FCC CFR47 PART 22 SUBPART H
AND PART 24 SUBPART E
CERTIFICATION

TEST REPORT
FOR

PDA PHONE

MODEL NUMBER: PA10A

FCC ID: NM8PA10A

REPORT NUMBER: 05T3291-1

ISSUE DATE: JUNE 27, 2005

Prepared for
HIGH TECH COMPUTER CORP.
1F, 6-3, BAU CHIAN ROAD, HSIN-TIEN
TAIPEI, 231, TAIWAN

Prepared by
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Revision History

Rev.	Issue Date	Revisions	Revised By
A	4/15/05	Initial Issue	Thu
B	6/27/05	Added Conduced Peak Power	Thu

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: HIGH TECH COMPUTER CORP.
1F, 6-3, BAU CHIAN ROAD, HSIN-TIEN
TAIPEI 231, TAIWAN

EUT DESCRIPTION: PDA PHONE

MODEL: PA10A

SERIAL NUMBER: HT510E600005

DATE TESTED: APRIL 07-19, 2005

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 22 SUBPART H	NO NON-COMPLIANCE NOTED
FCC PART 24 SUBPART E	NO NON-COMPLIANCE NOTED

Compliance Certification Services, Inc. tested the above equipment in accordance with the requirements set forth in the above standards. 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 Compliance Certification Services and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Compliance Certification Services will constitute fraud and shall nullify the document. No part of this report may be used to claim product certification, approval, or endorsement by NVLAP, NIST, or any government agency.

Approved & Released For CCS By:

THU CHAN
EMC SUPERVISOR
COMPLIANCE CERTIFICATION SERVICES

Tested By:

CHIN PANG
EMC TECHNICIAN
COMPLIANCE CERTIFICATION SERVICES

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with TIA/EIA 603A (2001), ANSI C63.4-2003, FCC CFR 47 Part 2, FCC CFR 47 Part 15 and FCC CFR 47 Part 22H and 24E.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 561F Monterey Road, Morgan Hill, California, USA. The sites are constructed in conformance with the requirements of ANSI C63.4, ANSI C63.7 and CISPR Publication 22. All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

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. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Radiated Emission, 30 to 200 MHz	+/- 3.3 dB
Radiated Emission, 200 to 1000 MHz	+4.5 / -2.9 dB
Radiated Emission, 1000 to 2000 MHz	+4.5 / -2.9 dB
Power Line Conducted Emission	+/- 2.9 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a PDA phone.

This report is for the CDMA 800 / 1900MHz performance of the PDA phone.

The device is manufactured by High Tech Computer Corp..

EUT auxiliary equipment

Auxiliary Equipment	Brand	Model No.
Li-Ion Rechargeable Battery	Celxpert Energy Co.	PA16A
AC adaptor	Delta Electronic	ADP-5FH B
USB Cable	MEC	60-4008-201A
Cradle	High Tech Computer	PA15A
Headset	Merry	EMC147-012-01

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted peak output power as follows:

824 to 849 MHz Authorized Band

Frequency Range (MHz)	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (mW)
824.7 - 848.31	CDMA	29.00	794.33

1850 to 1910 MHz Authorized Band

Frequency Range (MHz)	Modulation	Conducted Peak Power (dBm)	Conducted Peak Power (mW)
1851.25 - 1908.75	CDMA	28.07	641.21

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a monopole antenna, with a maximum allowed gain of –2.0dBi for Cellular bands and PCS bands.

5.4. SOFTWARE AND FIRMWARE

The EUT is linked with CMU200 tester support equipment during testing.

5.5. WORST-CASE CONFIGURATION AND MODE

The worst-case channel is determined as the channel with the highest output power. The highest measured output power was at 824.7 MHz and 1851.25 MHz.

5.6. DESCRIPTION OF TEST SETUP

SETUP FOR RF WIRELESS TESTS

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
DC Power Supply	Delta Electronic	ADP-5FH B	3UW0450071925	NA
Headset	MERRY	EMC147-012-01	NA	NA

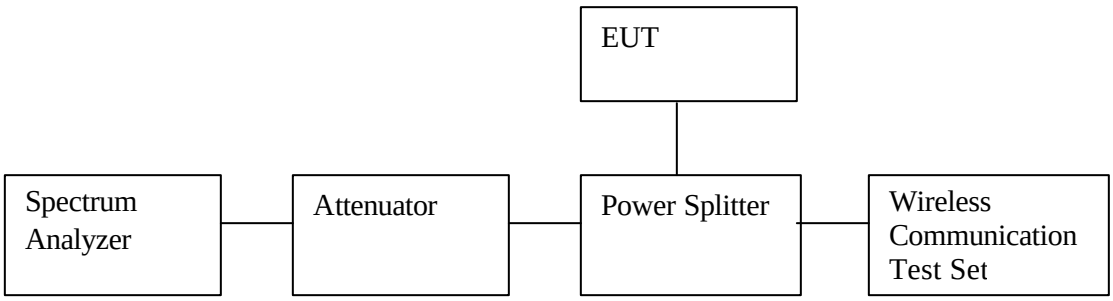
I/O CABLES

I/O CABLE LIST						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length**	**Remarks**
1	DC	1	DC	Un-shielded	1.5m	NA
2	Mic	1	Din	Un-shielded	2m	NA

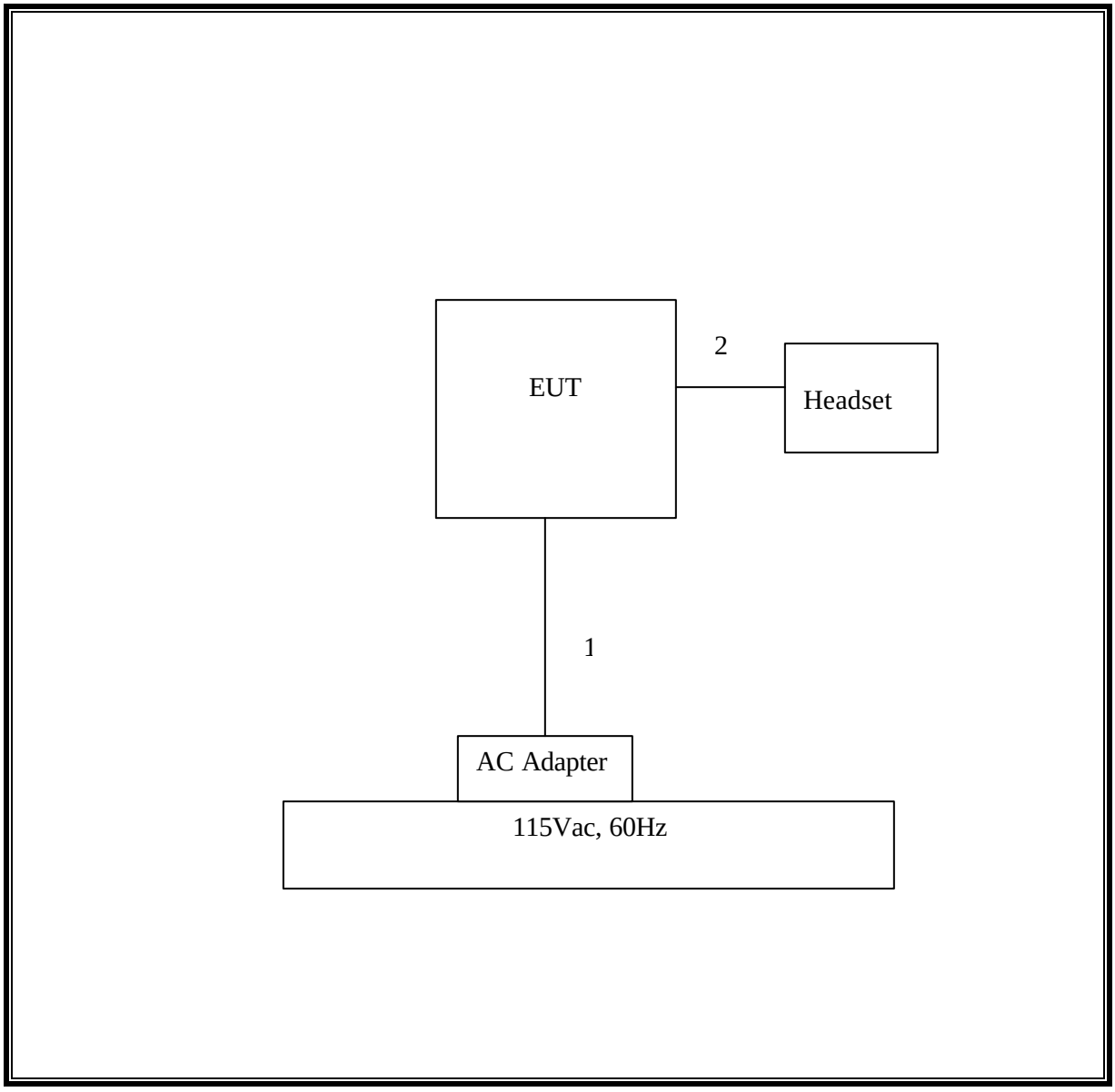
TEST SETUP

The EUT is installed as a stand-alone device during the tests. The Wireless Communication test set exercised the EUT.

RF CONDUCTED TEST SETUP DIAGRAM



RF RADIATED TEST SETUP DIAGRAM



SETUP FOR DIGITAL DEVICE TESTS

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Printer	HP	2225C	2930S52614	DSI6XU2225
Modem	ACEEX	1414	NA	IFAXDM1415
Mouse	HP	M-S34	LZB75062022	DZL211029
Laptop	HP	Ze4101	CN24600011	DoC
AC Adapter	HP	ADP-75HB	MVT0240165286	DoC
AC Adapter	Delta Electronic	ADP-5FH B	3UW0450072243	DoC
Headset	MERRY	EMC147-012-01	NA	NA
Cradle	High Tech Computer	PA15A	NA	NA

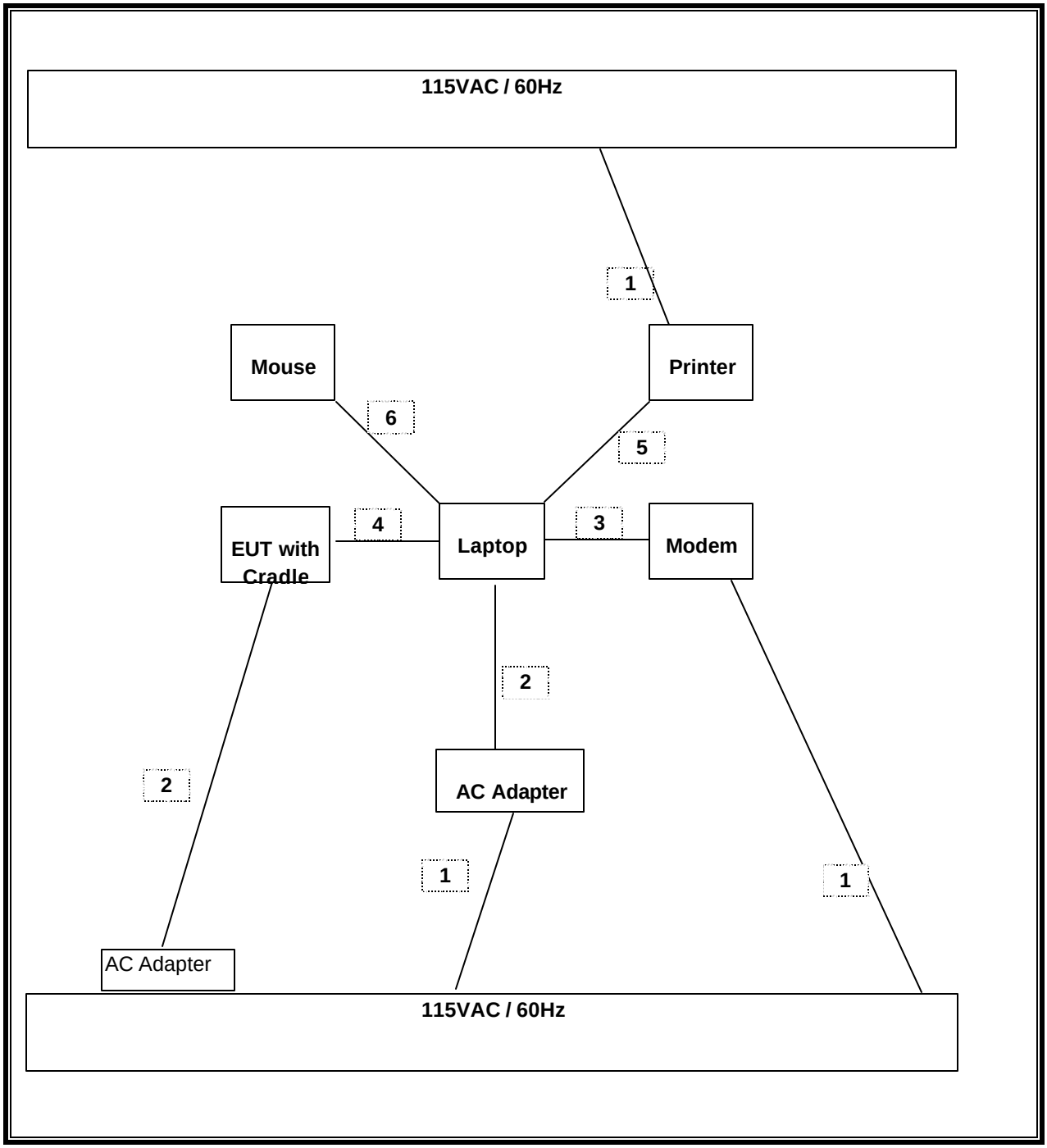
I/O CABLES

I/O CABLE LIST						
Cable No.	**Port**	**# of Identical Ports**	**Connector Type**	**Cable Type**	**Cable Length**	**Remarks**
1	AC	3	US 115V	Un-shielded	2m	Bundled EUT Power Cable for LC test
2	DC	2	DC	Un-shielded	1m	N/A
3	Serial	1	DB9	Shielded	1m	N/A
4	USB	1	USB	Shielded	2m	N/A
5	Parallel	1	DB25	Shielded	2m	N/A
6	Mouse	1	PS/2	Un-shielded	2m	N/A

TEST SETUP

The EUT is installed in the cradle. The cradle is connected to a laptop computer system with minimum configuration during the tests. Test software exercised and linked with the EUT.

DIGITAL RADIATED TEST SETUP DIAGRAM



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**	**Serial Number**	**Cal Due**
Spectrum Analyzer	HP	E4446A	US42510266	8/25/2005
EMI Receiver, 9 kHz ~ 2.9 GHz	HP	8542E	3942A00286	3/29/06
RF Filter Section	HP	85420E	3705A00256	3/29/06
30MHz— 2Ghz	Sunol Sciences	JB1 Antenna	A121003	9/12/05
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	6717	9/12/05
Preamplifier, 1 ~ 26 GHz	Miteq	NSP2600-44	646456	8/17/05
LISN, 10 kHz ~ 30 MHz	FCC	LISN-50/250-25-2	2023	8/30/05
LISN, 10 kHz ~ 30 MHz	Solar	8012-50-R-24-BNC	837990	10/21/05
EMI Test Receiver	R & S	ESHS 20	827129/006	10/22/05
Temperature / Humidity Chamber	Thermotron	SE 600-10-10	29800	5/13/05
Dipole	ETS	3121C	DB4	3/24/06
Peak Power Meter	Agilent	E4416A	GB41291160	2/9/06
Peak / Average Power Sensor	Agilent	E9327A	US40440755	2/10/06
Signal Generator 2 -40 GHz	R & S	SMP04	DE 34210	5/2/05
Signal Generator, 1024 MHz	R & S	SMY01	DE 12311	4/11/06
DC Power Suppy	Kenwood	PA-36-3A	N/A	NCR
Power Splitter	HP	11667B	N/A	N/A
2.7GHz HPF	MicroTronic	HPM13194	1	CNR
1.5GHz HPF	MicroTronic	HPM13193	2	CNR
Antenna, Horn 1 ~ 18 GHz	EMCO	3117	29301	9/12/05
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	6717	9/12/05

7. LIMITS AND RESULTS

7.1. OCCUPIED BANDWIDTH

LIMIT

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

No non-compliance noted:

800MHZ CELL CDMA Modulation

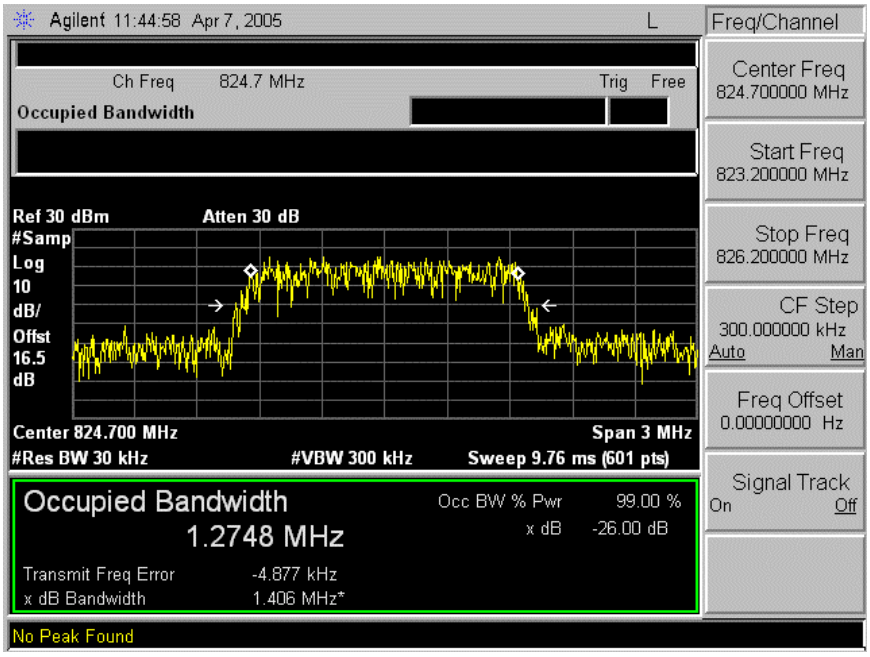
Channel	Frequency (MHz)	Bandwidth (MHz)
Low	824.7	1.406
Middle	836.5	1.366
High	848.3	1.404

1900MHz PCS Modulation

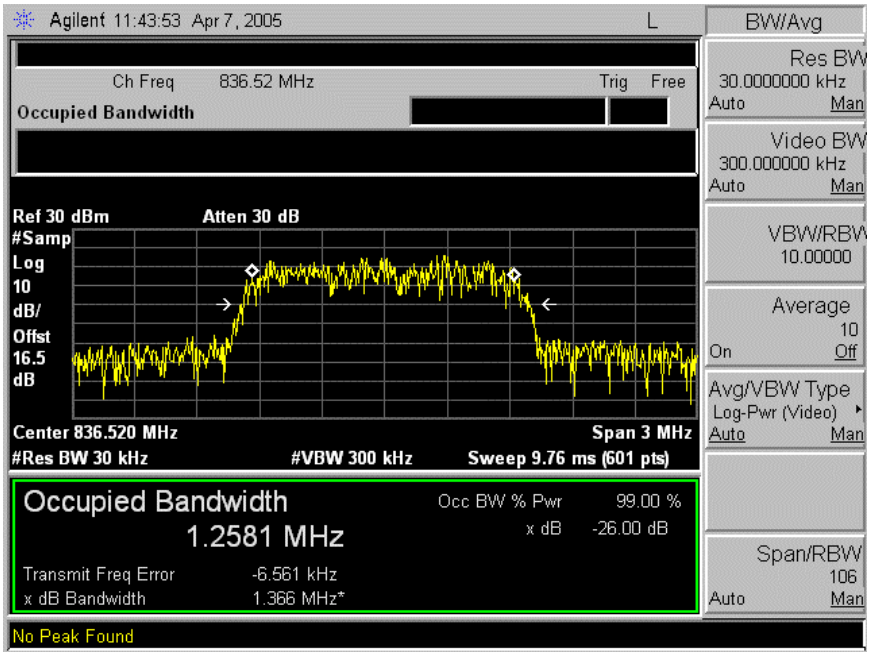
Channel	Frequency (MHz)	Bandwidth (MHz)
Low	1851.25	1.387
Middle	1880	1.401
High	1908.75	1.382

800MHz CELL CDMA 26 dB BANDWIDTH

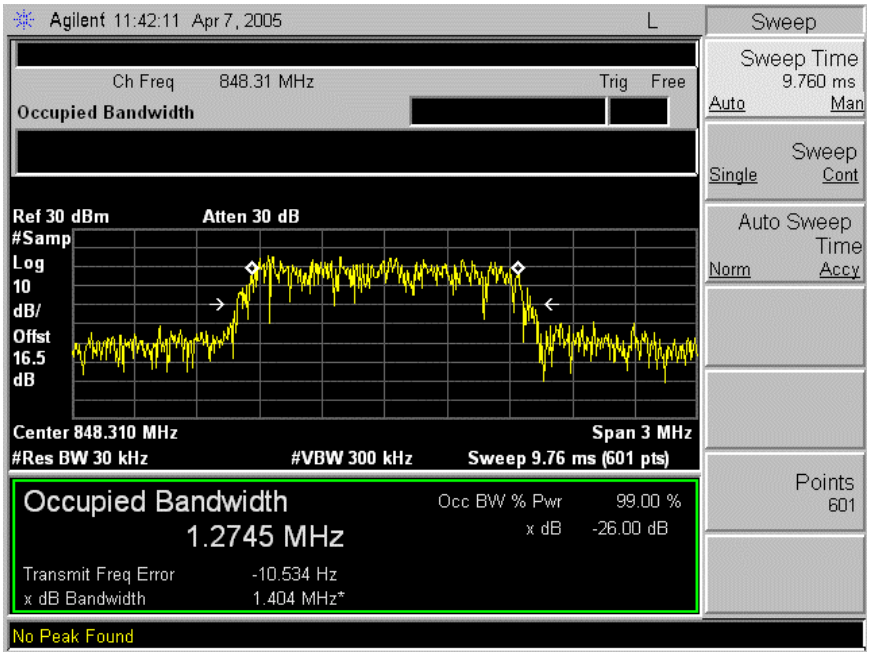
BANDWIDTH LOW CH



BANDWIDTH MID CH

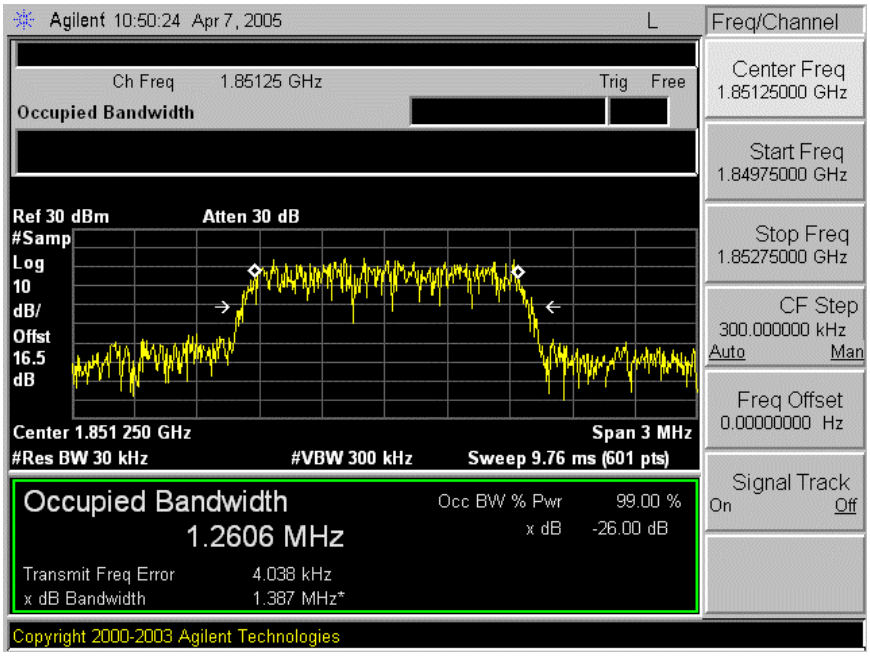


BANDWIDTH HIGH CH

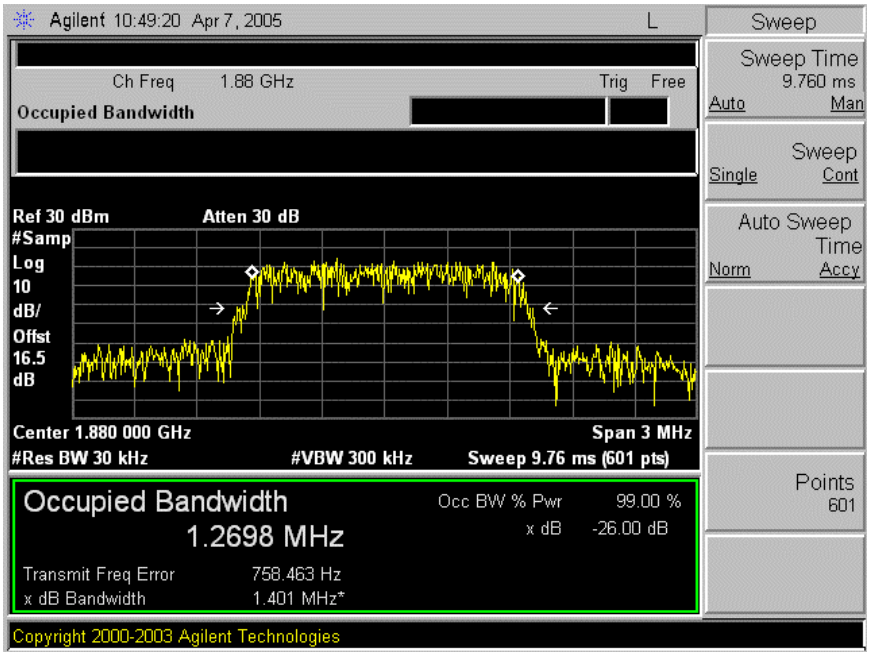


1900MHz PCS CDMA 26 dB BANDWIDTH

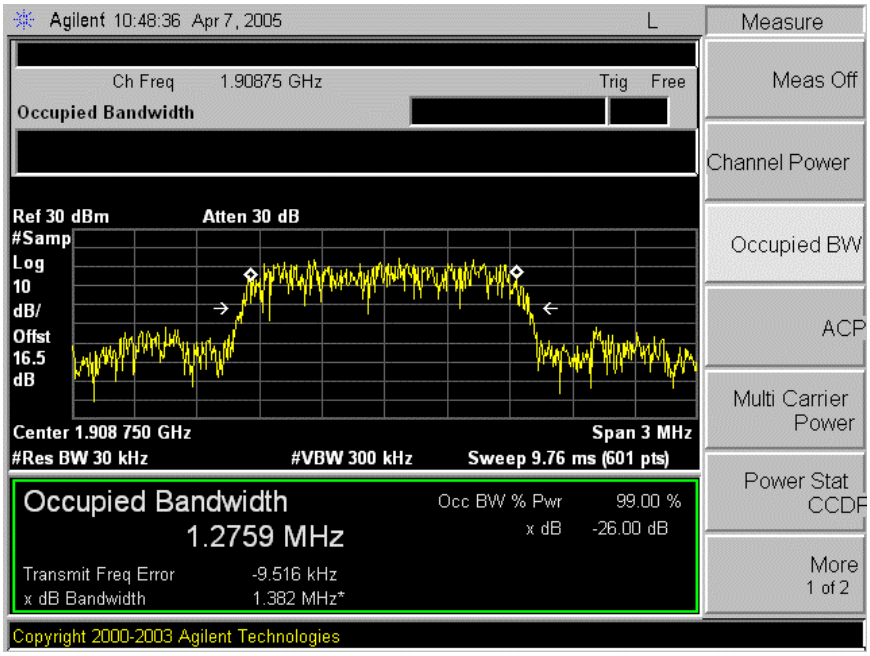
BANDWIDTH LOW CH



BANDWIDTH MID CH



BANDWIDTH HIGH CH



7.2. RF POWER OUTPUT

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 603 Clause 2.2.17

MEASUREMENT PROCEDURE

1). On a test site, the EUT shall be placed on a turntable, and in the position closest to the normal use as declared by the user.

2). The test antenna shall be oriented initially for vertical polarization located 3m from the EUT to correspond to the frequency of the transmitter.

3). The output of the test antenna shall be connected to the measuring receiver and either a peak or quasi-peak detector was used for the measurement as indicated on the report. The detector selection is based on how close the emission level was approaching the limit.

4). The transmitter shall be placed 0.80 meter above the ground plane, the X, Y, and Z positions shall be tested and the worst case reported. The transmitter shall be switched on with typical modulation and the measurement receiver shall be tuned to the frequency of the transmitter under test.

5). The test antenna shall be raised and lowered through the specified range of height until the measuring receiver detects a maximum signal level.

6). The transmitter shall than be rotated through 360° in the horizontal plane, until the maximum signal level is detected by the measuring receiver.

7). The test antenna shall be raised and lowered again through the specified range of height until a maximum signal level is detected by the measuring receiver.

8). The maximum signal level detected by the measuring receiver shall be noted.

9). The transmitter shall be replaced by a tuned dipole / horn (substitution antenna).

10). The substitution antenna shall be oriented for vertical polarization and the length of the substitution antenna shall be adjusted to correspond to the frequency of the transmitter.

11). The substitution antenna shall be connected to a calibrated signal generator.

12). If necessary, the input attenuator setting of the measuring receiver shall be adjusted in order to increase the sensitivity of the measuring receiver.

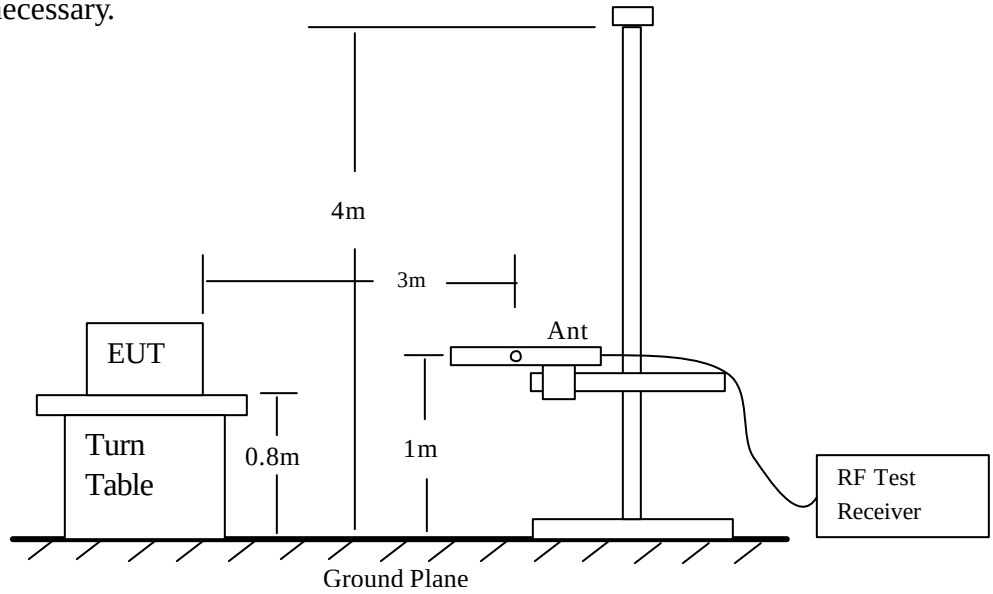
13). The test antenna shall be raised and lowered through the specified range of the height to ensure that the maximum signal is received.

14). The input signal to the substitution antenna shall be adjusted to the level that produces a level detected by the measuring receiver, that is equal to the level noted while the transmitter radiated power was measured, corrected for the change of input attenuation setting of the measuring receiver.

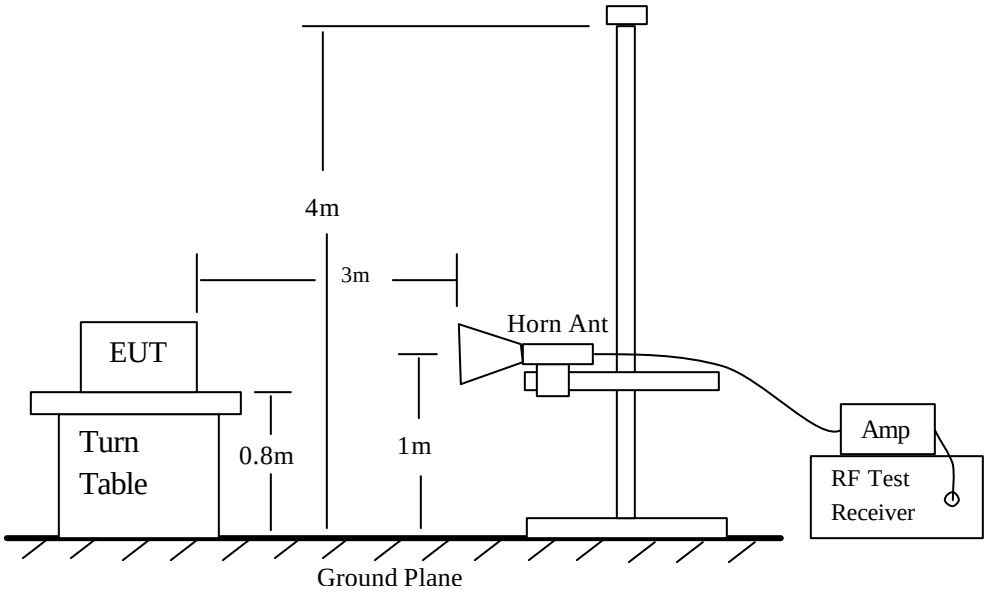
15). The input level to the substitution antenna shall be recorded as power level in dBm, corrected for any change of input attenuator setting of the measuring receiver.

16). The measurement shall be repeated with the test antenna and the substitution antenna oriented for horizontal polarization.

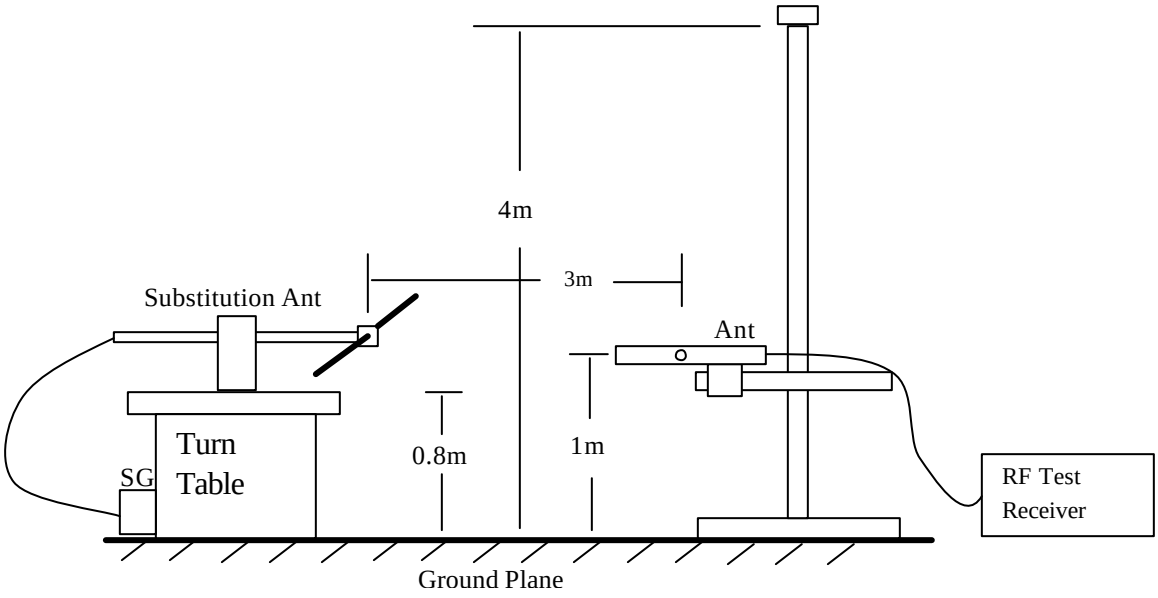
17). The measure of the effective radiated power is the larger of the two levels recorded, at the input to the substitution antenna, corrected for the gain of the substitution antenna if necessary.



Radiated Emission Measurement 30 to 1000 MHz



Radiated Emission above 1000 MHz



Radiated Emission – Substitution Method

RESULTS

No non-compliance noted.

800MHz CELL CDMA Modulation

Channel	Frequency (MHz)	ERP Peak Power (dBm)	ERP Peak Power (mW)
Low	824.7	24.80	302.00
Middle	836.5	24.90	309.03
High	848.3	24.50	281.84

1900MHz PCS Modulation

Channel	Frequency (MHz)	EIRP Peak Power (dBm)	EIRP Peak Power (mW)
Low	1851.25	25.80	380.19
Middle	1880	25.90	389.05
High	1908.75	25.50	354.81

NOTE: RBW=VBW=3MHz.

CDMA Output Power (ERP)

f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch									
824.70	100.4	V	24.2	0.8	0.0	23.4	38.5	-15.1	
824.70	102.4	H	25.6	0.8	0.0	24.8	38.5	-13.7	
Mid Ch									
836.52	100.5	V	23.7	0.8	0.0	22.9	38.5	-15.6	
836.52	102.6	H	25.7	0.8	0.0	24.9	38.5	-13.6	
High Ch									
848.31	100.0	V	23.3	0.8	0.0	22.5	38.5	-16.0	
848.31	101.8	H	25.3	0.8	0.0	24.5	38.5	-14.0	

NOTE: EUT tested at RBW=VBW=3MHz

PCS Output Power (EIRP)

f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch									
1.851	95.3	V	20.2	1.4	4.1	23.0	33.0	-10.0	
1.851	100.0	H	23.0	1.4	4.1	25.8	33.0	-7.2	
Mid Ch									
1.880	94.2	V	19.8	1.4	4.1	22.5	33.0	-10.5	
1.880	100.2	H	23.2	1.4	4.1	25.9	33.0	-7.1	
High Ch									
1.909	97.0	V	21.3	1.4	4.0	24.0	33.0	-9.0	
1.909	99.8	H	22.8	1.4	4.0	25.5	33.0	-7.5	

NOTE: EUT tested at RBW=VBW=3MHz

7.3. PEAK CONDUCTED POWER

PEAK POWER 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

The transmitter output is connected to a power meter.

RESULTS

No non-compliance noted:

The cable assembly insertion loss of 16.5 dB (including 6.5 dB splitter, 10 dB pad (~9.7 dB), and 0.3 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

800MHz CELL CDMA Modulation

Channel	Frequency (MHz)	Conducted Peak Output Power (dBm)
Low	824.7	28.84
Middle	836.5	29.00
High	848.3	28.60

1900MHz PCS Modulation

Channel	Frequency (MHz)	Conducted Peak Output Power (dBm)
Low	1851.25	28.04
Middle	1880	28.07
High	1908.75	27.00

7.4. SPURIOUS EMISSION AT ANTENNA TERMINAL

LIMIT

§22.917 (e) and §24.238 (a) Out of band emissions. 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

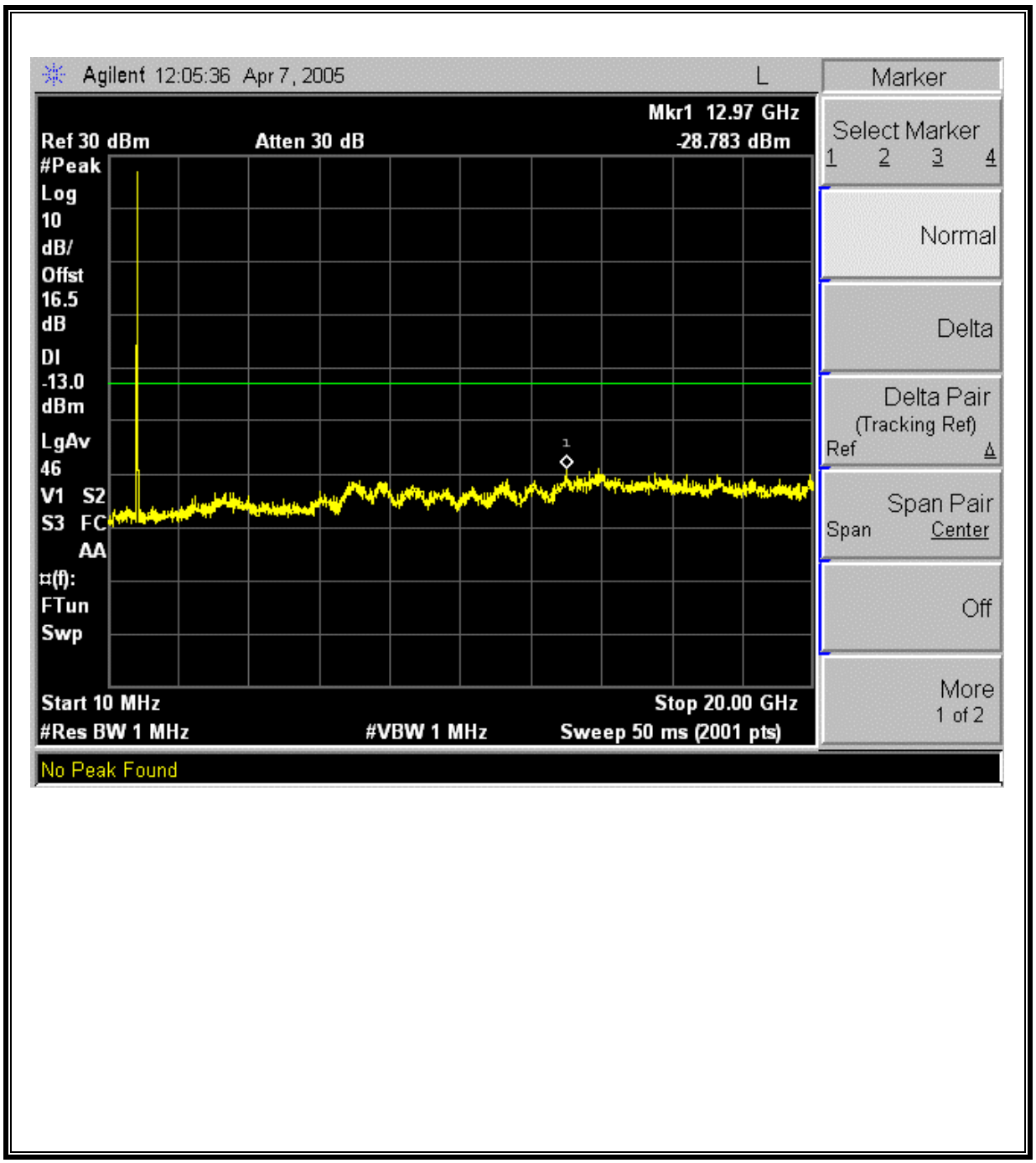
ANSI / TIA / EIA 603 Clause 3.2.12, FCC 22.917 (h), & FCC 24.238 (b)

RESULTS

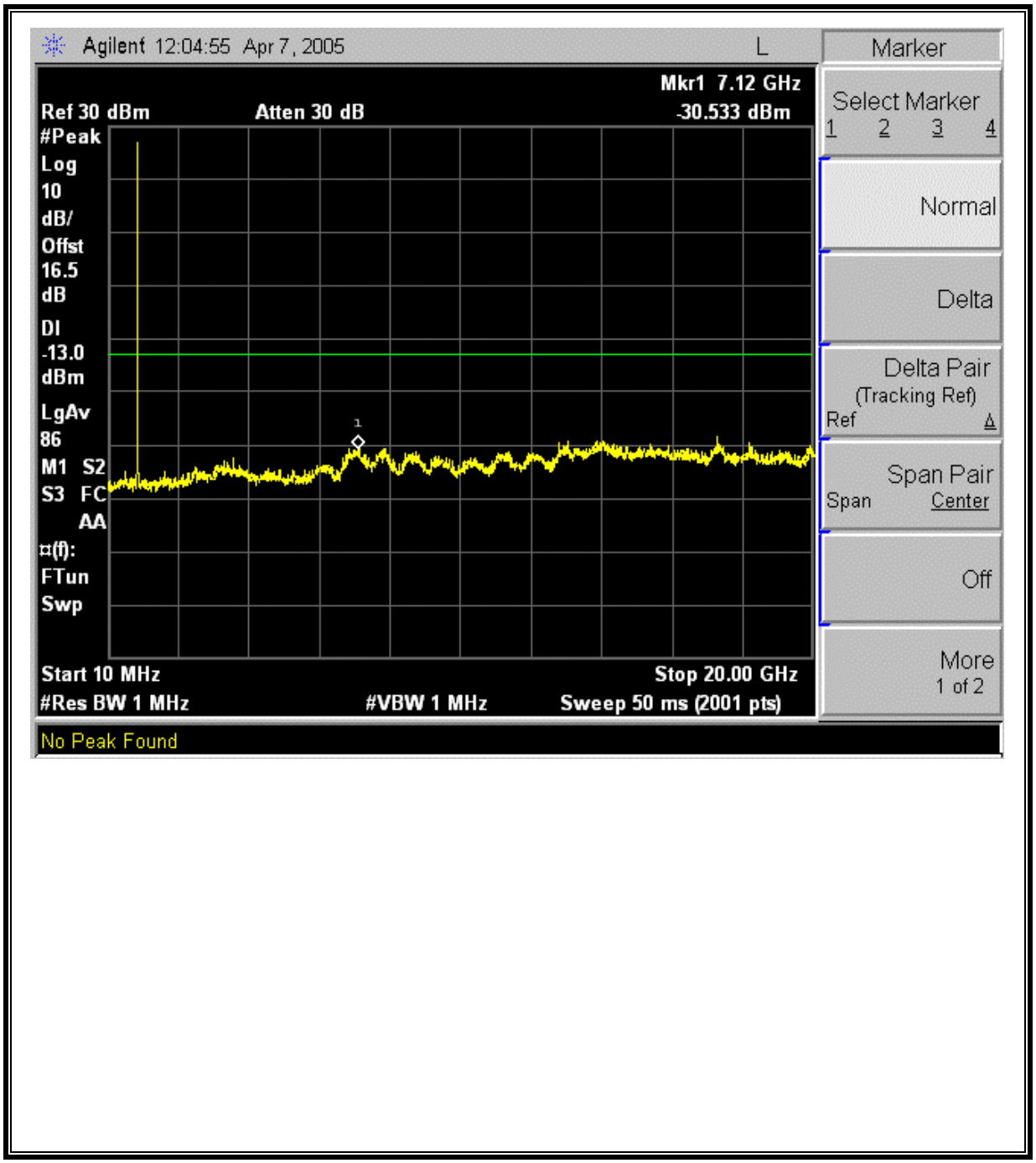
No non-compliance noted.

800MHz CELL CDMA MODULATION RESULTS

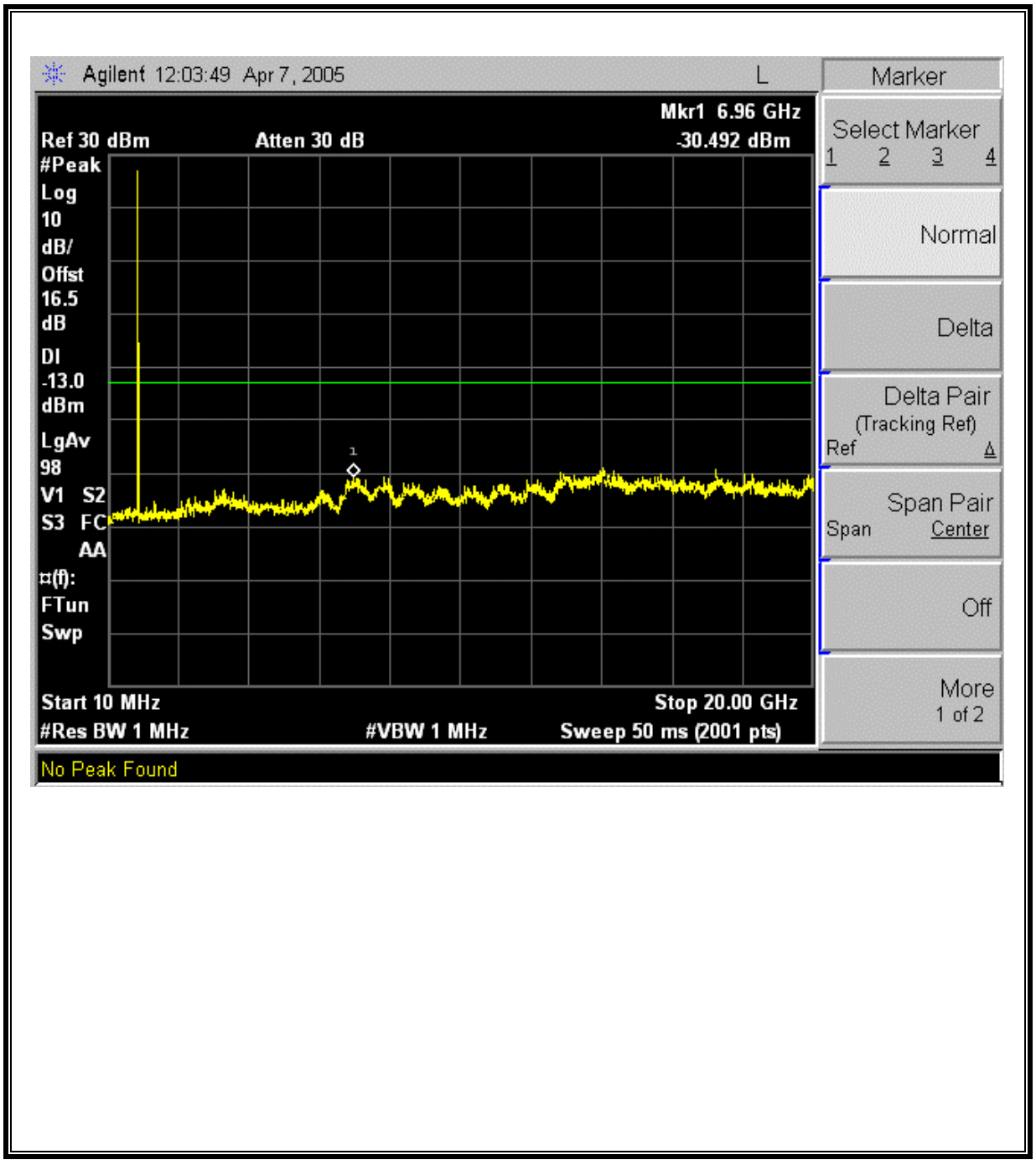
CDMA Modulation: Low Channel, Out-Of-Band Emissions



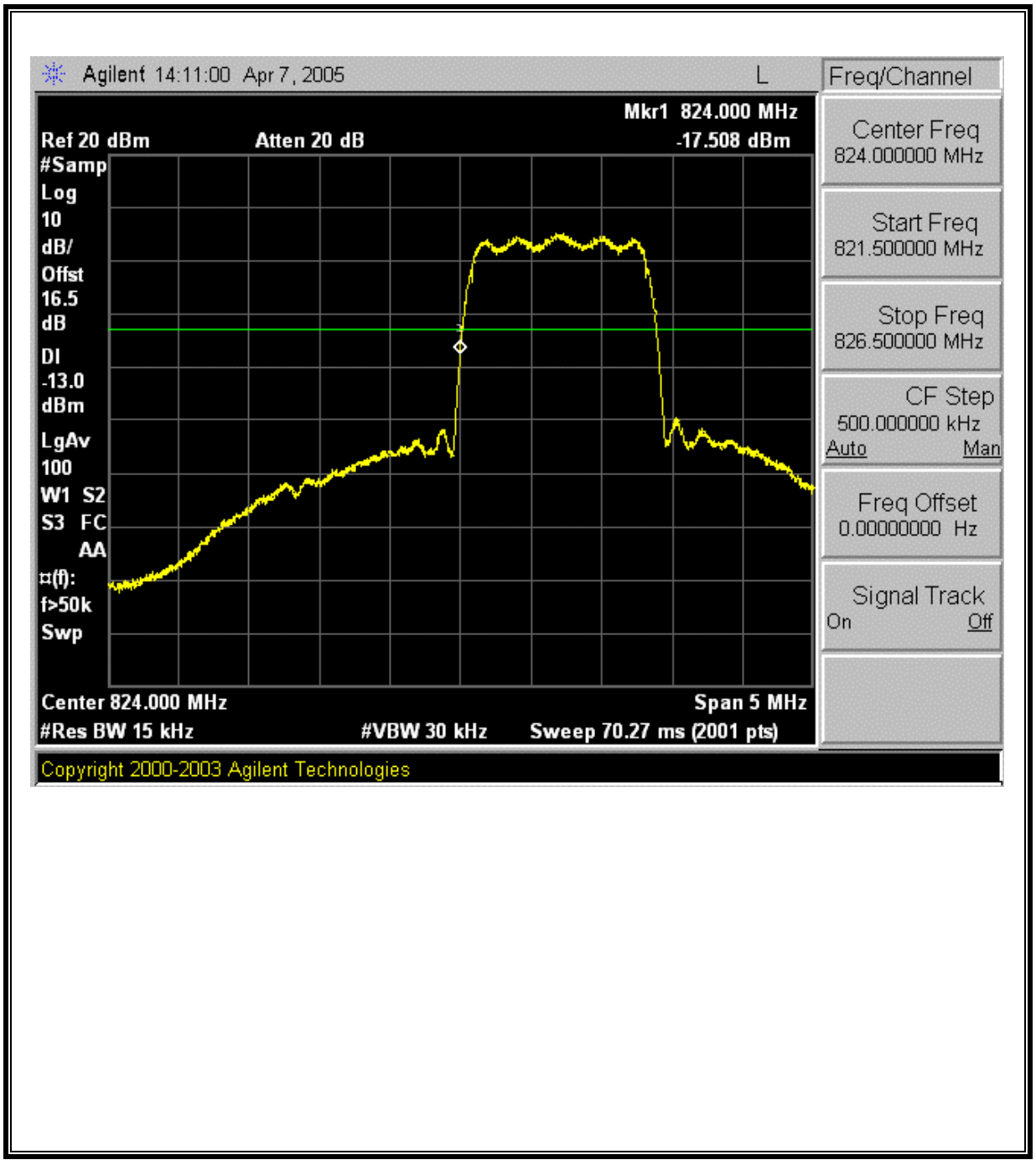
CDMA Modulation: Mid Channel, Out-Of-Band Emissions



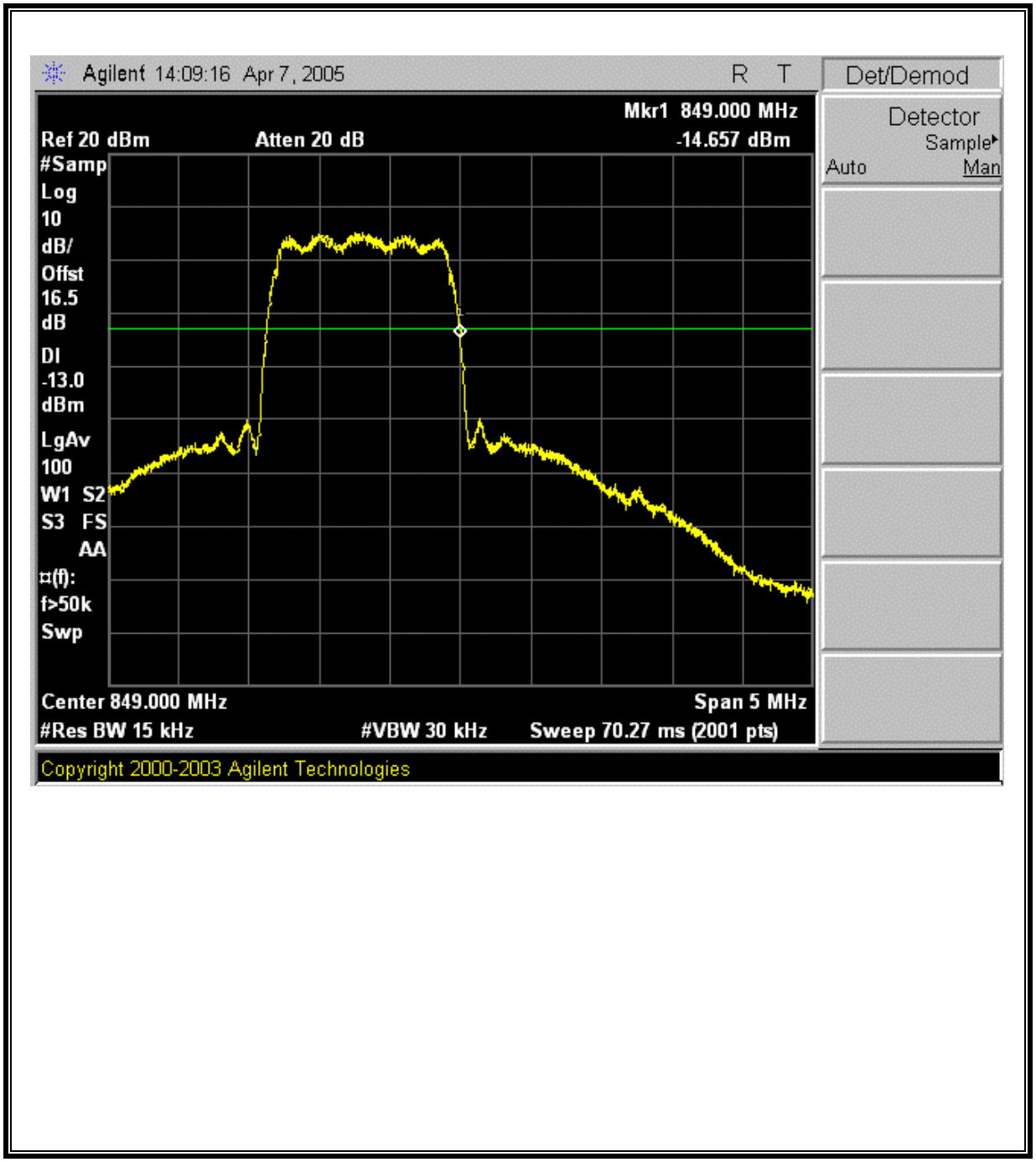
CDMA Modulation: High Channel, Out-Of-Band Emissions



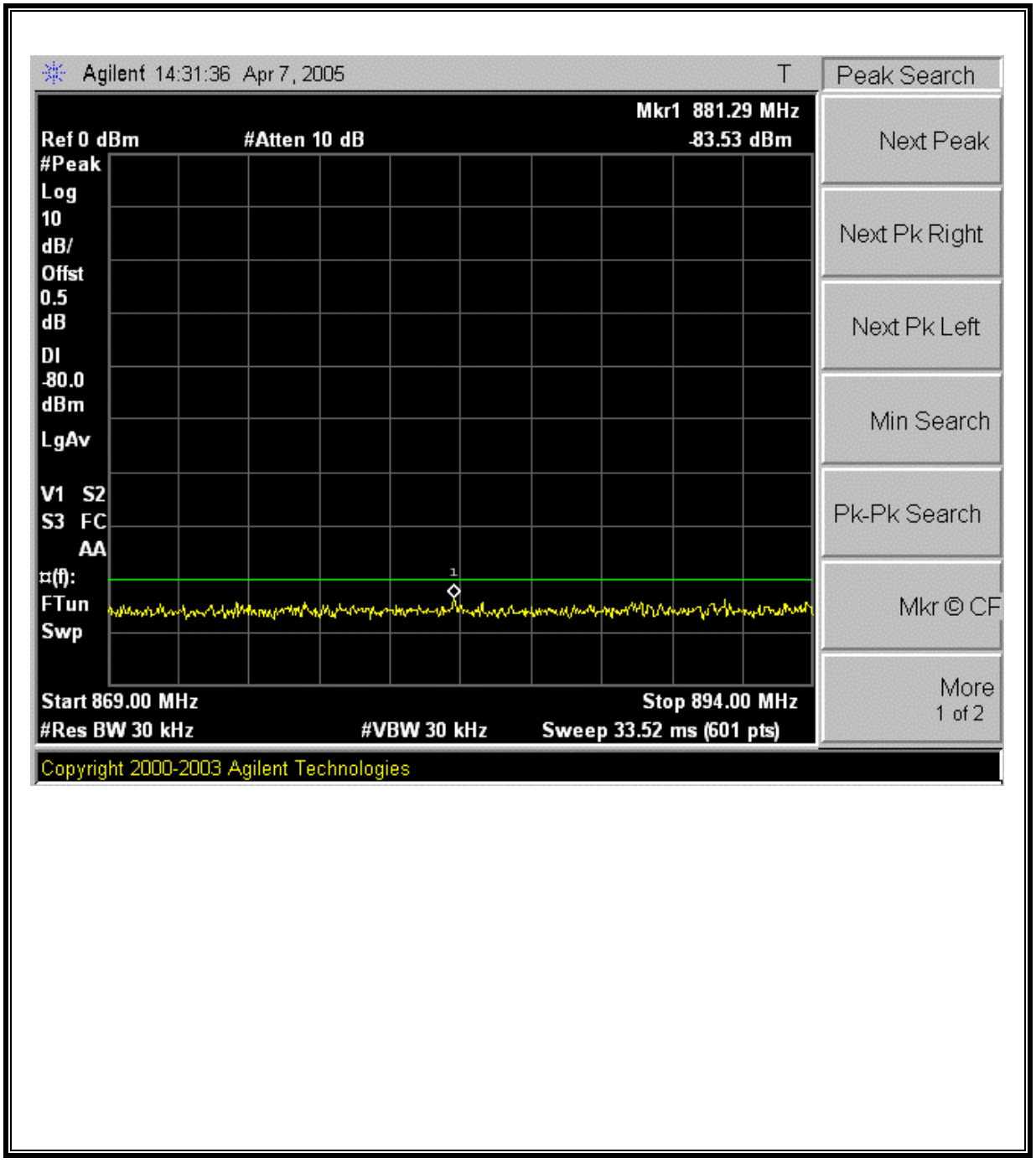
800MHz CELL CDMA Modulation: Low Channel Band Edge



800MHZ CELL CDMA Modulation: High Channel Band Edge

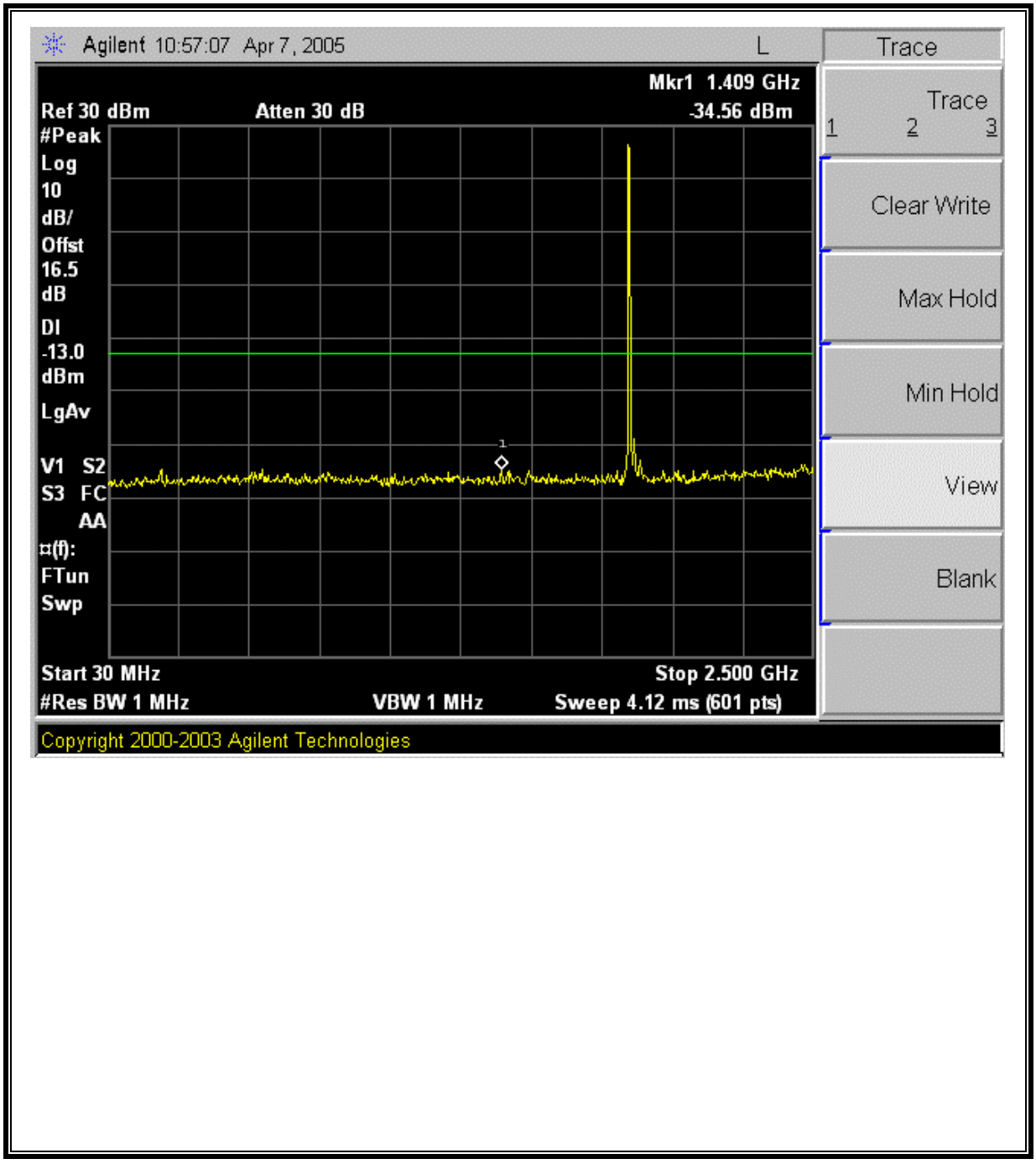


800MHZ CELL CDMA Mobile Emissions in Base Frequency Range



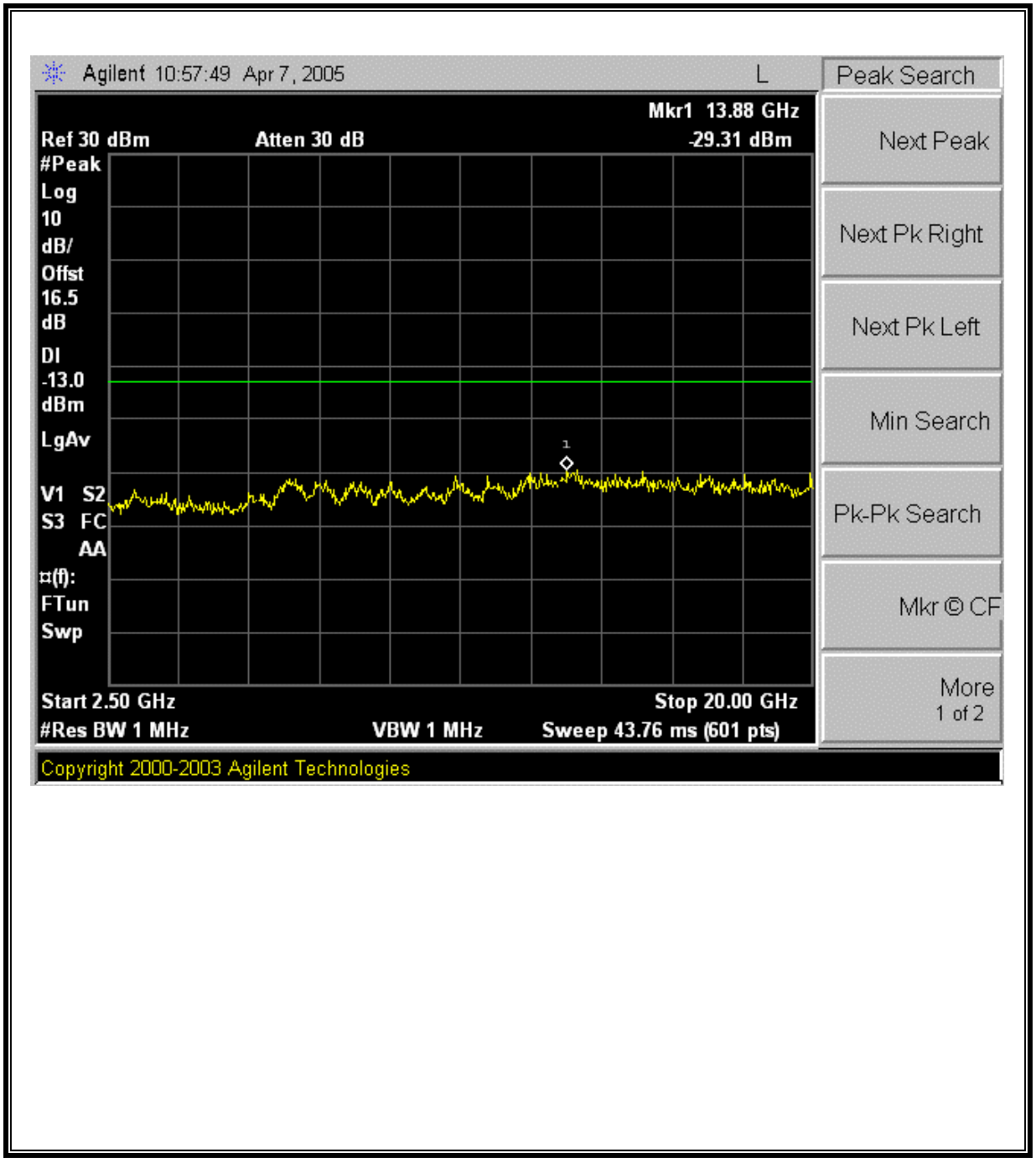
1900MHZ PCS CDMA MODULATION RESULTS

PCS CDMA Modulation: Low Channel Out-Of-Band Emissions #1

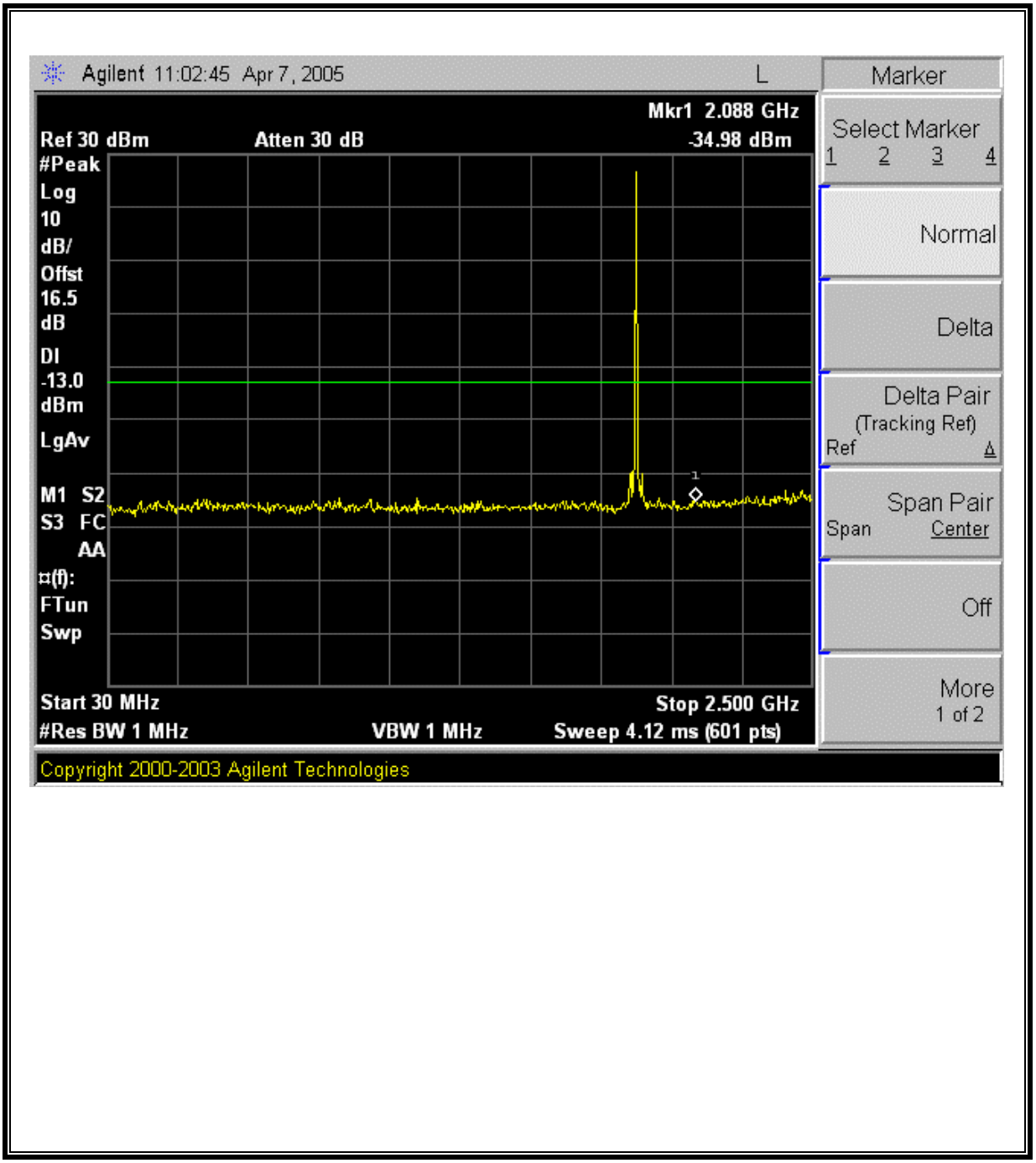


1900MHZ PCS CDMA MODULATION RESULTS

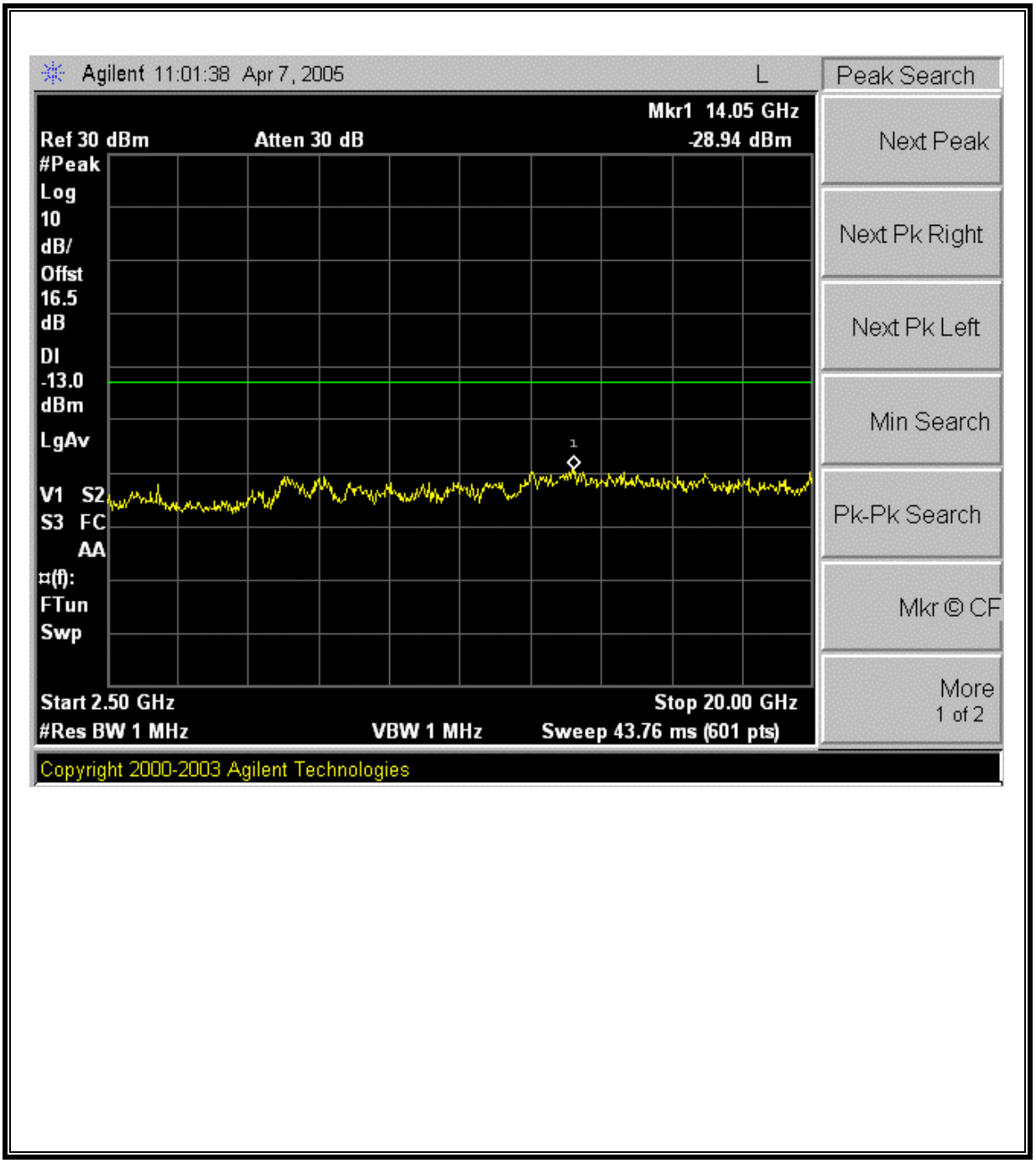
PCS CDMA Modulation: Low Channel Out-Of-Band Emissions #2



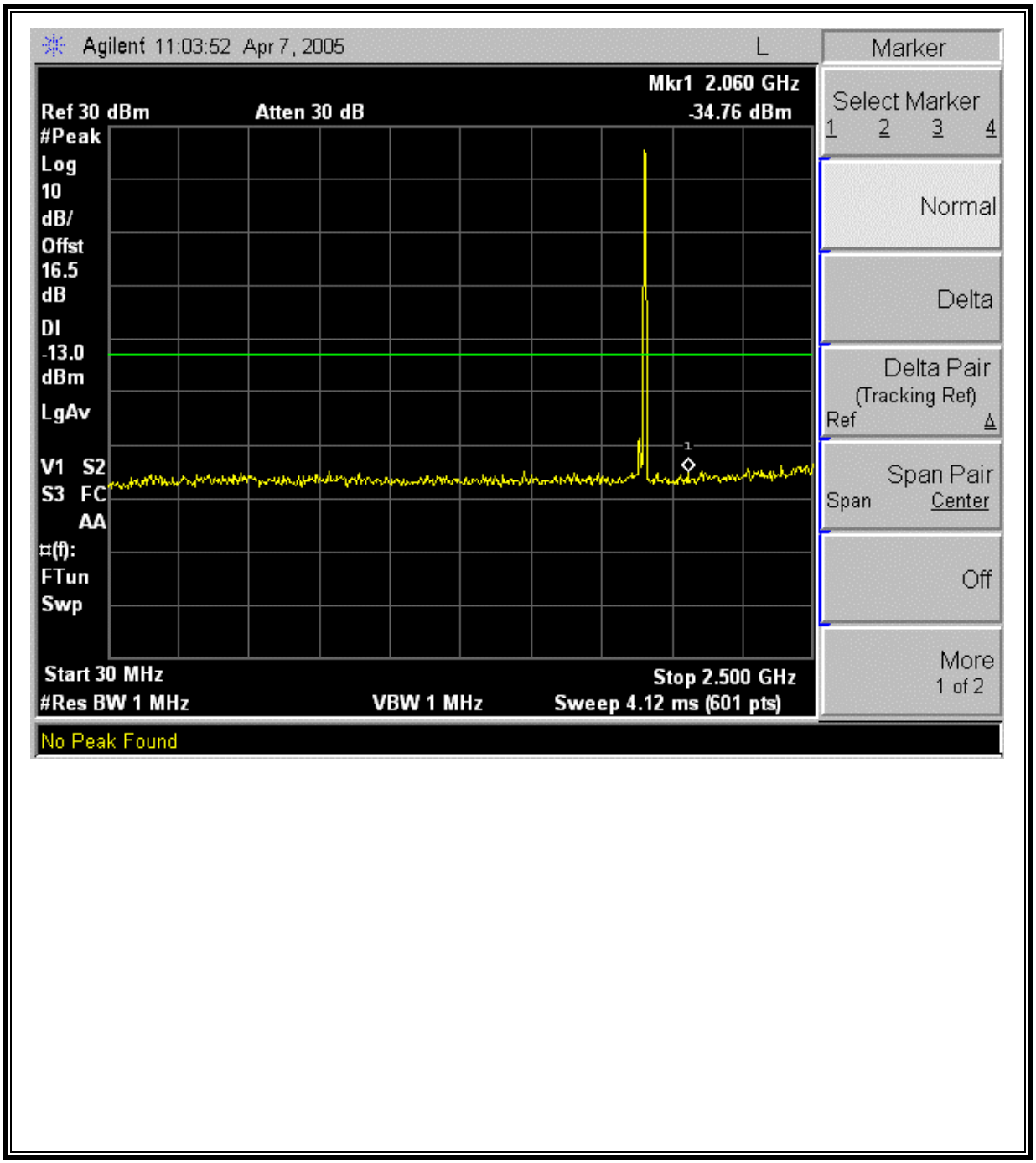
PCS CDMA Modulation: Mid Channel Out-Of-Band Emissions #1



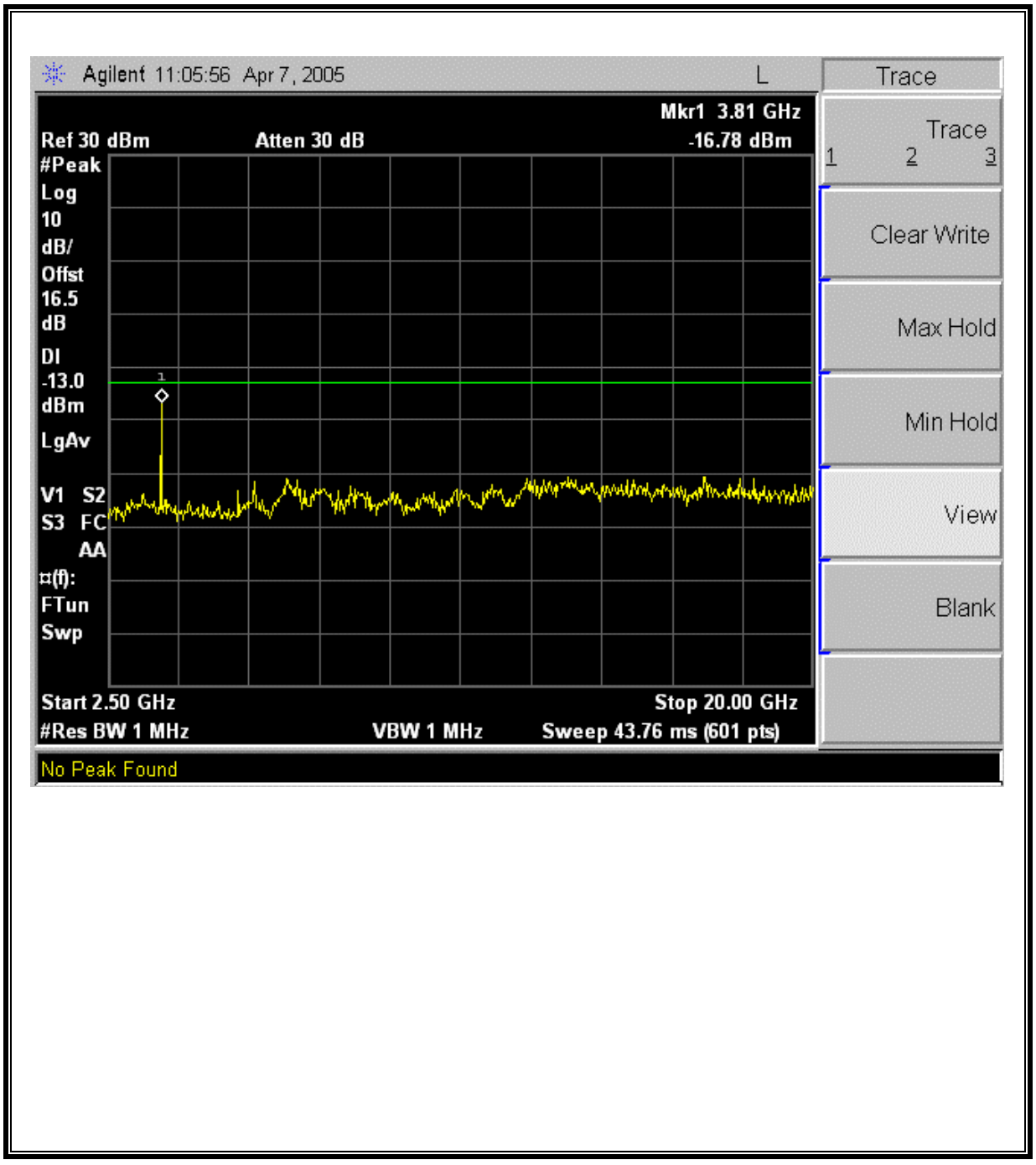
PCS CDMA Modulation: Mid Channel Out-Of-Band Emissions #2



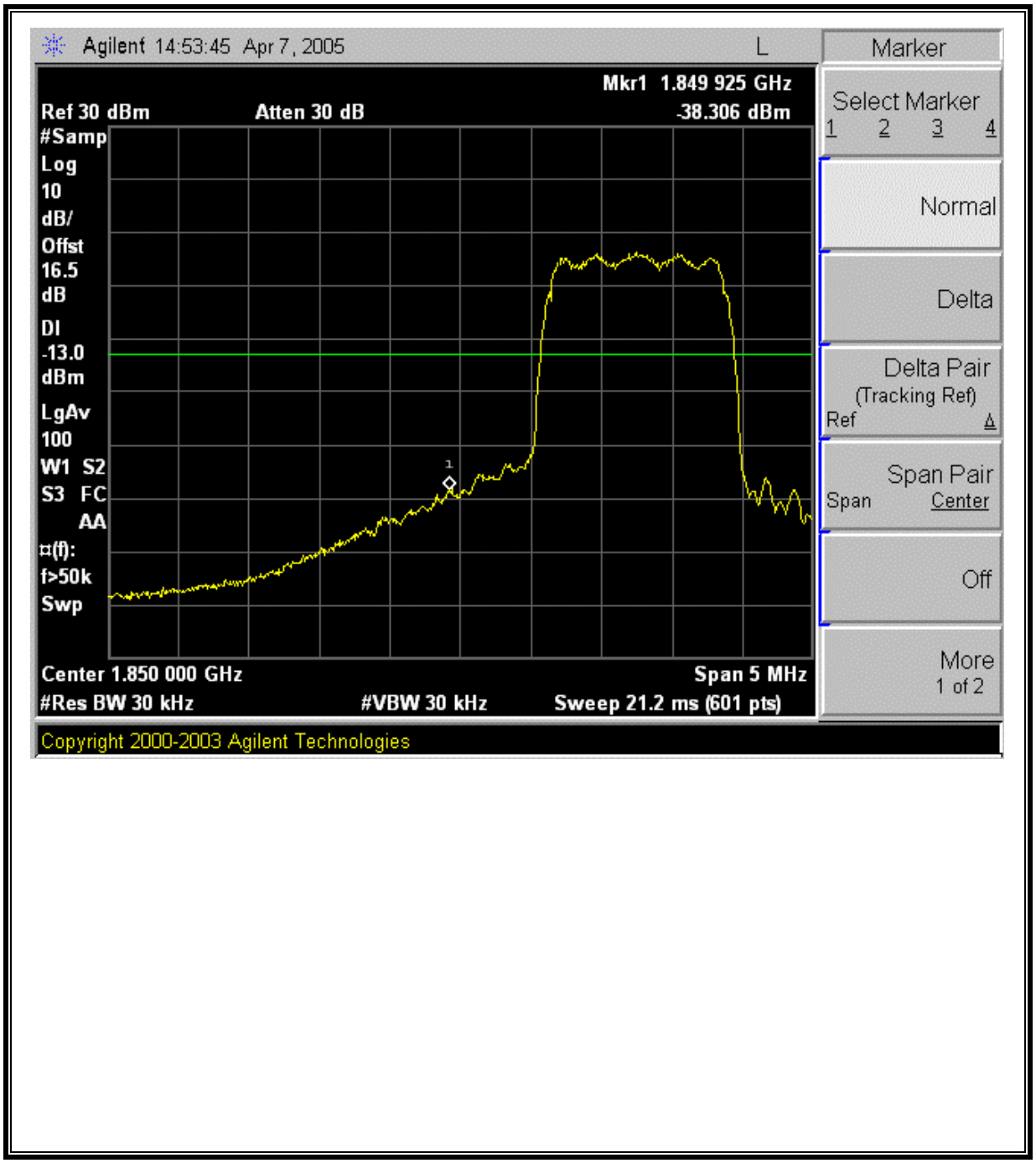
PCS CDMA Modulation: High Channel Out-Of-Band Emissions #1



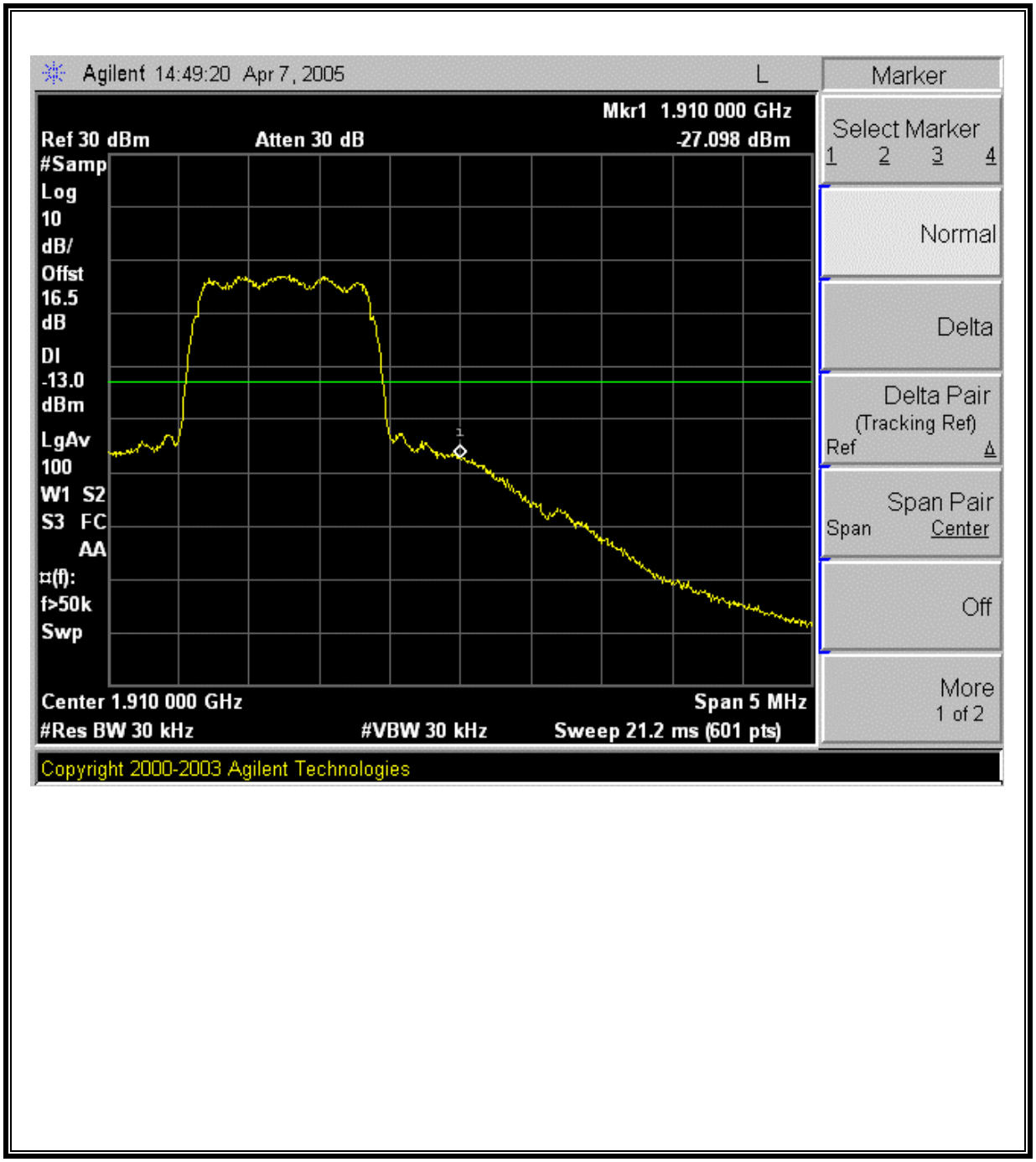
PCS CDMA Modulation: High Channel Out-Of-Band Emissions



PCS CDMA Modulation: Low Channel Band Edge



PCS CDMA Modulation: High Channel Band Edge



7.5. FIELD STRENGTH OF SPURIOUS EMISSION

LIMIT

§22.917 (e) and §24.238 (a) Out of band emissions. 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 3.2.12, FCC 22.917 (h), & FCC 24.238 (b)

RESULTS

No non-compliance noted.

800MHz Band CDMA (ERP), 30-1000MHz

04/11/05 High Frequency Substitution Measurement
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr: Chin Pang
Project #: 05T3291-1
Company: High Tech Computer
EUT Descrip.: PDA Phone with AC Adapter
EUT M/N: PA10A
Test Target: Part 22
Mode Oper: Tx, CDMA, 800MHz

Test Equipment:

Bilog Antenna	Cable	Pre-amplifier 8447D	Limit
5m Chamber Sunol Bilog	5m Chamber Cable	TS 8447D	ERP

f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
145.43	53.0	H	-55.1	1.5	-0.2	-2.4	-59.0	-13.0	-46.0	
672.14	53.6	H	-47.9	3.1	6.8	4.6	-46.4	-13.0	-33.4	
914.64	57.3	H	-40.1	3.6	6.8	4.6	-39.1	-13.0	-26.1	
77.53	55.4	V	-57.0	1.2	-0.8	-3.0	-61.1	-13.0	-48.1	
133.79	58.7	V	-48.9	1.5	-1.5	-3.7	-54.0	-13.0	-41.0	
929.19	55.2	V	-43.8	3.7	6.8	4.7	-42.8	-13.0	-29.8	

800MHz Band CDMA Spurious & Harmonic (ERP), Above 1GHz

04/12/05 High Frequency Measurement
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #: 05T3291-1
Company: High Tech Computer
EUT Descrip: PDA Phone
EUT M/N: PA10A
Test Target: FCC Part 22
Mode Oper: TX, CDMA 800MHz

Test Equipment:

EMCO Horn 1-18GHz: T73; S/N: 6717 @3m
Horn > 18GHz:
Limit: FCC 22
High Pass Filter
Hi Frequency Cables: (2 ft) (2~3 ft) (4~6 ft) (12 ft)
Pre-amplifer 1-26GHz: T63 Miteq 646456
Pre-amplifer 26-40GHz:

f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch										
1.649	56.0	V	-50.9	2.1	8.3	6.2	-46.8	-13.0	-33.8	
2.474	53.6	V	-50.5	2.6	9.7	7.6	-45.5	-13.0	-32.5	
3.298	54.8	V	-46.1	3.0	9.8	7.7	-41.4	-13.0	-28.4	
4.123	50.5	V	-48.1	3.5	10.4	8.3	-43.3	-13.0	-30.3	
1.649	52.3	H	-53.9	2.1	8.3	6.2	-49.8	-13.0	-36.8	
2.474	52.5	H	-51.4	2.6	9.7	7.6	-46.4	-13.0	-33.4	
3.298	51.8	H	-49.0	3.0	9.8	7.7	-44.3	-13.0	-31.3	
4.123	49.4	H	-48.8	3.5	10.4	8.3	-44.0	-13.0	-31.0	
Mid Ch										
1.673	54.6	V	-52.2	2.1	8.4	6.2	-48.1	-13.0	-35.1	
2.509	53.0	V	-50.9	2.6	9.7	7.5	-45.9	-13.0	-32.9	
3.346	52.5	V	-48.2	3.1	9.9	7.7	-43.6	-13.0	-30.6	
4.182	50.5	V	-48.0	3.5	10.5	8.3	-43.1	-13.0	-30.1	
1.673	52.8	H	-53.3	2.1	8.4	6.2	-49.2	-13.0	-36.2	
2.509	52.4	H	-51.3	2.6	9.7	7.5	-46.3	-13.0	-33.3	
3.346	51.4	H	-49.2	3.1	9.9	7.7	-44.6	-13.0	-31.6	
4.182	49.2	H	-48.9	3.5	10.5	8.3	-44.1	-13.0	-31.1	
High Ch										
1.697	54.7	V	-52.0	2.1	8.4	6.3	-47.9	-13.0	-34.9	
2.544	55.4	V	-48.3	2.6	9.7	7.5	-43.4	-13.0	-30.4	
3.393	53.8	V	-46.8	3.1	9.9	7.7	-42.1	-13.0	-29.1	
4.241	50.8	V	-47.5	3.6	10.5	8.4	-42.7	-13.0	-29.7	
1.697	53.0	H	-53.0	2.1	8.4	6.3	-48.8	-13.0	-35.8	
2.544	52.8	H	-50.7	2.6	9.7	7.5	-45.8	-13.0	-32.8	
3.393	51.5	H	-49.0	3.1	9.9	7.7	-44.3	-13.0	-31.3	
4.241	50.0	H	-48.0	3.6	10.5	8.4	-43.2	-13.0	-30.2	

_ No other emissions were found up to 10th harmonic.

PCS (EIRP), 30-1000MHz

04/11/05 High Frequency Substitution Measurement
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr: Chin Pang
Project #: 05T3291-1
Company: High Tech Computer
EUT Descrip.: PDA Phone with AC Adapter
EUT M/N: PA10A
Test Target: Part 24
Mode Oper: Tx, CDMA, 1900MHz

Test Equipment:

Bilog Antenna	Cable	Pre-amplifier 8447D	Limit
5m Chamber Sunol Bilog	5m Chamber Cable	TS 8447D	ERP

f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	ERP (dBm)	Limit (dBm)	Margin (dB)	Notes
133.79	45.9	H	-61.7	1.5	-1.5	-3.7	-66.8	-13.0	-53.8	
230.79	47.9	H	-61.9	1.9	5.9	3.8	-60.0	-13.0	-47.0	
478.14	51.2	H	-52.4	2.6	6.1	4.0	-51.0	-13.0	-38.0	
706.09	54.7	H	-45.0	3.1	6.7	4.6	-43.5	-13.0	-30.5	
64.92	44.9	V	-70.5	1.1	-2.0	-4.1	-75.7	-13.0	-62.7	
134.76	45.4	V	-62.2	1.5	-1.4	-3.6	-67.2	-13.0	-54.2	
640.13	55.9	V	-45.6	3.0	6.8	4.7	-43.9	-13.0	-30.9	
848.68	57.2	V	-40.6	3.5	6.7	4.6	-39.6	-13.0	-26.6	

PCS Spurious & Harmonic (EIRP), Above 1GHz

04/12/05 High Frequency Measurement
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #: 05T3291-1
Company: High Tech Computer
EUT Descrip.: PDA Phone
EUT M/N: PA10A
Test Target: FCC Part 24
Mode Oper: TX, CDMA 1900MHz

Test Equipment:

EMCO Horn 1-18GHz: T73; S/N: 6717 @3m
Horn > 18GHz:
Limit: FCC 24
High Pass Filter
Hi Frequency Cables: (2 ft) (2 - 3 ft) (4 - 6 ft) (12 ft)
Pre-amplifier 1-26GHz:
Pre-amplifer 26-40GHz:

f GHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
Low Ch										
3.702	58.8	V	-42.4	2.4	10.1	8.0	-34.8	-13.0	-21.8	
5.554	60.0	V	-36.4	3.2	11.0	8.8	-28.6	-13.0	-15.6	
7.405	51.8	V	-42.2	3.7	11.7	9.5	-34.2	-13.0	-21.2	
9.256	48.5	V	-44.5	4.2	12.2	10.0	-36.5	-13.0	-23.5	
3.702	60.6	H	-40.5	2.4	10.1	8.0	-32.9	-13.0	-19.9	
5.554	63.5	H	-31.9	3.2	11.0	8.8	-24.1	-13.0	-11.1	
7.405	52.0	H	-41.2	3.7	11.7	9.5	-33.2	-13.0	-20.2	
9.256	51.6	H	-41.4	4.2	12.2	10.0	-33.4	-13.0	-20.4	
Mid Ch										
3.760	57.3	V	-43.8	2.5	10.2	8.0	-36.1	-13.0	-23.1	
5.640	60.4	V	-35.9	3.3	11.1	8.9	-28.1	-13.0	-15.1	
7.520	50.2	V	-43.5	3.7	11.6	9.5	-35.7	-13.0	-22.7	
9.400	49.5	V	-43.5	4.2	12.3	10.1	-35.4	-13.0	-22.4	
3.760	57.8	H	-43.2	2.5	10.2	8.0	-35.5	-13.0	-22.5	
5.640	65.0	H	-30.3	3.3	11.1	8.9	-22.5	-13.0	-9.5	
7.520	52.0	H	-40.9	3.7	11.6	9.5	-33.1	-13.0	-20.1	
9.400	52.3	H	-40.7	4.2	12.3	10.1	-32.6	-13.0	-19.6	
High Ch										
3.820	63.3	V	-37.7	2.5	10.2	8.0	-30.0	-13.0	-17.0	
5.729	61.5	V	-34.8	3.3	11.2	9.0	-26.9	-13.0	-13.9	
7.639	54.6	V	-38.9	3.8	11.5	9.4	-31.1	-13.0	-18.1	
9.548	52.0	V	-40.9	4.3	12.4	10.2	-32.8	-13.0	-19.8	
3.820	66.0	H	-34.9	2.5	10.2	8.0	-27.2	-13.0	-14.2	
5.729	67.3	H	-28.0	3.3	11.2	9.0	-20.1	-13.0	-7.1	
7.639	55.7	H	-37.0	3.8	11.5	9.4	-29.2	-13.0	-16.2	
9.548	52.5	H	-40.4	4.3	12.4	10.2	-32.3	-13.0	-19.3	

_ No other emissions were found up to 10th harmonic.

7.6. CO-LOCATED TRANSMITTER RADIATED EMISSIONS

Worst-case configurations are determined as:

Lower bandedge: WLAN in b mode at low channel and CDMA 800MHz at low channel;
Upper bandedge: WLAN in b mode at high channel and CDMA 800MHz at high channel;
Harmonics and spurious emissions: WLAN at mid channel and CDMA 800MHz at mid channel.

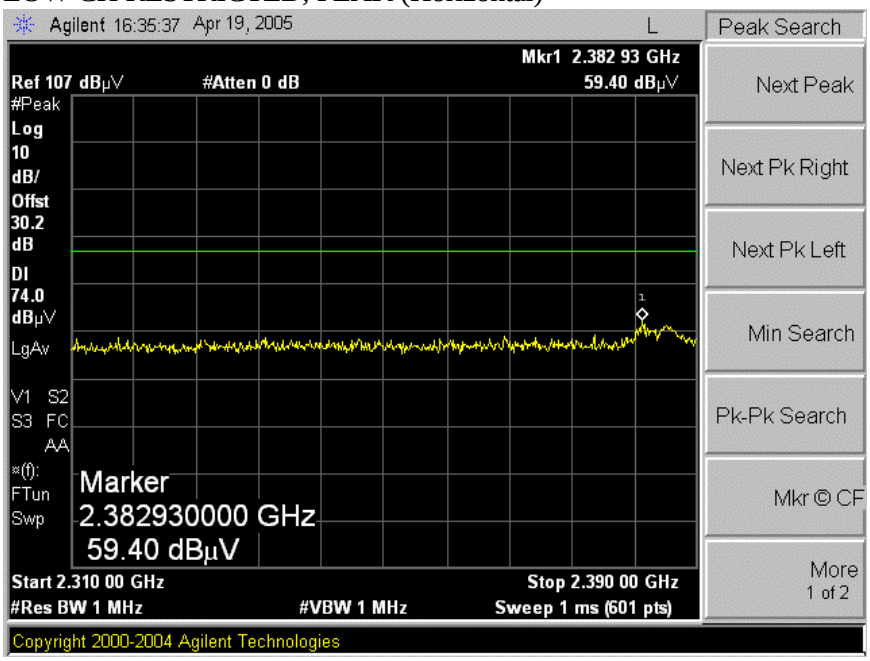
RESULTS

No non-compliance noted:

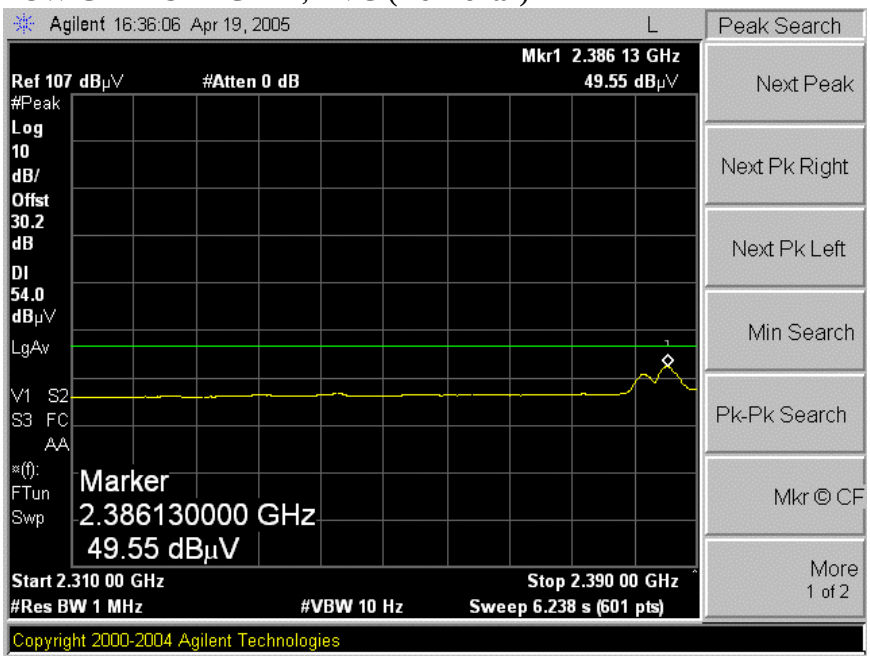
The dominant transmitter is the WLAN, and the non-dominant transmitter is CDMA 800MHz.

WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

LOW CH RESTRICTED, PEAK (Horizontal)

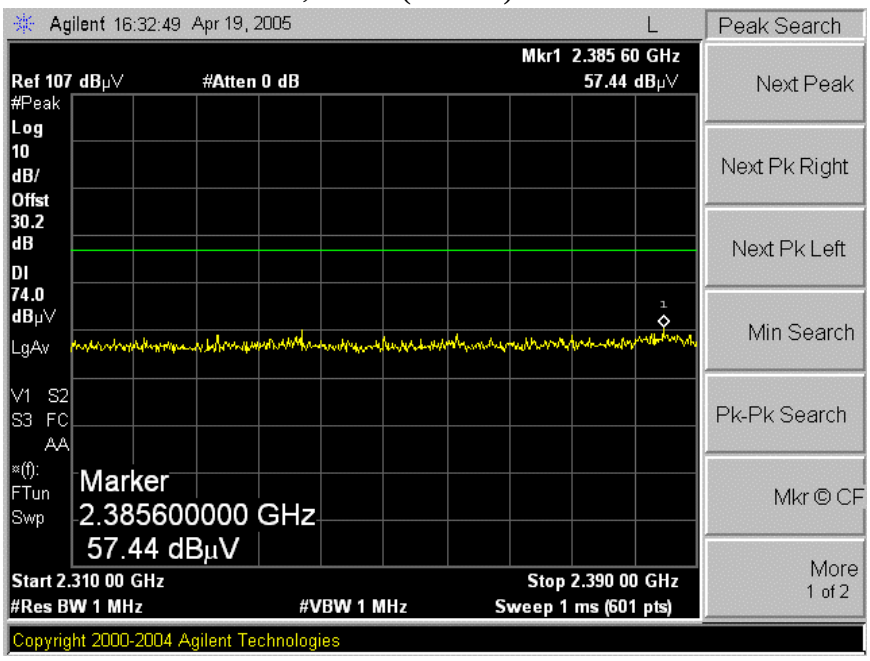


LOW CH RESTRICTED, AVG (Horizontal)

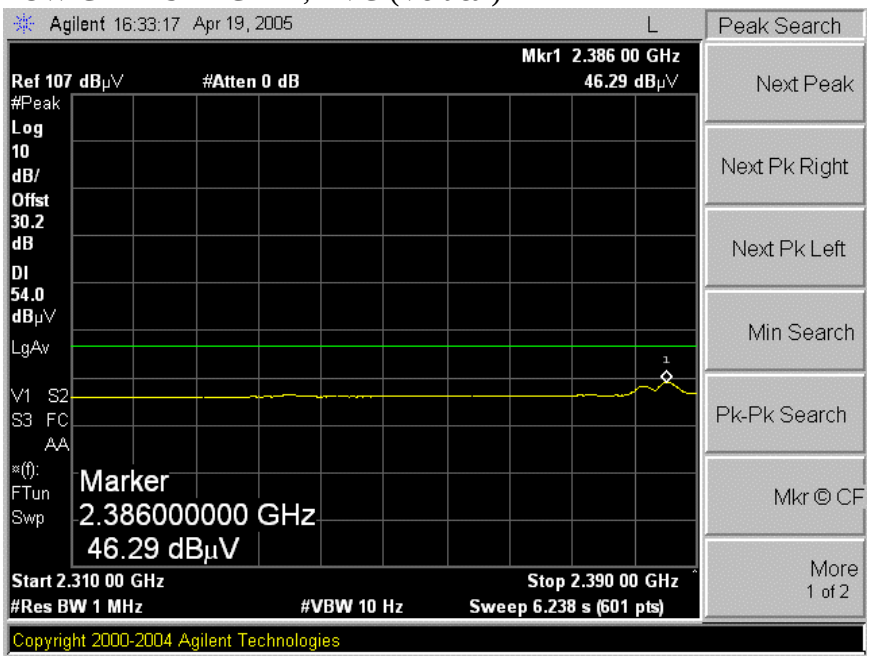


WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

LOW CH RESTRICTED, PEAK (Vertical)

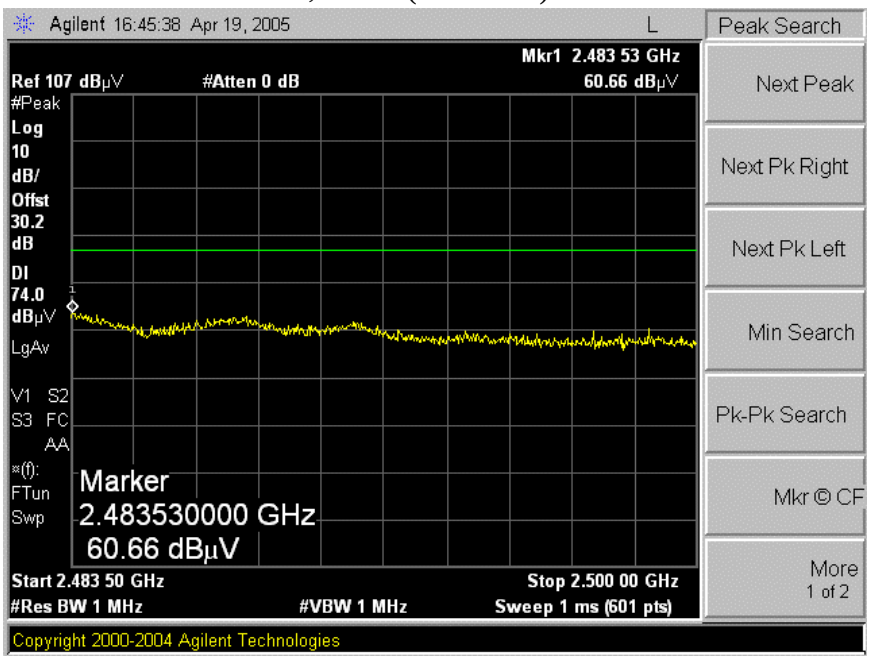


LOW CH RESTRICTED, AVG (Vertical)

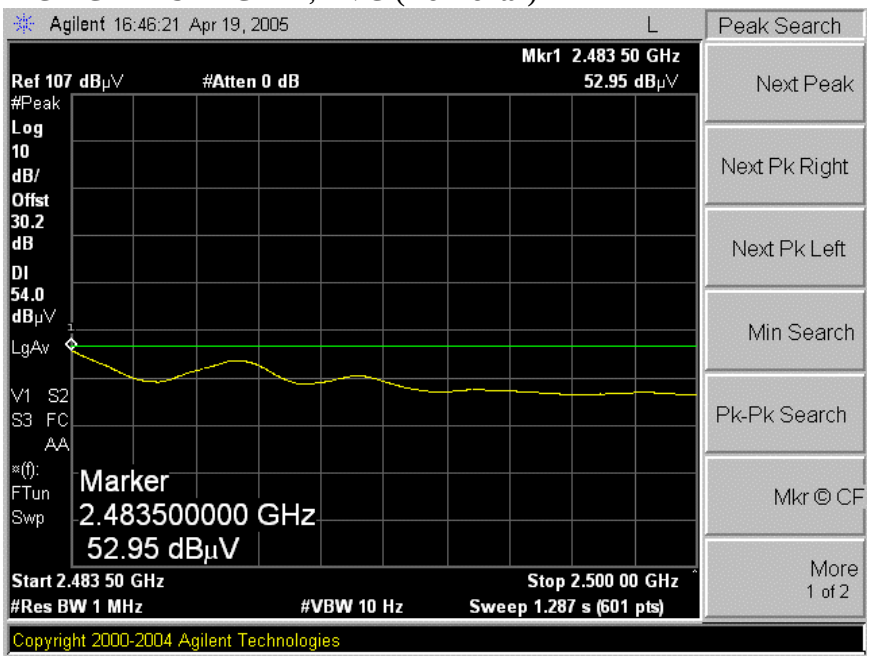


WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

HIGH CH RESTRICTED, PEAK (Horizontal)

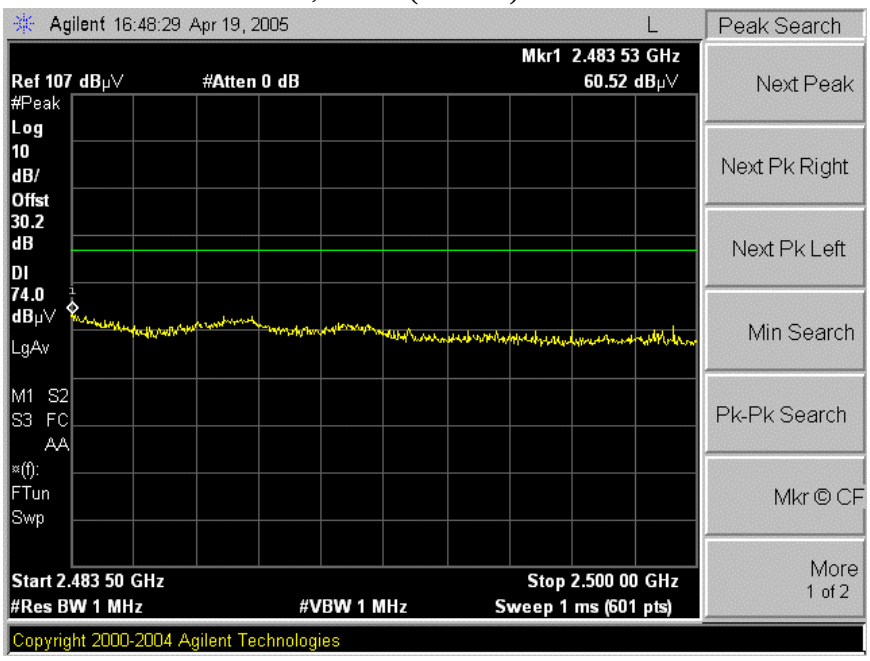


HIGH CH RESTRICTED, AVG (Horizontal)

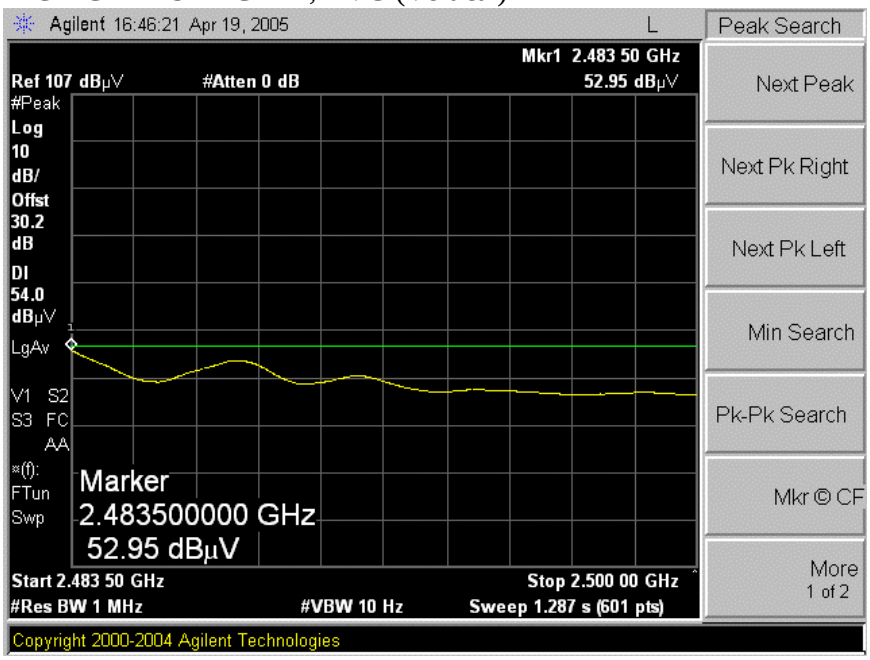


WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

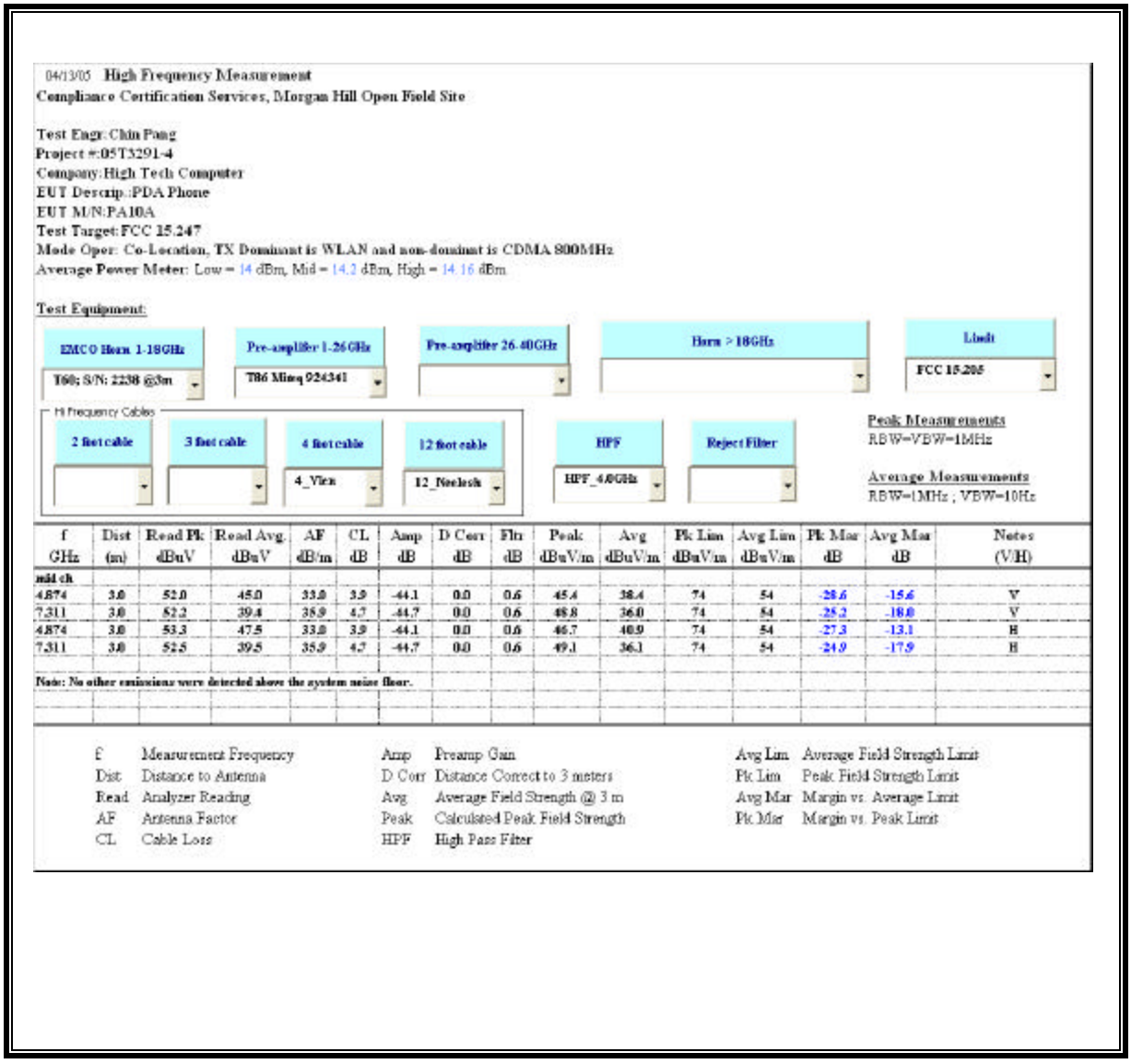
HIGH CH RESTRICTED, PEAK (Vertical)



HIGH CH RESTRICTED, AVG (Vertical)



WORST-CASE HARMONICS AND SPURIOUS EMISSIONS



04/13/05 High Frequency Measurement
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #: 05T3291-4
Company: High Tech Computer
EUT Descrip: PDA Phone
EUT M/N: PA10A
Test Target: FCC 15.247
Mode Oper: Co-Location, TX Dominant is WLAN and non-dominant is CDMA 800MHz
Average Power Meter: Low = 14 dBm, Mid = 14.2 dBm, High = 14.16 dBm

Test Equipment:

EMCO Horn 1-18GHz: T60; S/N: 2238 @3m
Pre-amplifier 1-26 GHz: T86 Miteq 924341
Pre-amplifier 26-40GHz:
Horn > 18GHz:
Limit: FCC 15.205

Hi Frequency Cables
2 foot cable:
3 foot cable:
4 foot cable: 4_Vien
12 foot cable: 12_Neelesh

HPF: HPF_4.0GHz
Reject Filter:

Peak Measurements
RBW=VBW=1MHz

Average Measurements
RBW=1MHz ; VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
mid ch															
4.874	3.0	52.0	45.0	33.0	3.9	-44.1	0.0	0.6	45.4	38.4	74	54	-28.6	-15.6	V
7.311	3.0	52.2	39.4	35.9	4.7	-44.7	0.0	0.6	48.8	36.0	74	54	-25.2	-18.0	V
4.874	3.0	53.3	47.5	33.0	3.9	-44.1	0.0	0.6	46.7	40.9	74	54	-27.3	-13.1	H
7.311	3.0	52.5	39.5	35.9	4.7	-44.7	0.0	0.6	49.1	36.1	74	54	-24.9	-17.9	H

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

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

RESULTS

Worst-case configurations are determined as:

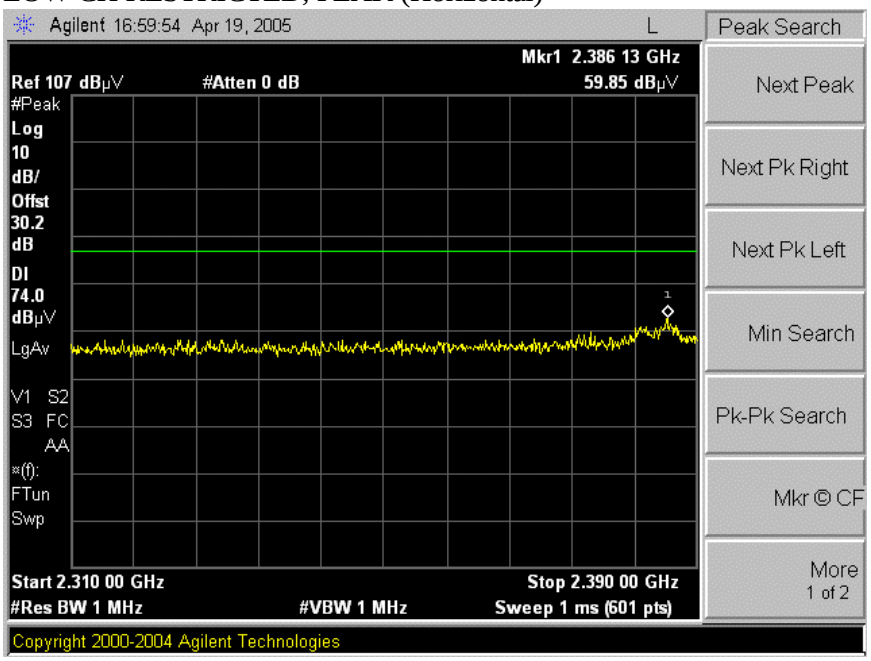
Lower bandedge: WLAN at low channel and CDMA 1900MHz at low channel;
Upper bandedge: WLANat high channel and CDMA 1900MHz at high channel;
Harmonics and spurious emissions: WLAN at mid channel and CDMA 1900MHz at mid channel.

No non-compliance noted:

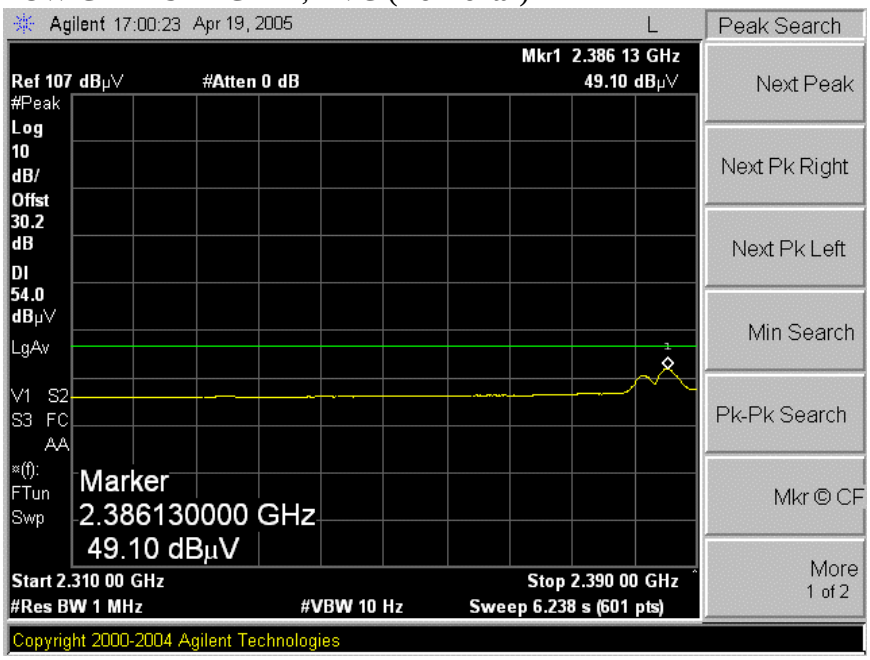
The dominant transmitter is the WLAN, and the non-dominant transmitter is CDMA 1900MHz.

WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

LOW CH RESTRICTED, PEAK (Horizontal)

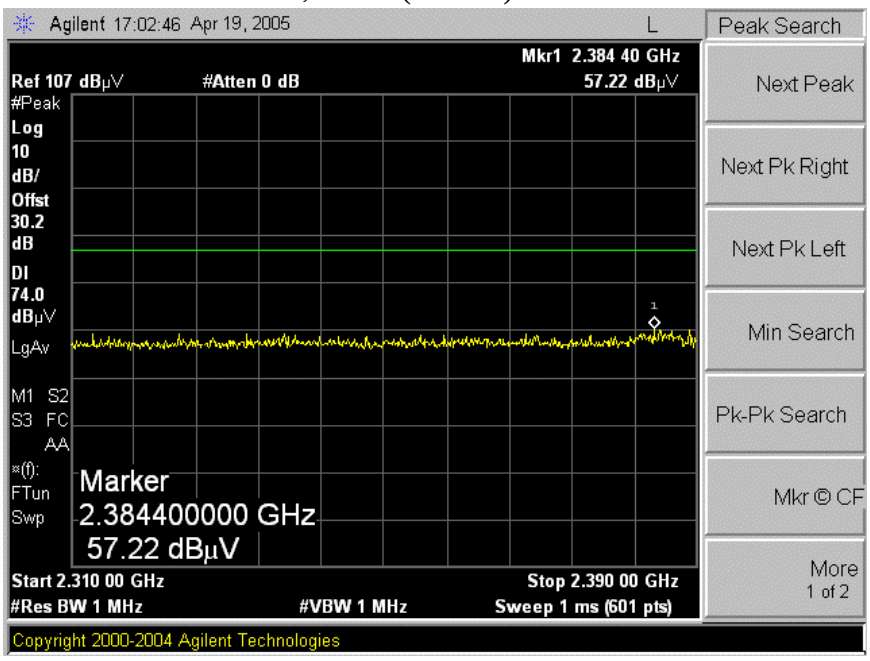


LOW CH RESTRICTED, AVG (Horizontal)

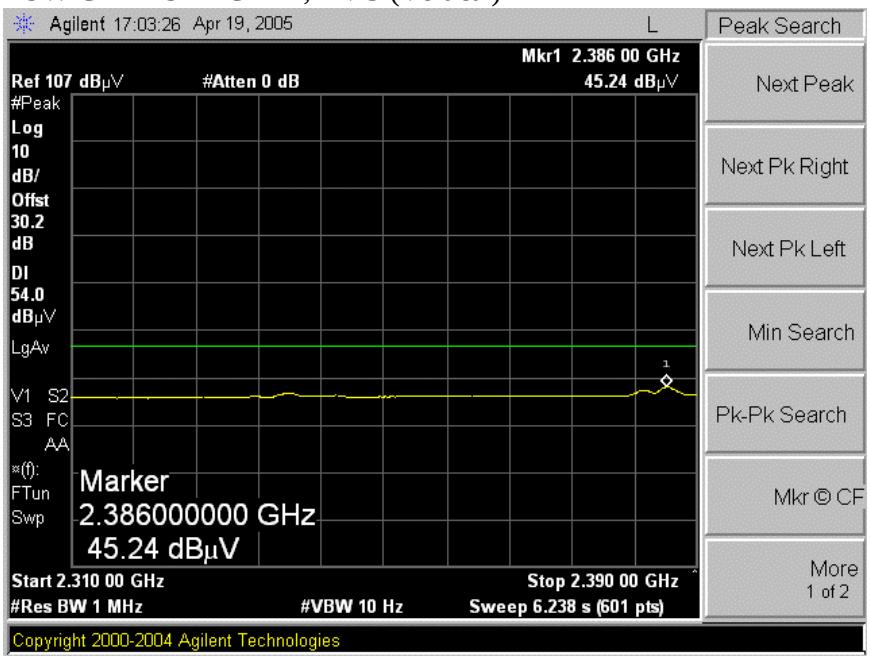


WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

LOW CH RESTRICTED, PEAK (Vertical)

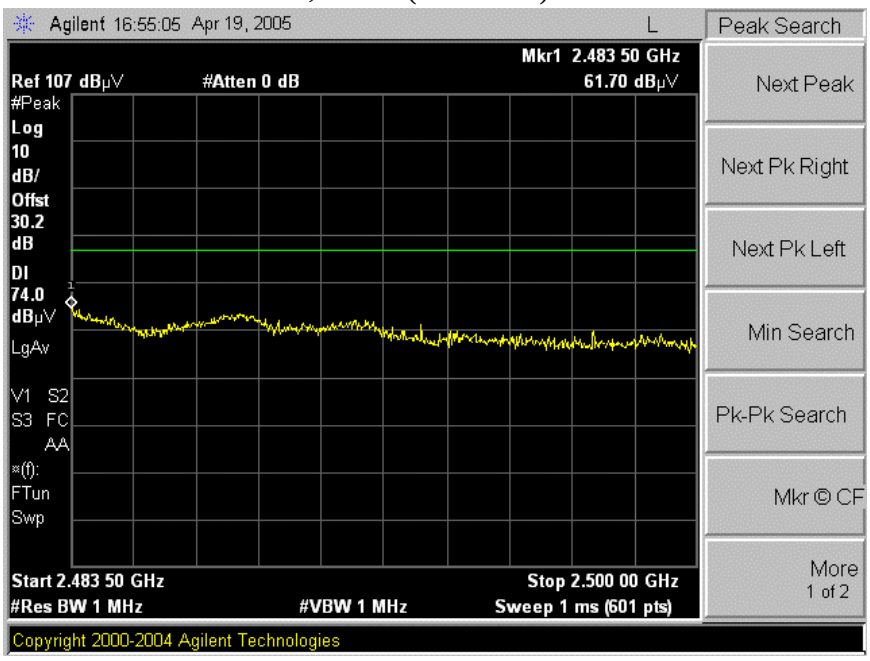


LOW CH RESTRICTED, AVG (Vertical)

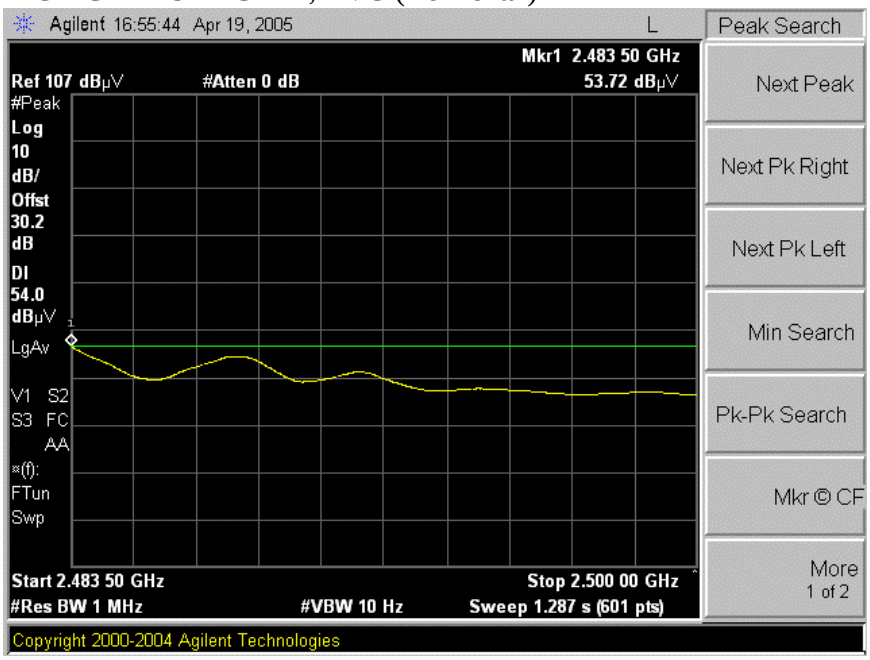


WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

HIGH CH RESTRICTED, PEAK (Horizontal)

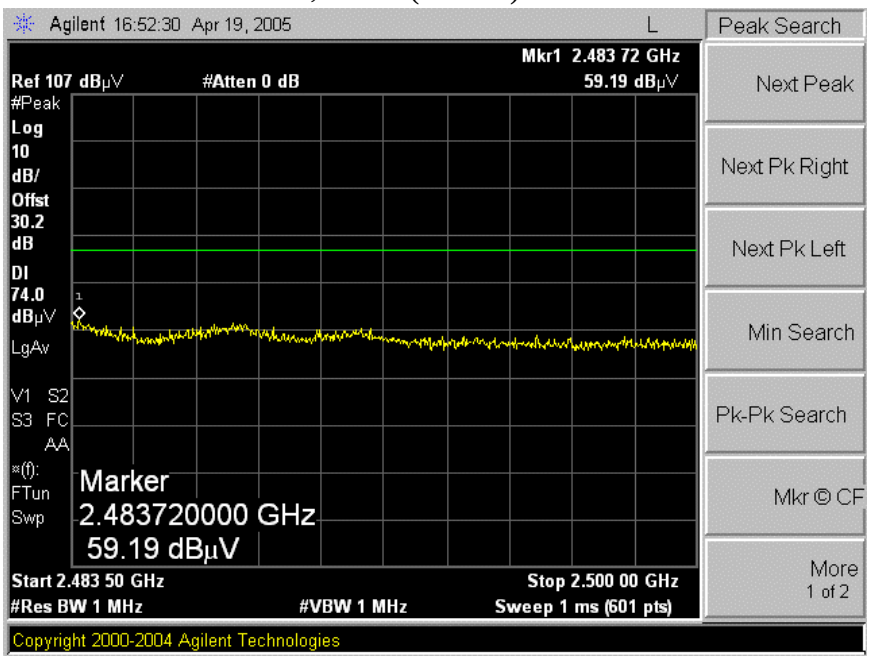


HIGH CH RESTRICTED, AVG (Horizontal)

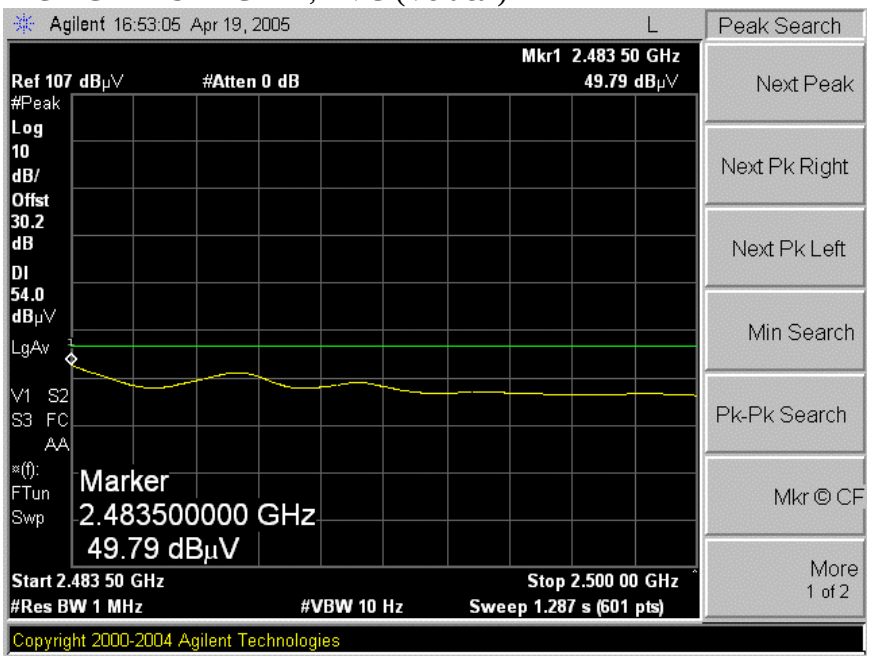


WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

HIGH CH RESTRICTED, PEAK (Vertical)



HIGH CH RESTRICTED, AVG (Vertical)



WORST-CASE HARMONICS AND SPURIOUS EMISSIONS

04/19/05 High Frequency Measurement
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #:05T3291-4
Company:High Tech Computer
EUT Descrip.:PDA Phone
EUT M/N:PA10A
Test Target:FCC 15.247
Mode Oper: Co-Location. TX Dominant is WLAN and non-dominant is CDMA 1900MHz
Average Power Meter: Low = 14 dBm, Mid = 14.2 dBm, High = 14.16 dBm

Test Equipment:

EMCO Horn 1-18GHz: T60; S/N: 2238 @3m
Pre-amplifier 1-26GHz: T86 Miteq 924341
Pre-amplifier 26-40GHz:
Horn > 18GHz:
Limit: FCC 15.205
Hi Frequency Cables
2 foot cable:
3 foot cable:
4 foot cable: 4_Vien
12 foot cable: 12_Neoleah
HPF: HPF_4.0GHz
Reject Filter:

Peak Measurements
RBW=VBW=1MHz

Average Measurements
RBW=1MHz ; VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
mid ch															
4.874	3.0	52.1	45.0	33.0	3.9	-44.1	0.0	0.6	45.5	38.4	74	54	-28.5	-15.6	V
7.311	3.0	51.0	38.6	35.9	4.7	-44.7	0.0	0.6	47.6	35.2	74	54	-26.4	-18.8	V
4.874	3.0	54.0	47.2	33.0	3.9	-44.1	0.0	0.6	47.4	40.6	74	54	-26.6	-13.4	H
7.311	3.0	51.4	39.0	35.9	4.7	-44.7	0.0	0.6	48.0	35.6	74	54	-26.0	-18.4	H

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

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

RESULTS

Worst-case configurations are determined as:

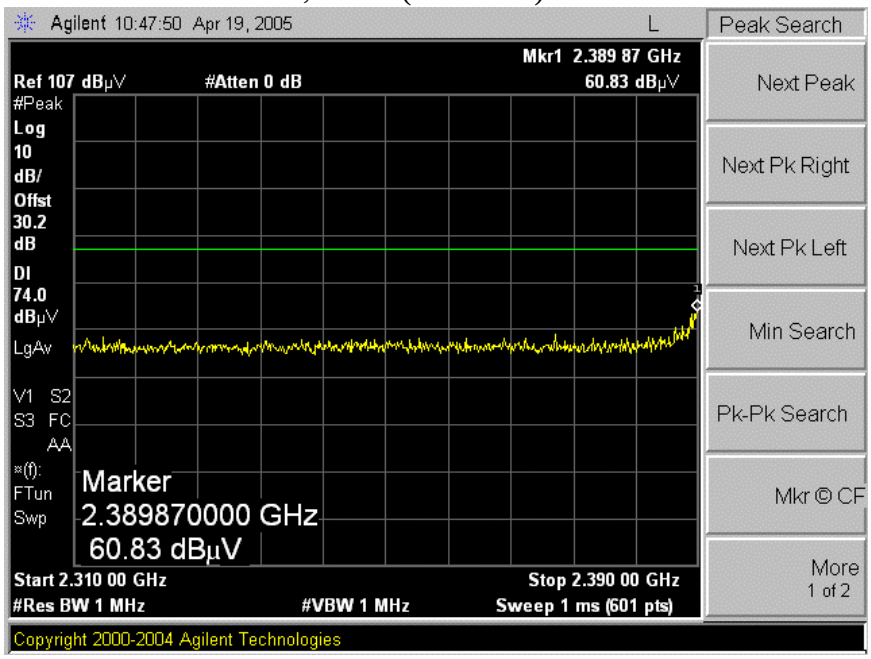
Lower bandedge: BT at low channel and CDMA 800MHz at low channel;
Upper bandedge: BT at high channel and CDMA 800MHz at high channel;
Harmonics and spurious emissions: BT at mid channel and CDMA 800MHz at mid channel.

No non-compliance noted:

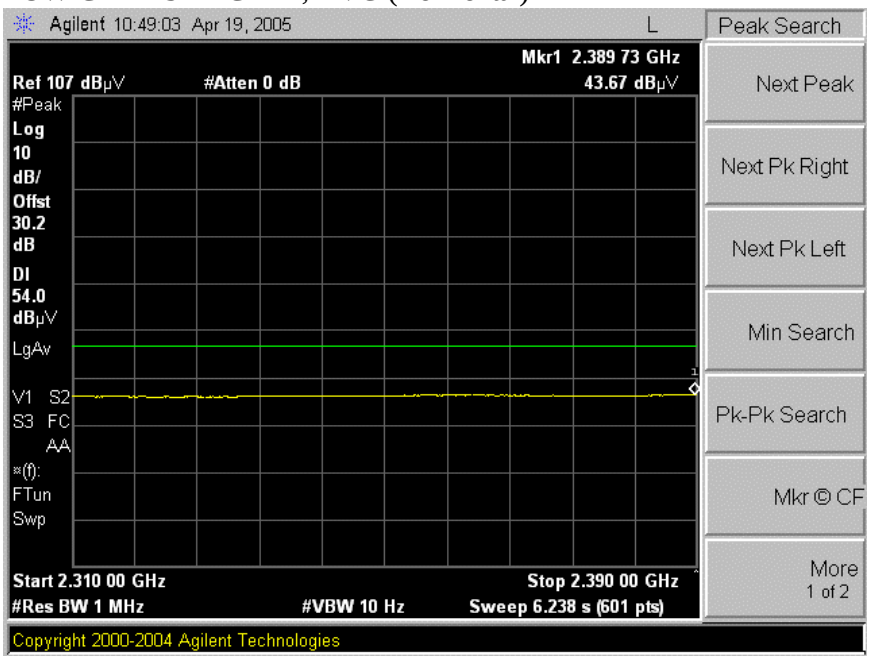
The dominant transmitter is the BT, and the non-dominant transmitter is CDMA 800MHz.

WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

LOW CH RESTRICTED, PEAK (Horizontal)

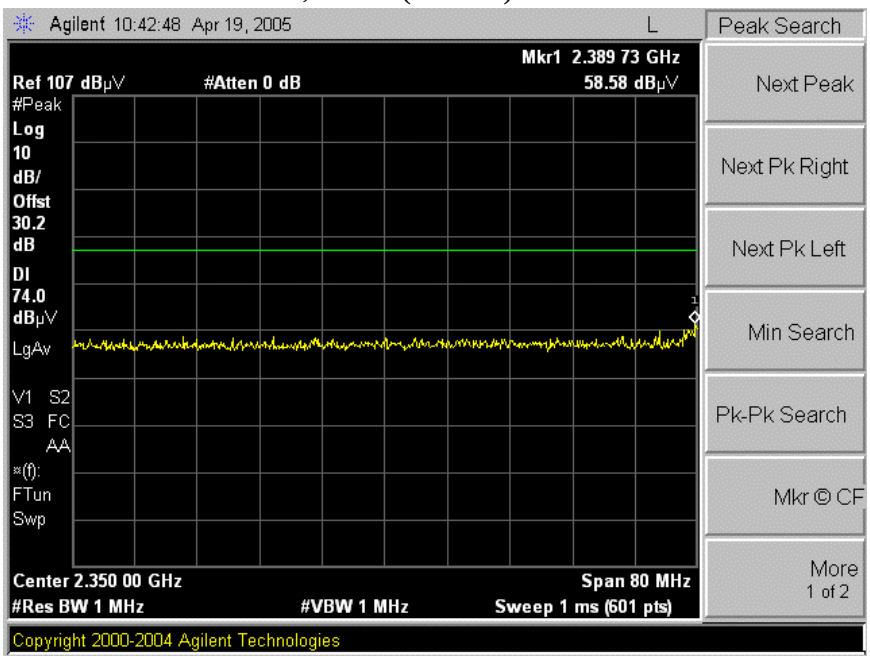


LOW CH RESTRICTED, AVG (Horizontal)

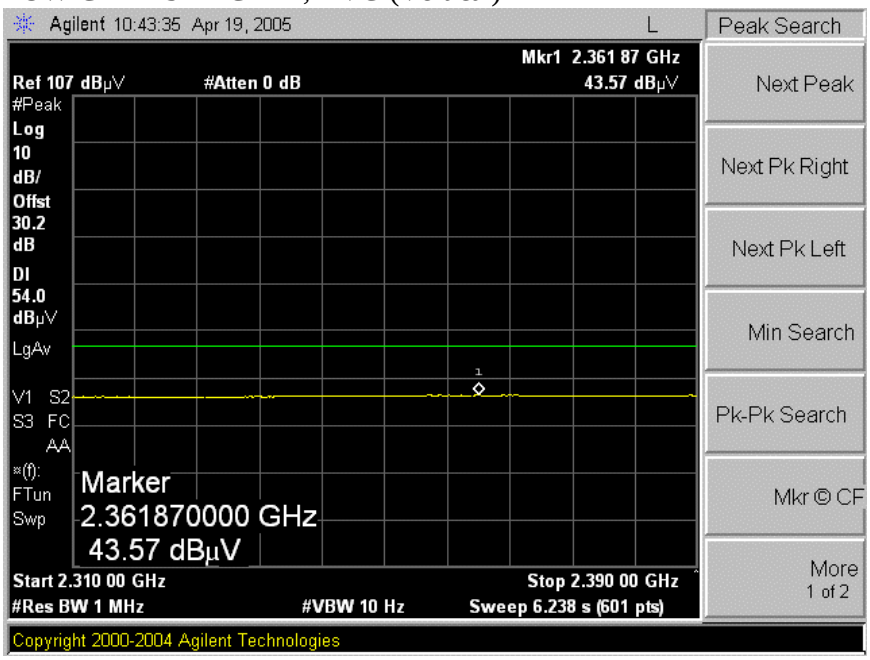


WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

LOW CH RESTRICTED, PEAK (Vertical)

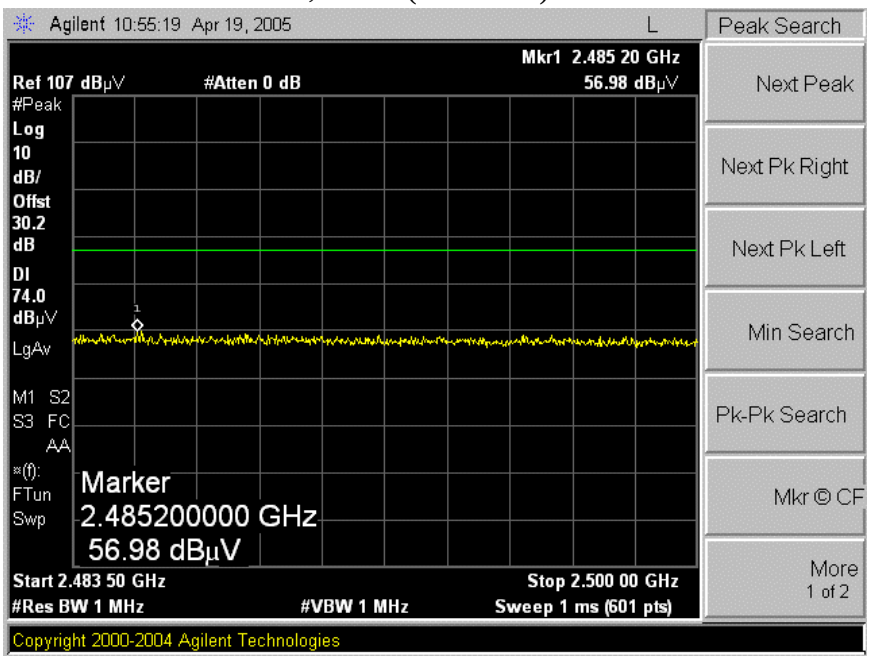


LOW CH RESTRICTED, AVG (Vertical)

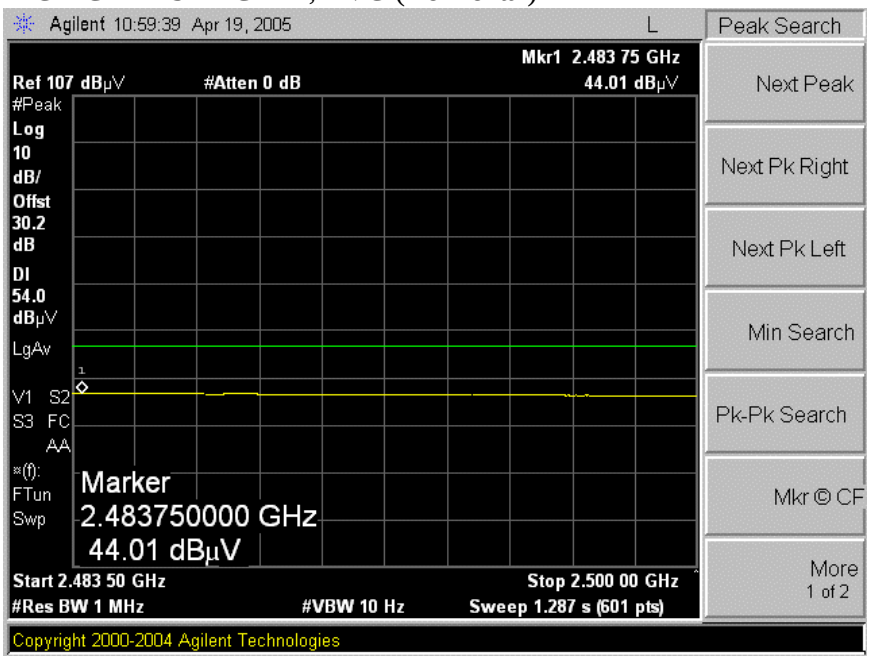


WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

HIGH CH RESTRICTED, PEAK (Horizontal)

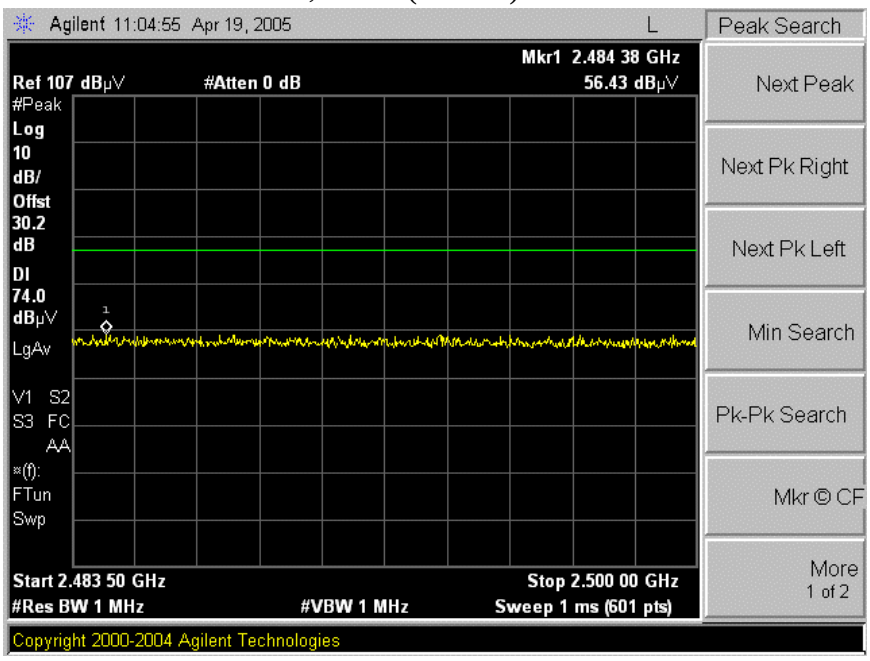


HIGH CH RESTRICTED, AVG (Horizontal)

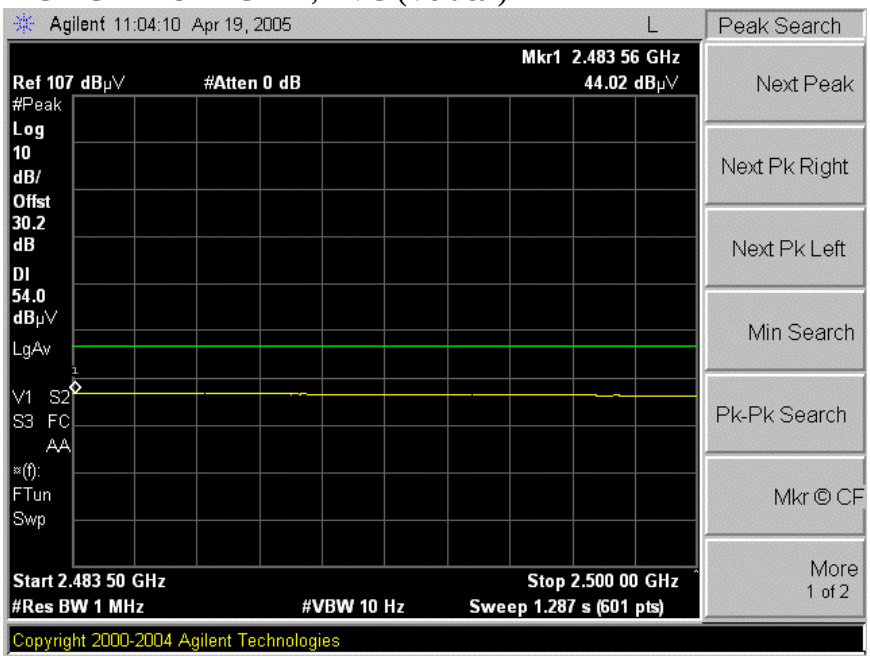


WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

HIGH CH RESTRICTED, PEAK (Vertical)



HIGH CH RESTRICTED, AVG (Vertical)



WORST-CASE HARMONICS AND SPURIOUS EMISSIONS

04/19/05 **High Frequency Measurement**
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #:05T3291-4
Company: High Tech Computer
EUT Descrip.:PDA Phone
EUT M/N:PA10A
Test Target:FCC 15.247
Mode Oper: Co-Location, TX Dominant is BT and non-dominant is CDMA 800MHz
Average Power Meter: Low = 0.5dBm, Mid = 0.3dBm, High = 0 dBm

Test Equipment:

EMCO Horn 1-18GHz	Pre-amplifier 1-26 GHz	Pre-amplifier 26-40GHz	Horn > 18GHz	Limit
T73; S/N: 6717 @3m	T86 Miteq 924341			FCC 15.205

Hi Frequency Cables: 2 foot cable; 3 foot cable; 4 foot cable: 4_View; 12 foot cable: 12_Neelesh

HPF: HPF_4.0GHz; Reject Filter:

Peak Measurements
RBW=VBW=1MHz

Average Measurements
RBW=1MHz ; VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
mid ch															
4.882	3.0	52.3	39.8	32.9	3.9	-44.1	0.0	0.6	45.7	33.2	74	54	-28.3	-20.8	V
7.323	3.0	52.0	39.7	35.9	4.7	-44.7	0.0	0.6	48.5	36.2	74	54	-25.5	-17.8	V
4.882	3.0	52.5	40.0	32.9	3.9	-44.1	0.0	0.6	45.9	33.4	74	54	-28.1	-20.6	H
7.323	3.0	52.4	39.9	35.9	4.7	-44.7	0.0	0.6	48.9	36.4	74	54	-25.1	-17.6	H

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

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

RESULTS

Worst-case configurations are determined as:

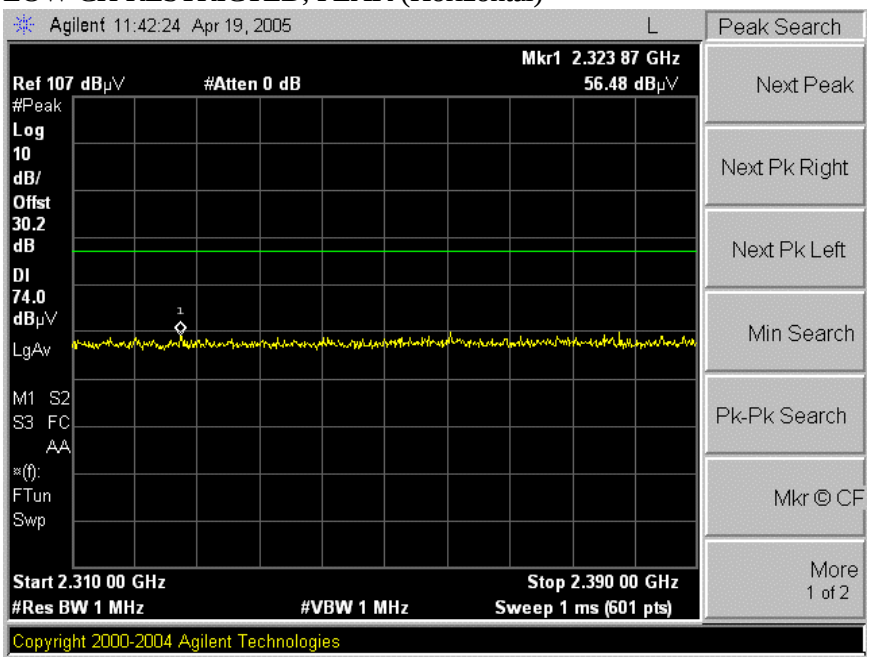
Lower bandedge: BT at low channel and CDMA 1900MHz at low channel;
Upper bandedge: BT at high channel and CDMA 1900MHz at high channel;
Harmonics and spurious emissions: BT at mid channel and CDMA 1900MHz at mid channel.

No non-compliance noted:

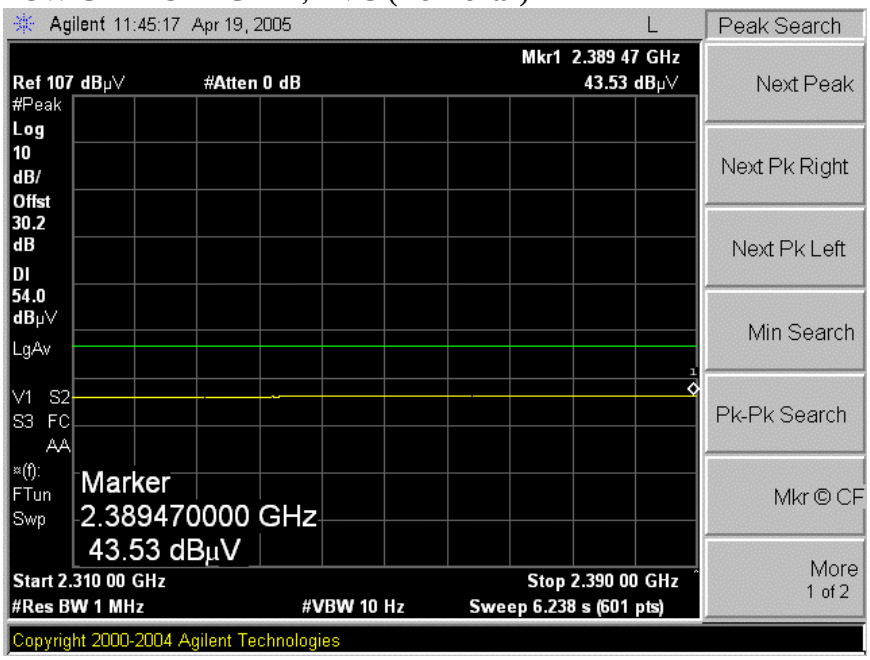
The dominant transmitter is the BT, and the non-dominant transmitter is CDMA 1900MHz.

WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

LOW CH RESTRICTED, PEAK (Horizontal)

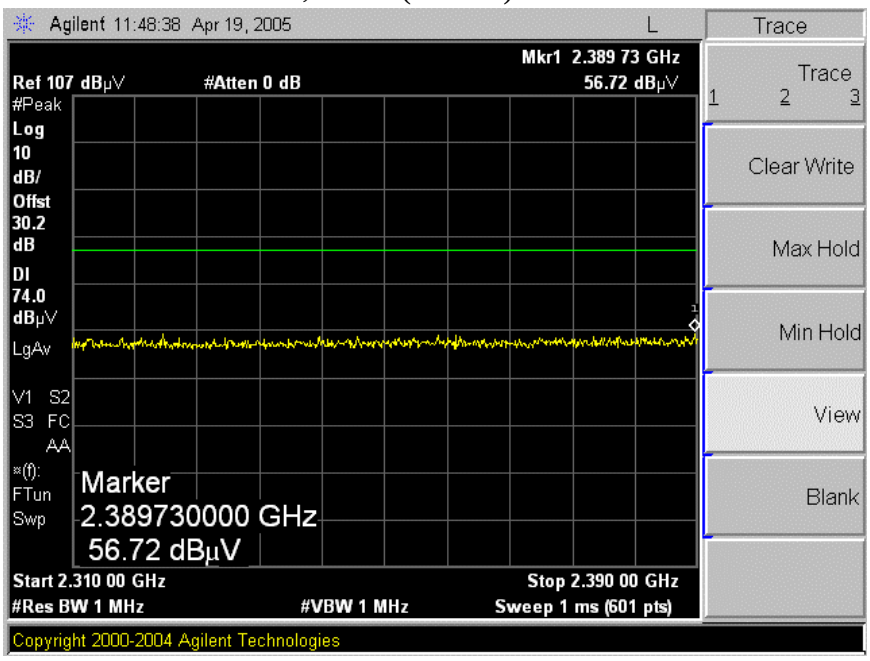


LOW CH RESTRICTED, AVG (Horizontal)

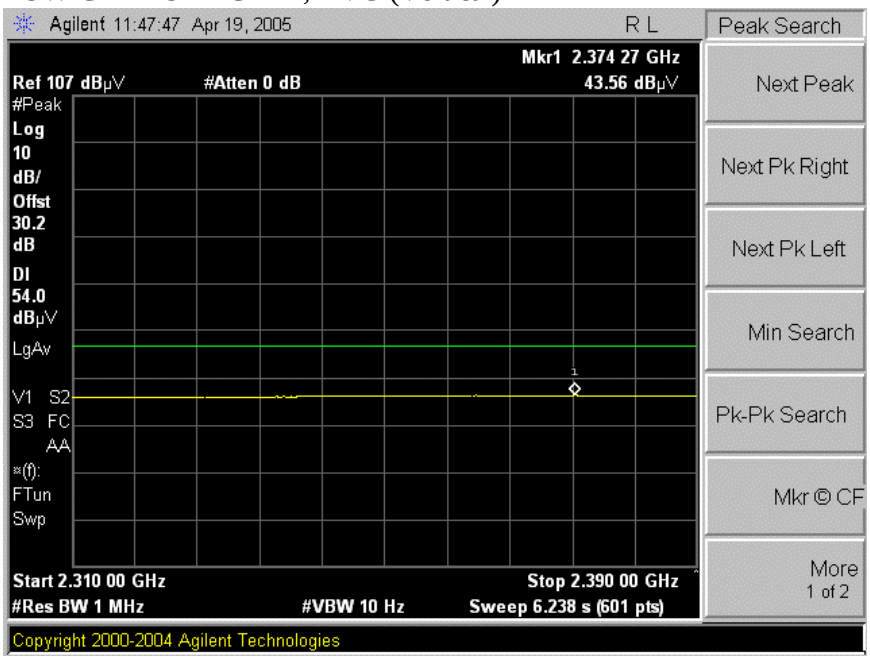


WORST-CASE RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

LOW CH RESTRICTED, PEAK (Vertical)

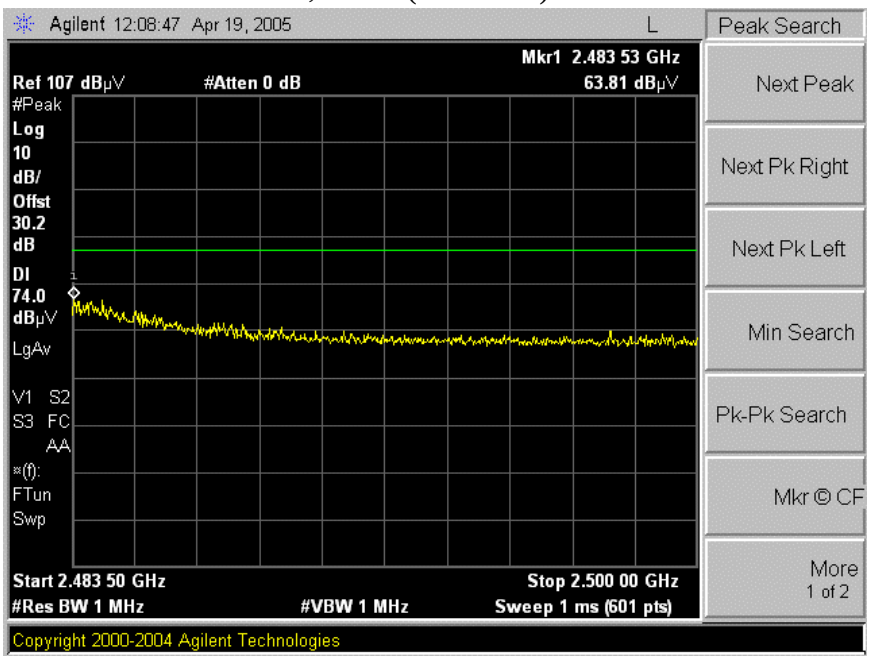


LOW CH RESTRICTED, AVG (Vertical)

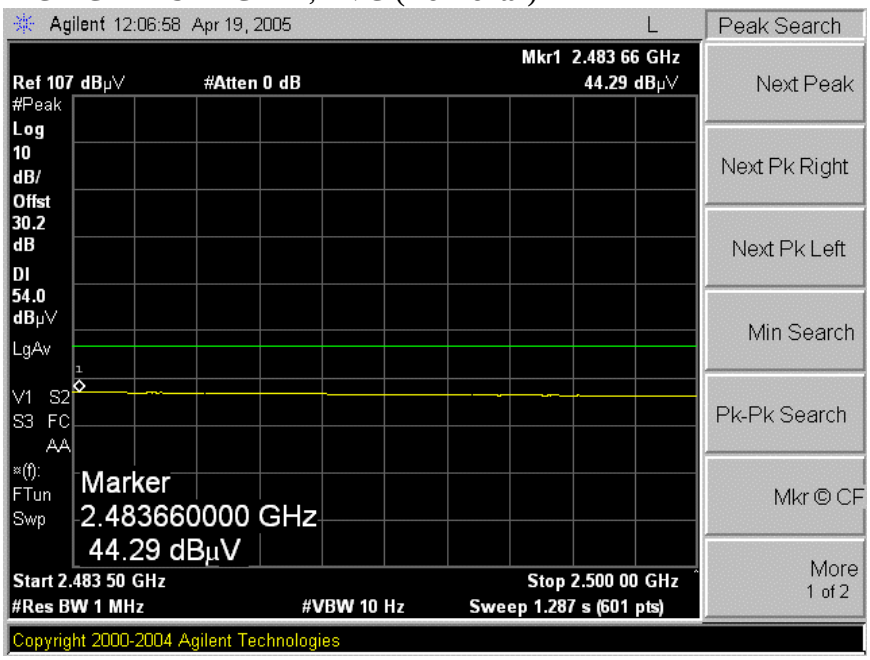


WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)

HIGH CH RESTRICTED, PEAK (Horizontal)

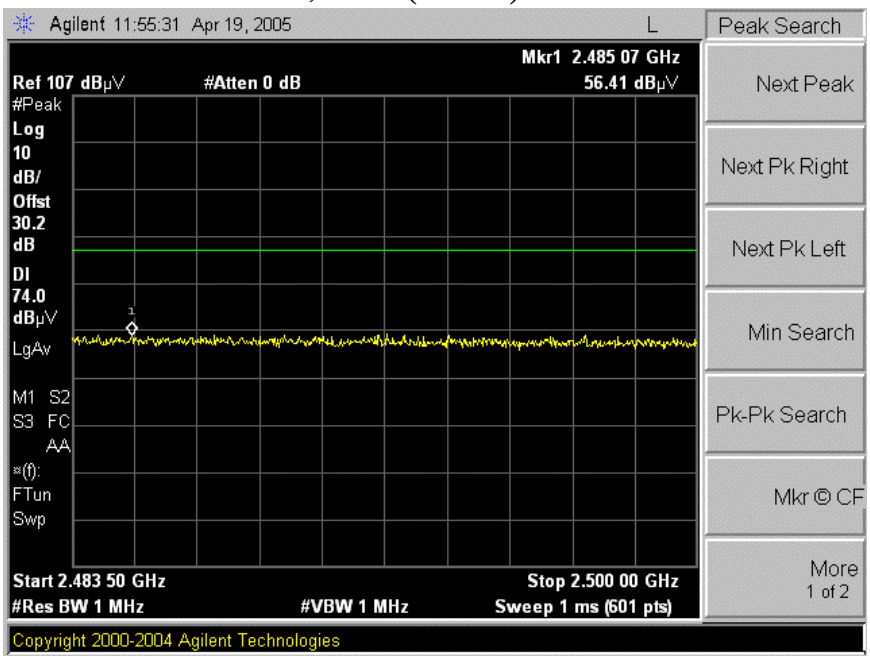


HIGH CH RESTRICTED, AVG (Horizontal)

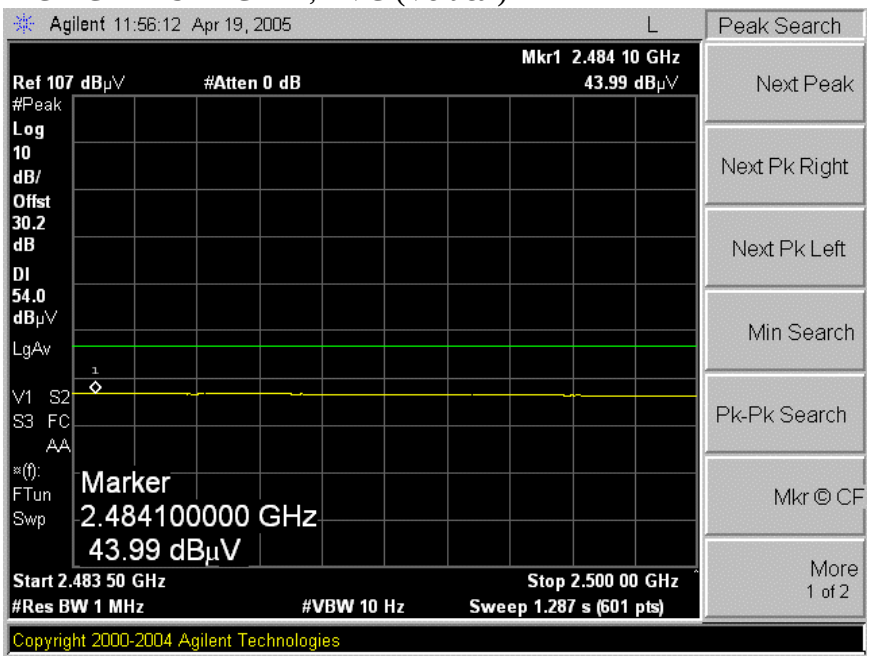


WORST-CASE RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)

HIGH CH RESTRICTED, PEAK (Vertical)



HIGH CH RESTRICTED, AVG (Vertical)



WORST-CASE HARMONICS AND SPURIOUS EMISSIONS

04/19/05 High Frequency Measurement
Compliance Certification Services, Morgan Hill Open Field Site

Test Engr: Chin Pang
Project #: 05T3291-4
Company: High Tech Computer
EUT Descrip.: PDA Phone
EUT M/N: PA10A
Test Target: FCC 15.247
Mode Oper: Co-Location. TX Dominant is BT and non-dominat is CDMA 1900MHz
Average Power Meter: Low = 0.5dBm, Mid = 0.3dBm, High = 0dBm

Test Equipment:

EMCO Horn 1-18GHz: T73; S/N: 6717 @3m
Pre-amplifier 1-26GHz: T86 Miteq 924341
Pre-amplifier 26-40GHz:
Horn > 18GHz:
Limit: FCC 15.205

Hi Frequency Cables
2 foot cable:
3 foot cable:
4 foot cable: 4_Vien
12 foot cable: 12_Neelesh

HPF: HPF_4.0GHz
Reject Filter:

Peak Measurements
RBW=VBW=1MHz

Average Measurements
RBW=1MHz ; VBW=10Hz

f GHz	Dist (m)	Read Pk dBuV	Read Avg. dBuV	AF dB/m	CL dB	Amp dB	D Corr dB	Fltr dB	Peak dBuV/m	Avg dBuV/m	Pk Lim dBuV/m	Avg Lim dBuV/m	Pk Mar dB	Avg Mar dB	Notes (V/H)
mid ch															
4882	3.0	52.3	39.8	32.9	3.9	-44.1	0.0	0.6	45.7	33.2	74	54	-28.3	-20.8	V
7323	3.0	52.6	40.0	35.9	4.7	-44.7	0.0	0.6	49.1	36.5	74	54	-24.9	-17.5	V
4882	3.0	52.5	40.0	32.9	3.9	-44.1	0.0	0.6	45.9	33.4	74	54	-28.1	-20.6	H
7323	3.0	53.8	40.4	35.9	4.7	-44.7	0.0	0.6	50.3	36.9	74	54	-23.7	-17.1	H
Note: No other emissions were detected above the system noise floor															

f	Measurement Frequency	Amp	Preamp Gain	Avg Lim	Average Field Strength Limit
Dist	Distance to Antenna	D Corr	Distance Correct to 3 meters	Pk Lim	Peak Field Strength Limit
Read	Analyzer Reading	Avg	Average Field Strength @ 3 m	Avg Mar	Margin vs. Average Limit
AF	Antenna Factor	Peak	Calculated Peak Field Strength	Pk Mar	Margin vs. Peak Limit
CL	Cable Loss	HPF	High Pass Filter		

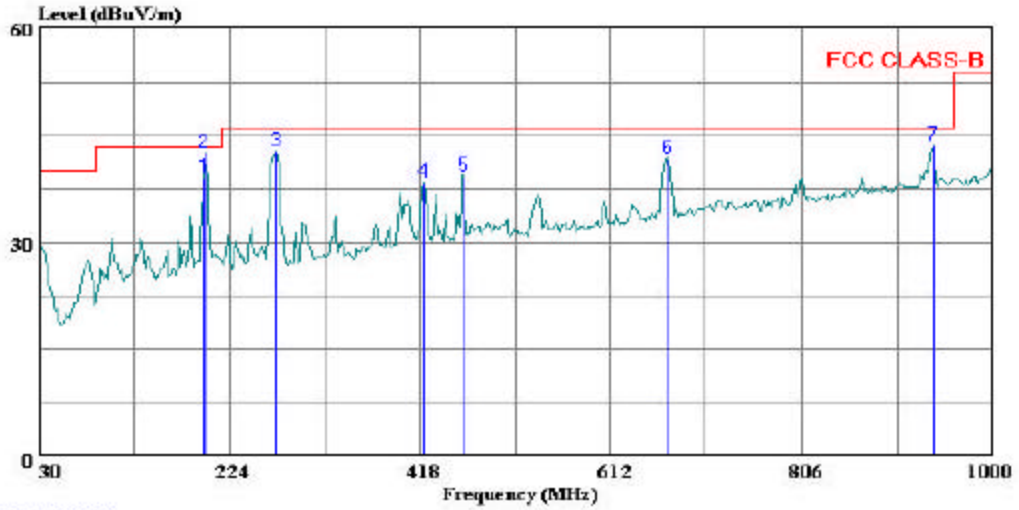
7.7. DIGITAL RADIATED EMISSIONS

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

HORIZONTAL PLOT

561F Monterey Road
Morgan Hill, CA 95037
Tel: (408) 463-0888
Fax: (408) 463-0885

Data#: 14 File#: Htc.emi Date: 04-22-2005 Time: 11:06:33



(Audix ATC)
Trace: 11 Ref Trace:

Condition: FCC CLASS-B HORIZONTAL
Test Operator: : Chin Pang
Project #: : 05T3291-1
Company: : High Tech Computer
EUT: : PDA Phone with Cradle
Model No : PA10A
Configuration: : EUT/Laptop/Printer/Modem/Mouse
Target of Test: : FCC Class B
Mode of Operation: Link to Laptop

HORIZONTAL DATA

Page: 1

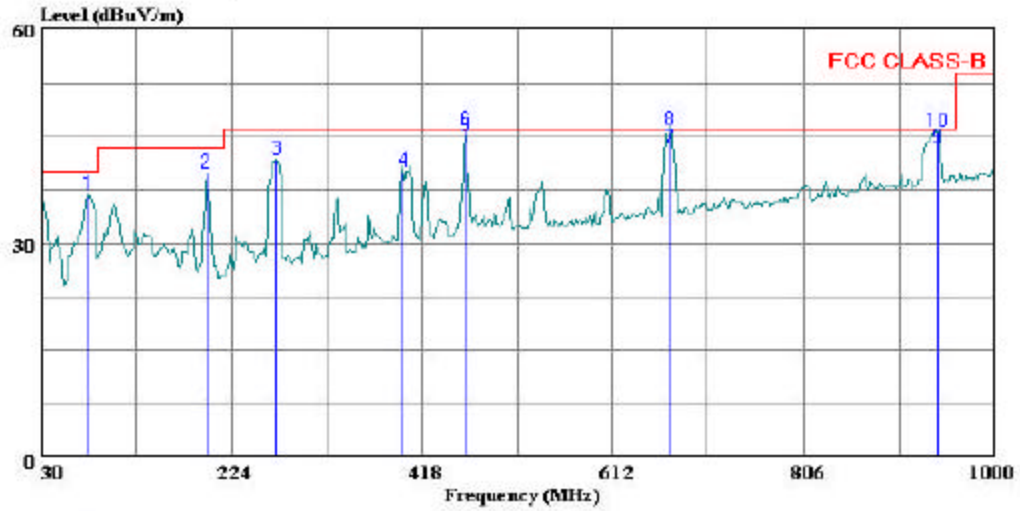
	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	198.170	24.87	14.24	39.11	43.50	-4.39	QP
2	198.780	28.17	14.37	42.54	43.50	-0.96	Peak
3	271.530	28.14	14.65	42.79	46.00	-3.21	Peak
4	421.880	19.80	18.58	38.38	46.00	-7.62	Peak
5	463.590	19.84	19.50	39.34	46.00	-6.66	Peak
6	670.200	19.14	22.66	41.80	46.00	-4.20	Peak
7	938.890	17.14	26.43	43.57	46.00	-2.43	Peak

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

VERTICAL PLOT

561F Monterey Road
Morgan Hill, CA 95037
Tel: (408) 463-0888
Fax: (408) 463-0885

Data#: 10 File#: Htc.emi Date: 04-22-2005 Time: 10:48:00



(Audix ATC)
Trace: 7 Ref Trace:

Condition: FCC CLASS-B VERTICAL
Test Operator: : Chin Pang
Project #: : 05T3291-1
Company: : High Tech Computer
EUT: : PDA Phone with Cradle
Model No : PA10A
Configuration: : EUT/Laptop/Printer/Modem/Mouse
Target of Test: : FCC Class B
Mode of Operation: Link to Laptop

VERTICAL DATA

Page: 1

	Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark
	MHz	dBuV	dB	dBuV/m	dBuV/m	dB	
1	78.500	27.87	8.95	36.83	40.00	-3.17	Peak
2	198.780	25.41	14.37	39.78	43.50	-3.72	Peak
3	269.590	27.04	14.61	41.65	46.00	-4.35	Peak
4	398.600	22.16	18.01	40.17	46.00	-5.83	Peak
5	463.590	25.60	19.49	45.09	46.00	-0.91	QP
6	463.590	26.31	19.50	45.81	46.00	-0.19	Peak
7	671.170	20.71	22.66	43.37	46.00	-2.63	QP
8	671.170	23.29	22.67	45.95	46.00	-0.05	Peak
9	941.800	17.05	26.43	43.48	46.00	-2.52	QP
10	941.800	19.16	26.43	45.60	46.00	-0.40	Peak

7.8. POWERLINE CONDUCTED EMISSIONS

LIMIT

§15.107 (a) (a) Except for Class A digital devices, for equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 µ H/50 ohms line impedance stabilization network (LISN). Compliance with the provisions of this paragraph shall be based on the measurement of the radio frequency voltage between each power line and ground at the power terminal. The lower limit applies at the band edges.

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.

TEST PROCEDURE

ANSI C63.4

RESULTS

No non-compliance noted:

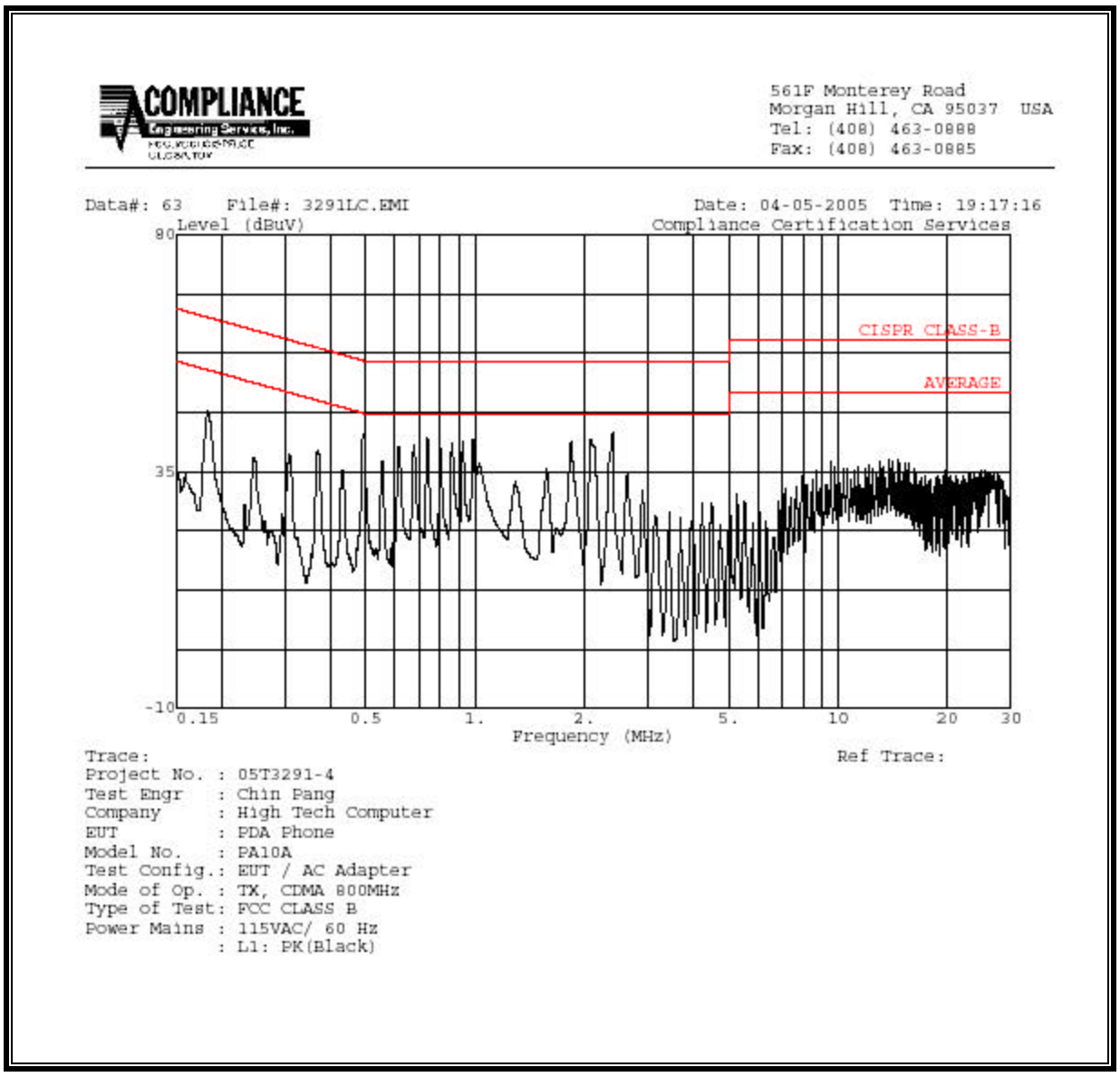
7.8.1. WORST-CASE LINE CONDUCTED EMISSIONS (TX MODE)

EUT AND AC ADAPTER:

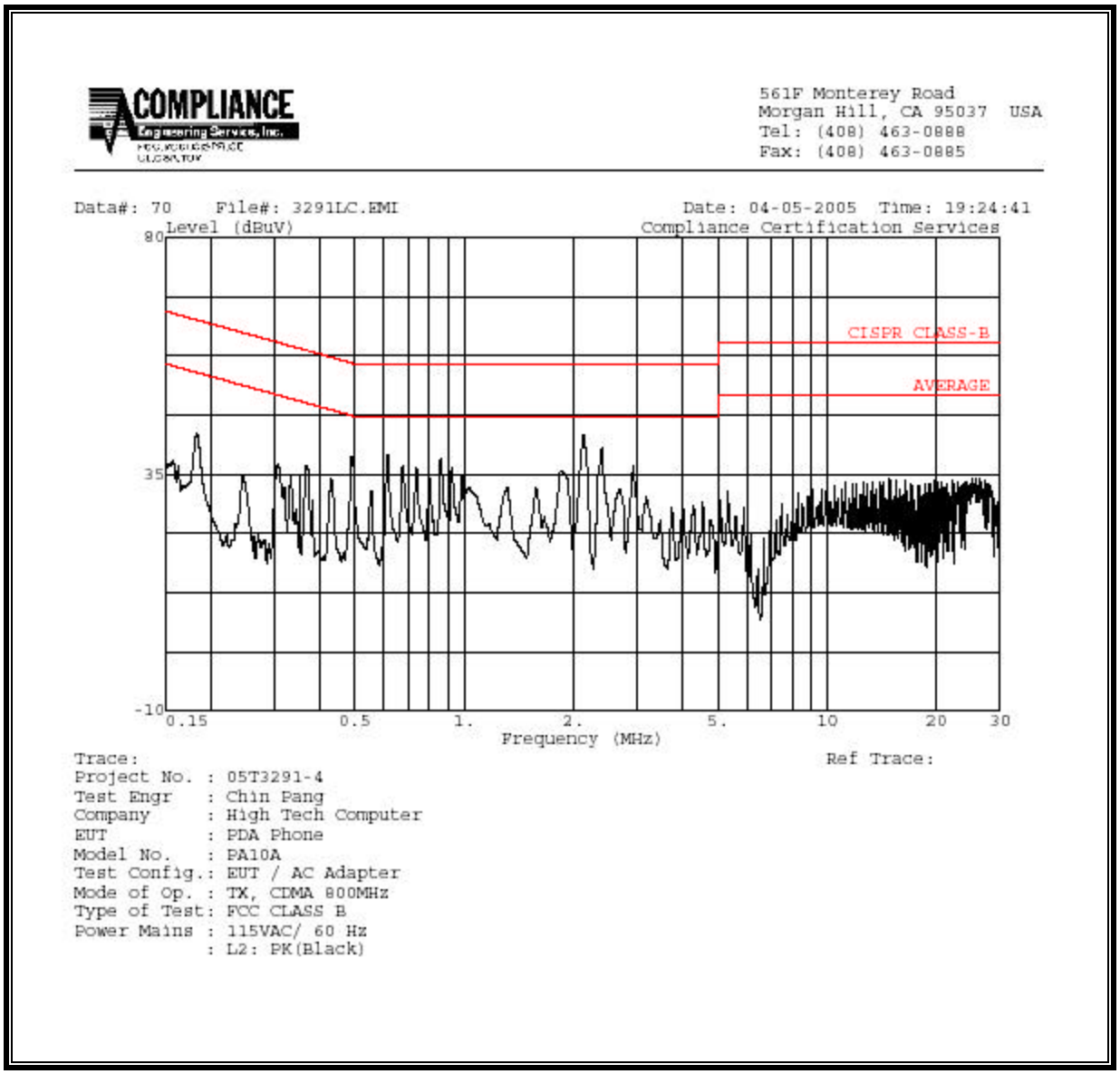
6 WORST EMISSIONS:

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
0.18	46.44	--	--	0.00	64.35	54.35	-17.91	-7.91	L1
0.49	42.06	--	--	0.00	56.15	46.15	-14.09	-4.09	L1
2.40	42.56	--	--	0.00	56.00	46.00	-13.44	-3.44	L1
0.18	42.64	--	--	0.00	64.35	54.35	-21.71	-11.71	L2
0.49	38.34	--	--	0.00	56.18	46.18	-17.84	-7.84	L2
2.13	42.58	--	--	0.00	56.00	46.00	-13.42	-3.42	L2
6 Worst Data									

LINE 1 RESULTS



LINE 2 RESULTS



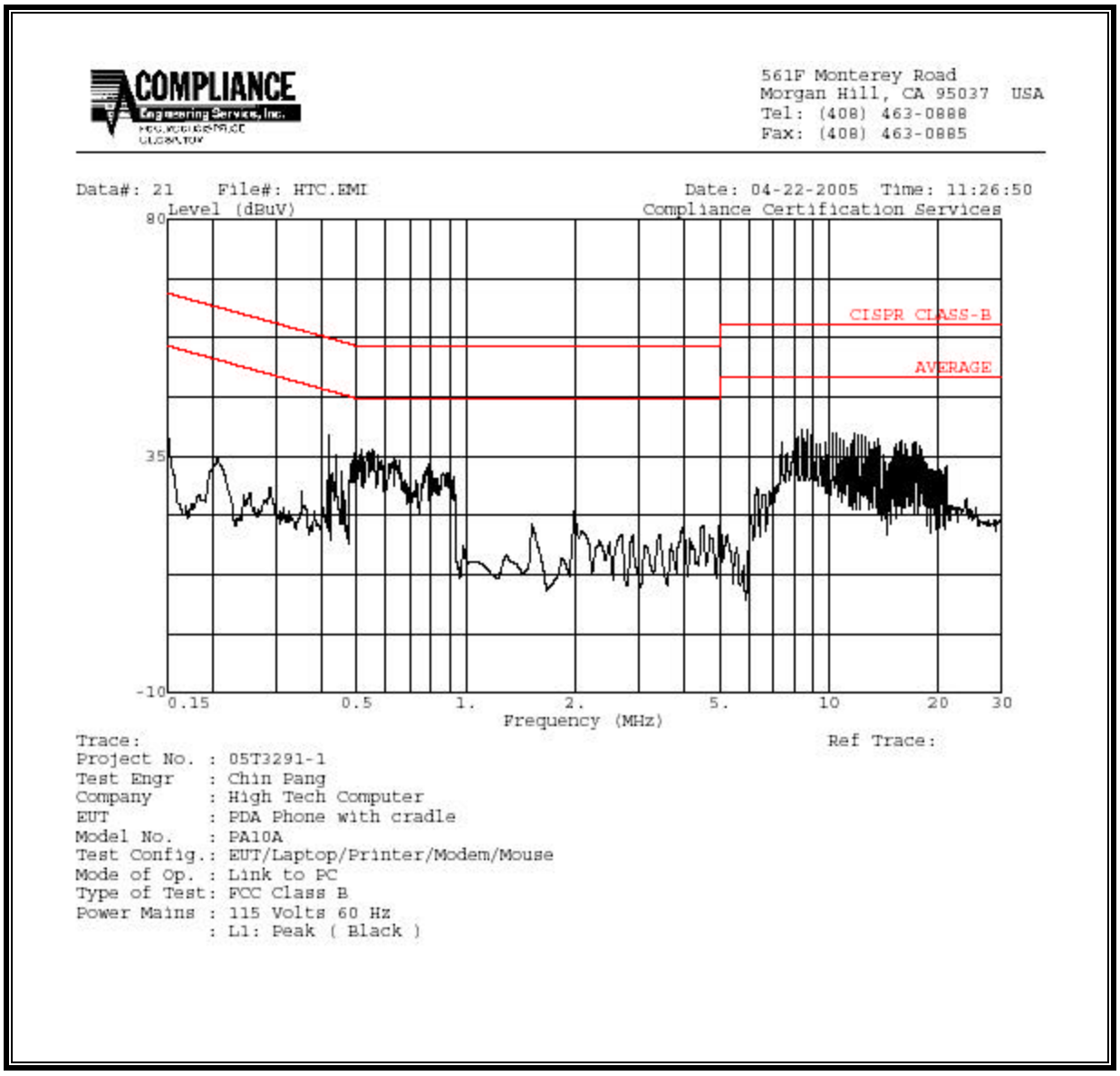
7.8.2. WORST-CASE LINE CONDUCTED EMISSIONS (DIGITAL MODE)

EUT WITH CRADLE VIA LAPTOP

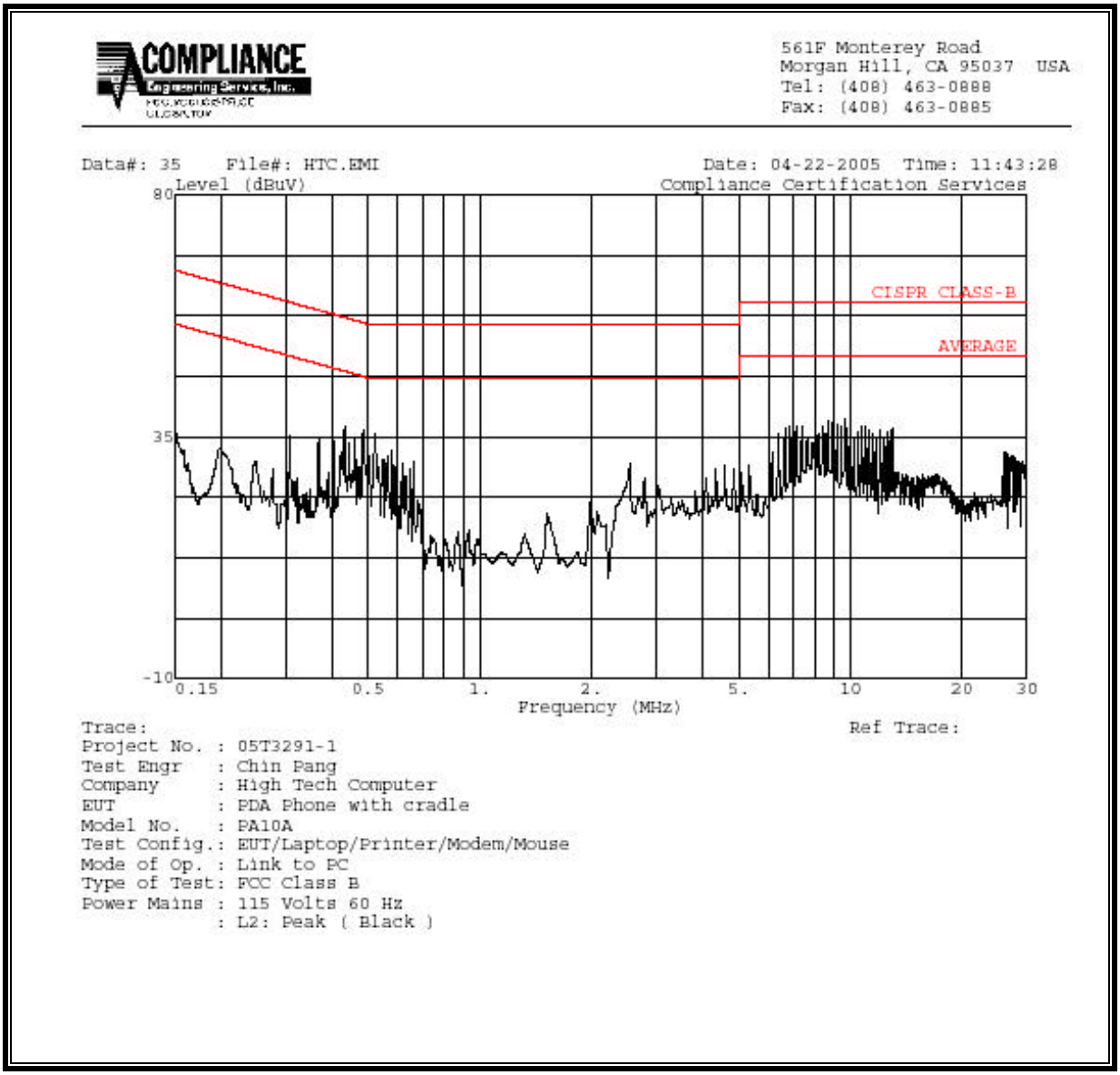
6 WORST EMISSIONS:

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
0.42	39.16	--	--	0.00	57.47	47.47	-18.31	-8.31	L1
8.46	40.10	--	--	0.00	60.00	50.00	-19.90	-9.90	L1
11.81	39.40	--	--	0.00	60.00	50.00	-20.60	-10.60	L1
0.43	36.96	--	--	0.00	57.19	47.19	-20.23	-10.23	L2
6.66	36.74	--	--	0.00	60.00	50.00	-23.26	-13.26	L2
9.71	38.34	--	--	0.00	60.00	50.00	-21.66	-11.66	L2
6 Worst Data									

LINE 1 RESULTS



LINE 2 RESULTS



7.9. FREQUENCY STABILITY

LIMIT

§22.355 Except as otherwise provided in this part, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table C–1 of this section.

For Mobile devices operating in the 824 to 849 MHz band at a power level less than or equal to 3 Watts, the limit specified in Table C-1 is +/- 2.5 ppm.

§24.235 The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

TEST PROCEDURE

ANSI / TIA / EIA 603 Clause 2.3.1 and 2.3.2

RESULTS

No non-compliance noted.

800MHz CELLULAR – MID CHANNEL

Reference Frequency: CDMA, CELLULAR Mid Channel 836.520017MHz @ 20*C Limit: to stay +- 2.5 ppm = 2091.300 Hz				
Power Supply	**Environment**	**Frequency Deviation Measureed with Time Elapse**		
(Vdc)	**Temperature (*C)**	**(MHz)**	**Delta (ppm)**	**Limit (ppm)**
3.70	50	836.520029	-0.055	2.5
3.70	40	836.520027	-0.053	2.5
3.70	30	836.520001	-0.021	2.5
3.70	***20***	***836.519983***	***0***	2.5
3.70	10	836.519969	0.017	2.5
3.70	0	836.519976	0.008	2.5
3.70	-10	836.519970	0.016	2.5
3.70	-20	836.519970	0.016	2.5
3.70	-30	836.519963	0.024	2.5

Reference Frequency: CDMA Mid Channel 836.520017MHz @ 20*C Limit: to stay +- 2.5 ppm = 2091.300 Hz				
Power Supply	**Environment**	**Frequency Deviation Measureed with Time Elapse**		
(Vdc)	**Temperature (*C)**	**(MHz)**	**Delta (ppm)**	**Limit (ppm)**
4.00	***20***	***836.520010***	***0***	***2.5***
3.1 (end point)	20	836.520071	*-0.073*	2.5
3.145	20	836.520003	*0.009*	2.5
4.25	20	836.519972	*0.045*	2.5

1900MHz PCS – MID CHANNEL

Reference Frequency: PCS Mid Channel 1880.000030MHz @ 20*C Limit: within the authorized block or +- 2.5 ppm = 4699.999 Hz				
Power Supply	**Environment**	**Frequency Deviation Measureed with Time Elapse**		
(Vdc)	**Temperature (*C)**	**(MHz)**	**Delta (ppm)**	**Limit (ppm)**
3.70	50	1880.000009	-0.148	2.5
3.70	40	1880.000005	-0.146	2.5
3.70	30	1879.999980	-0.133	2.5
3.70	***20***	***1879.999730***	***0***	***2.5***
3.70	10	1879.999690	0.021	2.5
3.70	0	1879.999700	0.016	2.5
3.70	-10	1879.999660	0.037	2.5
3.70	-20	1879.999680	0.027	2.5
3.70	-30	1879.999670	0.032	2.5

Reference Frequency: CDMA Mid Channel 1880.000030MHz @ 20*C 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)**
4.00	***20***	***1880.000030***	***0***	***2.5***
3.10 (end point)	20	1880.000019	*0.006*	2.5
3.145	20	1880.000015	*0.008*	2.5
4.25	20	1879.999740	*0.154*	2.5

(Note: The setup photos on pages 97 through 113 have been extracted under a separate file purposely.)