	Part 22

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.2MHz										
1.65	-50.0	H	3.0	36.6	35.5	1.0	-47.9	-13.0	-34.9	
2.47	-48.5	H	3.0	40.0	35.4	1.0	-42.9	-13.0	-29.9	
1.65	-46.5	V	3.0	36.9	35.5	1.0	-44.2	-13.0	-31.2	
2.47	-50.2	V	3.0	41.6	35.4	1.0	-43.0	-13.0	-30.0	
Mid Ch, 836.6MHz										
1.67	-50.5	H	3.0	36.9	35.5	1.0	-48.2	-13.0	-35.2	
2.51	-48.3	H	3.0	40.2	35.4	1.0	-42.5	-13.0	-29.5	
1.67	-43.5	V	3.0	37.1	35.5	1.0	-40.9	-13.0	-27.9	
2.51	-50.5	V	3.0	41.8	35.4	1.0	-43.1	-13.0	-30.1	
High Ch, 848.8MHz										
1.70	-49.3	H	3.0	37.1	35.5	1.0	-46.7	-13.0	-33.7	
2.55	-50.7	H	3.0	40.4	35.4	1.0	-44.8	-13.0	-31.8	
1.70	-42.2	V	3.0	37.4	35.5	1.0	-39.3	-13.0	-26.3	
2.55	-49.4	V	3.0	41.9	35.4	1.0	-42.0	-13.0	-29.0	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EGPRS 850 (Cellular Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Palm
Project #: 10U13357
Date: 10/25/2010
Test Engineer: Chin Pang
Configuration: EUT at worst position with AC Adapter
Mode: TX, EGPRS 850MHz

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T145 8449B	Filter 1	Part 22

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.2MHz										
1.65	-47.5	H	3.0	36.6	35.5	1.0	-45.4	-13.0	-32.4	
2.47	-53.0	H	3.0	40.0	35.4	1.0	-47.4	-13.0	-34.4	
1.65	-46.0	V	3.0	36.9	35.5	1.0	-43.7	-13.0	-30.7	
2.47	-57.0	V	3.0	41.6	35.4	1.0	-49.8	-13.0	-36.8	
Mid Ch, 836.6MHz										
1.67	-48.5	H	3.0	36.9	35.5	1.0	-46.2	-13.0	-33.2	
2.51	-48.3	H	3.0	40.2	35.4	1.0	-42.5	-13.0	-29.5	
1.67	-45.8	V	3.0	37.1	35.5	1.0	-43.2	-13.0	-30.2	
2.51	-52.0	V	3.0	41.8	35.4	1.0	-44.6	-13.0	-31.6	
High Ch, 848.8MHz										
1.70	-52.0	H	3.0	37.1	35.5	1.0	-49.4	-13.0	-36.4	
2.55	-53.1	H	3.0	40.4	35.4	1.0	-47.2	-13.0	-34.2	
1.70	-49.2	V	3.0	37.4	35.5	1.0	-46.3	-13.0	-33.3	
2.55	-51.2	V	3.0	41.9	35.4	1.0	-43.8	-13.0	-30.8	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

GPRS1900 (PCS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Palm
Project #: 10U13357
Date: 10/25/2010
Test Engineer: Chin Pang
Configuration: EUT at worst position with AC Adapter
Mode: TX, GPRS1900

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.2MHz										
3.70	-57.3	H	3.0	44.7	35.4	1.0	-47.0	-13.0	-34.0	
5.55	-54.8	H	3.0	49.7	34.7	1.0	-38.8	-13.0	-25.8	
7.40	-58.6	H	3.0	53.1	34.9	1.0	-39.4	-13.0	-26.4	
3.70	-54.0	V	3.0	44.9	35.4	1.0	-43.5	-13.0	-30.5	
5.55	-50.1	V	3.0	49.2	34.7	1.0	-34.7	-13.0	-21.7	
7.40	-60.5	V	3.0	52.1	34.9	1.0	-42.3	-13.0	-29.3	
Mid Ch, 1880MHz										
3.76	-55.7	H	3.0	44.8	35.3	1.0	-45.2	-13.0	-32.2	
5.64	-52.0	H	3.0	49.9	34.7	1.0	-35.8	-13.0	-22.8	
7.52	-56.3	H	3.0	53.3	34.9	1.0	-37.0	-13.0	-24.0	
3.76	-53.2	V	3.0	45.1	35.3	1.0	-42.4	-13.0	-29.4	
5.64	-51.6	V	3.0	49.3	34.7	1.0	-36.0	-13.0	-23.0	
7.52	-56.3	V	3.0	52.3	34.9	1.0	-37.9	-13.0	-24.9	
High Ch, 1909.8MHz										
3.82	-53.0	H	3.0	45.0	35.3	1.0	-42.3	-13.0	-29.3	
5.73	-56.3	H	3.0	50.1	34.7	1.0	-40.0	-13.0	-27.0	
7.64	-62.0	H	3.0	53.4	35.0	1.0	-42.6	-13.0	-29.6	
3.82	-57.0	V	3.0	45.3	35.3	1.0	-46.0	-13.0	-33.0	
5.73	-56.5	V	3.0	49.5	34.7	1.0	-40.8	-13.0	-27.8	
7.64	-60.0	V	3.0	52.4	35.0	1.0	-41.5	-13.0	-28.5	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EGPRS1900 (PCS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Palm
Project #: 10U13357
Date: 10/25/2010
Test Engineer: Chin Pang
Configuration: EUT at worst position with AC Adapter
Mode: TX, EGPRS1900

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.4MHz										
3.70	-61.4	H	3.0	44.7	35.4	1.0	-51.1	-13.0	-38.1	
5.55	-60.8	H	3.0	49.7	34.7	1.0	-44.8	-13.0	-31.8	
3.70	-59.4	V	3.0	44.9	35.4	1.0	-48.9	-13.0	-35.9	
5.55	-62.4	V	3.0	49.2	34.7	1.0	-47.0	-13.0	-34.0	
Mid Ch, 1880MHz										
3.76	-62.4	H	3.0	44.8	35.3	1.0	-51.9	-13.0	-38.9	
5.64	-60.5	H	3.0	49.9	34.7	1.0	-44.3	-13.0	-31.3	
3.76	-60.8	V	3.0	45.1	35.3	1.0	-50.0	-13.0	-37.0	
5.64	-62.0	V	3.0	49.3	34.7	1.0	-46.4	-13.0	-33.4	
High Ch, 1909.8MHz										
3.82	-61.7	H	3.0	45.0	35.3	1.0	-51.0	-13.0	-38.0	
5.73	-61.0	H	3.0	50.1	34.7	1.0	-44.7	-13.0	-31.7	
3.82	-62.3	V	3.0	45.3	35.3	1.0	-51.3	-13.0	-38.3	
5.73	-62.5	V	3.0	49.5	34.7	1.0	-46.8	-13.0	-33.8	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

UMTS850, REL99

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT at worst position with AC adapter
Mode: TX, REL99, 850MHz

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 22

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.4MHz										
1.65	-53.4	H	3.0	37.3	35.5	1.0	-50.7	-13.0	-37.7	
2.48	-61.4	H	3.0	39.8	35.4	1.0	-56.0	-13.0	-43.0	
1.65	-53.8	V	3.0	36.8	35.5	1.0	-51.5	-13.0	-38.5	
2.48	-62.5	V	3.0	41.7	35.4	1.0	-55.2	-13.0	-42.2	
Mid Ch, 836.6MHz										
1.67	-52.8	H	3.0	37.5	35.5	1.0	-49.9	-13.0	-36.9	
2.51	-60.5	H	3.0	39.9	35.4	1.0	-55.0	-13.0	-42.0	
1.67	-50.5	V	3.0	37.1	35.5	1.0	-47.9	-13.0	-34.9	
2.51	-59.3	V	3.0	41.8	35.4	1.0	-51.9	-13.0	-38.9	
High Ch, 846.6MHz										
1.69	-56.7	H	3.0	37.7	35.5	1.0	-53.6	-13.0	-40.6	
2.54	-63.1	H	3.0	40.1	35.4	1.0	-57.4	-13.0	-44.4	
1.69	-55.3	V	3.0	37.4	35.5	1.0	-52.4	-13.0	-39.4	
2.54	-62.0	V	3.0	41.9	35.4	1.0	-54.5	-13.0	-41.5	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

UMTS850, HSDPA

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT at worst position with AC adapter
Mode: TX, HSDPA, 850MHz

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 22

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	ERP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 826.4MHz										
1.65	-54.5	H	3.0	37.3	35.5	1.0	-51.8	-13.0	-38.8	
2.48	-61.6	H	3.0	39.8	35.4	1.0	-56.2	-13.0	-43.2	
1.65	-54.2	V	3.0	36.8	35.5	1.0	-51.9	-13.0	-38.9	
2.48	-62.2	V	3.0	41.7	35.4	1.0	-54.9	-13.0	-41.9	
Mid Ch, 836.6MHz										
1.67	-50.0	H	3.0	37.5	35.5	1.0	-47.1	-13.0	-34.1	
2.51	-62.3	H	3.0	39.9	35.4	1.0	-56.8	-13.0	-43.8	
1.67	-51.2	V	3.0	37.1	35.5	1.0	-48.6	-13.0	-35.6	
2.51	-61.8	V	3.0	41.8	35.4	1.0	-54.4	-13.0	-41.4	
High Ch, 846.6MHz										
1.69	-57.8	H	3.0	37.7	35.5	1.0	-54.7	-13.0	-41.7	
2.54	-63.3	H	3.0	40.1	35.4	1.0	-57.6	-13.0	-44.6	
1.69	-56.0	V	3.0	37.4	35.5	1.0	-53.1	-13.0	-40.1	
2.54	-62.8	V	3.0	41.9	35.4	1.0	-55.3	-13.0	-42.3	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

UMTS1900, REL99

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT at worst position with AC Adapter
Mode: TX, UMTS1900, Rel 99

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 24

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1952.4MHz										
3.70	-57.0	H	3.0	45.3	35.4	1.0	-46.0	-13.0	-33.0	
5.56	-60.8	H	3.0	50.0	35.4	1.0	-45.2	-13.0	-32.2	
3.70	-55.5	V	3.0	45.1	35.4	1.0	-44.7	-13.0	-31.7	
5.56	-60.7	V	3.0	49.2	35.4	1.0	-45.9	-13.0	-32.9	
Mid Ch, 1880MHz										
3.76	-50.5	H	3.0	45.5	35.3	1.0	-39.3	-13.0	-26.3	
5.64	-57.3	H	3.0	50.2	35.4	1.0	-41.6	-13.0	-28.6	
3.76	-51.0	V	3.0	45.3	35.3	1.0	-40.1	-13.0	-27.1	
5.64	-56.5	V	3.0	49.3	35.4	1.0	-41.6	-13.0	-28.6	
High Ch, 1907.6MHz										
3.82	-47.1	H	3.0	45.7	35.3	1.0	-35.7	-13.0	-22.7	
5.72	-57.3	H	3.0	50.3	35.4	1.0	-41.4	-13.0	-28.4	
3.82	-48.4	V	3.0	45.4	35.3	1.0	-37.3	-13.0	-24.3	
5.72	-56.2	V	3.0	49.4	35.4	1.0	-41.3	-13.0	-28.3	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

UMTS1900, HSDPA

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT at worst position with AC Adapter
Mode: TX, UMTS1900, HSDPA

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 24

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1952.4MHz										
3.70	-57.7	H	3.0	45.3	35.4	1.0	-46.7	-13.0	-33.7	
5.56	-60.5	H	3.0	50.0	35.4	1.0	-44.9	-13.0	-31.9	
3.70	-56.0	V	3.0	45.1	35.4	1.0	-45.2	-13.0	-32.2	
5.56	-60.0	V	3.0	49.2	35.4	1.0	-45.2	-13.0	-32.2	
Mid Ch, 1880MHz										
3.76	-47.5	H	3.0	45.5	35.3	1.0	-36.3	-13.0	-23.3	
5.64	-57.2	H	3.0	50.2	35.4	1.0	-41.5	-13.0	-28.5	
3.76	-51.1	V	3.0	45.3	35.3	1.0	-40.2	-13.0	-27.2	
5.64	-57.5	V	3.0	49.3	35.4	1.0	-42.6	-13.0	-29.6	
High Ch, 1907.6MHz										
3.82	-50.0	H	3.0	45.7	35.3	1.0	-38.6	-13.0	-25.6	
5.72	-58.6	H	3.0	50.3	35.4	1.0	-42.7	-13.0	-29.7	
3.82	-50.2	V	3.0	45.4	35.3	1.0	-39.1	-13.0	-26.1	
5.72	-57.5	V	3.0	49.4	35.4	1.0	-42.6	-13.0	-29.6	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EUT WITH INDUCTIVE CHARGING DOCK

GPRS 850 (Cellular Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Palm
Project #: 10U13357
Date: 10/25/2010
Test Engineer: Chin Pang
Configuration: EUT with Charging Dock
Mode: TX, GPRS 850MHz

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 22

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.2MHz										
1.65	-45.7	H	3.0	37.2	35.5	1.0	-43.0	-13.0	-30.0	
2.47	-49.8	H	3.0	39.8	35.4	1.0	-44.4	-13.0	-31.4	
4.12	-58.6	H	3.0	46.7	35.2	1.0	-46.2	-13.0	-33.2	
2.48	-50.0	V	3.0	41.7	35.4	1.0	-42.7	-13.0	-29.7	
Mid Ch, 836.6MHz										
1.67	-45.3	H	3.0	37.5	35.5	1.0	-42.4	-13.0	-29.4	
2.51	-48.3	H	3.0	39.9	35.4	1.0	-42.8	-13.0	-29.8	
5.02	-60.0	H	3.0	48.9	35.3	1.0	-45.4	-13.0	-32.4	
8.37	-61.5	H	3.0	54.1	35.6	1.0	-42.1	-13.0	-29.1	
1.67	-51.1	V	3.0	37.1	35.5	1.0	-48.5	-13.0	-35.5	
2.51	-57.5	V	3.0	41.8	35.4	1.0	-50.1	-13.0	-37.1	
8.37	-56.4	V	3.0	52.5	35.6	1.0	-38.6	-13.0	-25.6	
High Ch, 848.8MHz										
1.69	-52.2	H	3.0	37.7	35.5	1.0	-49.1	-13.0	-36.1	
2.54	-58.6	H	3.0	40.1	35.4	1.0	-52.9	-13.0	-39.9	
1.69	-58.1	V	3.0	37.4	35.5	1.0	-55.2	-13.0	-42.2	
2.54	-60.3	V	3.0	41.9	35.4	1.0	-52.8	-13.0	-39.8	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EGPRS 850 (Cellular Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Palm
Project #: 10U13357
Date: 10/25/2010
Test Engineer: Chin Pang
Configuration: EUT with Charging Dock
Mode: TX, EGPRS 850MHz

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 22

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 824.2MHz										
1.65	-47.6	H	3.0	36.6	37.4	1.0	-47.3	-13.0	-34.3	
2.47	-56.1	H	3.0	40.0	36.4	1.0	-51.5	-13.0	-38.5	
1.65	-46.0	V	3.0	36.9	37.4	1.0	-45.5	-13.0	-32.5	
2.47	-52.7	V	3.0	41.6	36.4	1.0	-46.5	-13.0	-33.5	
Mid Ch, 836.6MHz										
1.67	-47.2	H	3.0	36.9	37.3	1.0	-46.7	-13.0	-33.7	
2.51	-57.3	H	3.0	40.2	36.4	1.0	-52.5	-13.0	-39.5	
1.67	-46.0	V	3.0	37.1	37.3	1.0	-45.2	-13.0	-32.2	
2.51	-55.3	V	3.0	41.8	36.4	1.0	-48.9	-13.0	-35.9	
High Ch, 848.8MHz										
1.70	-48.0	H	3.0	37.1	37.3	1.0	-47.2	-13.0	-34.2	
2.55	-52.2	H	3.0	40.4	36.3	1.0	-47.2	-13.0	-34.2	
1.70	-44.2	V	3.0	37.4	37.3	1.0	-43.1	-13.0	-30.1	
2.55	-54.0	V	3.0	41.9	36.3	1.0	-47.5	-13.0	-34.5	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

GPRS 1900 (PCS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Palm
Project #: 10U13357
Date: 10/25/2010
Test Engineer: Chin Pang
Configuration: EUT with Charging Dock
Mode: TX, GPRS1900

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.2MHz										
3.70	-53.3	H	3.0	44.7	35.4	1.0	-43.0	-13.0	-30.0	
5.55	-54.2	H	3.0	49.7	34.7	1.0	-38.2	-13.0	-25.2	
7.40	-61.5	H	3.0	53.1	34.9	1.0	-42.3	-13.0	-29.3	
3.70	-50.6	V	3.0	44.9	35.4	1.0	-40.1	-13.0	-27.1	
5.55	-55.0	V	3.0	49.2	34.7	1.0	-39.6	-13.0	-26.6	
7.40	-63.1	V	3.0	52.1	34.9	1.0	-44.9	-13.0	-31.9	
Mid Ch, 1880MHz										
3.76	-53.3	H	3.0	44.8	35.3	1.0	-42.8	-13.0	-29.8	
5.64	-57.0	H	3.0	49.9	34.7	1.0	-40.8	-13.0	-27.8	
7.52	-62.0	H	3.0	53.3	34.9	1.0	-42.7	-13.0	-29.7	
3.76	-51.3	V	3.0	45.1	35.3	1.0	-40.5	-13.0	-27.5	
5.64	-55.0	V	3.0	49.3	34.7	1.0	-39.4	-13.0	-26.4	
7.52	-62.3	V	3.0	52.3	34.9	1.0	-43.9	-13.0	-30.9	
High Ch, 1909.8MHz										
3.82	-52.0	H	3.0	45.0	35.3	1.0	-41.3	-13.0	-28.3	
5.73	-54.6	H	3.0	50.1	34.7	1.0	-38.3	-13.0	-25.3	
7.64	-61.0	H	3.0	53.4	35.0	1.0	-41.6	-13.0	-28.6	
3.82	-50.1	V	3.0	45.3	35.3	1.0	-39.1	-13.0	-26.1	
5.73	-52.0	V	3.0	49.5	34.7	1.0	-36.3	-13.0	-23.3	
7.64	-57.0	V	3.0	52.4	35.0	1.0	-38.5	-13.0	-25.5	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

EGPRS1900 (PCS Band)

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Palm
Project #: 10U13357
Date: 10/25/2010
Test Engineer: Chin Pang
Configuration: EUT with Charging Dock
Mode: TX, EGPRS1900

Chamber	Pre-amplifer	Filter	Limit
3m Chamber	T34 8449B	Filter 1	Part 24

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.2MHz										
3.70	-64.0	H	3.0	44.7	35.4	1.0	-53.7	-13.0	-40.7	
5.55	-64.5	H	3.0	49.7	34.7	1.0	-48.5	-13.0	-35.5	
3.70	-63.0	V	3.0	44.9	35.4	1.0	-52.5	-13.0	-39.5	
5.55	-59.3	V	3.0	49.2	34.7	1.0	-43.9	-13.0	-30.9	
Mid Ch, 1880MHz										
3.76	-64.5	H	3.0	44.8	35.3	1.0	-54.0	-13.0	-41.0	
5.64	-65.1	H	3.0	49.9	34.7	1.0	-48.9	-13.0	-35.9	
3.76	-65.1	V	3.0	45.1	35.3	1.0	-54.3	-13.0	-41.3	
5.64	-60.8	V	3.0	49.3	34.7	1.0	-45.2	-13.0	-32.2	
High Ch, 1909.8MHz										
3.82	-63.6	H	3.0	45.0	35.3	1.0	-52.9	-13.0	-39.9	
5.73	-64.5	H	3.0	50.1	34.7	1.0	-48.2	-13.0	-35.2	
3.82	-62.4	V	3.0	45.3	35.3	1.0	-51.4	-13.0	-38.4	
5.73	-63.2	V	3.0	49.5	34.7	1.0	-47.5	-13.0	-34.5	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

UMTS1900, REL99

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT with Charging Dock
Mode: TX, UMTS1900, Rel 99

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 24

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1952.4MHz										
3.70	-56.5	H	3.0	45.3	35.4	1.0	-45.5	-13.0	-32.5	
5.56	-61.3	H	3.0	50.0	35.4	1.0	-45.7	-13.0	-32.7	
3.70	-54.2	V	3.0	45.1	35.4	1.0	-43.4	-13.0	-30.4	
5.56	-61.0	V	3.0	49.2	35.4	1.0	-46.2	-13.0	-33.2	
Mid Ch, 1880MHz										
3.76	-52.0	H	3.0	45.5	35.3	1.0	-40.8	-13.0	-27.8	
5.64	-60.0	H	3.0	50.2	35.4	1.0	-44.3	-13.0	-31.3	
3.76	-47.8	V	3.0	45.3	35.3	1.0	-36.9	-13.0	-23.9	
5.64	-52.5	V	3.0	49.3	35.4	1.0	-37.6	-13.0	-24.6	
High Ch, 1907.6MHz										
3.82	-51.0	H	3.0	45.7	35.3	1.0	-39.6	-13.0	-26.6	
5.72	-57.0	H	3.0	50.3	35.4	1.0	-41.1	-13.0	-28.1	
3.82	-45.8	V	3.0	45.4	35.3	1.0	-34.7	-13.0	-21.7	
5.72	-54.0	V	3.0	49.4	35.4	1.0	-39.1	-13.0	-26.1	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

UMTS1900, HSDPA

Compliance Certification Services
Above 1GHz High Frequency Substitution Measurement

Company: Palm
Project #: 10U13357
Date: 10/23/2010
Test Engineer: Chin Pang
Configuration: EUT with Charging Dock
Mode: TX, UMTS1900, HSDPA

Chamber	Pre-amplifer	Filter	Limit
5m Chamber B	T145 8449B	Filter 1	Part 24

f GHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Path Loss (dB)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1952.4MHz										
3.70	-58.5	H	3.0	45.3	35.4	1.0	-47.5	-13.0	-34.5	
5.56	-62.0	H	3.0	50.0	35.4	1.0	-46.4	-13.0	-33.4	
3.70	-52.8	V	3.0	45.1	35.4	1.0	-42.0	-13.0	-29.0	
5.56	-59.0	V	3.0	49.2	35.4	1.0	-44.2	-13.0	-31.2	
Mid Ch, 1880MHz										
3.76	-55.0	H	3.0	45.5	35.3	1.0	-43.8	-13.0	-30.8	
5.64	-58.1	H	3.0	50.2	35.4	1.0	-42.4	-13.0	-29.4	
3.76	-48.0	V	3.0	45.3	35.3	1.0	-37.1	-13.0	-24.1	
5.64	-52.5	V	3.0	49.3	35.4	1.0	-37.6	-13.0	-24.6	
High Ch, 1907.6MHz										
3.82	-51.2	H	3.0	45.7	35.3	1.0	-39.8	-13.0	-26.8	
5.72	-57.0	H	3.0	50.3	35.4	1.0	-41.1	-13.0	-28.1	
3.82	-49.1	V	3.0	45.4	35.3	1.0	-38.0	-13.0	-25.0	
5.72	-55.0	V	3.0	49.4	35.4	1.0	-40.1	-13.0	-27.1	

Rev. 03.03.09
Note: No other emissions were detected above the system noise floor.

9.3. RECEIVER SPURIOUS EMISSIONS

LIMIT

RSS-Gen 7.2.2

Spurious Emission Limits for Receivers:

Spurious Frequency (MHz)	Field Strength (microvolts/m at 3 metres)
30-88	100
88-216	150
216-960	200
Above 960	500

TEST PROCEDURE

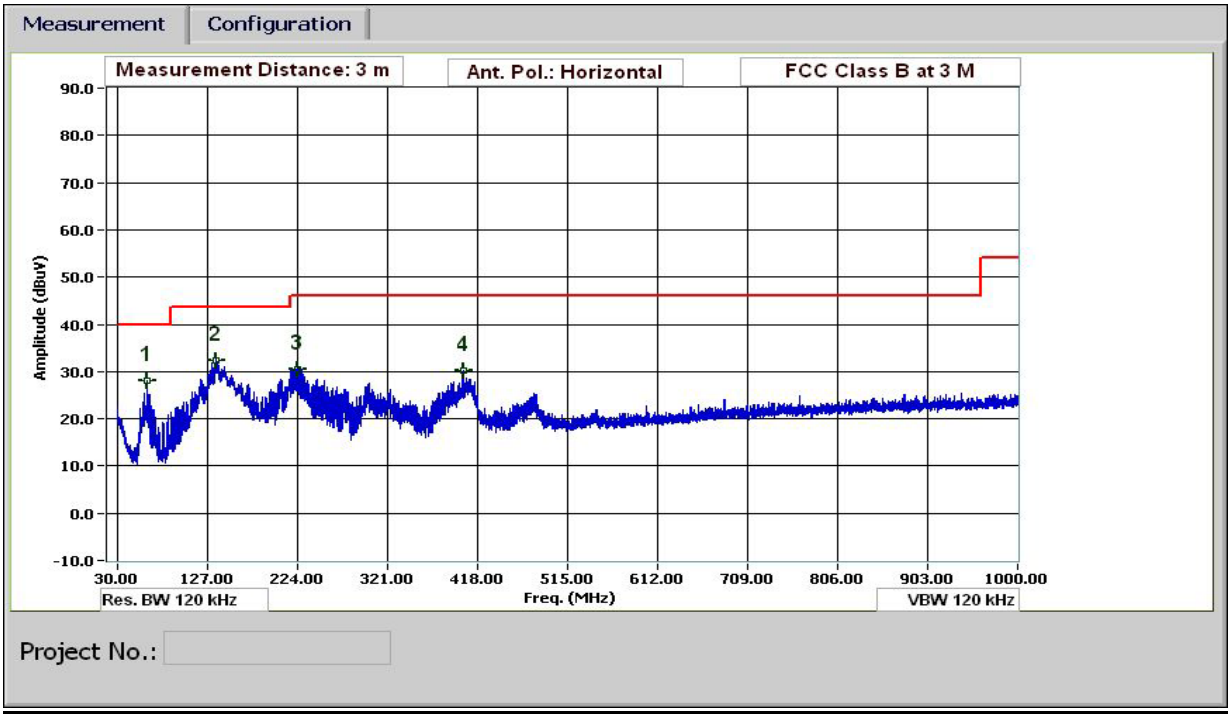
The search for spurious emissions shall be from the lowest frequency internally generated or used in the receiver (local oscillator frequency, intermediate frequency or carrier frequency),

or 30 MHz, whichever is the higher, to at least 3 times the highest tunable and local oscillator frequencies.

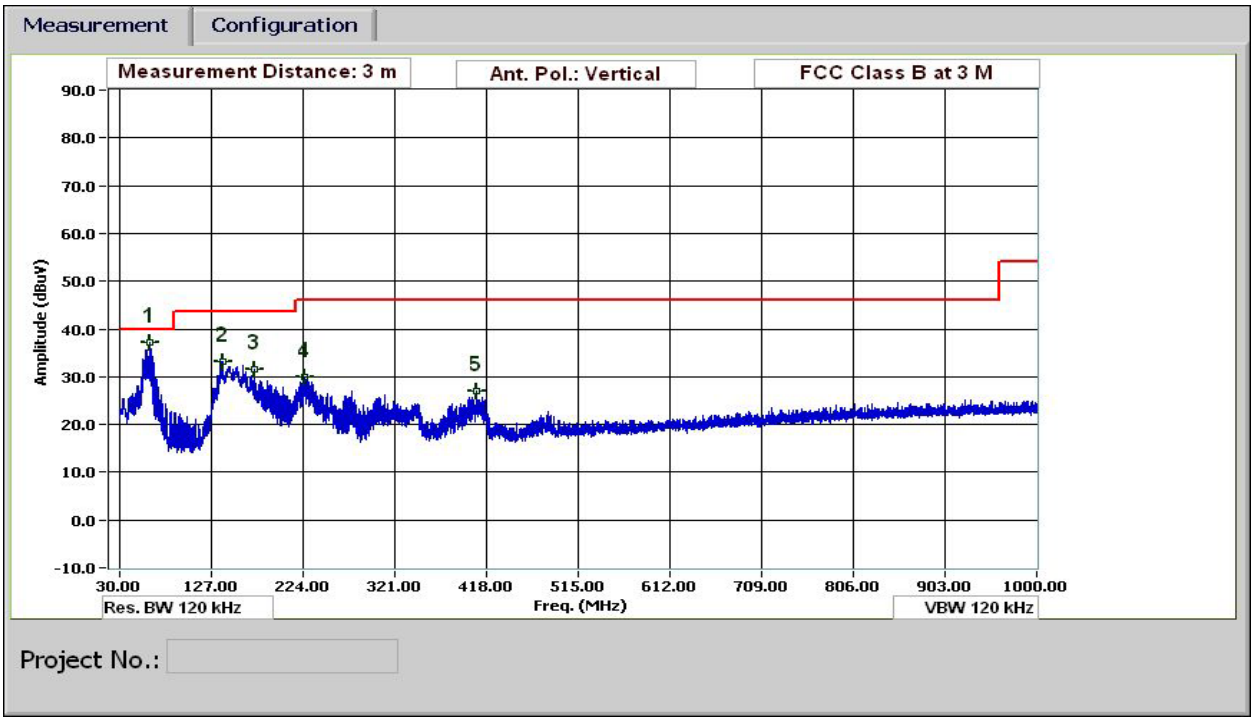
RESULTS

EUT WITH AC ADAPTER

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)



SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)



SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)

30-1000MHz Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Test Engr: Chin Pang
Date: 10/14/10
Project #: 10U13357
Company: Palm
Configuration: EUT with AC Adapter
Test Target: FCC 15.209
Mode Oper: TX (Worst Case)

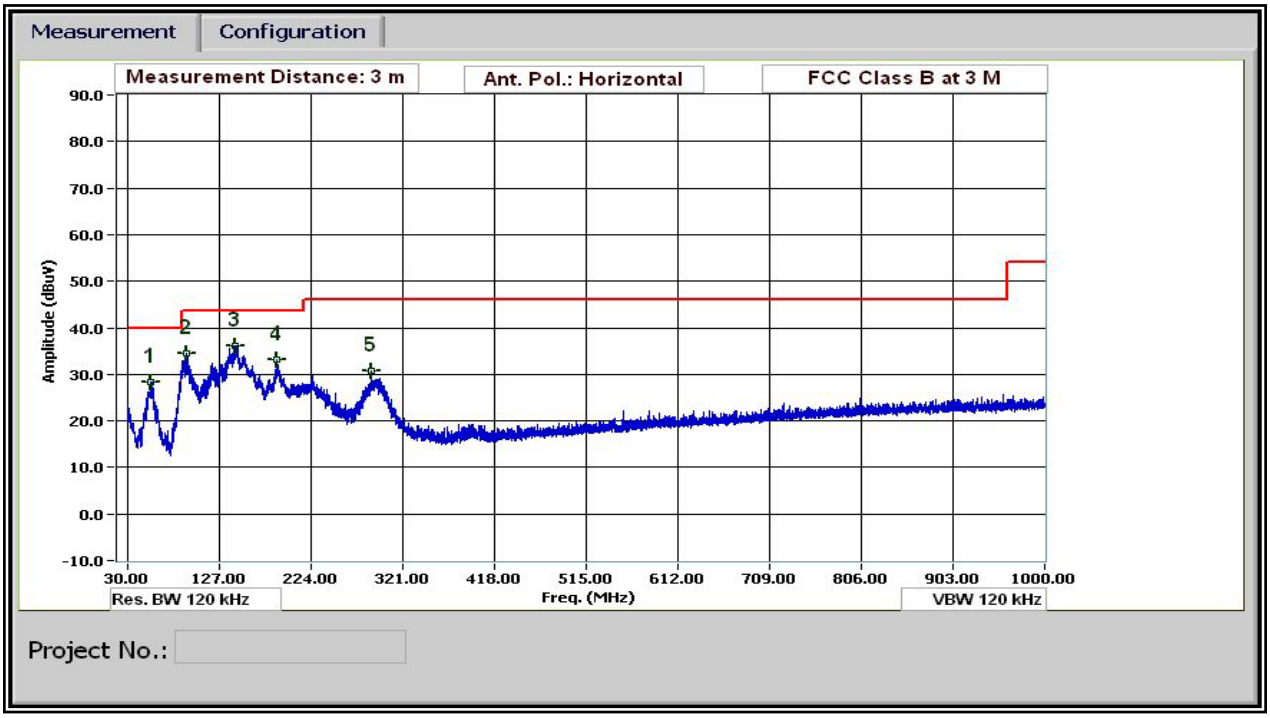
f	Measurement Frequency	Amp	Preamp Gain
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters
Read	Analyzer Reading	Filter	Filter Insert Loss
AF	Antenna Factor	Corr.	Calculated Field Strength
CL	Cable Loss	Limit	Field Strength Limit

Margin Margin vs. Limit

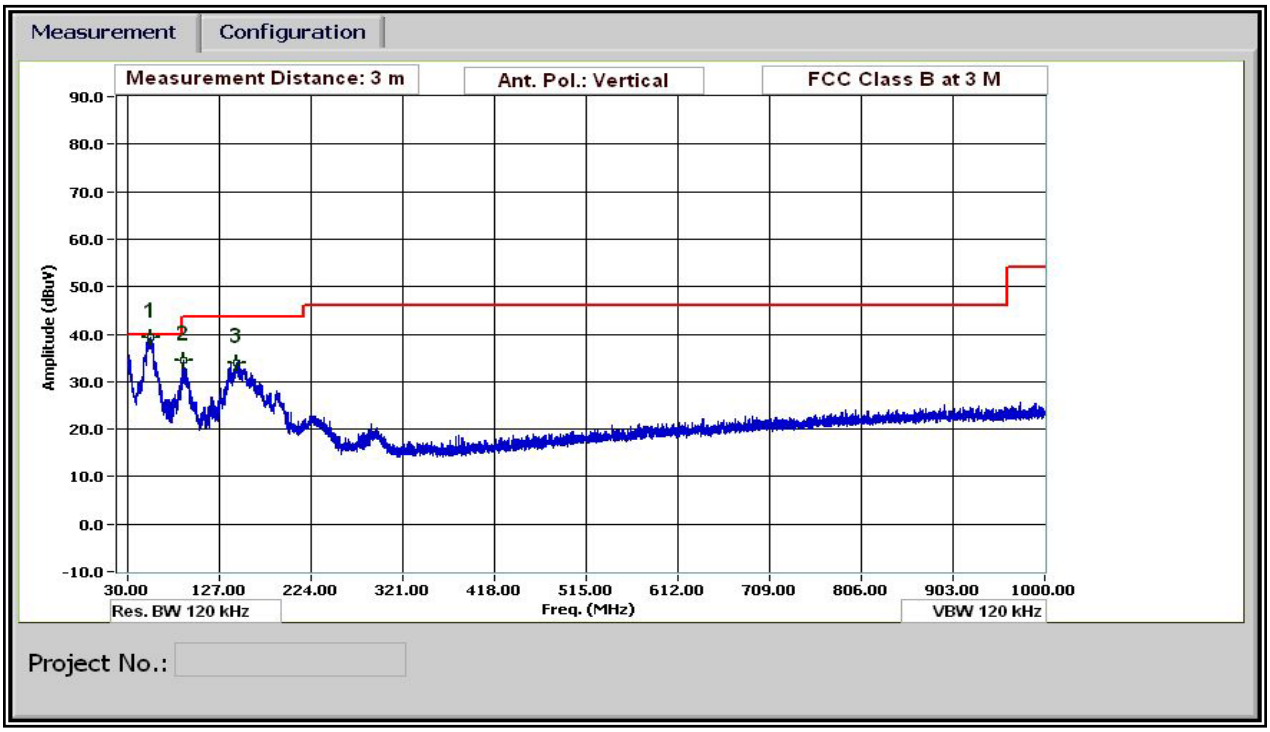
f MHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Pad dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
vert													
61.681	3.0	57.0	7.9	0.7	28.4	0.0	0.0	37.2	40.0	-2.8	V	P	
61.681	3.0	54.3	7.9	0.7	28.4	0.0	0.0	34.5	40.0	-5.5	V	QP	
138.484	3.0	47.0	13.3	1.1	28.3	0.0	0.0	33.1	43.5	-10.4	V	P	
172.086	3.0	48.0	10.7	1.2	28.2	0.0	0.0	31.5	43.5	-12.0	V	P	
225.848	3.0	44.9	11.9	1.3	28.2	0.0	0.0	29.9	46.0	-16.1	V	P	
407.056	3.0	38.1	15.0	1.8	28.1	0.0	0.0	26.9	46.0	-19.1	V	P	
61.801	3.0	47.9	7.9	0.7	28.4	0.0	0.0	28.2	40.0	-11.8	H	P	
136.444	3.0	46.3	13.4	1.1	28.3	0.0	0.0	32.5	43.5	-11.0	H	P	
223.808	3.0	45.4	11.9	1.3	28.2	0.0	0.0	30.4	46.0	-15.6	H	P	
402.735	3.0	41.4	15.0	1.8	28.1	0.0	0.0	30.1	46.0	-15.9	H	P	

EUT WITH AC INCUCTIV CHARGER

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)



SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)



SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)

30-1000MHz Frequency Measurement
Compliance Certification Services, Fremont 5m Chamber

Test Engr: Chin Pang
Date: 10/14/10
Project #: 10U13357
Company: Palm
Configuration: EUT with Charging Dock
Test Target: FCC 15.209
Mode Oper: TX (Worst Case)

f	Measurement Frequency	Amp	Preamp Gain	Margin	Margin vs. Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters		
Read	Analyzer Reading	Filter	Filter Insert Loss		
AF	Antenna Factor	Corr.	Calculated Field Strength		
CL	Cable Loss	Limit	Field Strength Limit		

f MHz	Dist (m)	Read dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Pad dB	Corr. dBuV/m	Limit dBuV/m	Margin dB	Ant. Pol. V/H	Det. P/A/QP	Notes
horiz													
54.841	3.0	47.8	8.1	0.7	28.4	0.0	0.0	28.3	40.0	-11.7	H	P	
92.283	3.0	53.8	8.1	0.9	28.3	0.0	0.0	34.4	43.5	-9.1	H	P	
142.925	3.0	50.1	13.1	1.1	28.3	0.0	0.0	36.0	43.5	-7.5	H	P	
188.047	3.0	49.0	11.3	1.2	28.2	0.0	0.0	33.2	43.5	-10.3	H	P	
288.011	3.0	44.4	13.0	1.5	28.1	0.0	0.0	30.8	46.0	-15.2	H	P	
54.361	3.0	58.8	8.2	0.7	28.4	0.0	0.0	39.3	40.0	-0.7	V	P	
54.361	3.0	56.1	8.2	0.7	28.4	0.0	0.0	36.5	40.0	-3.5	V	QP	
88.922	3.0	54.6	7.5	0.8	28.3	0.0	0.0	34.6	43.5	-8.9	V	P	
145.085	3.0	48.2	12.9	1.1	28.3	0.0	0.0	33.9	43.5	-9.6	V	P	

SPURIOUS EMISSIONS ABOVE 1000 MHz (WORST-CASE CONFIGURATION)

Note: No emissions were detected above the system noise floor.

9.4. POWER LINE CONDUCTED EMISSION

LIMIT

RSS-Gen 7.2.2

Except when the requirements applicable to a given device state otherwise, for any licence-exempt radio communication device equipped to operate from the public utility AC power supply, either directly or indirectly, the radio frequency voltage that is conducted back onto the AC power lines in the frequency range of 0.15 MHz to 30 MHz shall not exceed the limits shown in Table 2. The tighter limit applies at the frequency range boundaries.

Table 2 – AC Power Lines Conducted Emission Limits

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

RESULTS

6 WORST EMISSIONS (157-10124-00)

EUT WITH AC ADAPTER

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	EN_B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.20	55.43	--	44.57	0.00	63.61	53.61	-8.18	-9.04	L1
0.40	49.27	--	41.88	0.00	57.85	47.85	-8.58	-5.97	L1
1.00	46.02	--	35.31	0.00	56.00	46.00	-9.98	-10.69	L1
0.20	51.40	--	40.28	0.00	63.53	53.53	-12.13	-13.25	L2
0.40	47.08	--	39.87	0.00	57.81	47.81	-10.73	-7.94	L2
1.00	49.11	--	34.51	0.00	56.00	46.00	-6.89	-11.49	L2
6 Worst Data									

EUT WITH INCUCTIVE CHARGER

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	EN_B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.30	45.94	--	43.09	0.00	60.27	50.27	-14.33	-7.18	L1
0.60	49.85	--	44.57	0.00	56.00	46.00	-6.15	-1.43	L1
0.89	48.10	--	43.91	0.00	56.00	46.00	-7.90	-2.09	L1
0.30	48.92	--	42.51	0.00	60.27	50.27	-11.35	-7.76	L2
0.60	50.17	--	43.63	0.00	56.00	46.00	-5.83	-2.37	L2
0.89	49.67	--	42.71	0.00	56.00	46.00	-6.33	-3.29	L2
6 Worst Data									

6 WORST EMISSIONS (157-10130-00)

EUT WITH AC ADAPTER

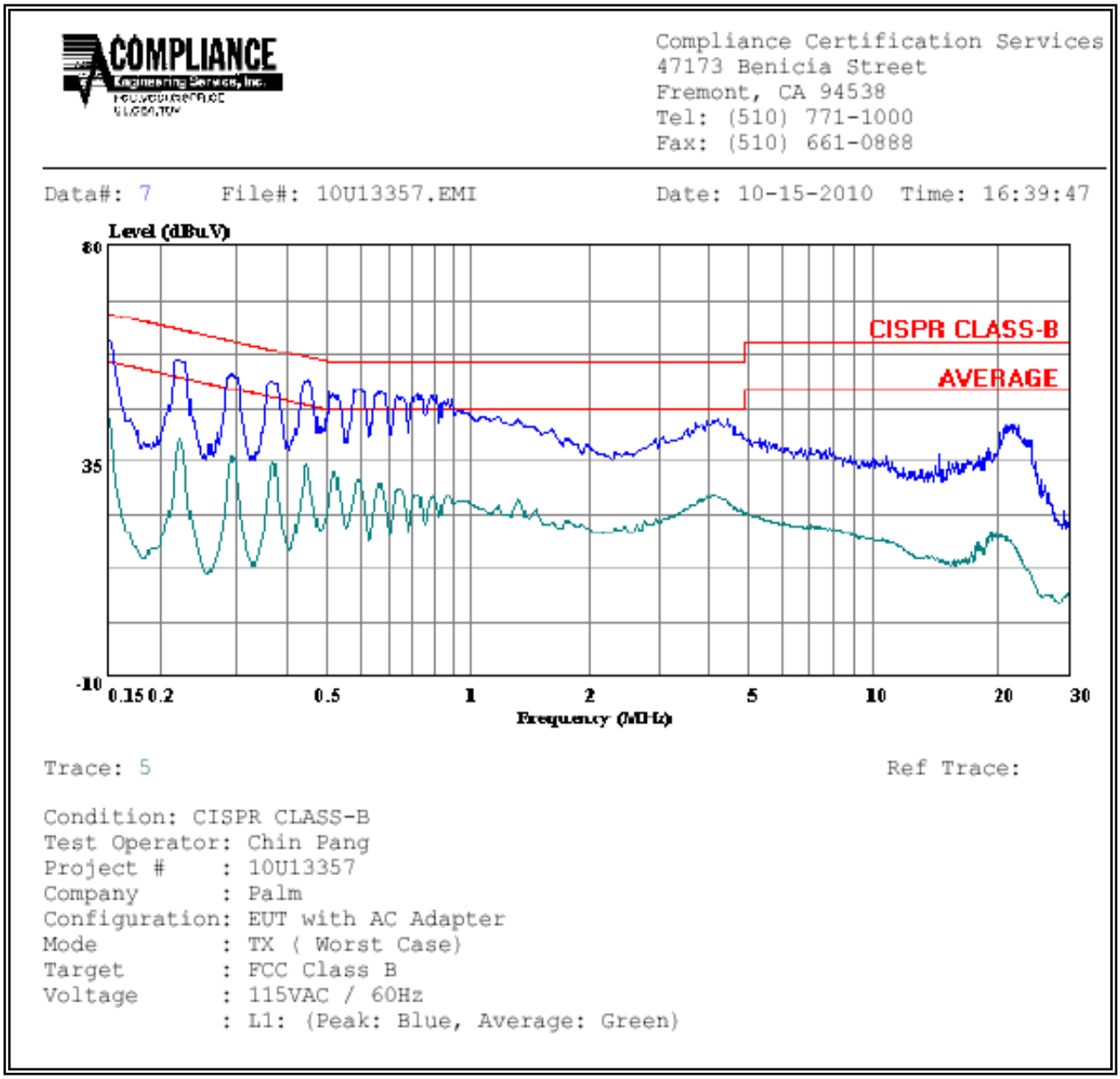
CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	EN_B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.23	55.80	--	46.19	0.00	62.38	52.38	-6.58	-6.19	L1
0.47	52.58	--	44.26	0.00	56.58	46.58	-4.00	-2.32	L1
0.71	47.47	--	36.21	0.00	56.00	46.00	-8.53	-9.79	L1
0.23	58.18	--	46.52	0.00	62.56	52.56	-4.38	-6.04	L2
0.46	53.96	--	43.01	0.00	56.77	46.77	-2.81	-3.76	L2
0.69	47.69	--	36.06	0.00	56.00	46.00	-8.31	-9.94	L2
6 Worst Data									

EUT WITH INCUCTIVE CHARGER

CONDUCTED EMISSIONS DATA (115VAC 60Hz)									
Freq.	Reading			Closs	Limit	EN_B	Margin		Remark
(MHz)	PK (dBuV)	QP (dBuV)	AV (dBuV)	(dB)	QP	AV	QP (dB)	AV (dB)	L1 / L2
0.21	56.06	--	46.66	0.00	63.05	53.05	-6.99	-6.39	L1
0.43	52.51	--	45.16	0.00	57.23	47.23	-4.72	-2.07	L1
0.65	48.15	--	37.87	0.00	56.00	46.00	-7.85	-8.13	L1
0.22	54.36	--	44.94	0.00	62.86	52.86	-8.50	-7.92	L2
0.44	53.27	--	43.86	0.00	57.16	47.16	-3.89	-3.30	L2
4.98	48.54	--	36.26	0.00	56.00	46.00	-7.46	-9.74	L2
6 Worst Data									

EUT WITH AC ADAPTER (157-10124-00)

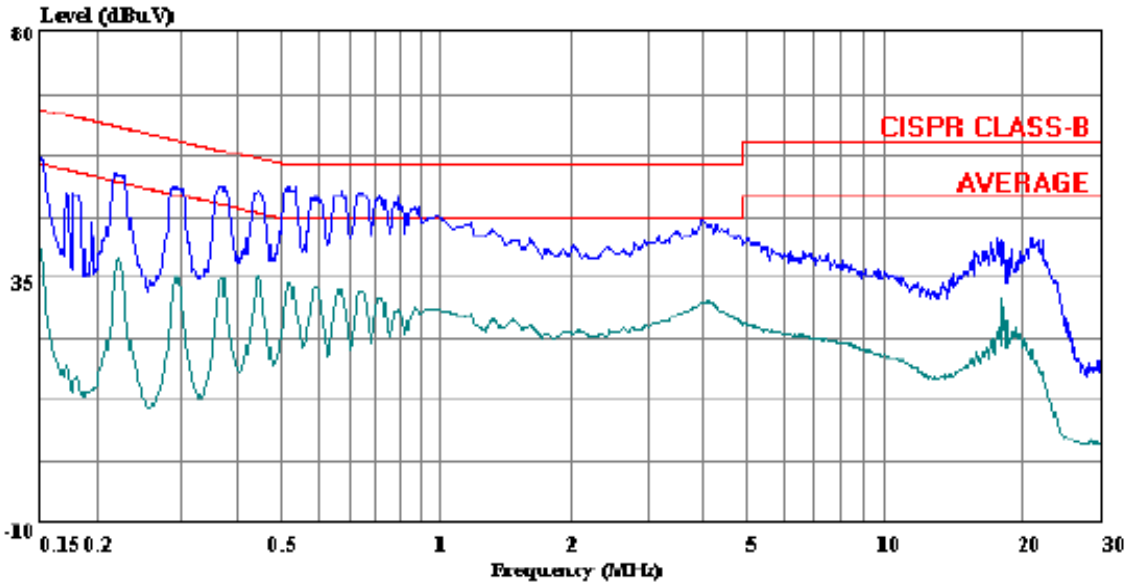
LINE 1 RESULTS



LINE 2 RESULTS

Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538
Tel: (510) 771-1000
Fax: (510) 661-0888

Data#: 14 File#: 10U13357.EMI Date: 10-15-2010 Time: 16:47:26

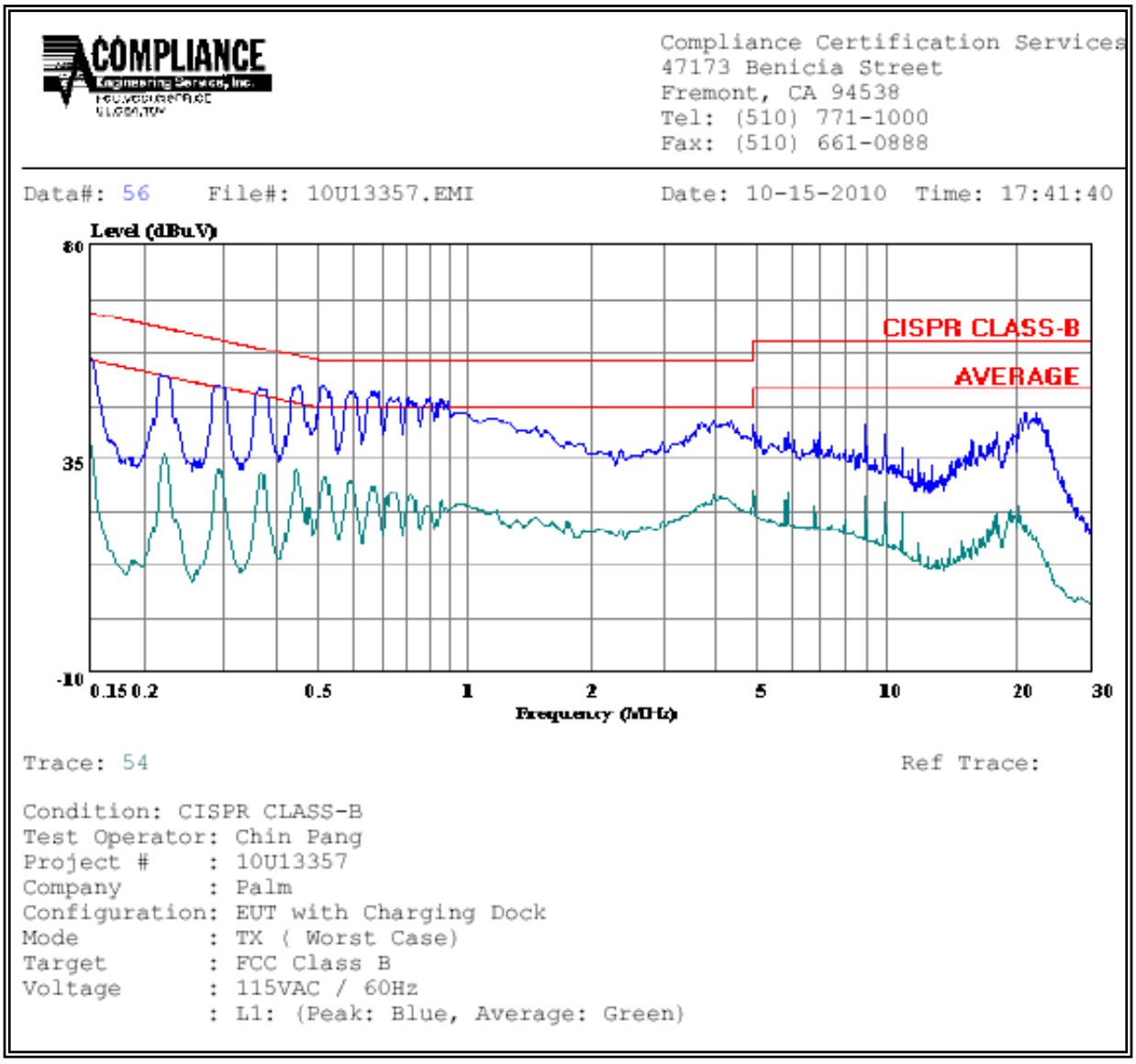


Trace: 12 Ref Trace:

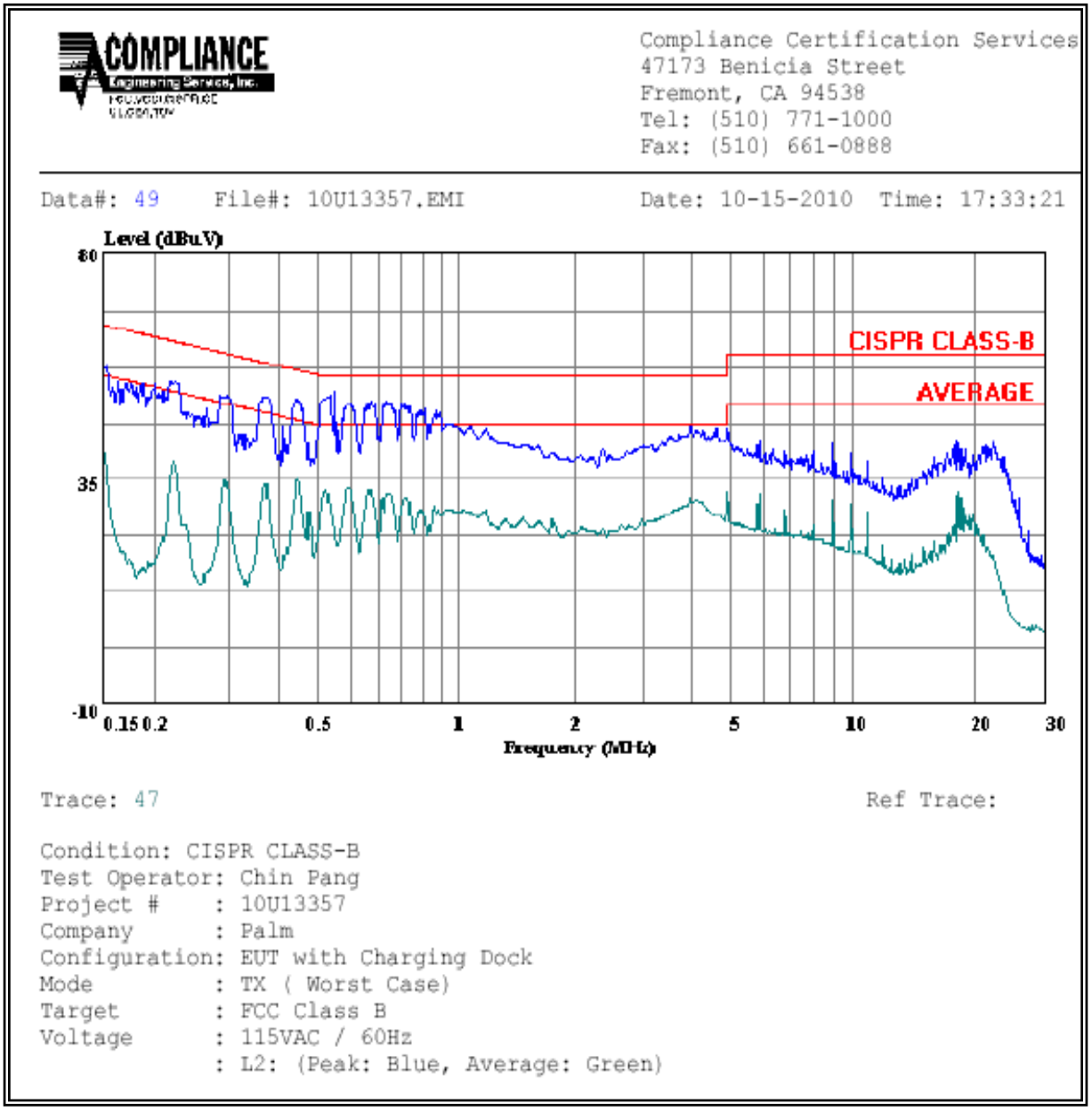
Condition: CISPR CLASS-B
Test Operator: Chin Pang
Project # : 10U13357
Company : Palm
Configuration: EUT with AC Adapter
Mode : TX (Worst Case)
Target : FCC Class B
Voltage : 115VAC / 60Hz
: L2: (Peak: Blue, Average: Green)

EUT WITH AC INDUCTIVE CHARGER (157-10124-00)

LINE 1 RESULTS

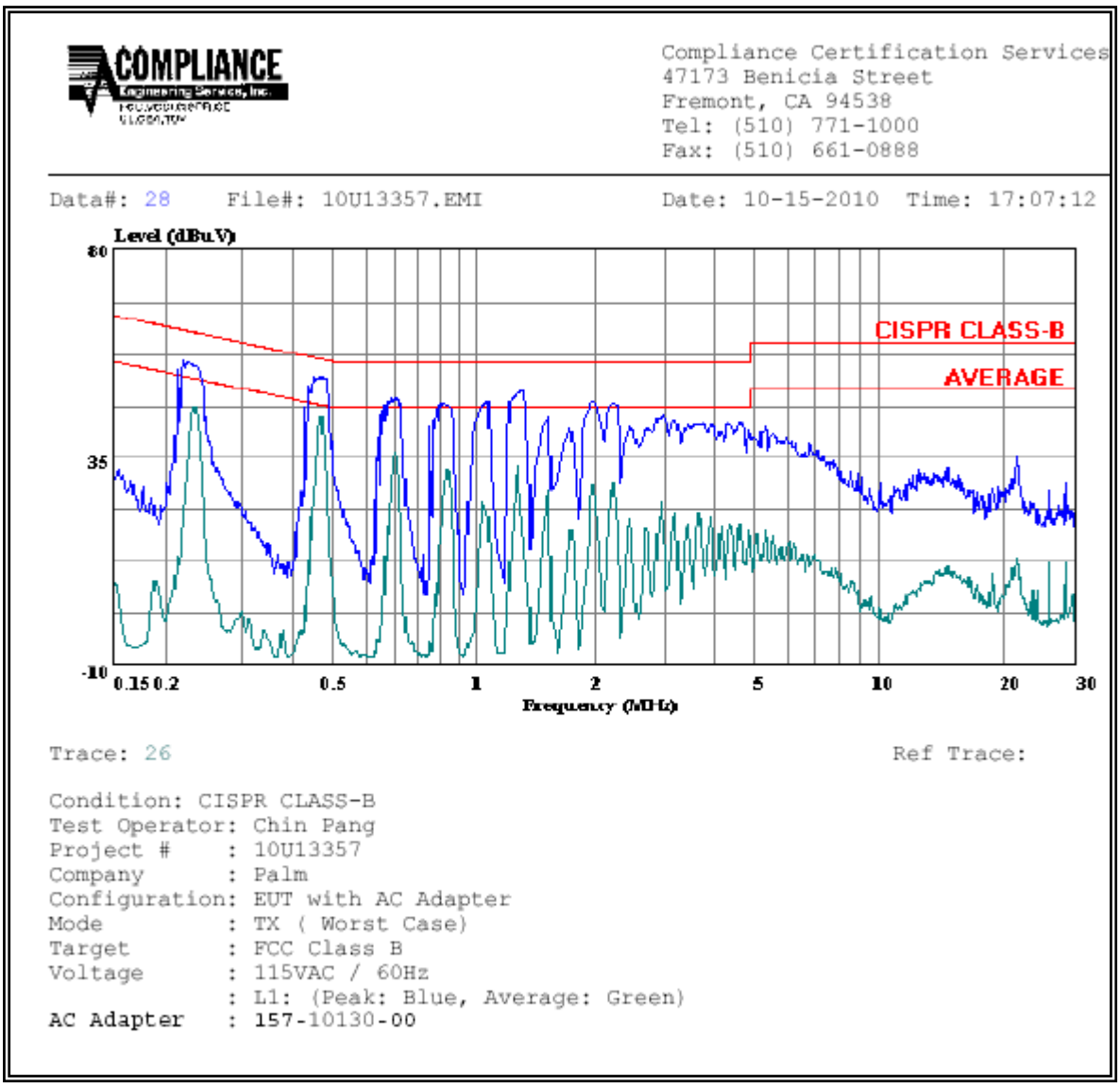


LINE 2 RESULTS



EUT WITH AC ADAPTER (157-10130-00)

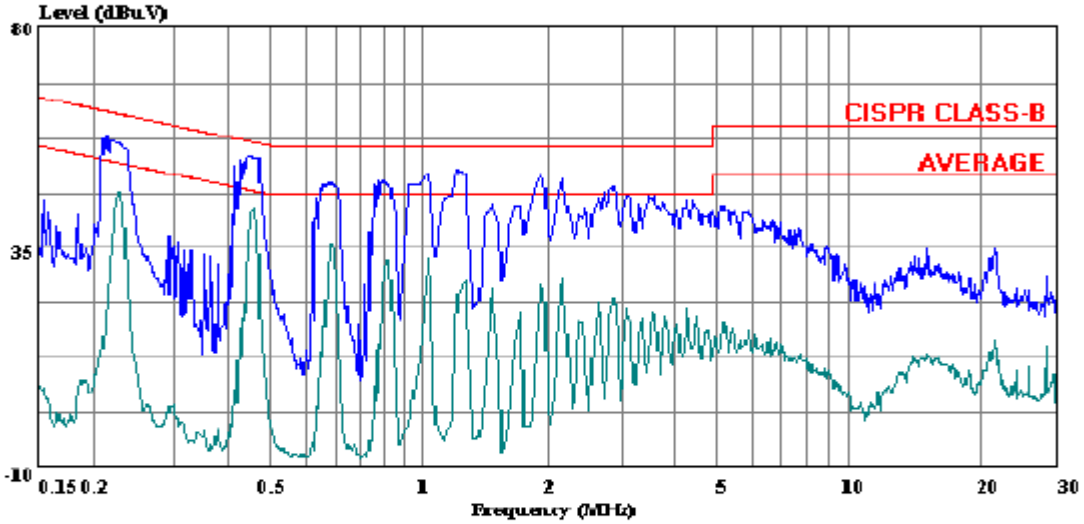
LINE 1 RESULTS



LINE 2 RESULTS

Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538
Tel: (510) 771-1000
Fax: (510) 661-0888

Data#: 21 File#: 10U13357.EMI Date: 10-15-2010 Time: 16:59:04

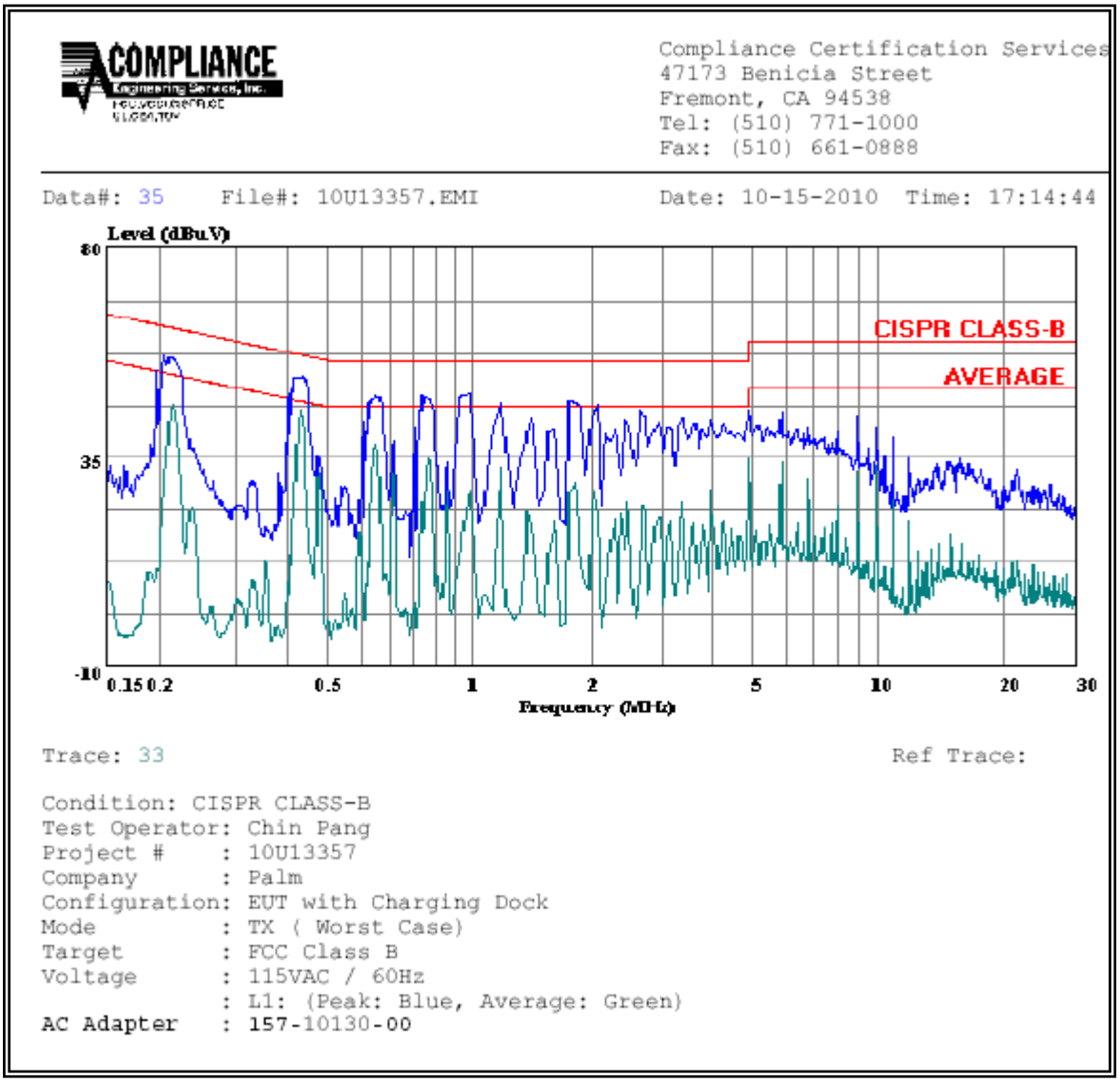


Trace: 19 Ref Trace:

Condition: CISPR CLASS-B
Test Operator: Chin Pang
Project # : 10U13357
Company : Palm
Configuration: EUT with AC Adapter
Mode : TX (Worst Case)
Target : FCC Class B
Voltage : 115VAC / 60Hz
: L2: (Peak: Blue, Average: Green)
AC Adapter : 157-10130-00

EUT WITH AC INDUCTIVE CHARGER (157-10130-00)

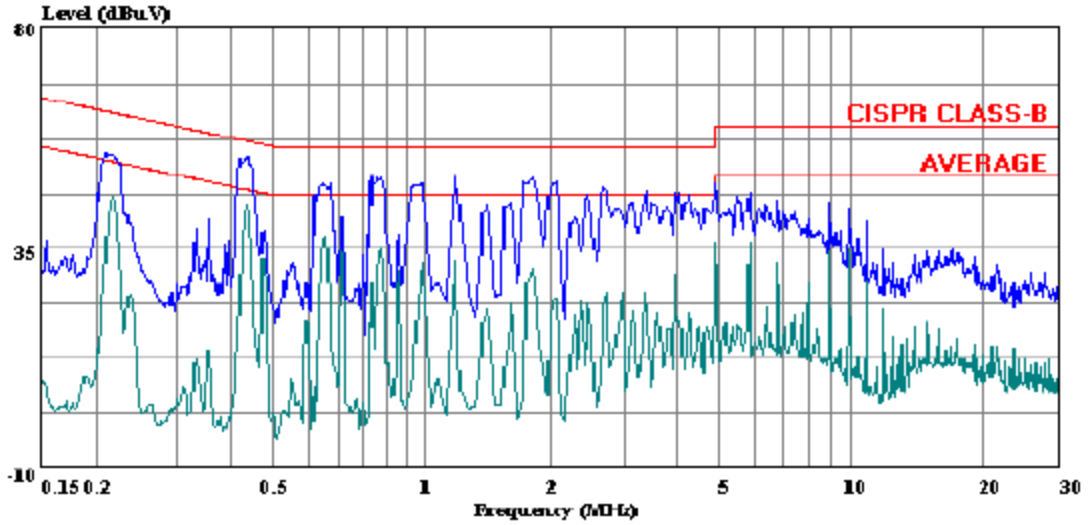
LINE 1 RESULTS



LINE 2 RESULTS

Compliance Certification Services
47173 Benicia Street
Fremont, CA 94538
Tel: (510) 771-1000
Fax: (510) 661-0888

Data#: 42 File#: 10U13357.EMI Date: 10-15-2010 Time: 17:21:35



Trace: 40 Ref Trace:

Condition: CISPR CLASS-B
Test Operator: Chin Pang
Project # : 10U13357
Company : Palm
Configuration: EUT with Charging Dock
Mode : TX (Worst Case)
Target : FCC Class B
Voltage : 115VAC / 60Hz
: L2: (Peak: Blue, Average: Green)
AC Adapter : 157-10130-00