FCC CFR47 PART 22H & 24E
CERTIFICATION
TEST REPORT

FOR

SMARTPHONE

MODEL NUMBER: ST22A

FCC ID: NM8TND

REPORT NUMBER: 05T3459-1

ISSUE DATE: JULY 14, 2005

Prepared for
HIGH TECH COMPUTER CORP.
23 HSIN HUA ROAD
TAOYUAN 330, TAIWAN R.O.C

Prepared by
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Revision History

Rev.	Issue Date	Revisions	Revised By
A	7/14/05	Initial Issue	Thu

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: HIGH TECH COMPUTER, CORP.
23, HSIN HUA ROAD
TAOYUAN 330, TAIWAN R.O.C.

EUT DESCRIPTION: SMARTPHONE

MODEL: ST22A

SERIAL NUMBER: HT525ES00124

DATE TESTED: JUNE 27 - JULY 01, 2005

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
FCC PART 22 H and 24 E	NO NON-COMPLIANCE NOTED
DIGITAL DEVICE CONFIGURATION: FCC PART 15 SUBPART B	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 ENGINEER
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 22 and Part 24.

3. CROSS REFERENCE TO OTHER REPORTS ON THIS PRODUCT

Other FCC report applicable to this product includes CCS 05U3452-2.

4. 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.

5. CALIBRATION AND UNCERTAINTY

5.1. 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.

5.2. 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%.

6. EQUIPMENT UNDER TEST

6.1. DESCRIPTION OF EUT

The EUT is a SMARTPHONE with all auxiliary equipment as described below.

Auxiliary Equipment	Brand	Model No.
Li-Ion Rechargeable Battery	Celxpert	ST26B
AC adaptor	Delta Electronic	ADP-5FH B
Earphone	eAcepech Corp.	TS888-03206N

6.2. MAXIMUM OUTPUT POWER

T The transmitter has a maximum peak conducted output power, ERP, and EIRP as follows:

824 to 849 MHz Authorized Band

Frequency Range (MHz)	Modulation	Conducted Output Power (dBm)	Conducted Output Power (mW)	ERP Output Power (dBm)	ERP Output Power (mW)
824.2 - 848.8	GSM	32.85	1927.52	30.50	1122.02
824.2 - 848.8	GPRS	32.7	1862.09	30.10	1023.29
824.2 - 848.8	EGPRS	27.29	535.80	25.80	380.19

1850 - 1910 MHz Authorized Band

Frequency Range (MHz)	Modulation	Conducted Output Power (dBm)	Conducted Output Power (mW)	EIRP Output Power (dBm)	EIRP Output Power (mW)
1850.2 - 1909.8	GSM	30.86	1218.99	30.60	1148.15
1850.2 - 1909.8	GPRS	30.93	1238.80	29.60	912.01
1850.2 - 1909.8	EGPRS	27.35	543.25	27.70	588.84

6.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a PIFA antenna with a maximum gain of 0 dBi for both GSM850 and GSM1900 bands.

6.4. SOFTWARE AND FIRMWARE

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

6.5. 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 824.2 MHz @ GSM850 and 1850.2 MHz @ GPRS1900.
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6.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

PERIPHERAL SUPPORT EQUIPMENT LIST				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
AC Adapter	Delta Electronic	ADO-5FH B	4MW0512038391	DoC
Wireless Test Set	R & S	CMU200	1100.0008.02	12/17/05

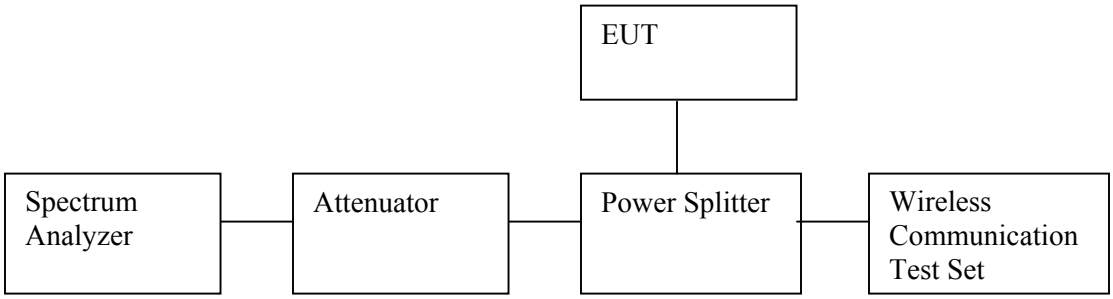
I/O CABLES

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

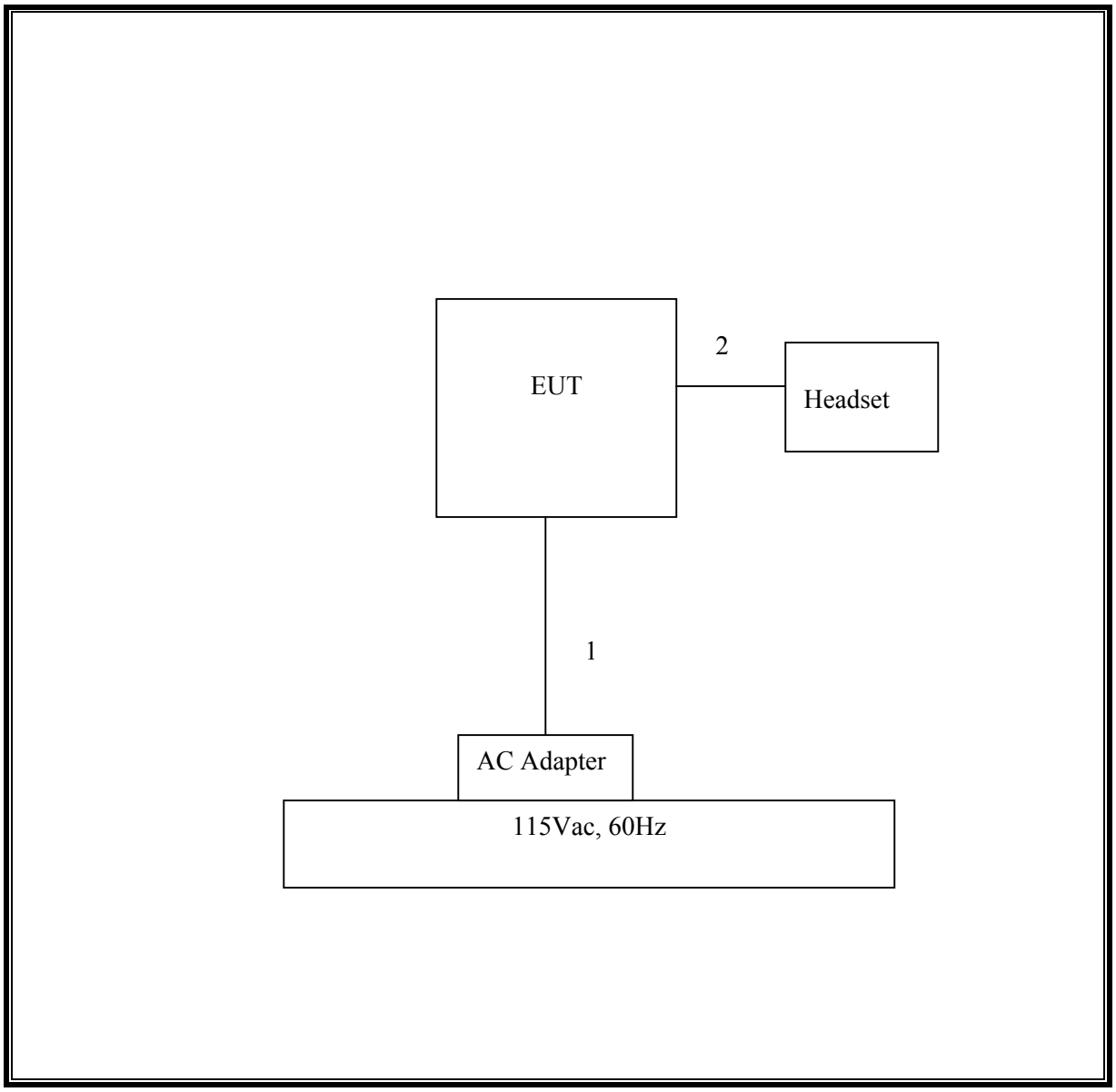
TEST SETUP

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



7. 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**
Signal Generator, 10 MHz ~ 20 GHz	HP	83732B	US34490599	7/7/2005
Peak Power Meter	Agilent	E4416A	GB41291160	2/9/06
Peak / Average Power Sensor	Agilent	E9327A	US40440755	2/10/06
Spectrum Analyzer 3 Hz ~ 44 GHz	Agilent	E4446A	MY43360112	3/28/06
AC Power Source, 8 kVA	APC	AFP2-8KVA	J5061	CNR
Temperature / Humidity Chamber	Thermotron	SE 600-10-10	29800	5/13/06
Directional Coupler	Krytar	1817	2656	11/12/05
Antenna, Bilog 30MHz ~ 2Ghz	Sunol Sciences	JB1	A121003	3/3/06
RF Filter Section	HP	85420E	3705A00256	3/29/06
EMI Receiver, 9 kHz ~ 2.9 GHz	HP	8542E	3942A00286	3/29/06
EMI Test Receiver	R & S	ESHS 20	827129/006	6/3/06
LISN, 10 kHz ~ 30 MHz	Solar	8012-50-R-24-BNC	8379443	10/21/05
Site A Line Stabilizer/Conditioner	Tripplite	LC-1800a	A005181	CNR
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	9001-3245	4/22/06
Antenna, Horn 1 ~ 18 GHz	EMCO	3115	2238	4/22/06
Tuned Dipole Antenna 400~1000 MHz	ETS	3121C DB4	1629	5/7/06

8. LIMITS AND RESULTS

8.1. 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:

GSM850 Modulation

Channel	Frequency (MHz)	Bandwidth (KHz)
Low	824.2	300.237
Middle	836.4	302.046
High	848.6	294.524

GPRS850 Modulation

Channel	Frequency (MHz)	Bandwidth (KHz)
Low	824.2	313.454
Middle	836.4	318.52
High	848.6	303.442

EGPRS850 Modulation

Channel	Frequency (MHz)	Bandwidth (KHz)
Low	824.2	288.731
Middle	836.4	298.397
High	848.6	300.01

GSM1900 Modulation

Channel	Frequency (MHz)	Bandwidth (KHz)
Low	1850.2	307.35
Middle	1880	316.542
High	1909.8	317.214

GPRS1900Modulation

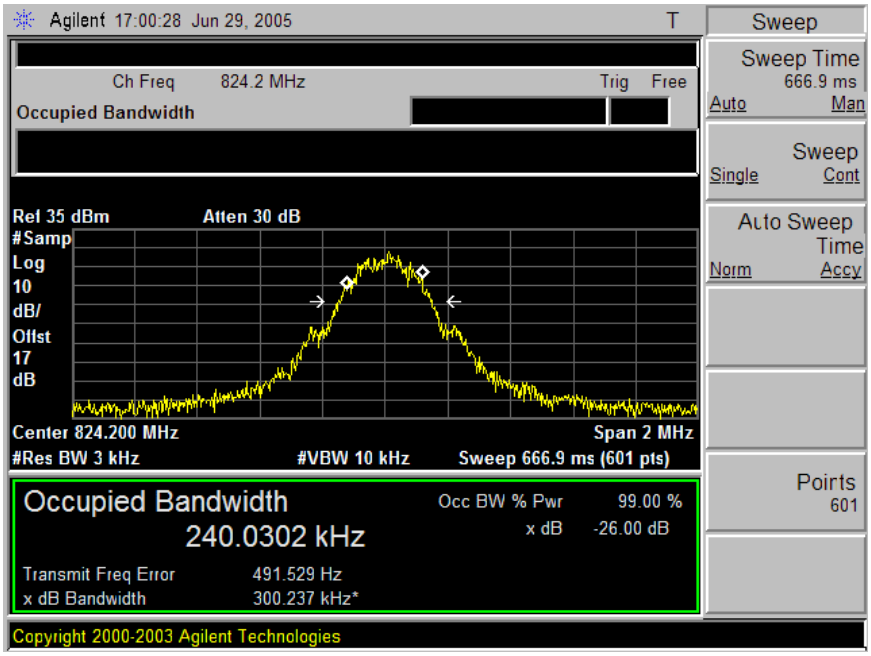
Channel	Frequency (MHz)	Bandwidth (KHz)
Low	1850.2	303.198
Middle	1880	312.745
High	1909.8	322.7

EGPRS1900 Modulation

Channel	Frequency (MHz)	Bandwidth (KHz)
Low	1850.2	310.646
Middle	1880	308.175
High	1909.8	313.378

GSM850 26 dB BANDWIDTH

BANDWIDTH MID CH



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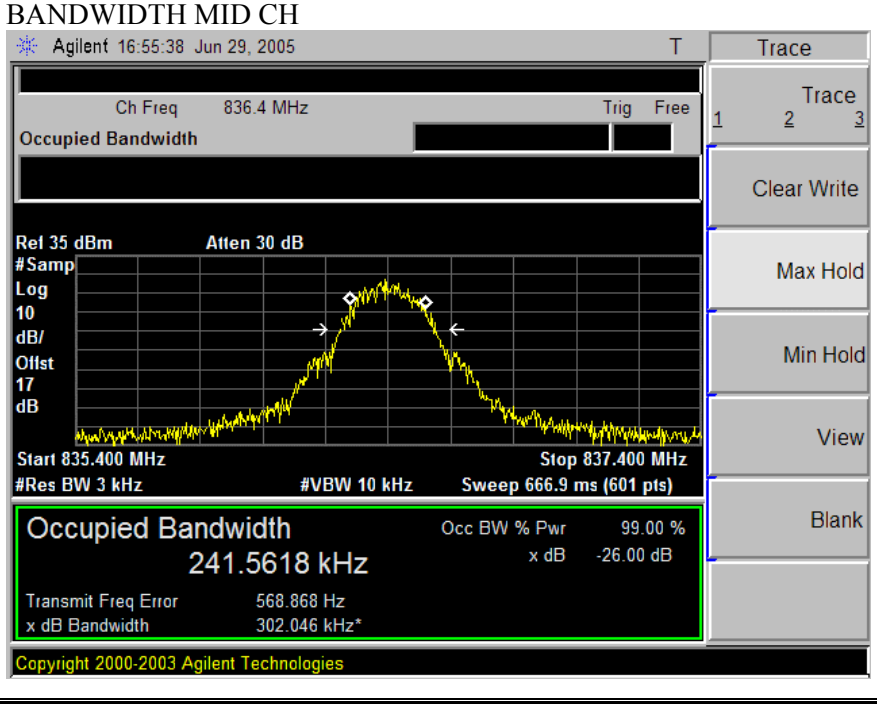
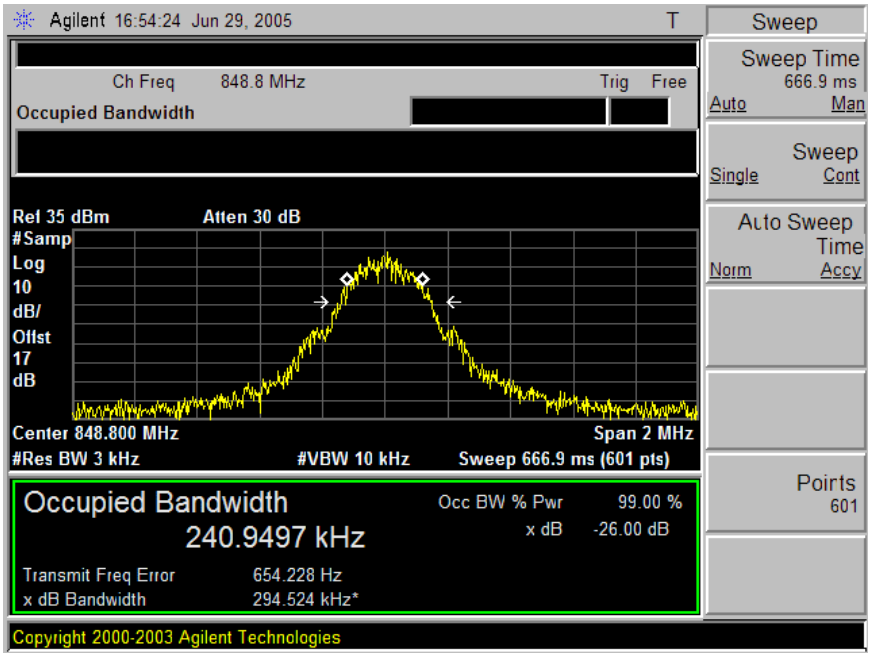
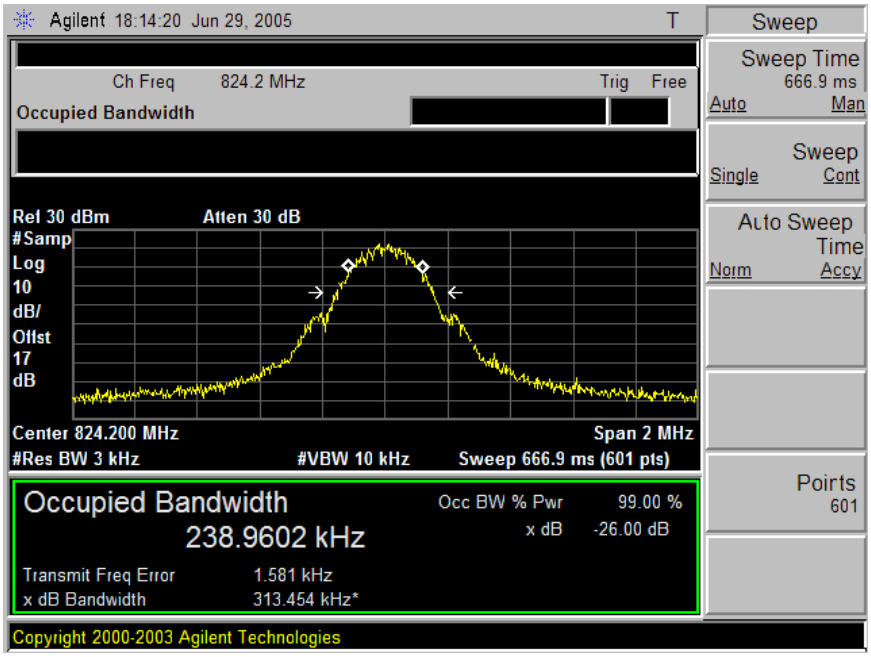


BANDWIDTH HIGH CH



GPRS850 26 dB BANDWIDTH

BANDWIDTH LOW CH



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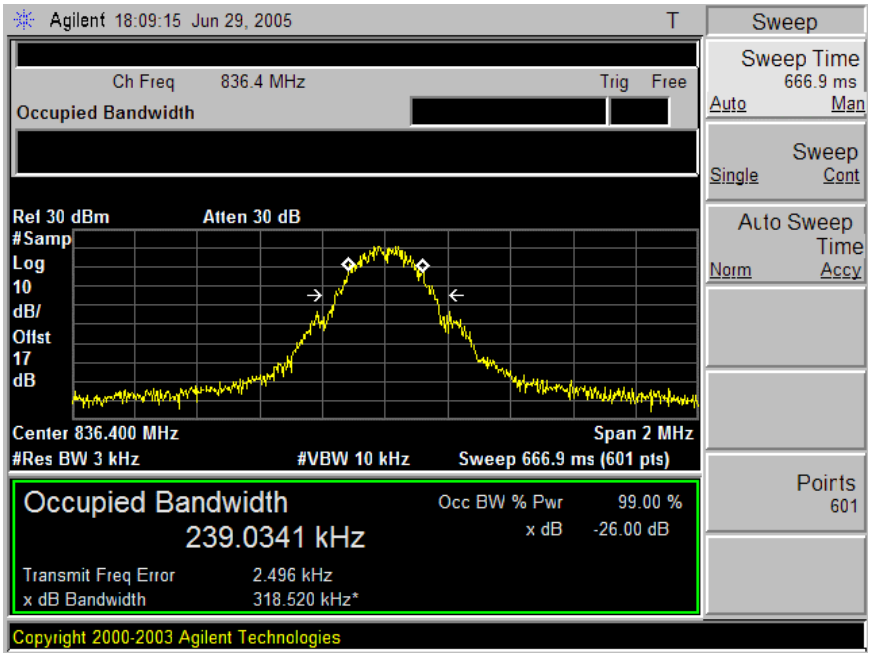

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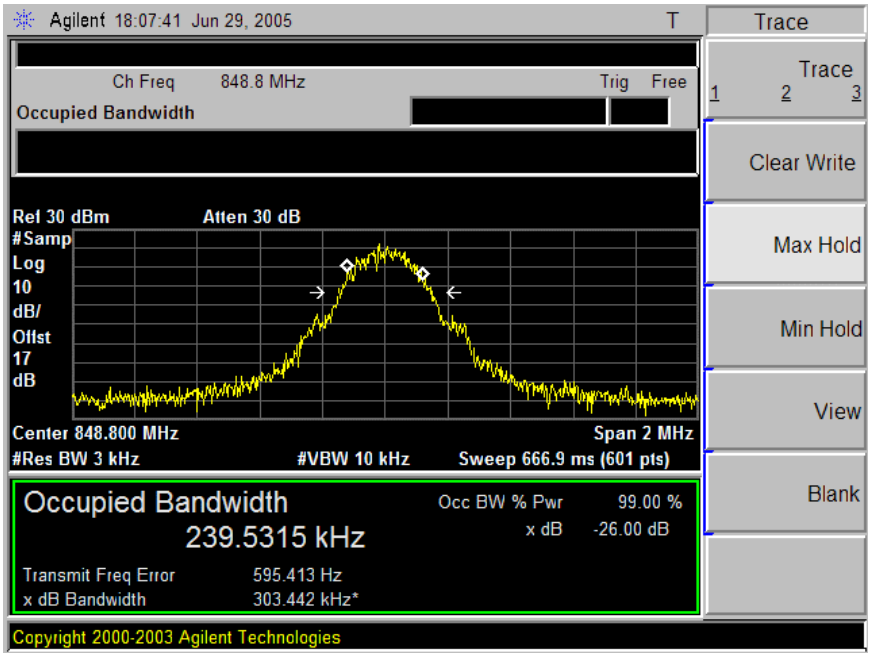
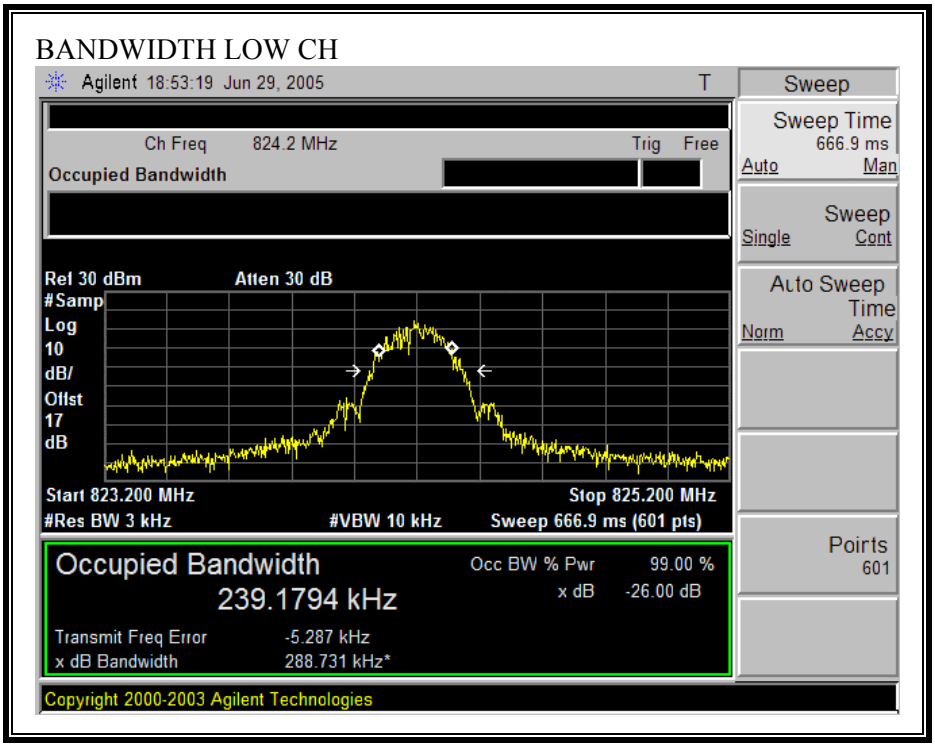


EGPRS850 26 dB BANDWIDTH

BANDWIDTH LOW CH



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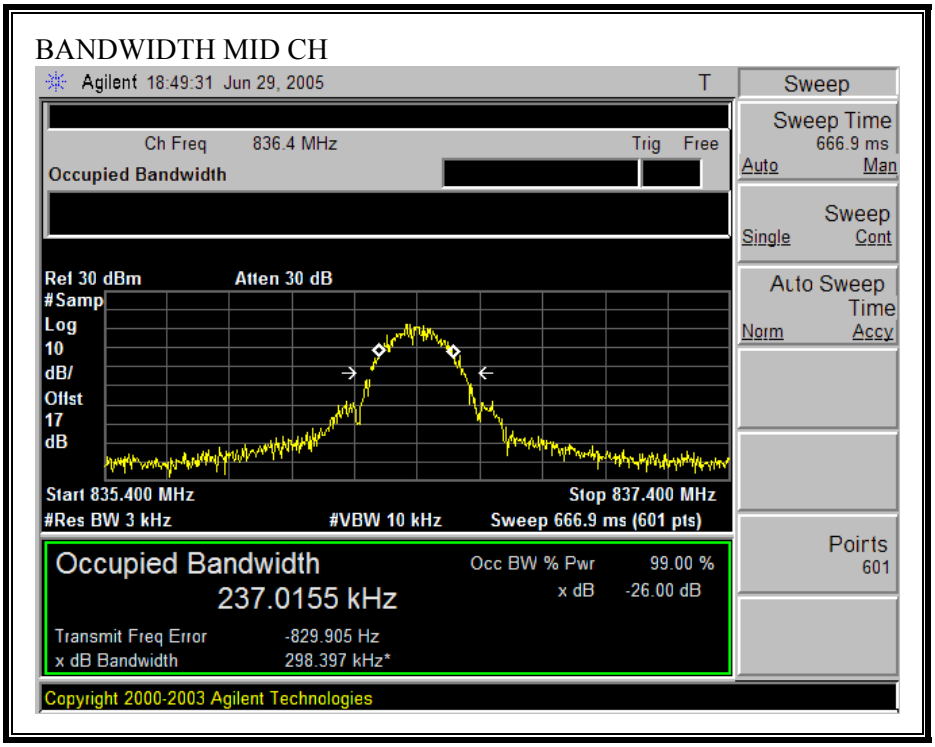

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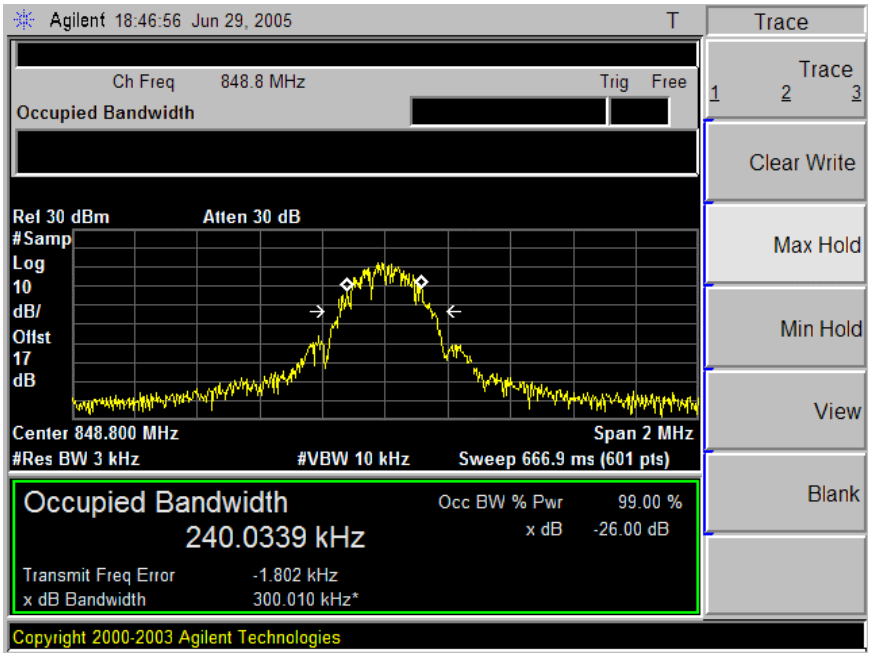

8.2. RF POWER OUTPUT

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

RESULTS

No non-compliance noted.

824 to 849 MHz Authorized Band

Frequency (MHz)	Modulation	Conducted Peak Output Power (dBm)	Radiated ERP (dBm)
824.2	GSM	32.85	29.90
836.4	GSM	32.85	30.50
848.8	GSM	32.62	28.80
824.2	GPRS	32.70	30.10
836.4	GPRS	32.60	29.30
848.8	GPRS	32.49	28.20
824.2	EGPRS	27.29	25.80
836.4	EGPRS	27.24	25.30
848.8	EGPRS	27.23	24.50

GSM1900, 1850 - 1910 MHz Authorized Band

Frequency (MHz)	Modulation	Conducted Peak Output Power (dBm)	Radiated EIRP (dBm)
1850.2	GSM	30.36	30.10
1880	GSM	30.74	30.60
1909.8	GSM	29.01	28.70
1850.2	GPRS	30.43	29.10
1880	GPRS	29.72	29.60
1909.8	GPRS	29.06	29.00
1850.2	EGPRS	27.55	27.30
1880	EGPRS	27.77	27.70
1909.8	EGPRS	27.25	27.20

GSM850 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
GSM850									
Low Ch									
824.20	99.6	V	27.8	2.0	0.0	25.8	38.5	-12.7	
824.20	104.1	H	31.9	2.0	0.0	29.9	38.5	-8.6	
Mid Ch									
836.40	96.0	V	24.4	2.0	0.0	22.4	38.5	-16.1	
836.40	104.6	H	32.5	2.0	0.0	30.5	38.5	-8.0	
High Ch									
848.60	95.0	V	23.5	2.0	0.0	21.5	38.5	-17.0	
848.60	102.8	H	30.8	2.0	0.0	28.8	38.5	-9.7	

GPRS850 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
GPRS850									
Low Ch									
824.20	93.5	V	21.7	2.0	0.0	19.7	38.5	-18.8	
824.20	104.3	H	32.1	2.0	0.0	30.1	38.5	-8.4	
Mid Ch									
836.40	92.9	V	21.3	2.0	0.0	19.3	38.5	-19.2	
836.40	103.4	H	31.3	2.0	0.0	29.3	38.5	-9.2	
High Ch									
848.60	94.5	V	23.0	2.0	0.0	21.0	38.5	-17.5	
848.60	102.2	H	30.2	2.0	0.0	28.2	38.5	-10.3	

EGPRS850 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
EGPRS850									
Low Ch									
824.20	92.2	V	20.4	2.0	0.0	18.4	38.5	-20.1	
824.20	100.1	H	27.8	2.0	0.0	25.8	38.5	-12.7	
Mid Ch									
836.40	91.8	V	20.1	2.0	0.0	18.1	38.5	-20.4	
836.40	99.4	H	27.3	2.0	0.0	25.3	38.5	-13.2	
High Ch									
848.60	91.9	V	20.4	2.0	0.0	18.4	38.5	-20.1	
848.60	98.5	H	26.5	2.0	0.0	24.5	38.5	-14.0	

GSM1900 Output Power (EIRP)

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										
1.850	98.5	V	26.0	0.5	4.6	2.5	30.1	33.0	-2.9	
1.850	96.4	H	22.5	0.5	4.6	2.5	26.6	33.0	-6.5	
Mid Ch Y Pos										
1.880	99.3	V	26.5	0.5	4.6	2.5	30.6	33.0	-2.5	
1.880	96.5	H	23.0	0.5	4.6	2.5	27.1	33.0	-5.9	
High Ch										
1.910	97.2	V	24.5	0.5	4.7	2.6	28.7	33.0	-4.3	
1.910	95.9	H	22.5	0.5	4.7	2.6	26.7	33.0	-6.3	

GPRS1900 Output Power (EIRP)

f	SA reading	Ant. Pol.	SG reading	CL	Gain	Gain	EIRP	Limit	Margin	Notes
GPRS1900										
Low Ch										
1.850	99.3	V	25.0	0.5	4.6	2.5	29.1	33.0	-3.9	
1.850	96.3	H	22.3	0.5	4.6	2.5	26.4	33.0	-6.6	
Mid Ch										
1.880	100.2	V	25.4	0.5	4.7	2.6	29.6	33.0	-3.4	
1.880	95.9	H	22.4	0.5	4.7	2.6	26.6	33.0	-6.4	
High Ch										
1.910	97.5	V	24.8	0.5	4.7	2.6	29.0	33.0	-4.0	
1.910	96.8	H	23.5	0.5	4.7	2.6	27.7	33.0	-5.3	

EGPRS1900 Output Power (EIRP)

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										
1.850	95.7	V	23.2	0.5	4.6	2.5	27.3	33.0	-5.7	
1.850	96.0	H	22.0	0.5	4.6	2.5	26.1	33.0	-6.9	
Mid Ch Y Pos										
1.880	97.0	V	23.5	0.5	4.7	2.6	27.7	33.0	-5.3	
1.880	96.0	H	22.4	0.5	4.7	2.6	26.6	33.0	-6.4	
High Ch										
1.910	96.1	V	23.0	0.5	4.7	2.6	27.2	33.0	-5.8	
1.910	93.5	H	20.2	0.5	4.7	2.6	24.4	33.0	-8.6	

8.3. 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.

GSM 850

Reference Frequency: AMPS Mid Channel 836.490000MHz @ 25*C Limit: ± 2.5 ppm = 2091.000 Hz				
Power Supply	**Environment**	**Frequency Deviation Measureed with Time Elapse**		
(Vdc)	**Temperature (*C)**	**(MHz)**	**Delta (ppm)**	**Limit (ppm)**
3.70	50	836.40001	-0.026	± 2.5
3.70	40	836.40000	-0.019	± 2.5
3.70	30	836.39999	-0.007	± 2.5
3.70	***25***	***836.39999***	***0***	***± 2.5***
3.70	20	836.39997	0.020	± 2.5
3.70	10	836.39997	0.024	± 2.5
3.70	0	836.39998	0.011	± 2.5
3.70	-10	836.39997	0.016	± 2.5
3.70	-20	836.39997	0.024	± 2.5
3.70	-30	836.39996	0.025	± 2.5
3.145	25	836.39999	-0.010	± 2.5
4.255	25	836.39998	0.012	± 2.5

GSM 1900

Reference Frequency: PCS Mid Channel 1880MHz @ 25*C Limit: to stay within the authorized block				
Power Supply	**Environment**	**Frequency Deviation Measureed with Time Elapse**		
(Vdc)	**Temperature (*C)**	**(MHz)**	**Delta (ppm)**	**Limit (ppm)**
3.70	50	1880.00012	-0.128	± 2.5
3.70	40	1880.00007	-0.101	± 2.5
3.70	30	1880.00005	-0.090	± 2.5
3.70	***25***	***1879.99988***	0.000	***± 2.5***
3.70	20	1879.99976	0.064	± 2.5
3.70	10	1879.99973	0.080	± 2.5
3.70	0	1879.99975	0.069	± 2.5
3.70	-10	1879.99970	0.096	± 2.5
3.70	-20	1879.99969	0.101	± 2.5
3.70	-30	1879.99970	0.096	± 2.5
3.145	25	1880.00006	-0.096	± 2.5
4.255	25	1879.99985	0.016	± 2.5

8.4. SPURIOUS EMISSION AT ANTENNA TERMINAL

LIMIT

§§22.917 (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.

§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 3.2.13 & FCC 22.917 (b)
ANSI / TIA / EIA 603 Clause 3.2.12 & FCC 24.238 (b)

RESULTS

No non-compliance noted.
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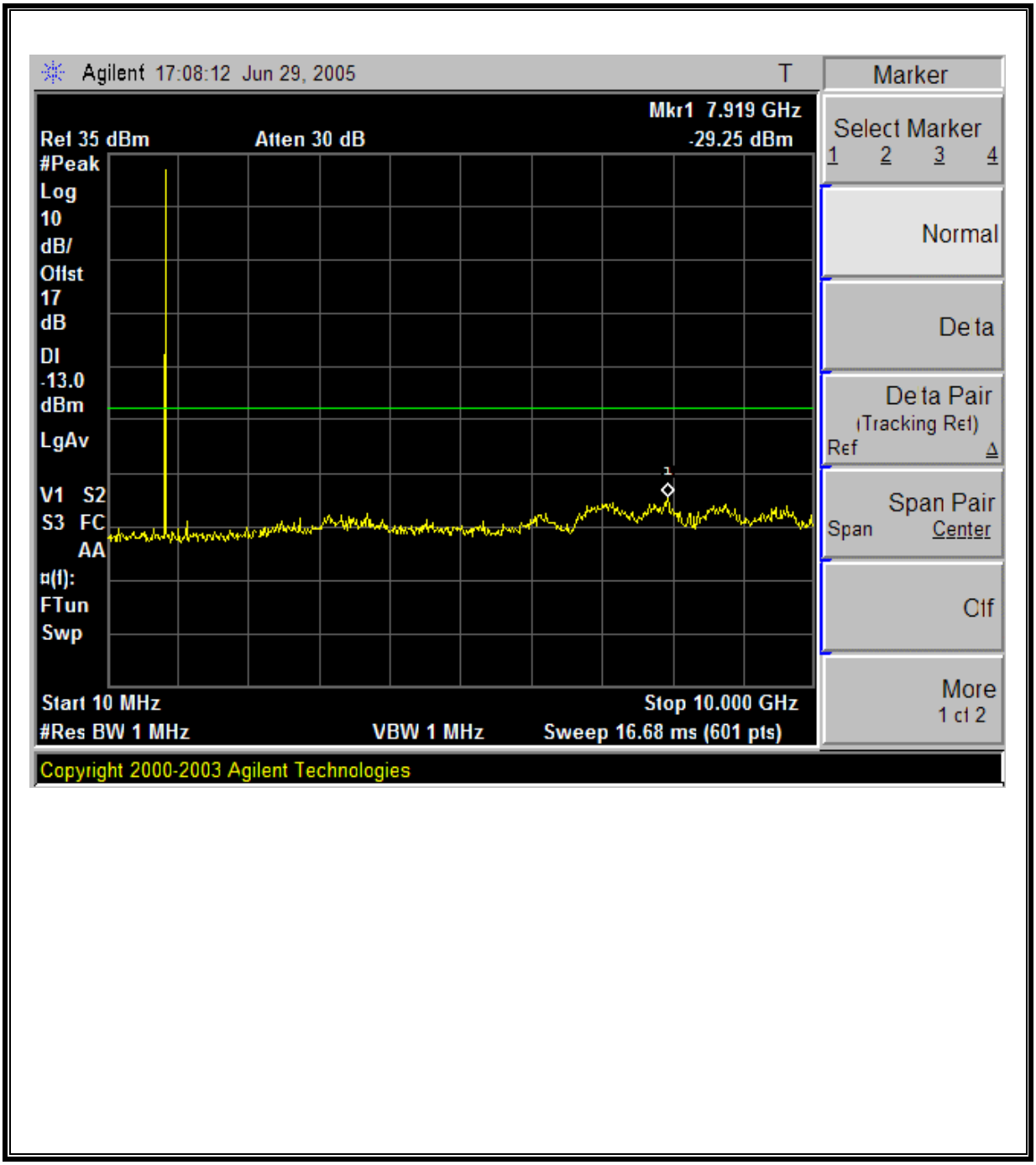
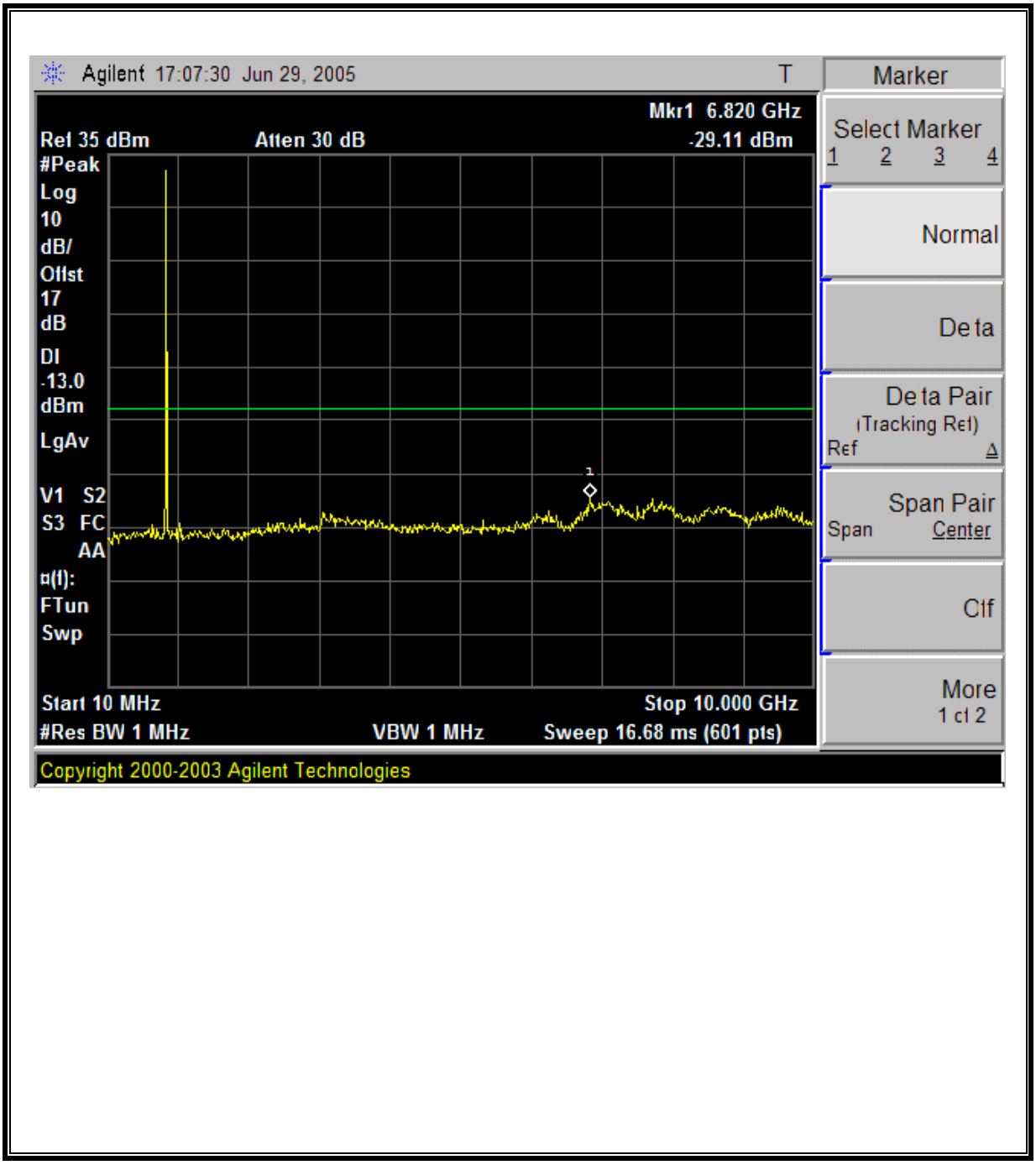
GSM850 MODULATION RESULTS

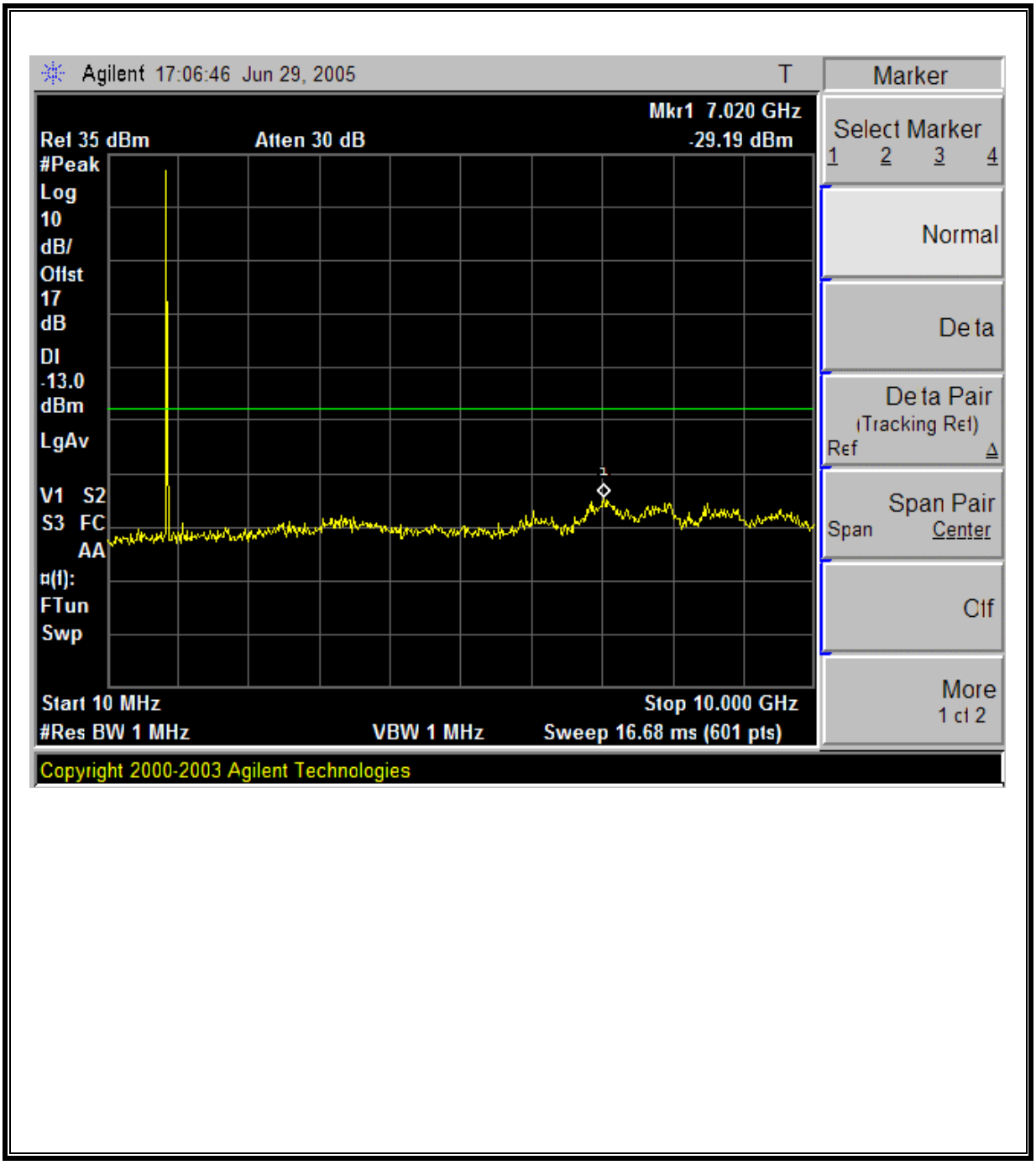
GSM850 Modulation: Low Channel, Out-Of-Band Emissions



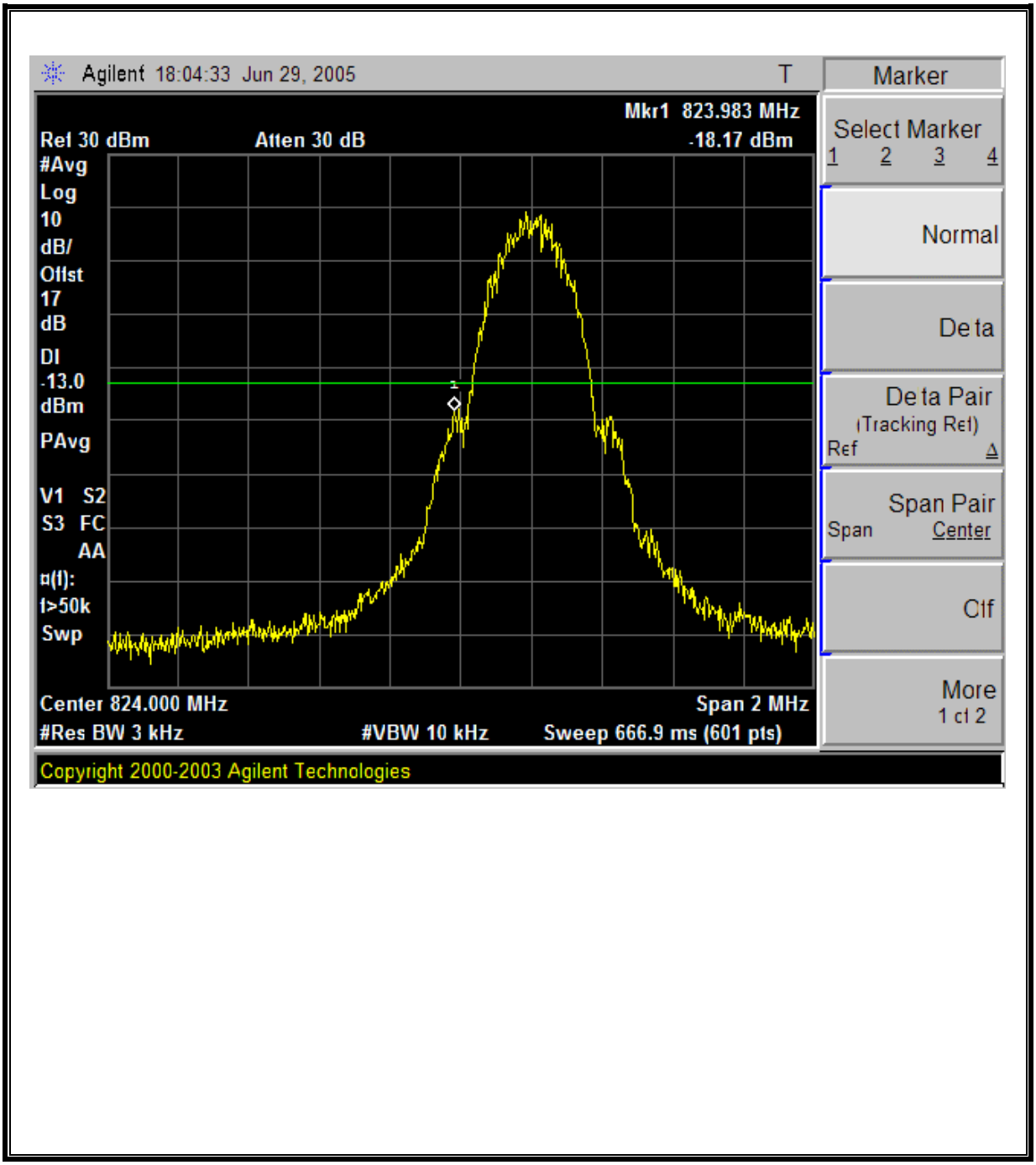
GSM850 Modulation: Mid Channel, Out-Of-Band Emissions



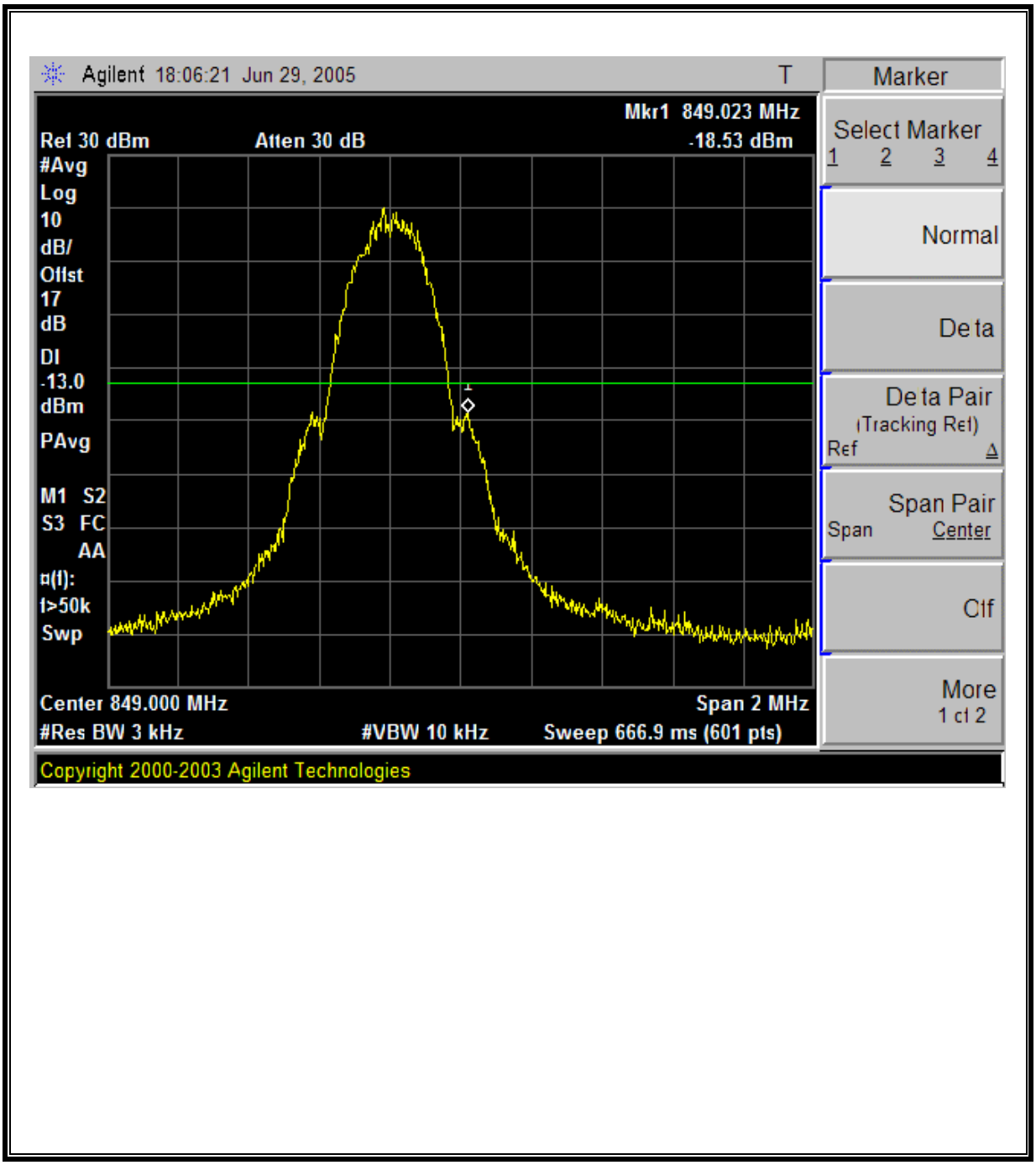
GSM850 Modulation: High Channel, Out-Of-Band Emissions



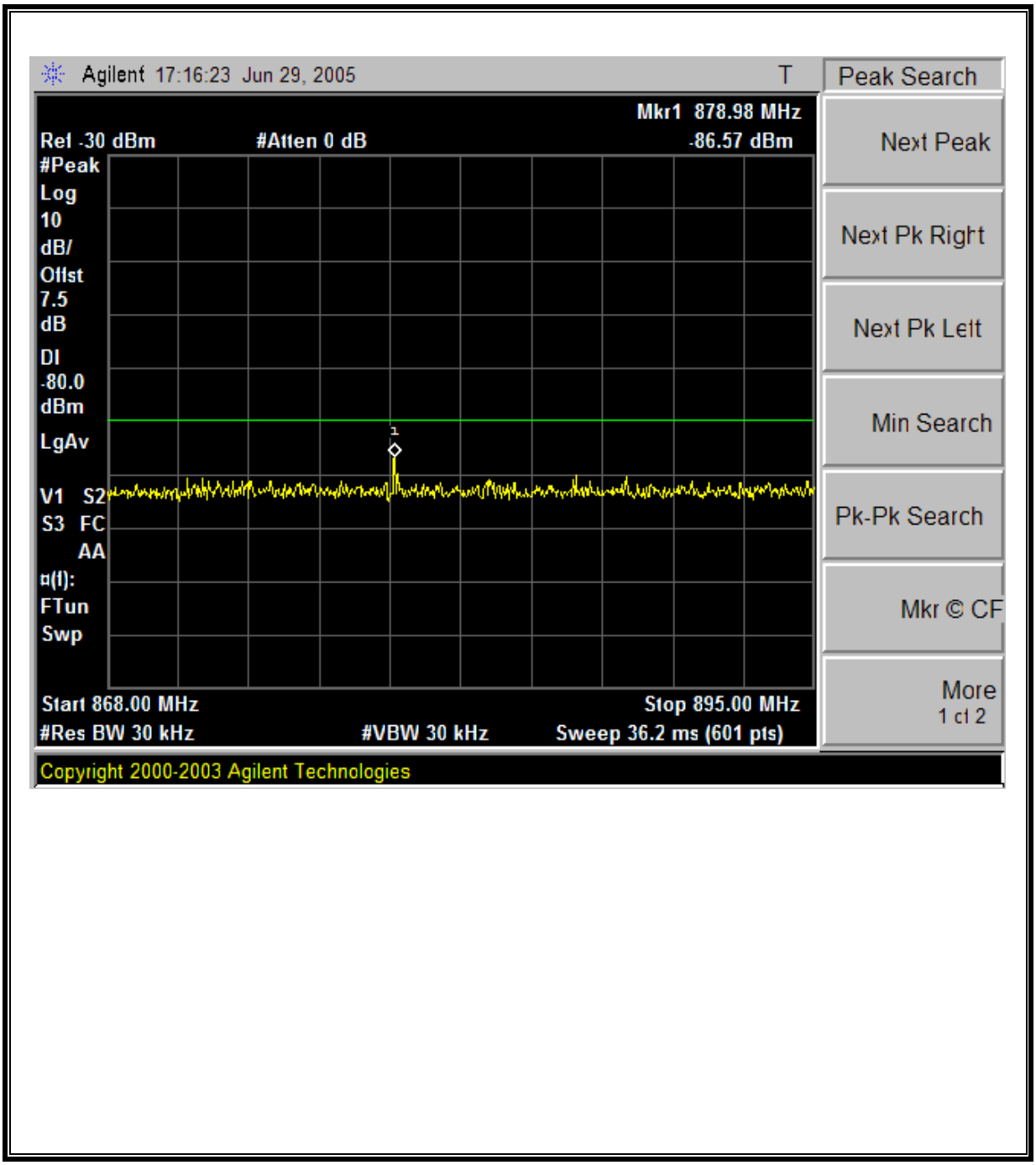
GSM850 Modulation: Low Channel Band Edge



GSM850 Modulation: High Channel Band Edge

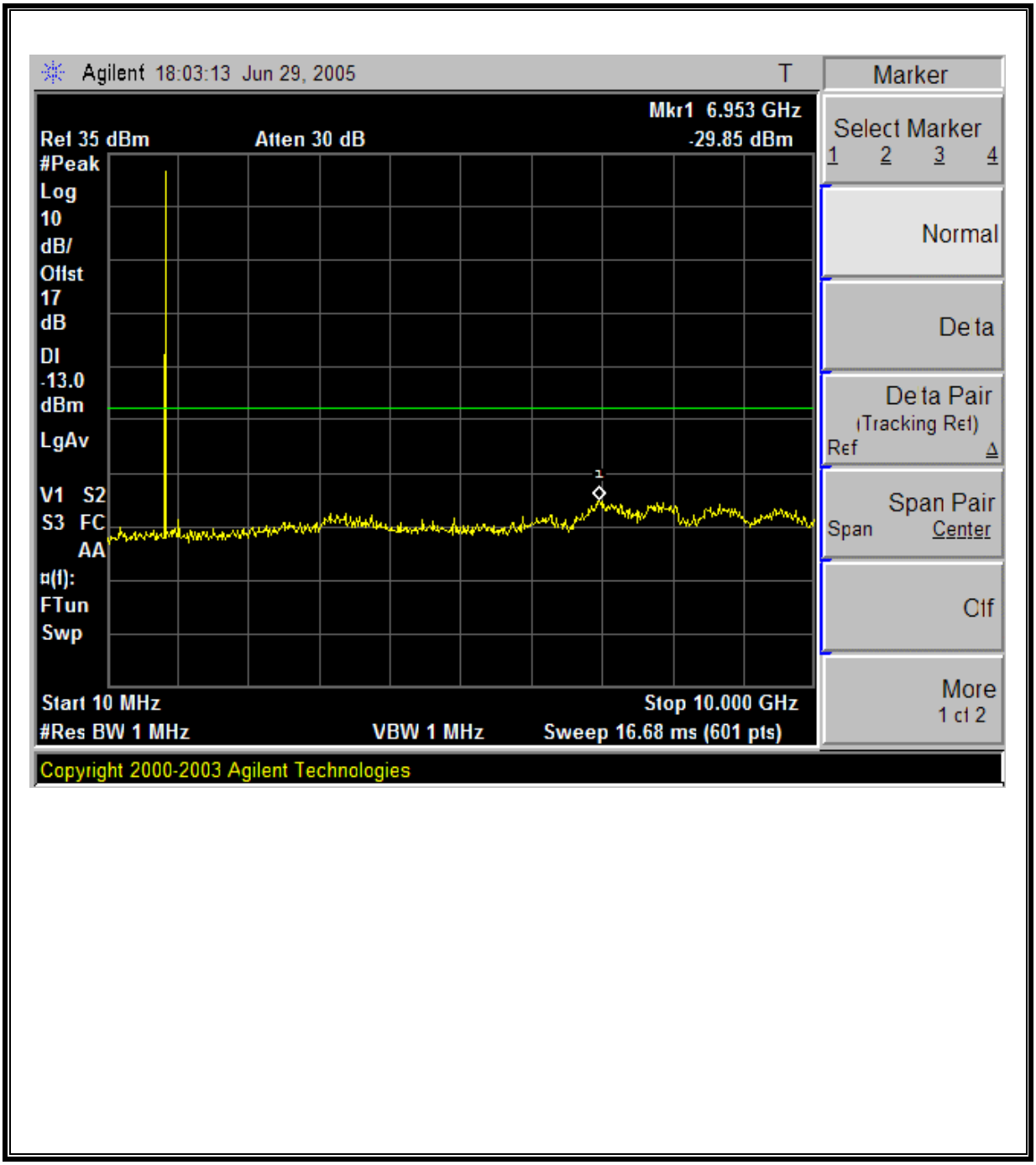


GSM850 Mobile Emissions in Base Frequency Range

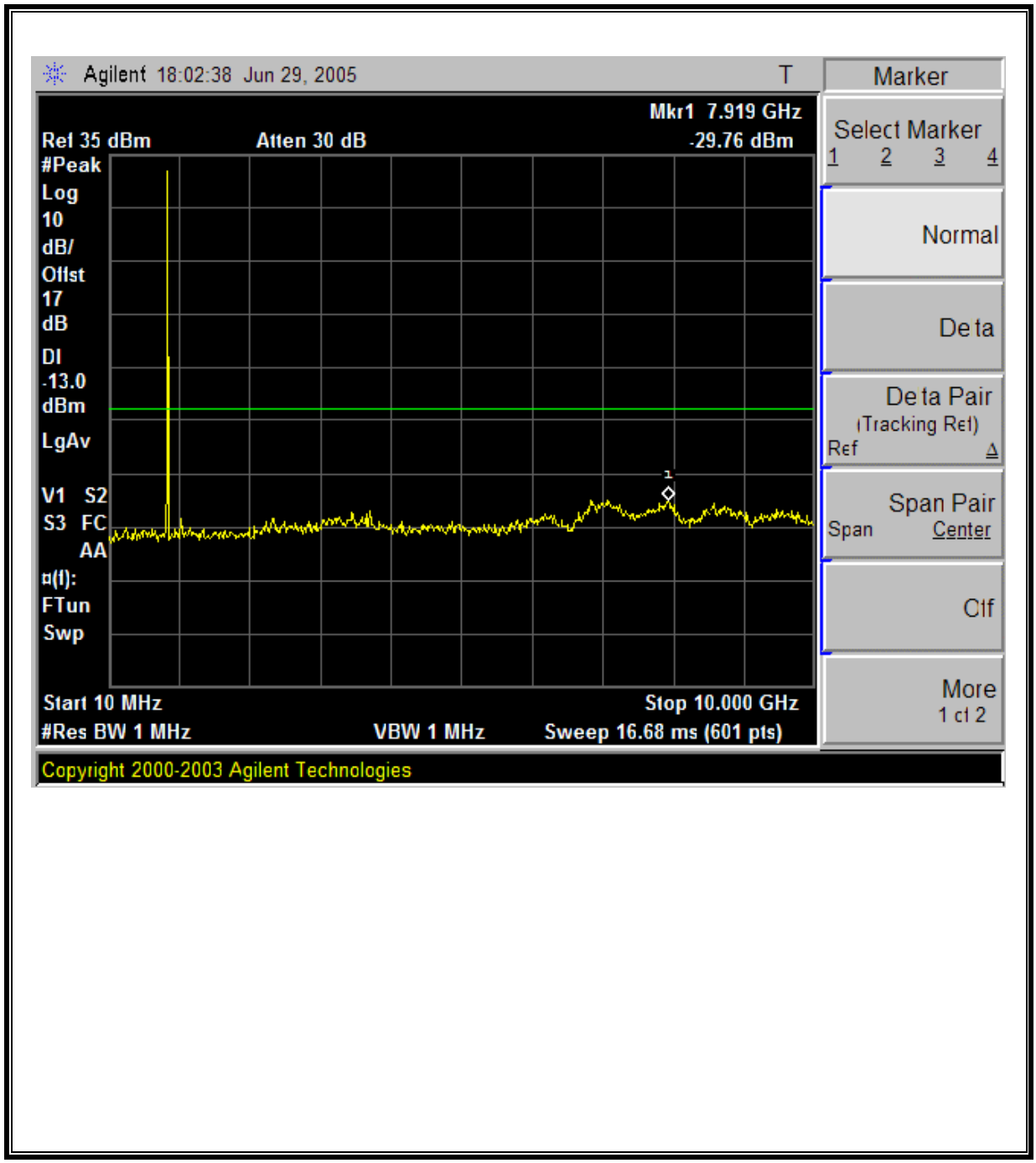


GPRSM850 MODULATION RESULTS

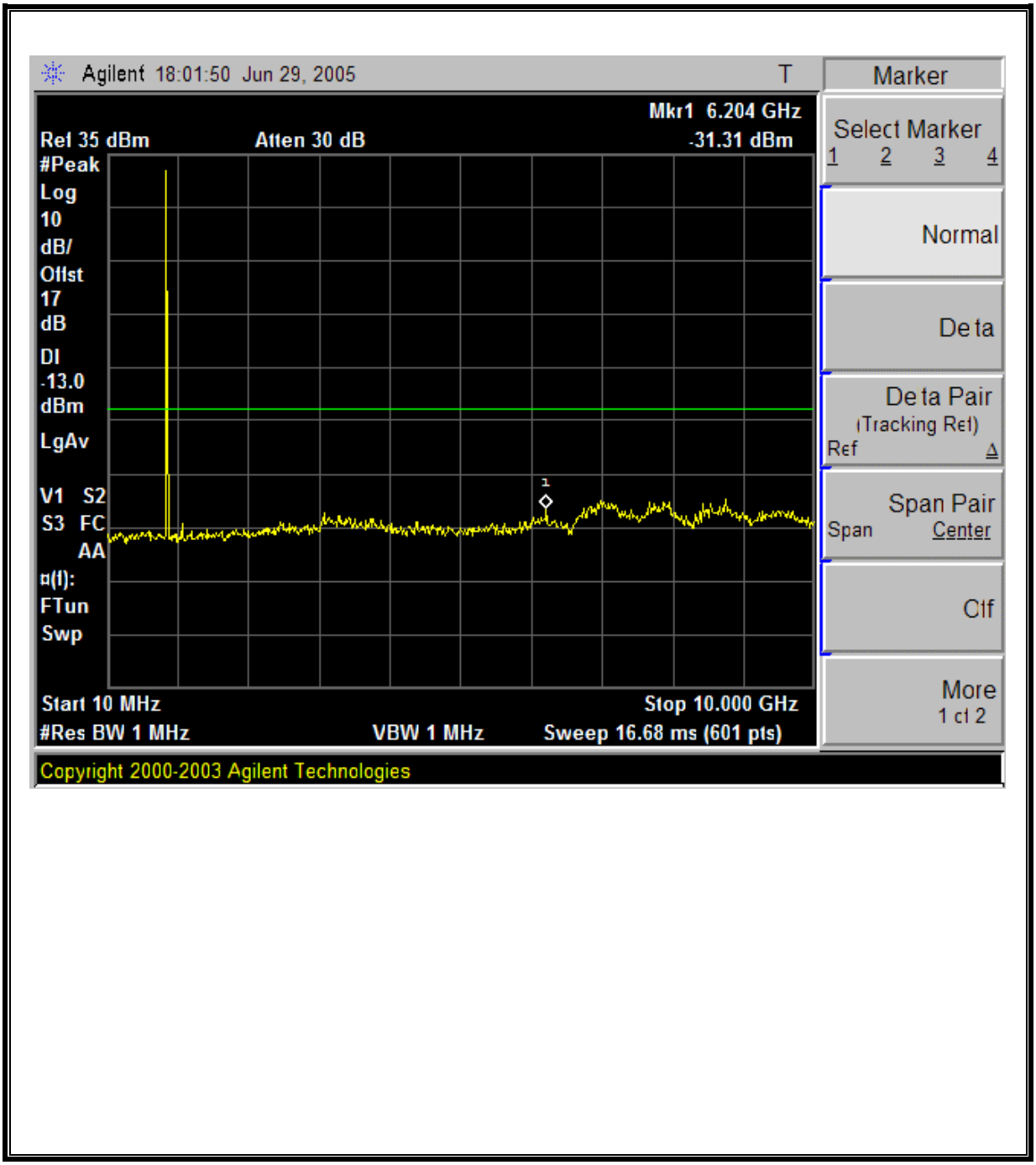
GPRS850 Modulation: Low Channel, Out-Of-Band Emissions



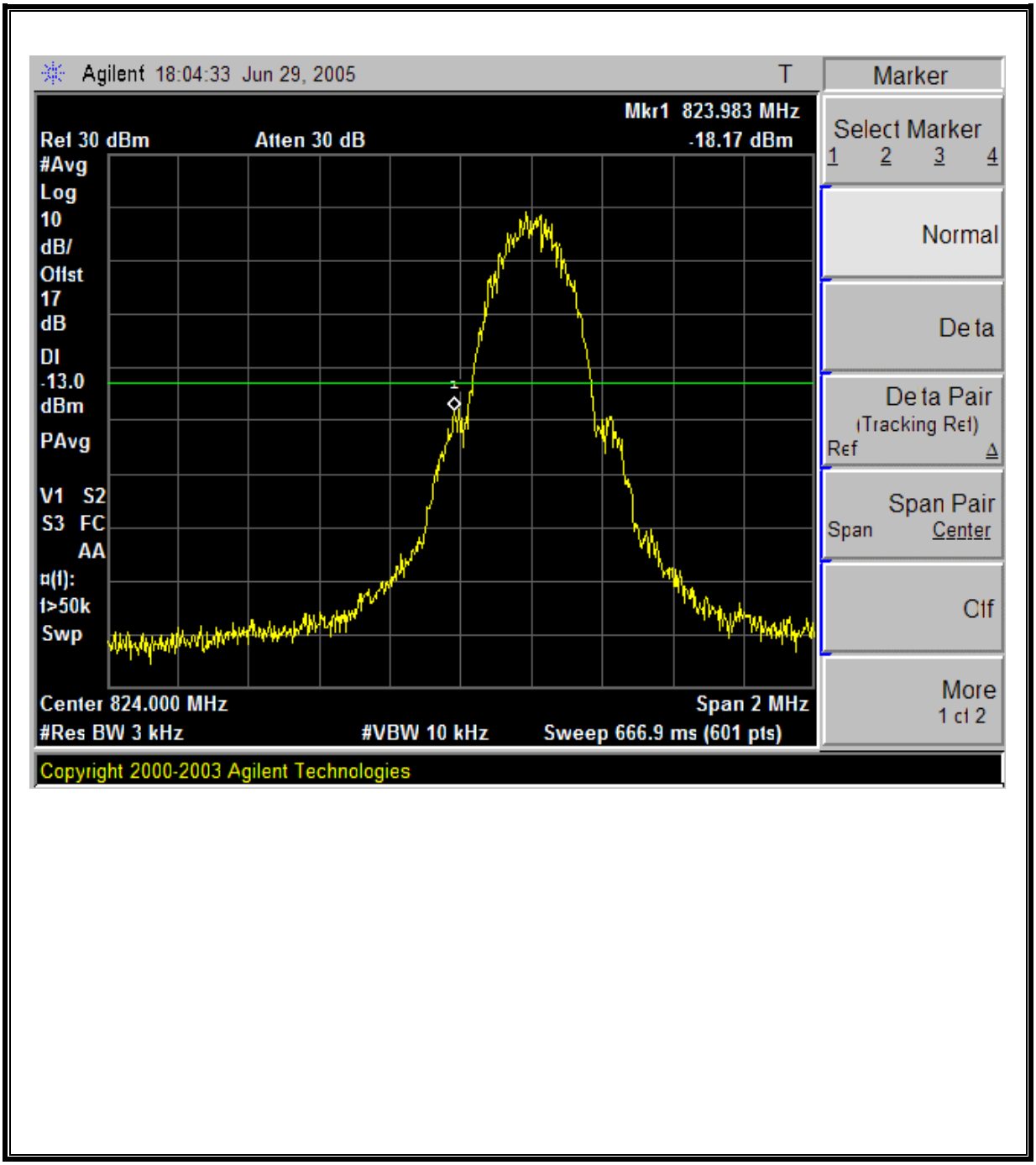
GPRS850 Modulation: Mid Channel, Out-Of-Band Emissions



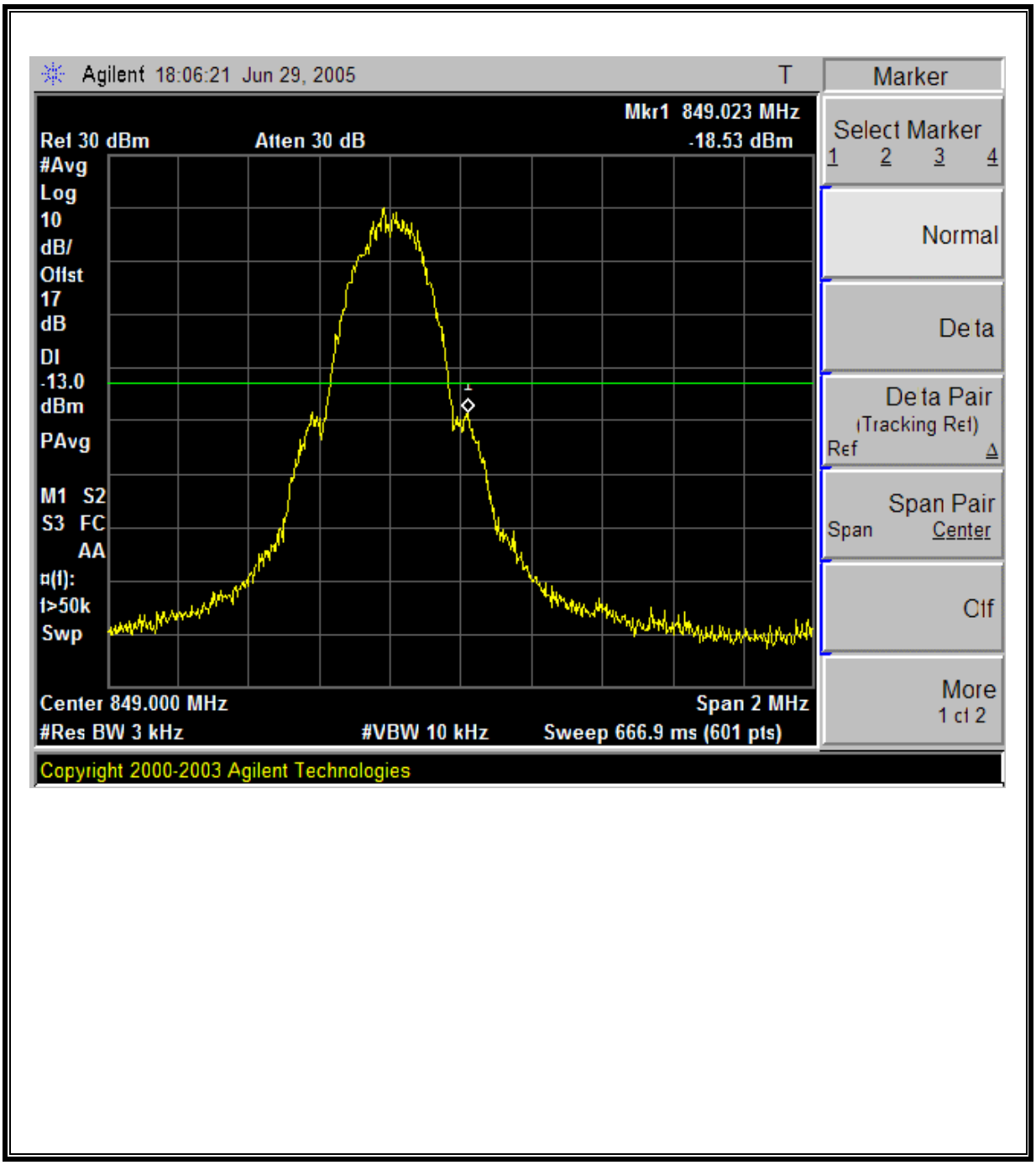
GPRSM850 Modulation: High Channel, Out-Of-Band Emissions



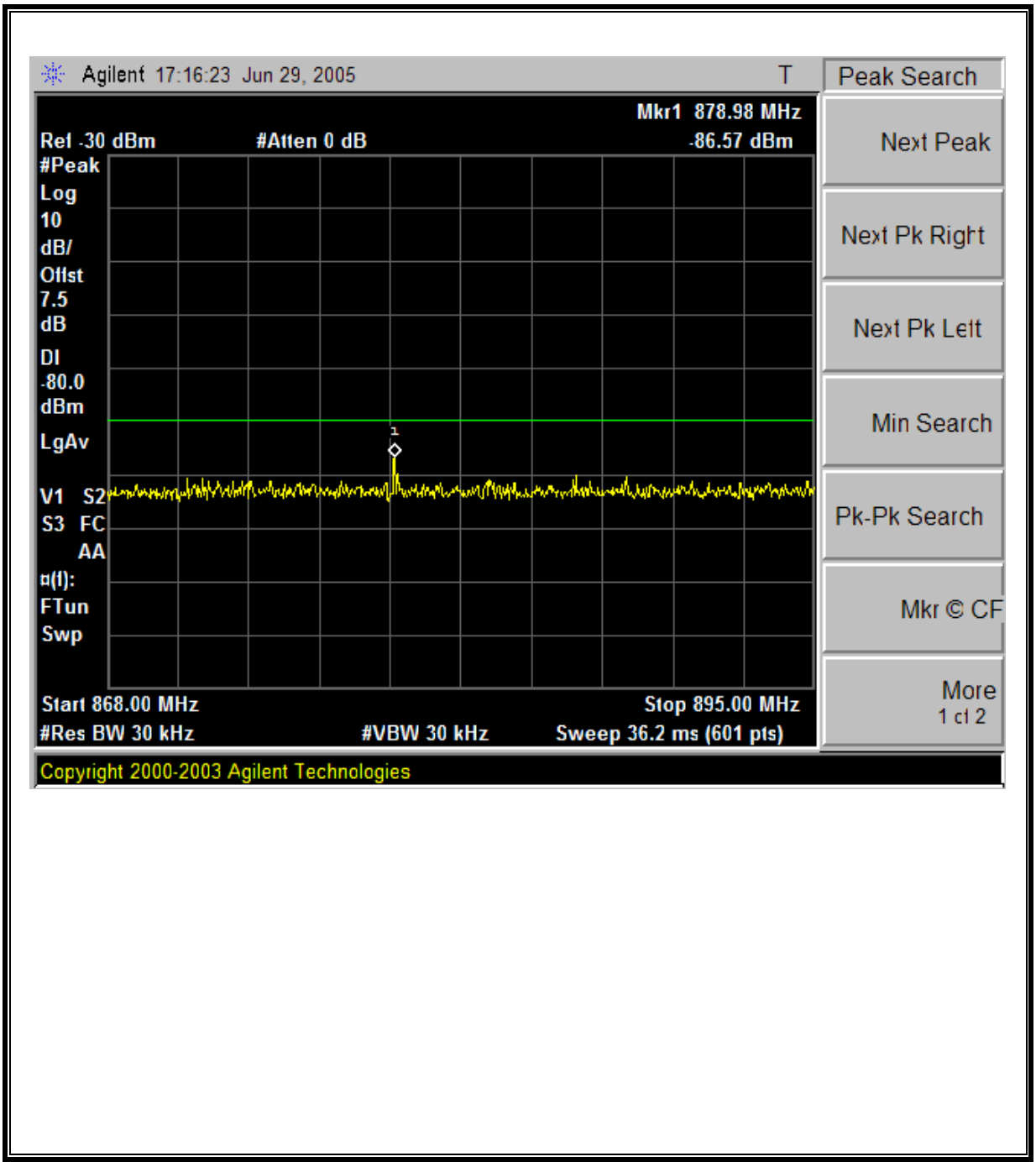
GPRS850 Modulation: Low Channel Band Edge



GPRS850 Modulation: High Channel Band Edge

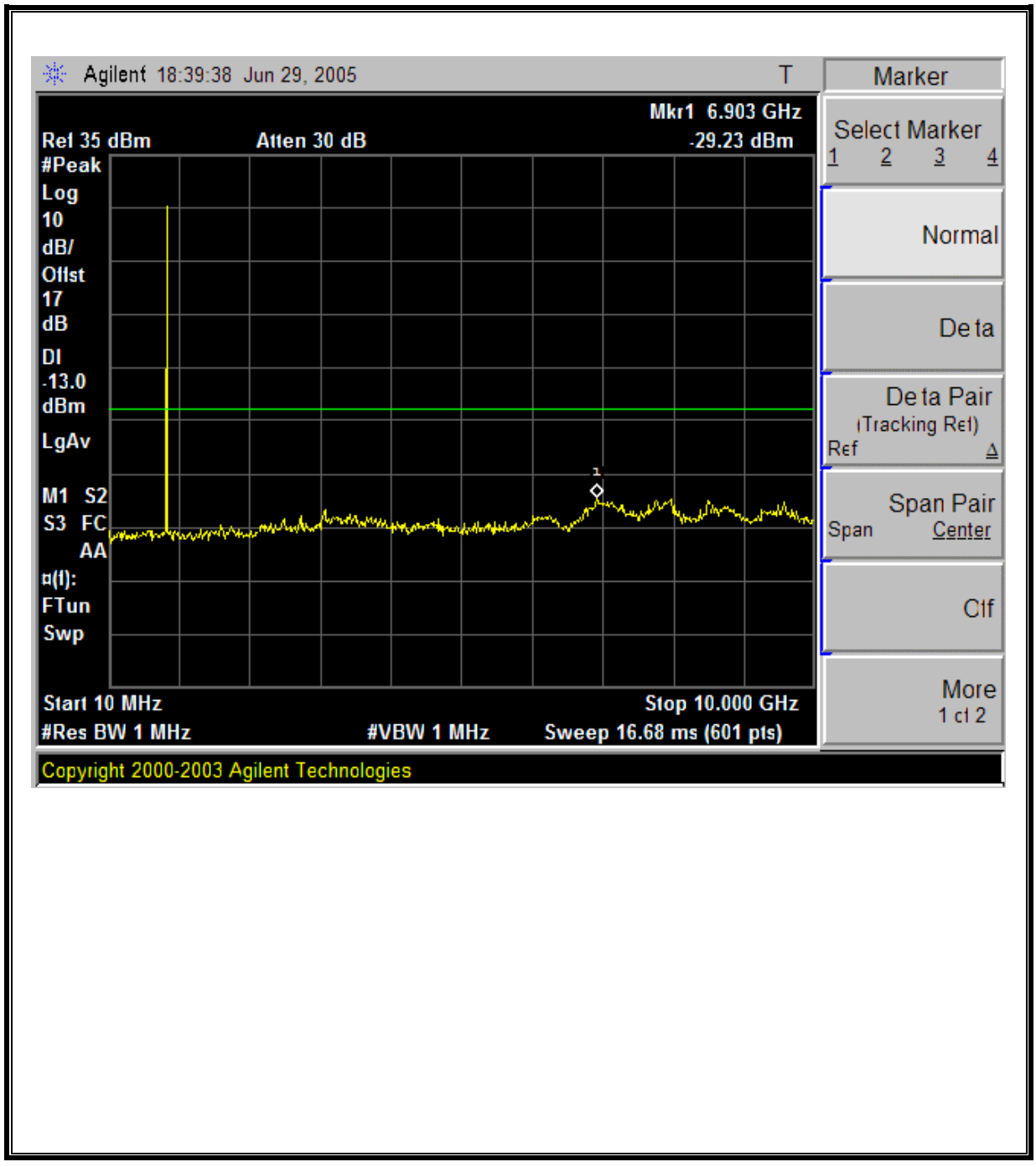


GPRS850 Mobile Emissions in Base Frequency Range

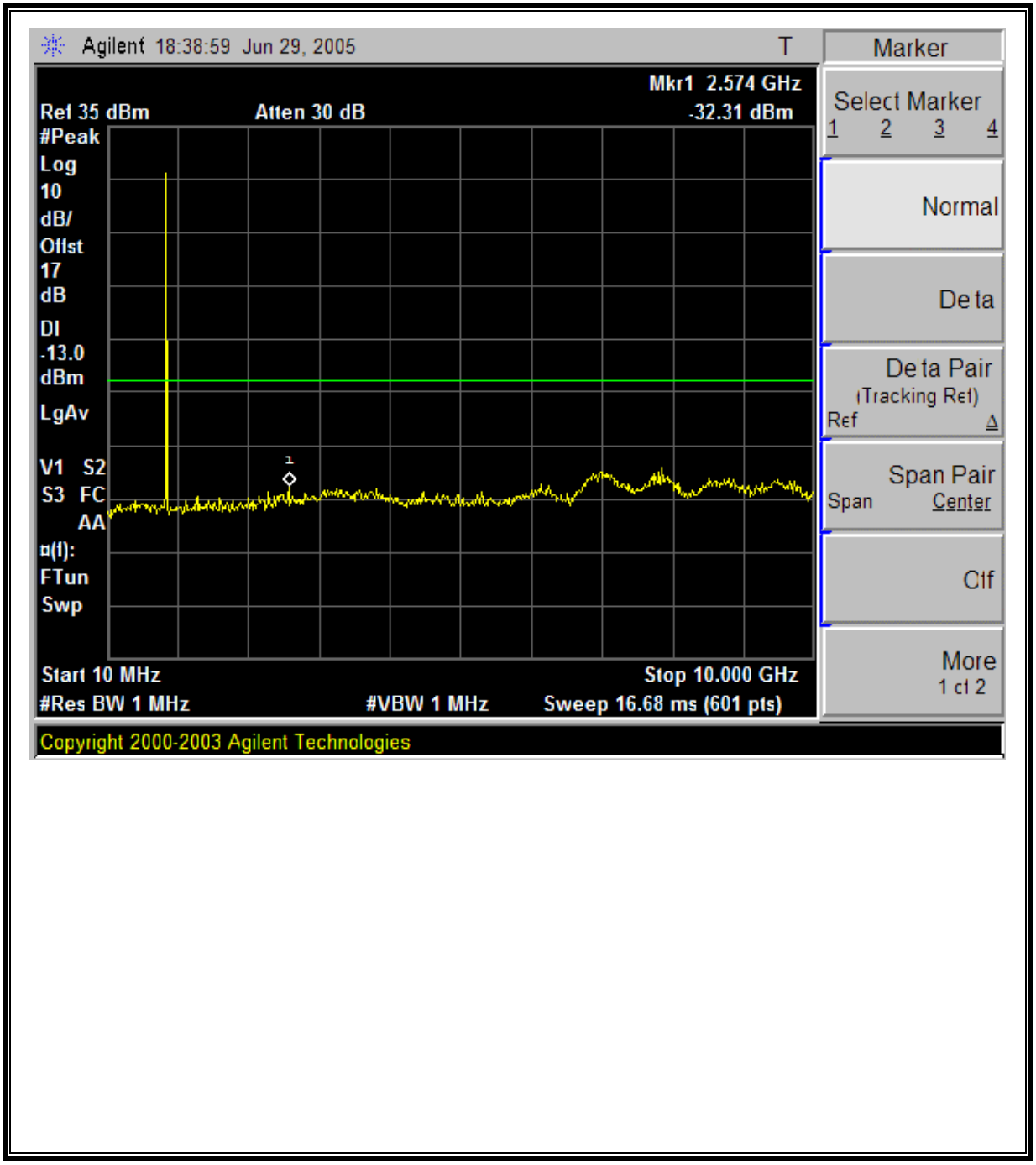


EGPRSM850 MODULATION RESULTS

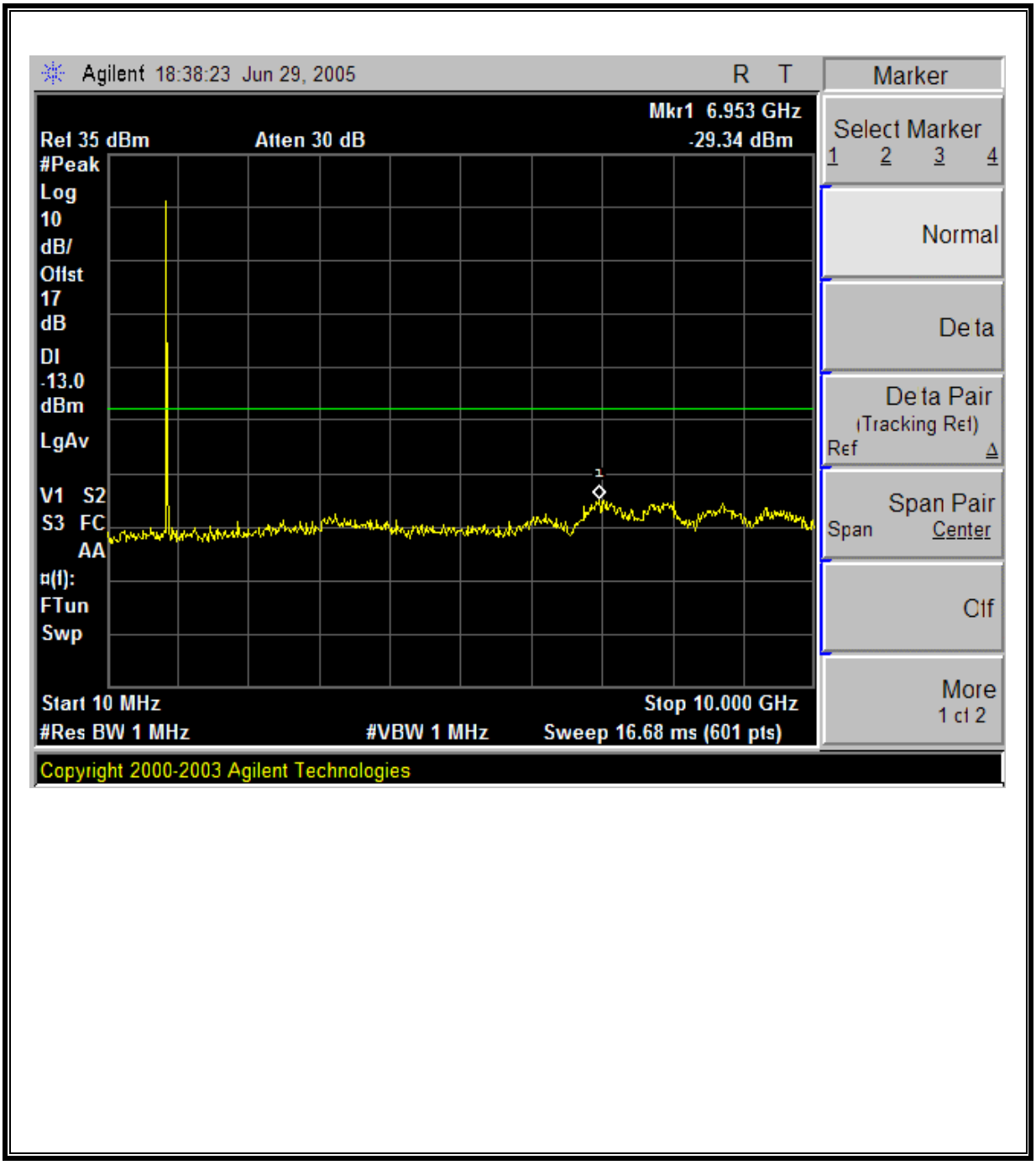
EGPRS850 Modulation: Low Channel Out-Of-Band Emissions



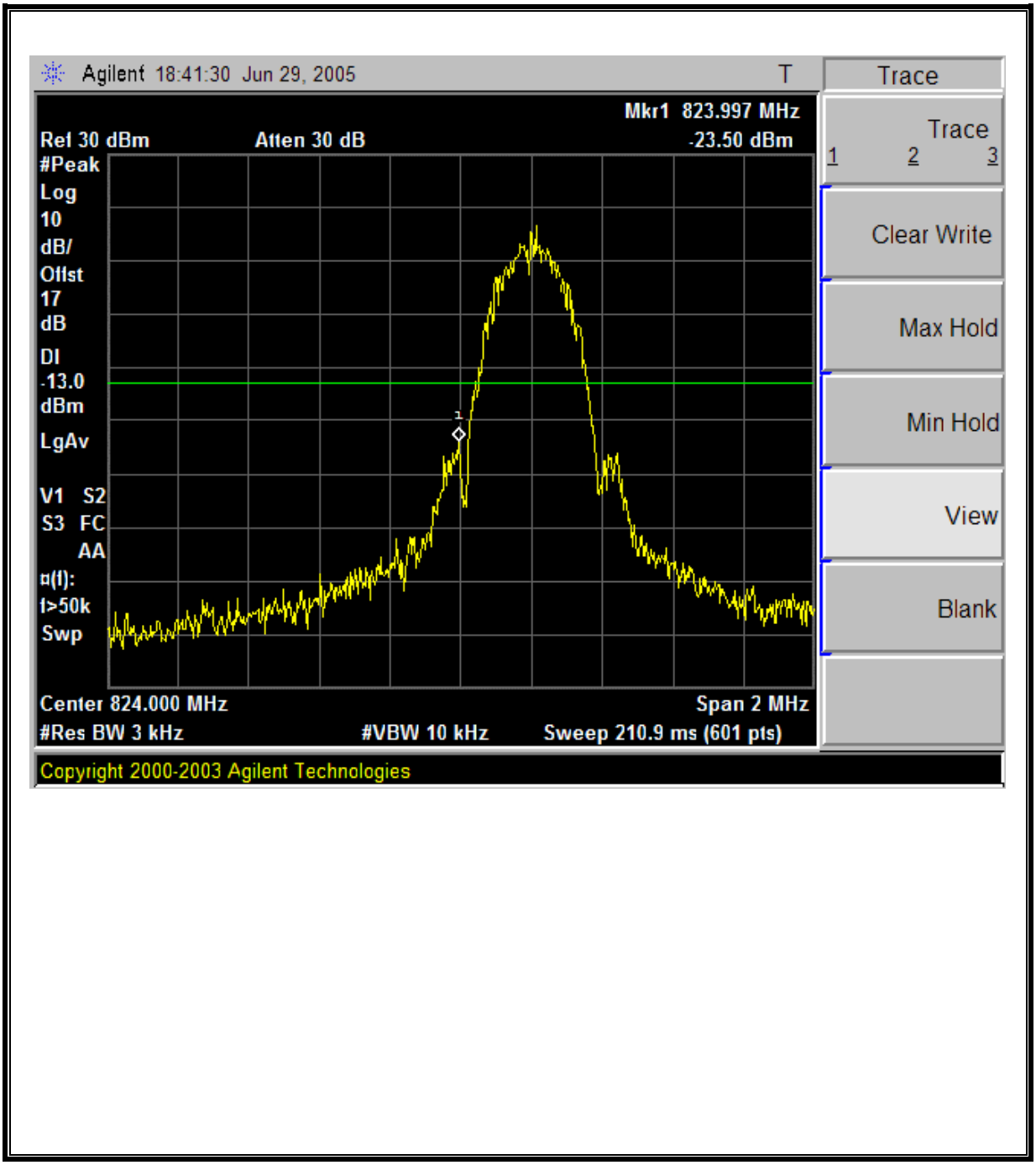
EGPRS850 Modulation: Mid Channel Out-Of-Band Emissions



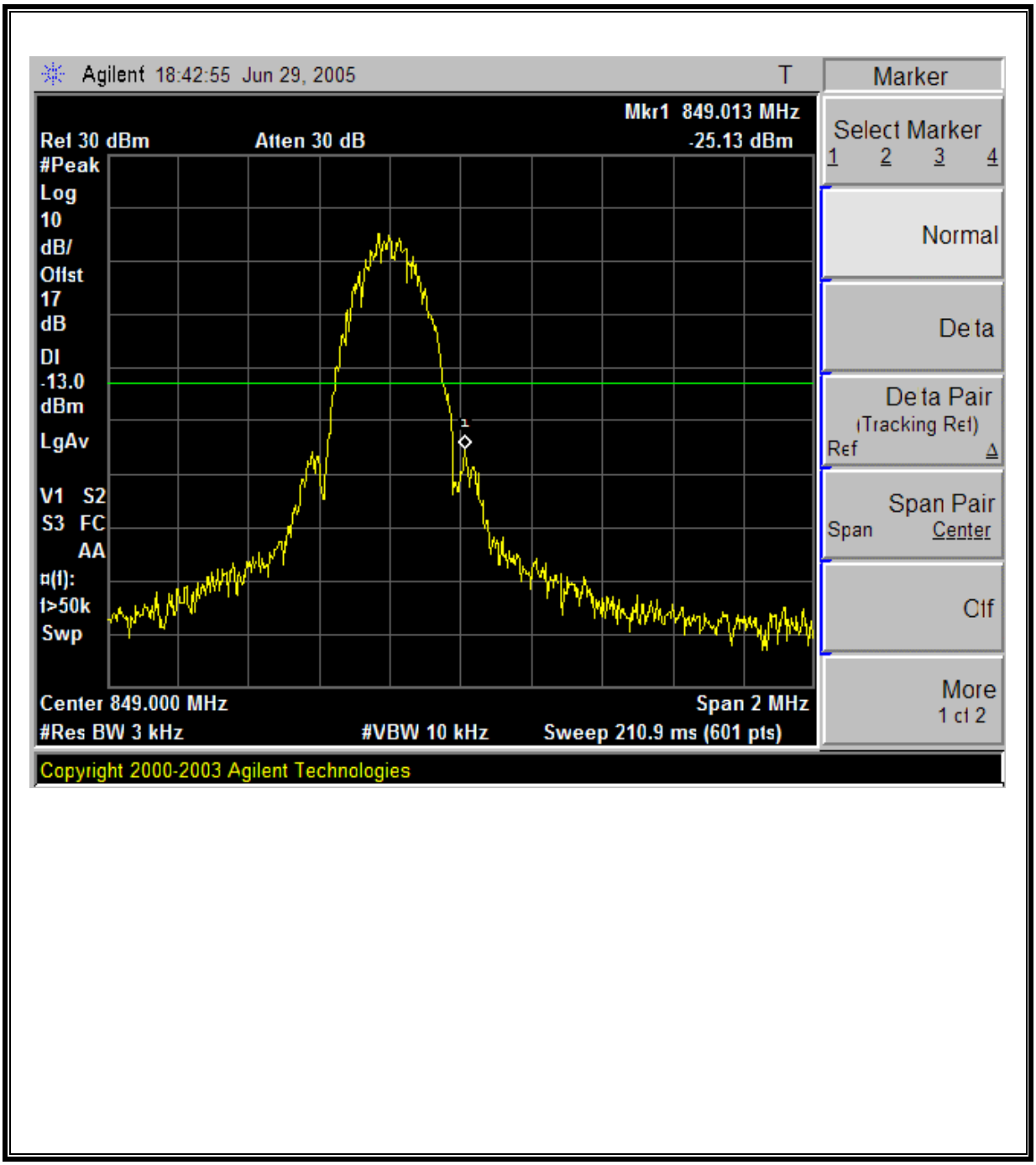
EGPRS850 Modulation: High Channel Out-Of-Band Emissions



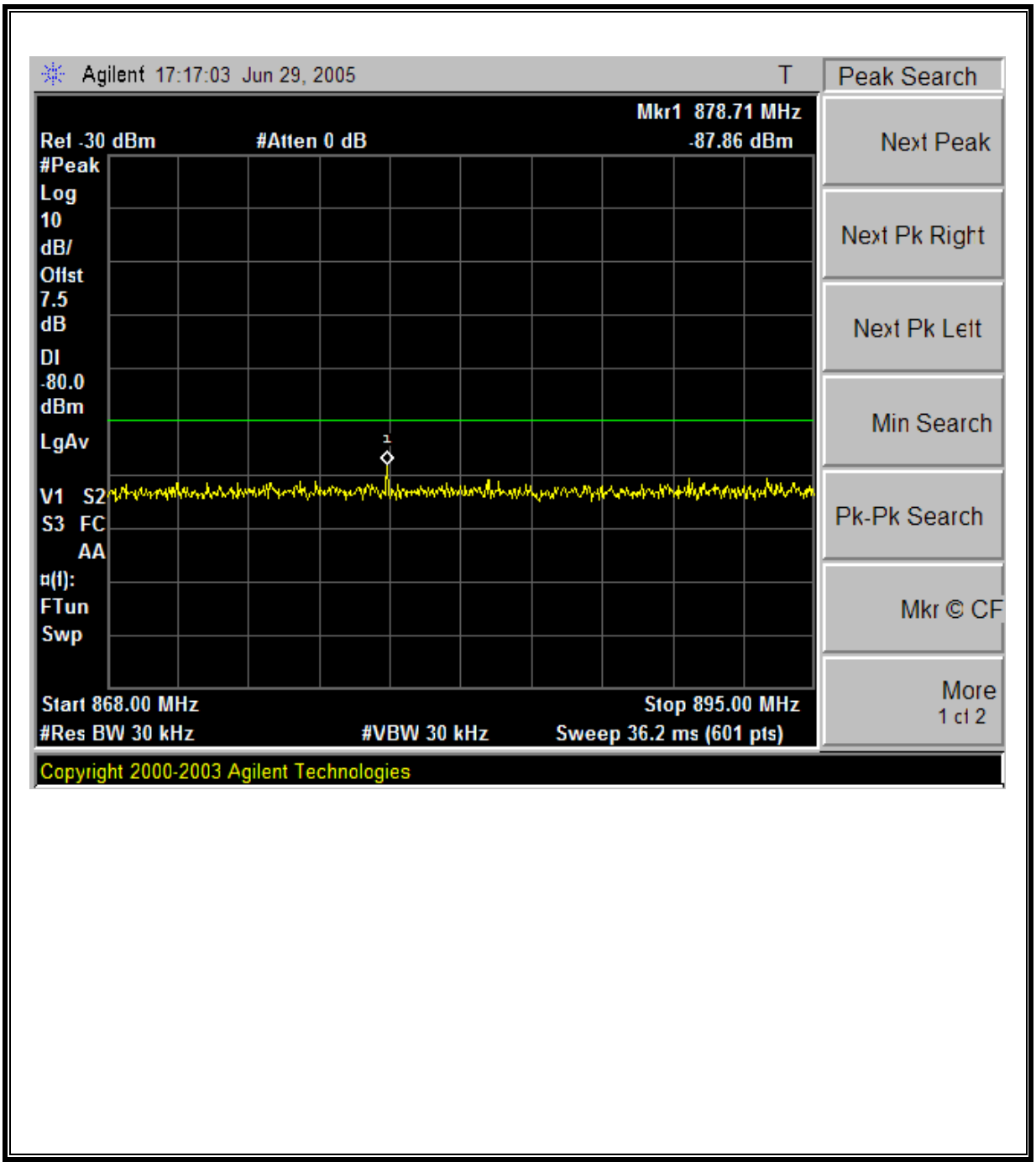
EGPRS850 Modulation: Low Channel Band Edge



EGPRS850 Modulation: High Channel Band Edge

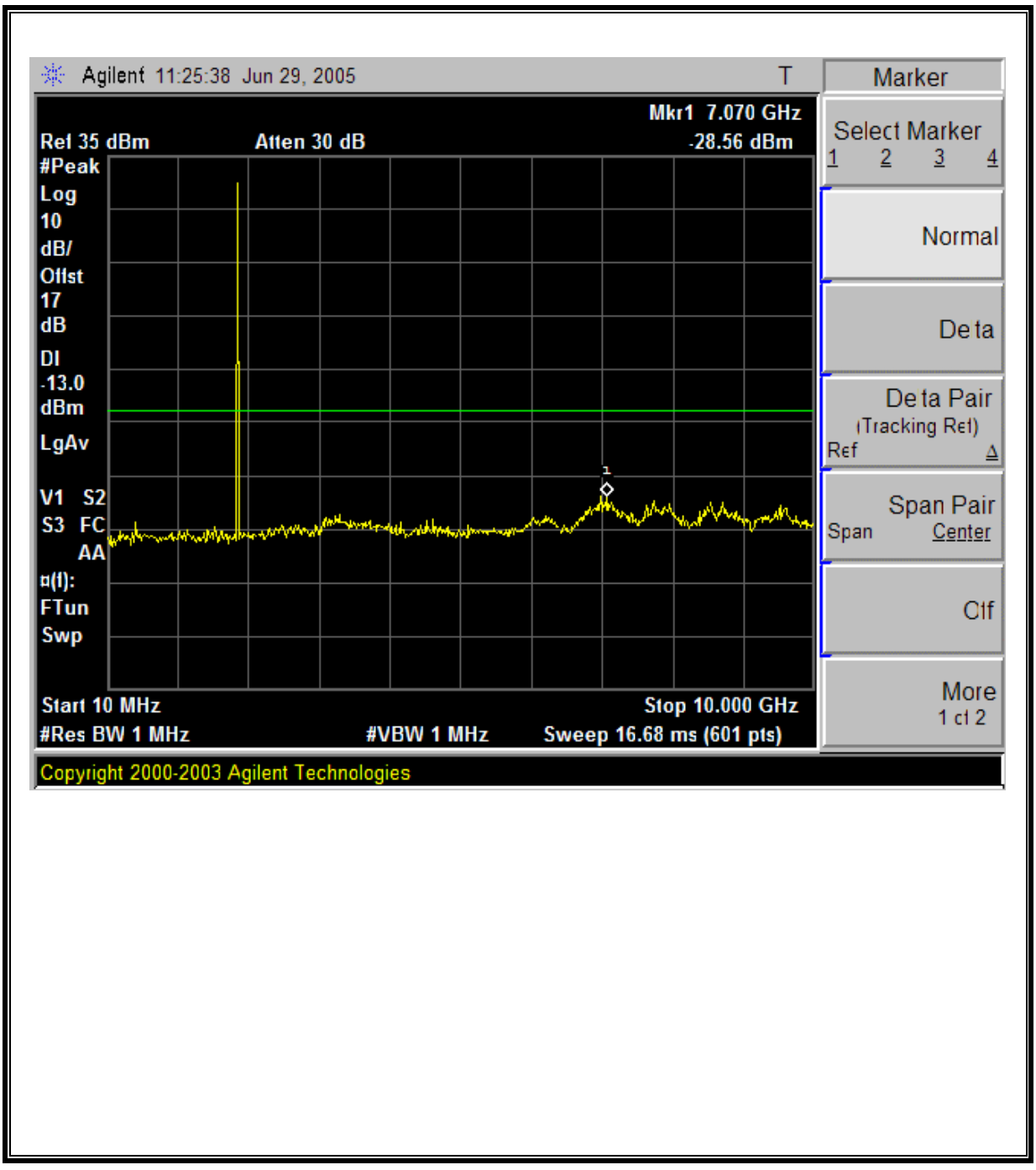


GSM850 Mobile Emissions in Base Frequency Range

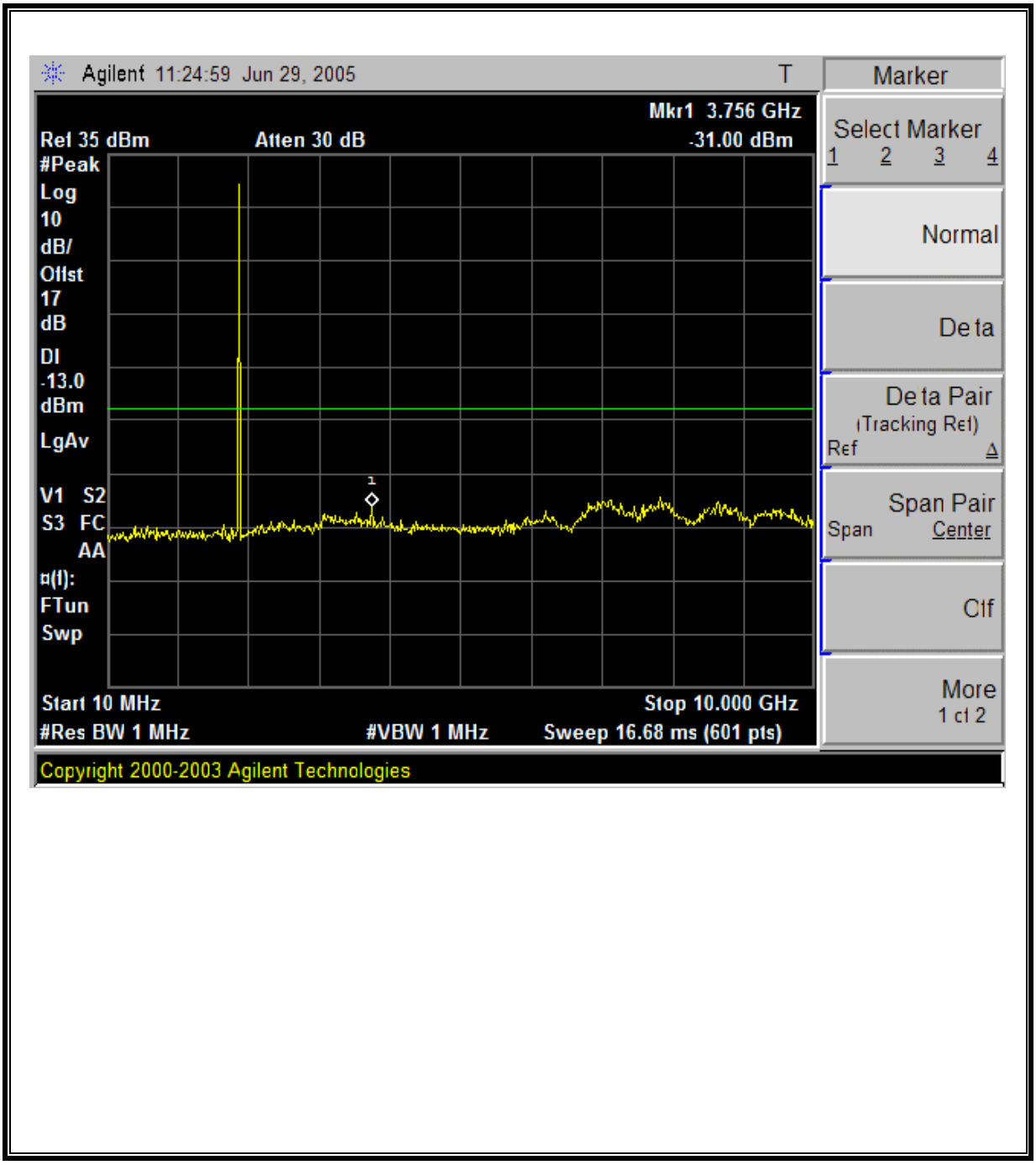


PCS GSM1900 MODULATION RESULTS

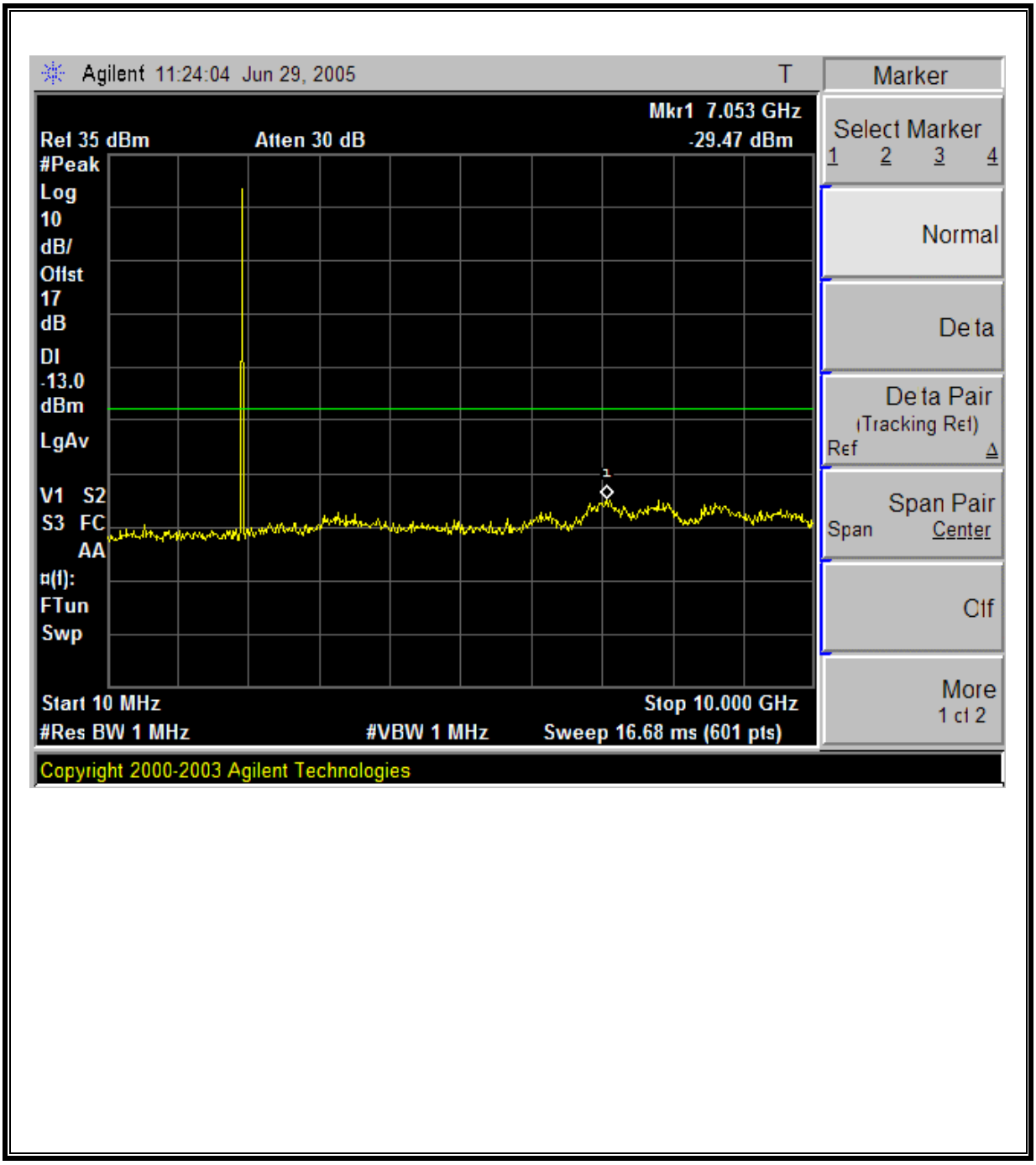
Low Channel, Out-Of-Band Emissions



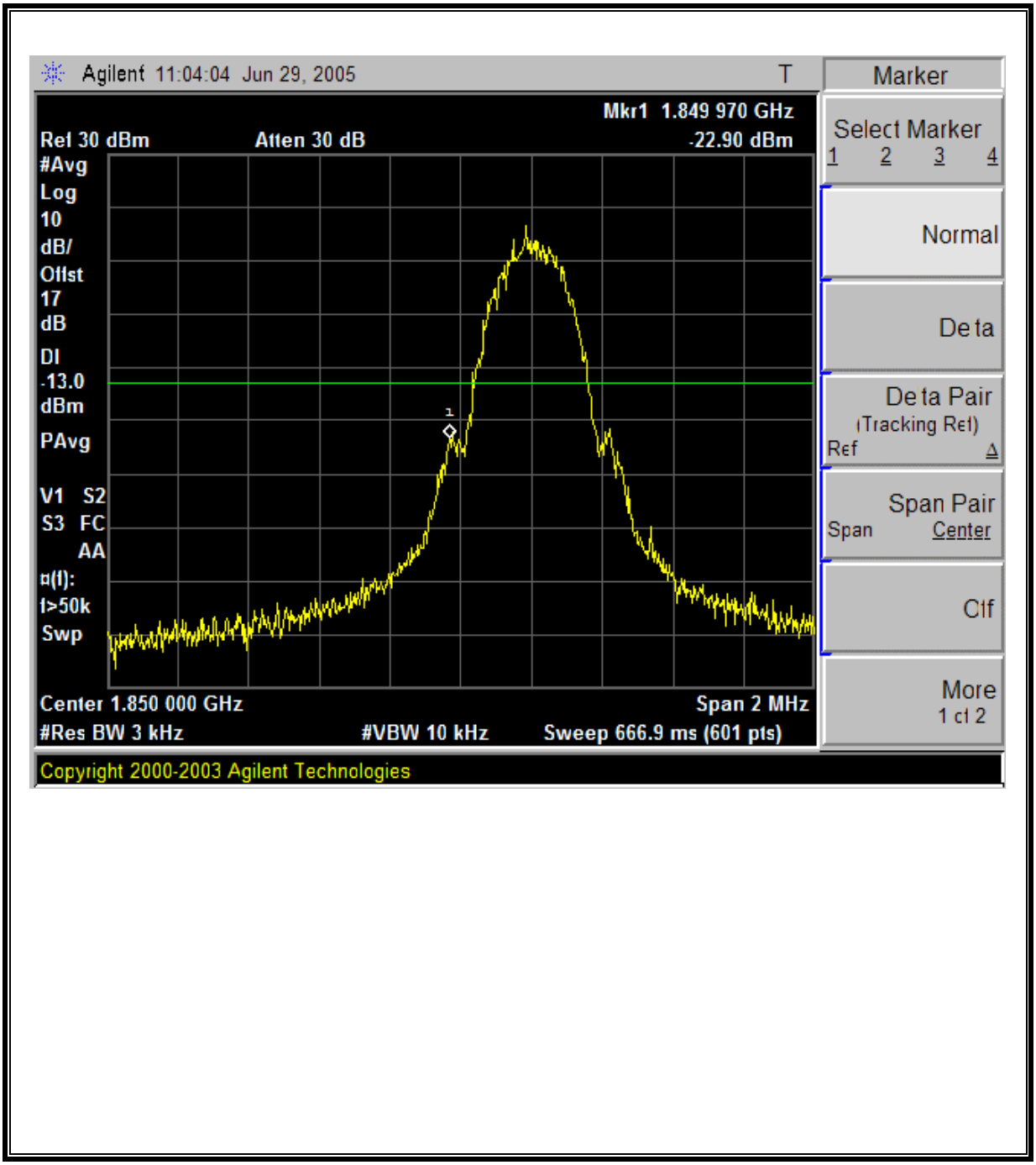
Mid Channel, Out-Of-Band Emissions



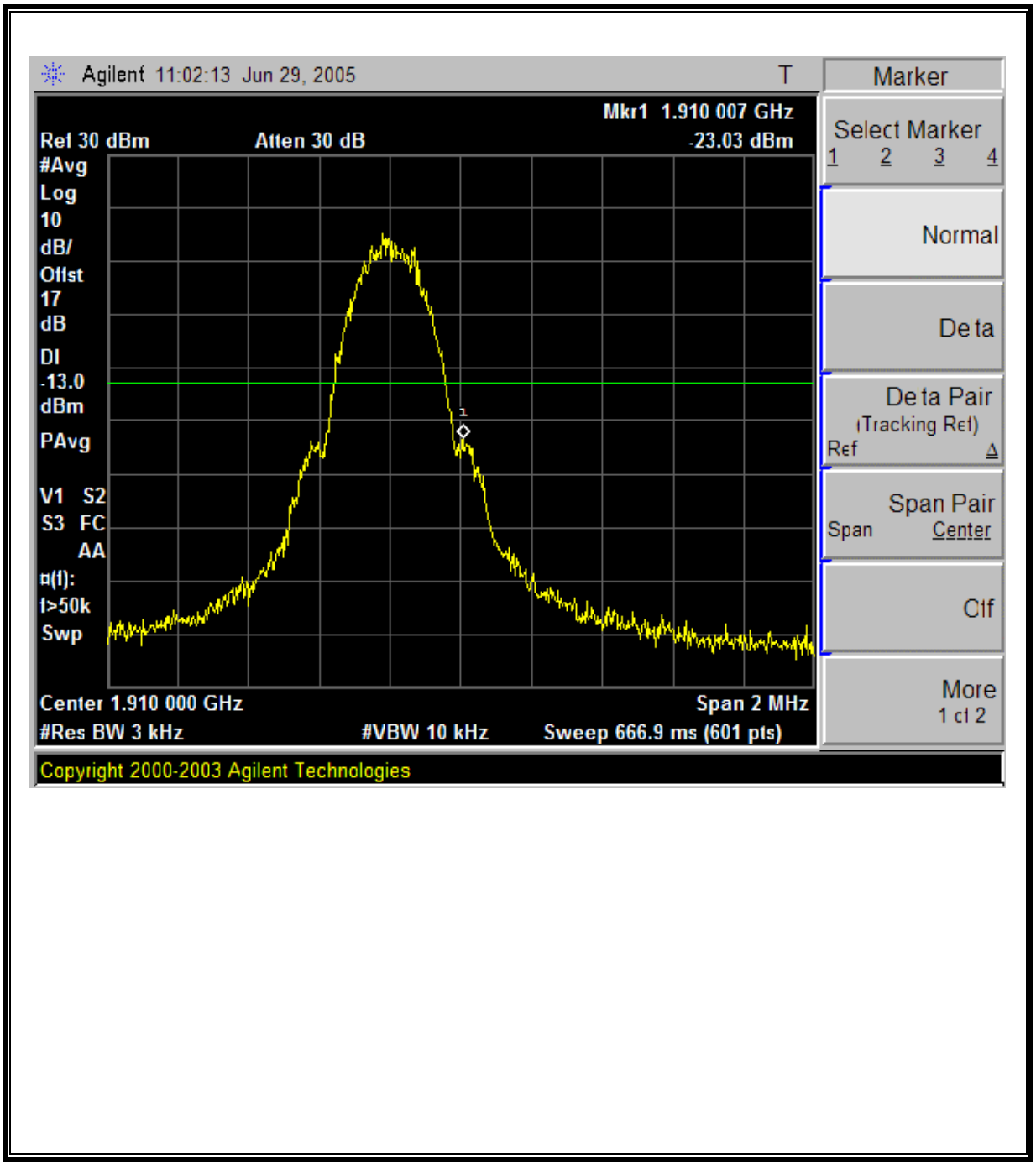
High Channel, Out-Of-Band Emissions



Low Channel Band Edge

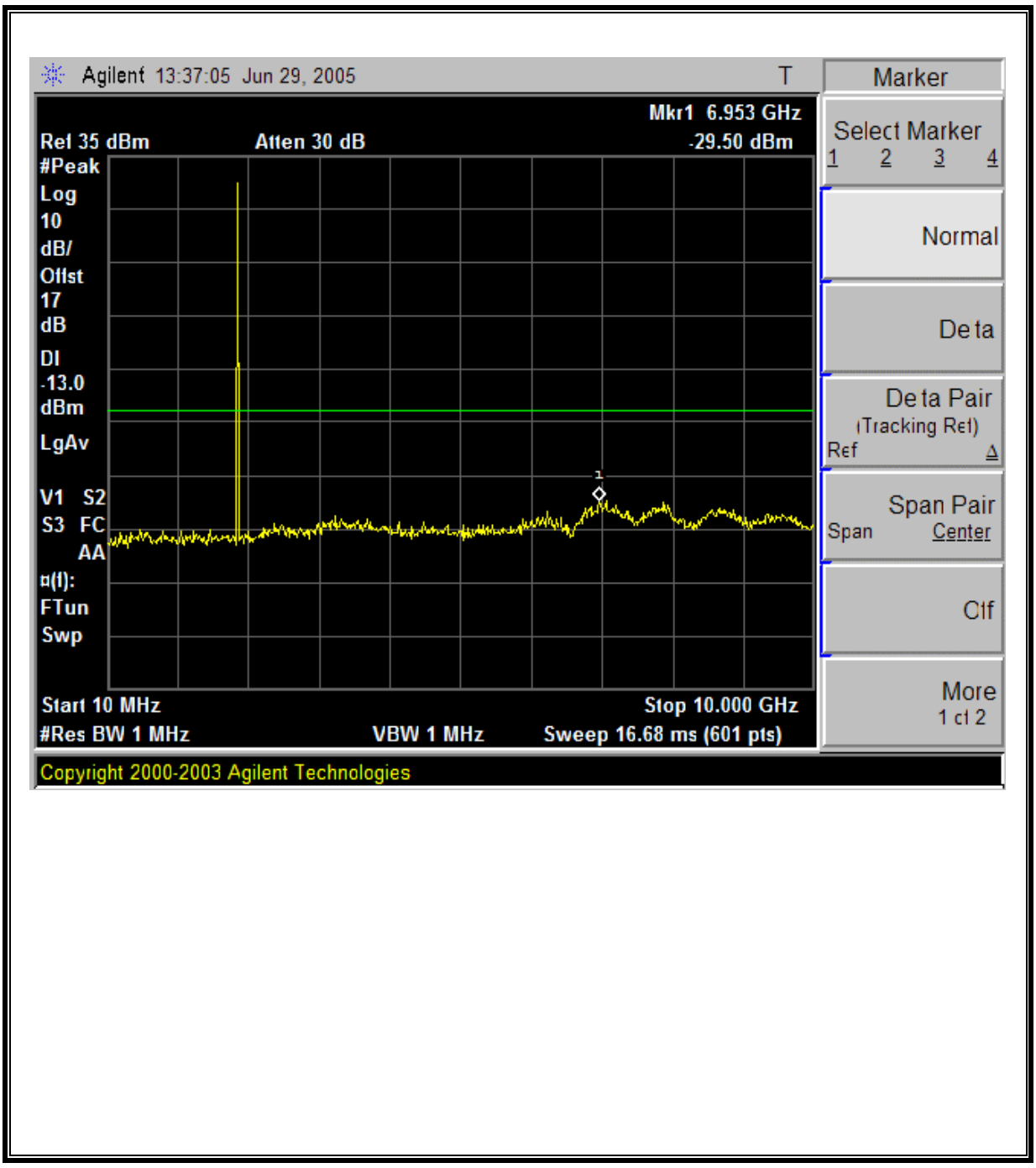


High Channel Band Edge

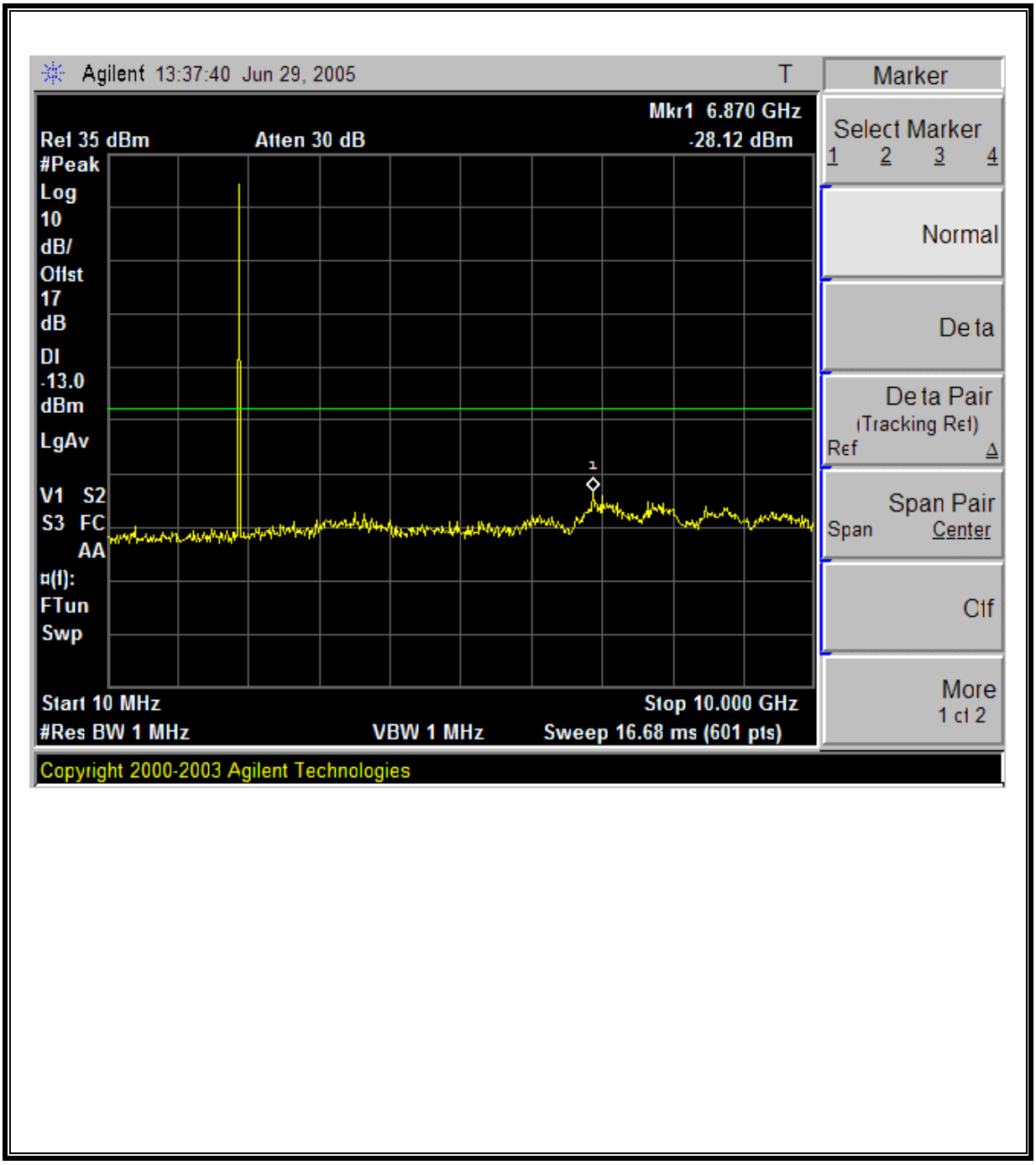


PCS GPRS 1900 MODULATION RESULTS

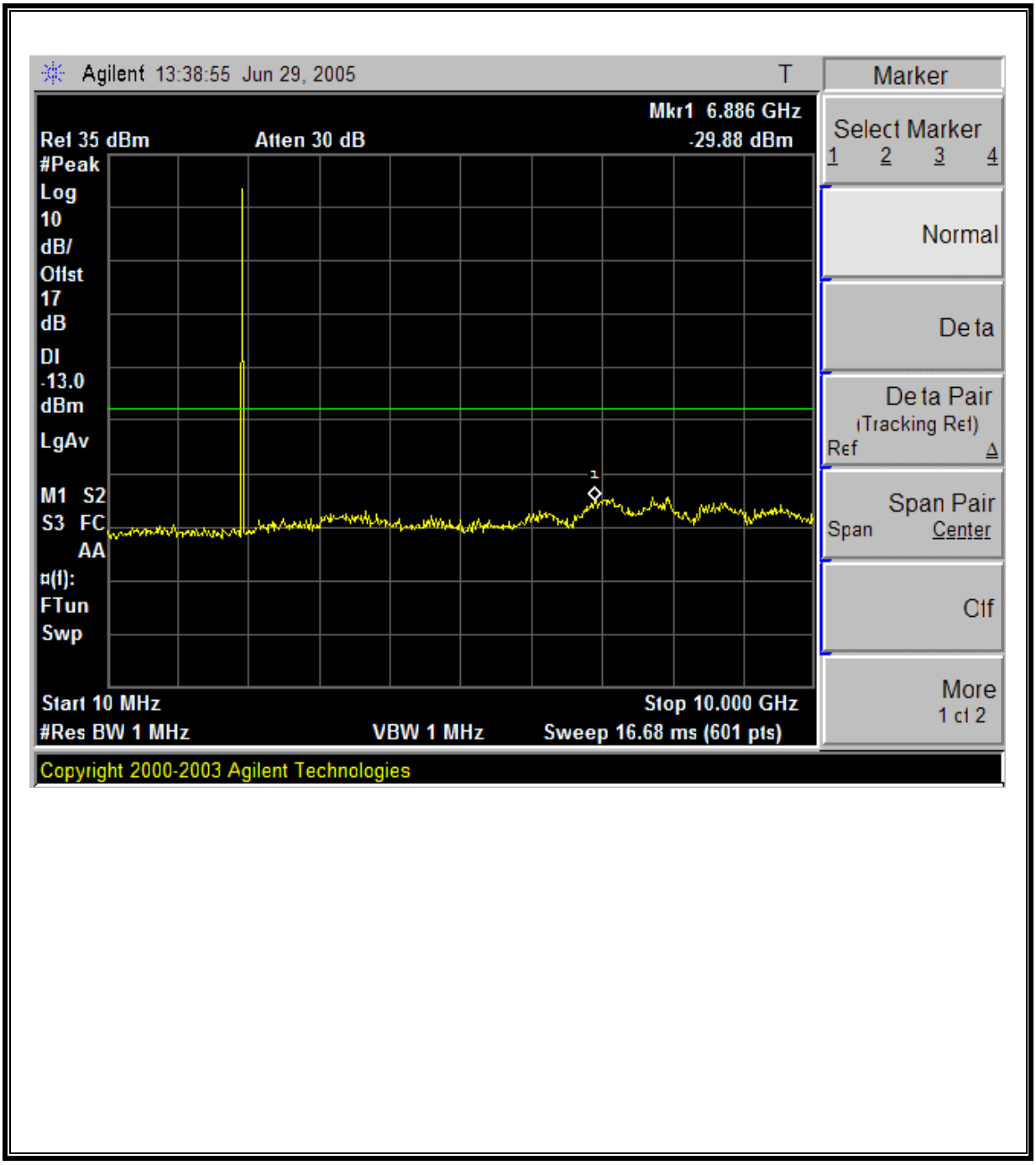
Low Channel, Out-Of-Band Emissions



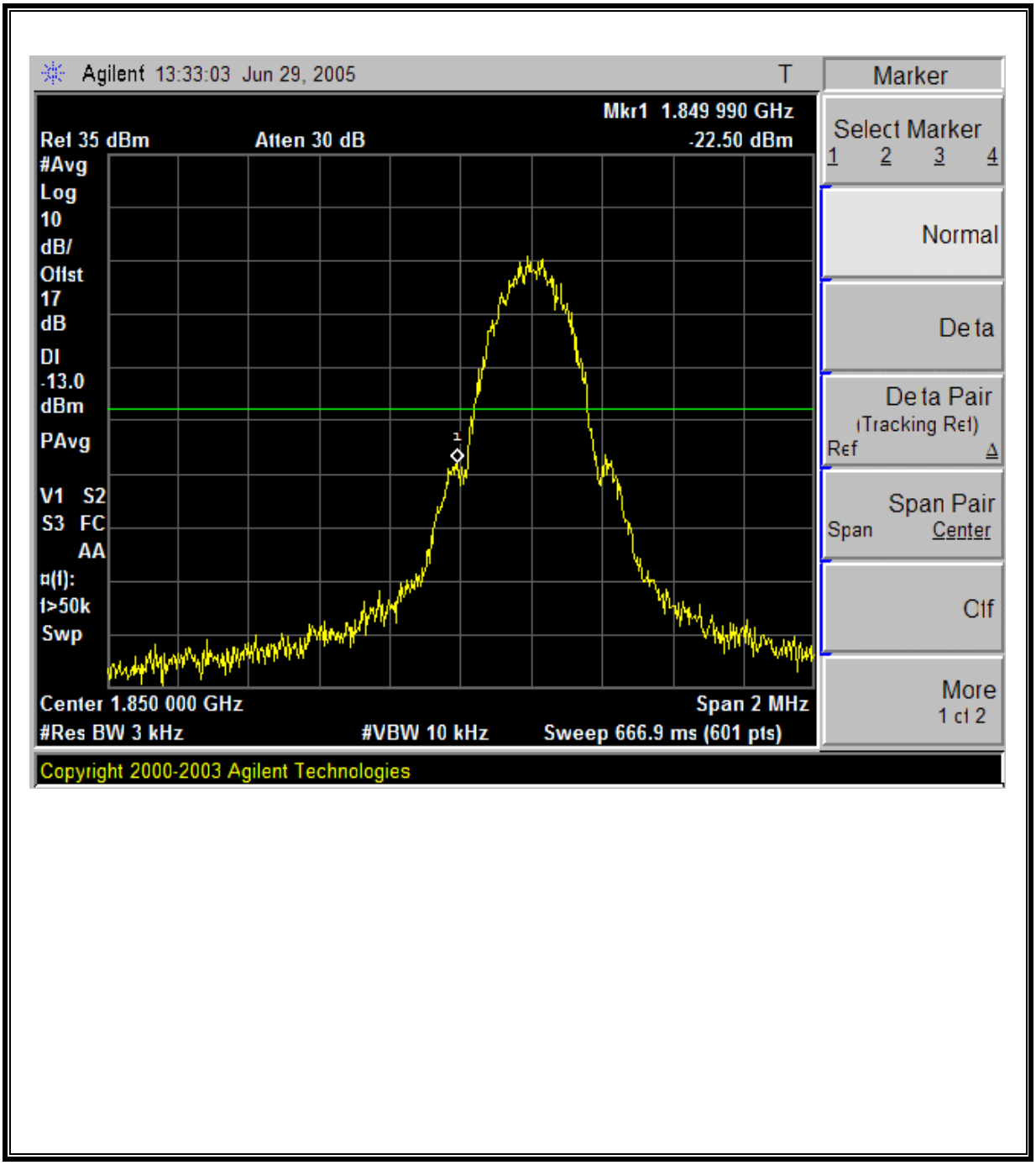
Mid Channel, Out-Of-Band Emissions



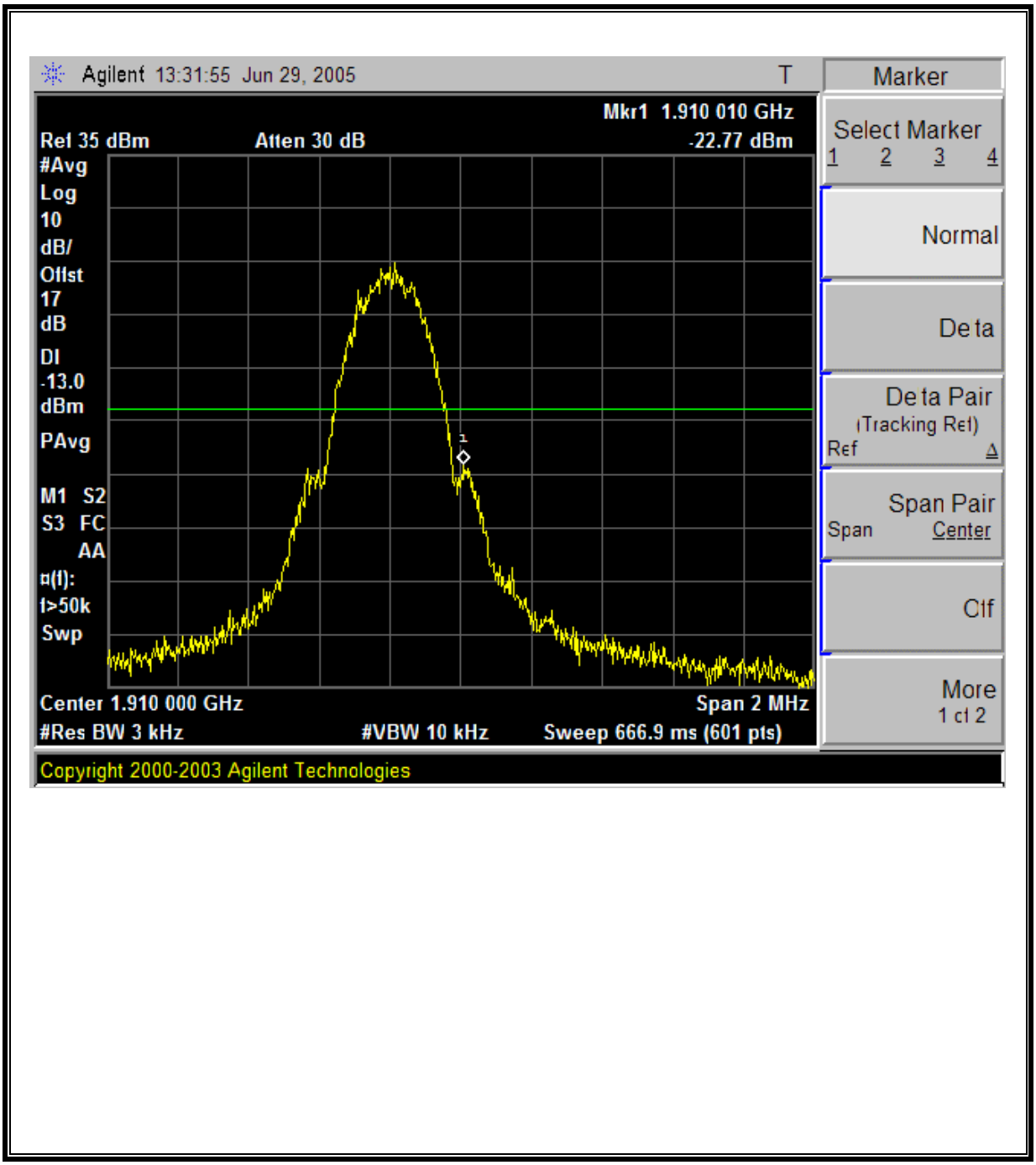
High Channel, Out-Of-Band Emissions



Low Channel Band Edge

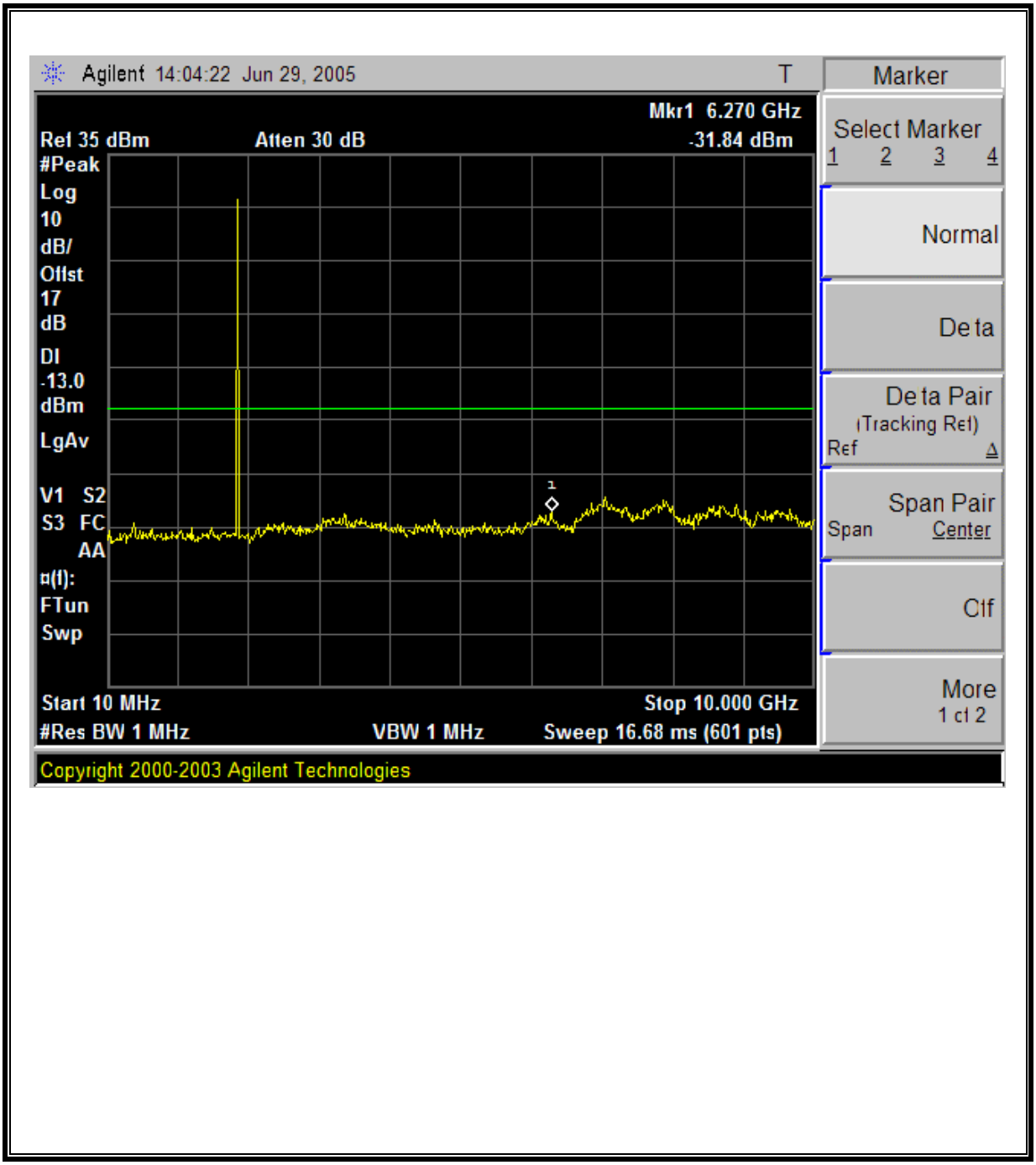


High Channel Band Edge

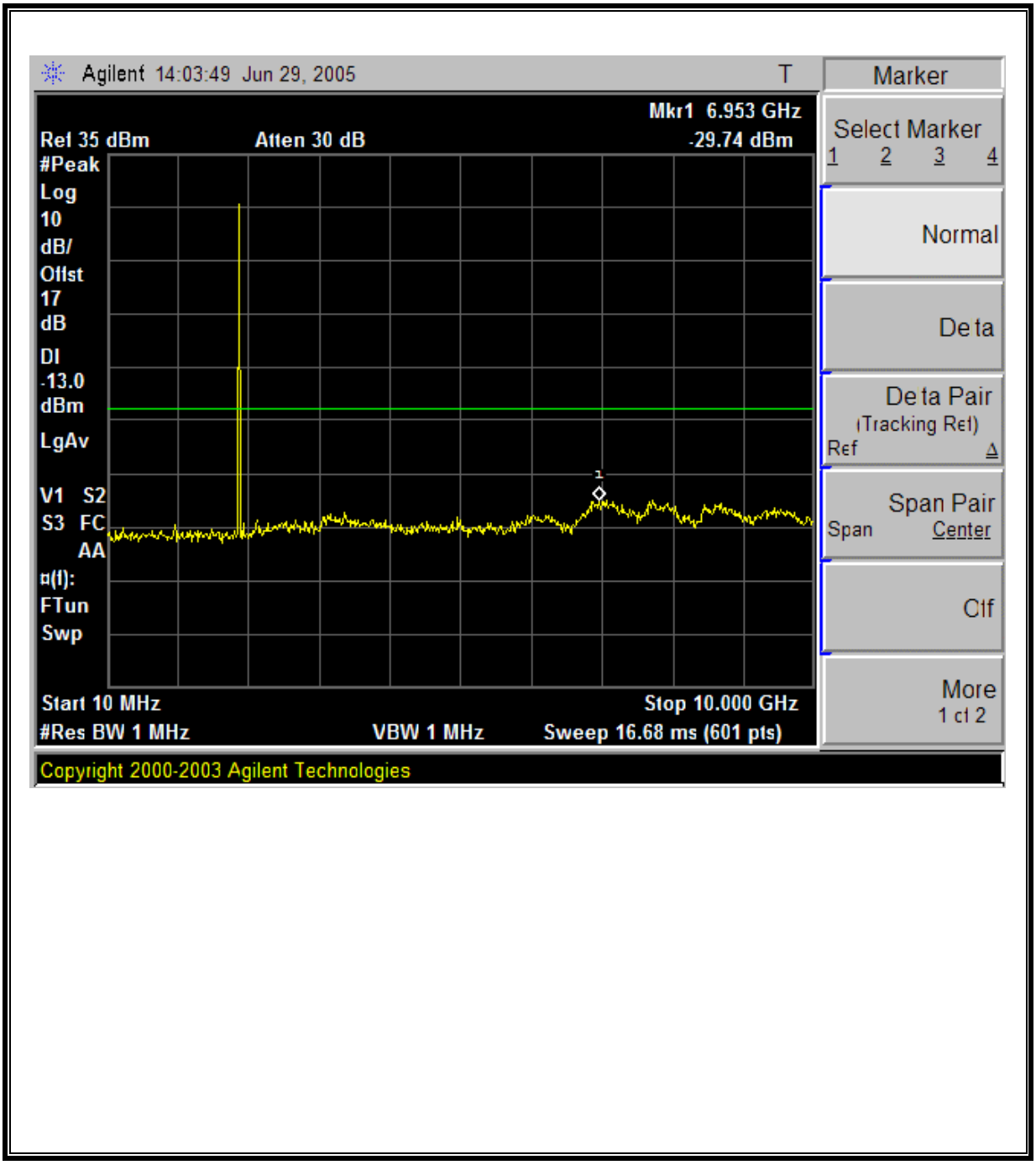


PCS EGPRS 1900 MODULATION RESULTS

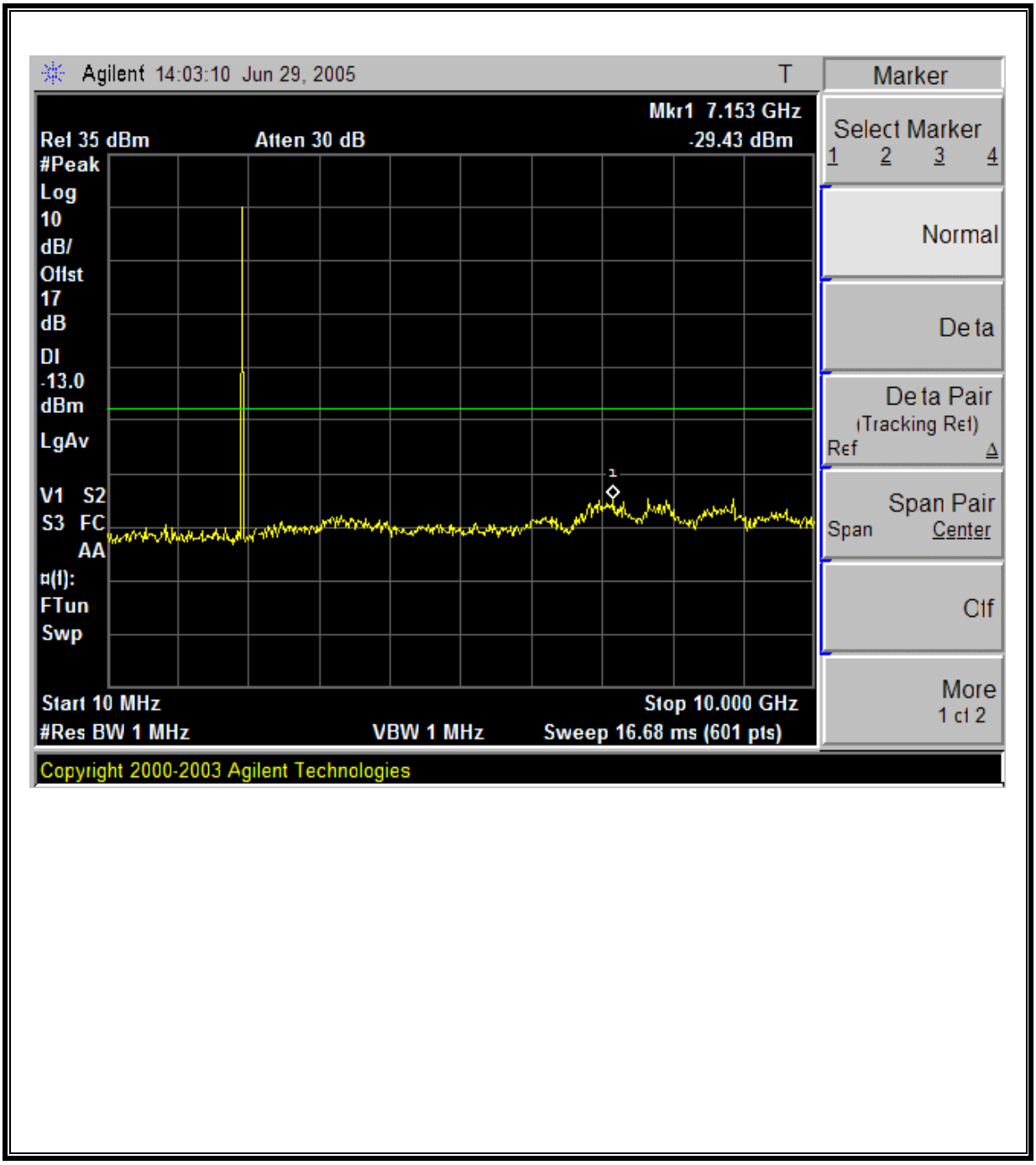
Low Channel, Out-Of-Band Emissions



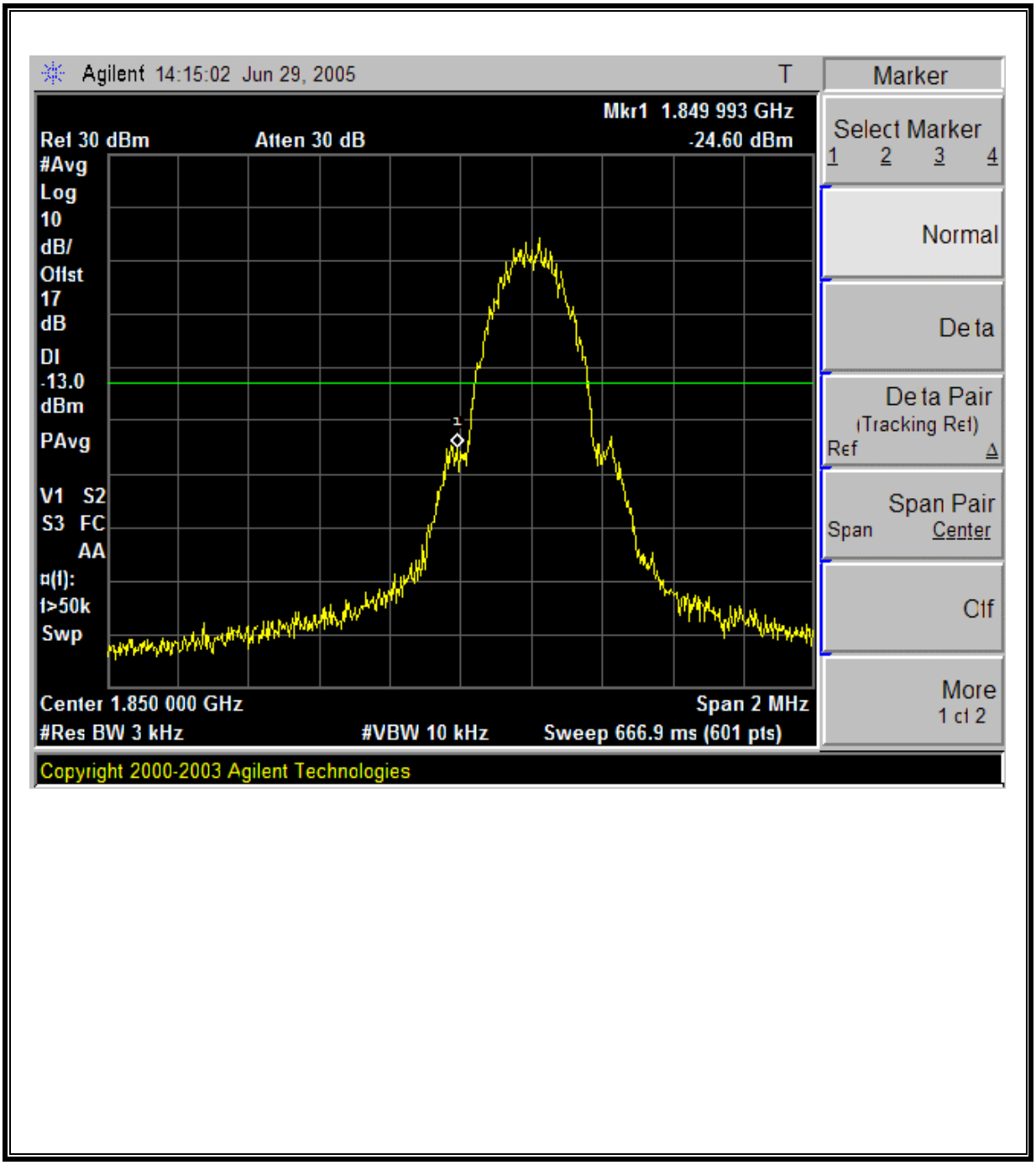
Mid Channel, Out-Of-Band Emissions



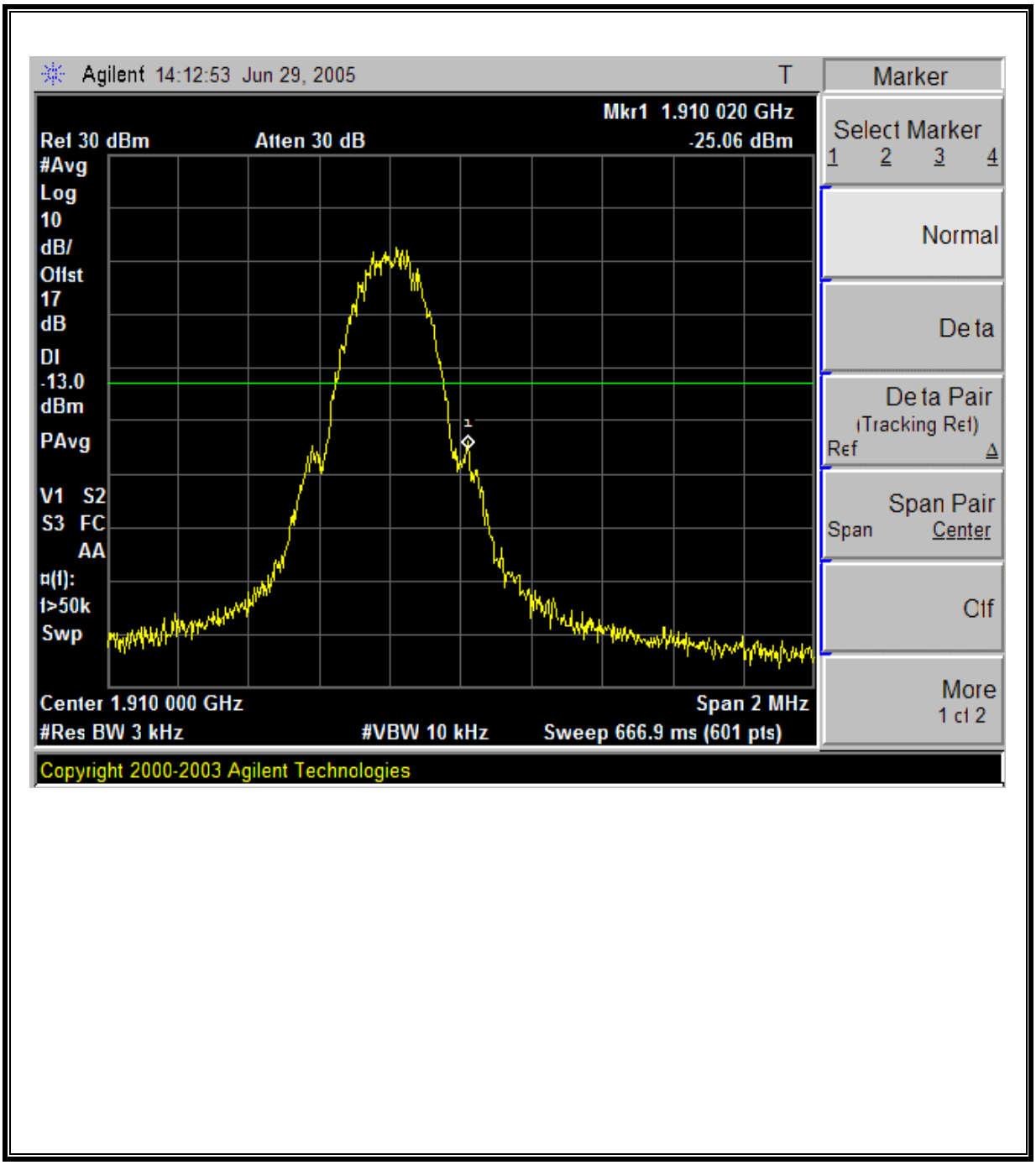
High Channel, Out-Of-Band Emissions



Low Channel Band Edge



High Channel Band Edge



8.5. FIELD STRENGTH OF SPURIOUS RADIATION

LIMIT

§22.917 (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.
§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 (b)
ANSI / TIA / EIA 603 Clause 3.2.12 & FCC 24.238 (b)

RESULTS

No non-compliance noted.

GSM850 / GPRS850 / EGPRS850 Band (ERP), 30-1000MHz

06/30/05 High Frequency Substitution Measurement
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr: Chin Pang
Project #: 05T3459-1
Company: High Tech Computer
EUT Descrip.: Smatphone (GSM800/1900/EDGE/BT/802.11b)
EUT M/N: ST22A
Test Target: FCC 22
Mode Oper: GSM850

Test Equipment:

Bilog Antenna	Cable	Pre-amplifier 8447D	Limit
5m Chamber Sunol Bilog	5m Chamber Cable	T5 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
122.15	60.5	H	-47.2	1.4	-2.5	-4.7	-53.3	-13.0	-40.3	
149.31	56.4	H	-52.0	1.5	0.3	-1.8	-55.4	-13.0	-42.4	
212.36	58.9	H	-51.5	1.9	5.8	3.6	-49.8	-13.0	-36.8	
260.56	57.3	H	-51.3	2.0	6.1	3.9	-49.3	-13.0	-36.3	
120.21	62.4	V	-45.2	1.4	-2.7	-4.8	-51.4	-13.0	-38.4	
142.52	60.5	V	-48.1	1.5	-0.6	-2.7	-52.3	-13.0	-39.3	
240.50	63.6	V	-45.9	1.9	6.0	3.8	-43.9	-13.0	-30.9	
371.44	59.8	V	-45.9	2.3	6.0	3.9	-44.3	-13.0	-31.3	
Both GPRS850 and EGPRS850 have the same readings as above.										

GSM850 Spurious & Harmonic (ERP)

06/30/05 **High Frequency Substitution Measurement**
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr:Chin Pang
Project #:05T3459-1
Company:High Tech Computer
EUT Descrip.:Smatphone (GSM800/1900/EDGE/BT/802.11b)
EUT M/N:ST22A
Test Target:Part 22
Mode Oper:GSM850

Test Equipment:

EMCO Horn 1-18GHz: T60; S/N: 2238 @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
GSM850										
Low Ch										
1.648	84.0	V	-23.0	1.6	7.9	5.7	-18.8	-13.0	-5.8	
2.472	63.3	V	-41.5	1.9	9.8	7.6	-35.8	-13.0	-22.8	
3.296	52.0	V	-49.5	2.3	9.7	7.6	-44.2	-13.0	-31.2	
4.121	48.8	V	-50.1	2.6	9.8	7.7	-45.0	-13.0	-32.0	
4.945	49.3	V	-48.7	3.0	11.1	9.0	-42.6	-13.0	-29.6	
1.648	78.3	H	-27.9	1.6	7.9	5.7	-23.8	-13.0	-10.8	
2.472	63.0	H	-41.6	1.9	9.8	7.6	-35.9	-13.0	-22.9	
3.296	58.0	H	-43.4	2.3	9.7	7.6	-38.1	-13.0	-25.1	
4.121	50.0	H	-48.5	2.6	9.8	7.7	-43.4	-13.0	-30.4	
4.945	49.4	H	-48.2	3.0	11.1	9.0	-42.2	-13.0	-29.2	
Mid Ch										
1.672	79.4	V	-27.5	1.6	7.9	5.8	-23.3	-13.0	-10.3	
2.509	65.0	V	-39.6	1.9	9.8	7.6	-33.9	-13.0	-20.9	
3.346	60.3	V	-41.0	2.3	9.7	7.6	-35.8	-13.0	-22.8	
4.182	52.0	V	-46.8	2.6	9.9	7.8	-41.6	-13.0	-28.6	
5.018	52.8	V	-43.8	3.0	11.2	9.1	-37.8	-13.0	-24.8	
1.672	76.9	H	-29.3	1.6	7.9	5.8	-25.1	-13.0	-12.1	
2.509	62.1	H	-42.3	1.9	9.8	7.6	-36.6	-13.0	-23.6	
3.346	56.6	H	-44.6	2.3	9.7	7.6	-39.4	-13.0	-26.4	
4.182	55.2	H	-43.3	2.6	9.9	7.8	-38.1	-13.0	-25.1	
5.018	50.0	V	-46.6	3.0	11.2	9.1	-40.6	-13.0	-27.6	
High Ch										
1.697	80.0	V	-26.8	1.6	8.0	5.8	-22.6	-13.0	-9.6	
2.546	64.5	V	-40.0	2.0	9.8	7.6	-34.3	-13.0	-21.3	
3.395	49.8	V	-51.4	2.3	9.7	7.6	-46.1	-13.0	-33.1	
4.244	49.4	V	-49.3	2.7	10.0	7.9	-44.1	-13.0	-31.1	
5.091	51.8	V	-44.7	3.0	11.2	9.0	-38.7	-13.0	-25.7	
1.697	73.5	H	-32.6	1.6	8.0	5.8	-28.3	-13.0	-15.3	
2.546	60.2	H	-44.1	2.0	9.8	7.6	-38.4	-13.0	-25.4	
3.395	54.1	H	-47.0	2.3	9.7	7.6	-41.7	-13.0	-28.7	
4.244	48.3	H	-50.1	2.7	10.0	7.9	-44.9	-13.0	-31.9	
5.091	48.6	H	-46.8	3.0	11.2	9.0	-40.9	-13.0	-27.9	
Note: No other emissions were detected above the system noise floor.										

GPRS850 Spurious & Harmonic (ERP)

06/30/05 **High Frequency Substitution Measurement**
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr:Chin Pang
Project #:05T3459-1
Company:High Tech Computer
EUT Descrip.:Smatphone (GSM800/1900/EDGE/BT/802.11b)
EUT M/N:ST22A
Test Target:Part 22
Mode Oper:GPRS850

Test Equipment:

EMCO Horn 1-18GHz: T60; S/N: 2238 @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
GSM850										
Low Ch										
1.648	63.8	V	-43.2	1.6	7.9	5.7	-39.0	-13.0	-26.0	
2.472	53.5	V	-51.3	1.9	9.8	7.6	-45.6	-13.0	-32.6	
3.296	51.8	V	-49.7	2.3	9.7	7.6	-44.4	-13.0	-31.4	
4.121	51.7	V	-47.2	2.6	9.8	7.7	-42.1	-13.0	-29.1	
4.945	50.0	V	-48.0	3.0	11.1	9.0	-41.9	-13.0	-28.9	
1.648	67.8	H	-38.4	1.6	7.9	5.7	-34.3	-13.0	-21.3	
2.472	51.1	H	-53.5	1.9	9.8	7.6	-47.8	-13.0	-34.8	
3.296	50.2	H	-51.2	2.3	9.7	7.6	-45.9	-13.0	-32.9	
4.121	50.5	H	-48.0	2.6	9.8	7.7	-42.9	-13.0	-29.9	
4.945	48.0	H	-49.6	3.0	11.1	9.0	-43.6	-13.0	-30.6	
Mid Ch										
1.672	62.5	V	-44.4	1.6	7.9	5.8	-40.2	-13.0	-27.2	
2.509	50.0	V	-54.6	1.9	9.8	7.6	-48.9	-13.0	-35.9	
3.346	51.8	V	-49.5	2.3	9.7	7.6	-44.3	-13.0	-31.3	
4.182	48.6	V	-50.2	2.6	9.9	7.8	-45.0	-13.0	-32.0	
5.018	49.4	V	-47.2	3.0	11.2	9.1	-41.2	-13.0	-28.2	
1.672	62.5	H	-43.7	1.6	7.9	5.8	-39.5	-13.0	-26.5	
2.509	53.8	H	-50.6	1.9	9.8	7.6	-44.9	-13.0	-31.9	
3.346	48.6	H	-52.6	2.3	9.7	7.6	-47.4	-13.0	-34.4	
4.182	53.4	H	-45.1	2.6	9.9	7.8	-39.9	-13.0	-26.9	
5.018	47.6	H	-48.0	3.0	11.2	9.1	-42.0	-13.0	-29.0	
High Ch										
1.697	64.0	V	-42.8	1.6	8.0	5.8	-38.6	-13.0	-25.6	
2.546	50.6	V	-53.9	2.0	9.8	7.6	-48.2	-13.0	-35.2	
3.395	50.8	V	-50.4	2.3	9.7	7.6	-45.1	-13.0	-32.1	
4.244	49.5	V	-49.2	2.7	10.0	7.9	-44.0	-13.0	-31.0	
5.091	50.7	V	-45.7	3.0	11.2	9.0	-39.8	-13.0	-26.8	
1.697	63.4	H	-42.7	1.6	8.0	5.8	-38.4	-13.0	-25.4	
2.546	52.7	H	-51.6	2.0	9.8	7.6	-45.9	-13.0	-32.9	
3.395	51.0	H	-50.1	2.3	9.7	7.6	-44.8	-13.0	-31.8	
4.244	50.5	H	-47.9	2.7	10.0	7.9	-42.7	-13.0	-29.7	
5.091	48.8	H	-46.6	3.0	11.2	9.0	-40.7	-13.0	-27.7	
Note: No other emissions were detected above the system noise floor.										

EGPRS850 Spurious & Harmonic (ERP)

06/30/05 **High Frequency Substitution Measurement**
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr:Chin Pang
Project #:05T3459-1
Company:High Tech Computer
EUT Descrip.:Smatphone (GSM800/1900/EDGE/BT/802.11b)
EUT M/N:ST22A
Test Target:Part 22
Mode Oper:EGPRS850

Test Equipment:

EMCO Horn 1-18GHz: T60; S/N: 2238 @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
EGPRS850										
Low Ch										
1.648	63.8	V	-43.2	1.6	7.9	5.7	-39.0	-13.0	-26.0	
2.472	53.5	V	-51.3	1.9	9.8	7.6	-45.6	-13.0	-32.6	
3.296	51.8	V	-49.7	2.3	9.7	7.6	-44.4	-13.0	-31.4	
4.121	51.7	V	-47.2	2.6	9.8	7.7	-42.1	-13.0	-29.1	
4.945	50.0	V	-48.0	3.0	11.1	9.0	-41.9	-13.0	-28.9	
1.648	62.5	H	-43.7	1.6	7.9	5.7	-39.6	-13.0	-26.6	
2.472	50.0	H	-54.6	1.9	9.8	7.6	-48.9	-13.0	-35.9	
3.296	48.6	H	-52.8	2.3	9.7	7.6	-47.5	-13.0	-34.5	
4.121	50.4	H	-48.1	2.6	9.8	7.7	-43.0	-13.0	-30.0	
4.945	47.1	H	-50.6	3.0	11.1	9.0	-44.6	-13.0	-31.6	
Mid Ch										
1.672	62.8	V	-44.1	1.6	7.9	5.8	-39.9	-13.0	-26.9	
2.509	50.2	V	-54.4	1.9	9.8	7.6	-48.7	-13.0	-35.7	
3.346	51.4	V	-49.9	2.3	9.7	7.6	-44.7	-13.0	-31.7	
4.182	49.2	V	-49.6	2.6	9.9	7.8	-44.4	-13.0	-31.4	
5.018	48.1	V	-48.5	3.0	11.2	9.1	-42.5	-13.0	-29.5	
1.672	60.2	H	-46.0	1.6	7.9	5.8	-41.8	-13.0	-28.8	
2.509	49.0	H	-55.4	1.9	9.8	7.6	-49.7	-13.0	-36.7	
3.346	48.3	H	-52.9	2.3	9.7	7.6	-47.7	-13.0	-34.7	
4.182	51.4	H	-47.1	2.6	9.9	7.8	-41.9	-13.0	-28.9	
5.018	47.2	H	-48.4	3.0	11.2	9.1	-42.4	-13.0	-29.4	
High Ch										
1.697	64.0	V	-42.8	1.6	8.0	5.8	-38.6	-13.0	-25.6	
2.546	50.6	V	-53.9	2.0	9.8	7.6	-48.2	-13.0	-35.2	
3.395	50.8	V	-50.4	2.3	9.7	7.6	-45.1	-13.0	-32.1	
4.244	49.5	V	-49.2	2.7	10.0	7.9	-44.0	-13.0	-31.0	
5.091	50.7	V	-45.7	3.0	11.2	9.0	-39.8	-13.0	-26.8	
1.697	63.4	H	-42.7	1.6	8.0	5.8	-38.4	-13.0	-25.4	
2.546	52.7	H	-51.6	2.0	9.8	7.6	-45.9	-13.0	-32.9	
3.395	51.0	H	-50.1	2.3	9.7	7.6	-44.8	-13.0	-31.8	
4.244	50.5	H	-47.9	2.7	10.0	7.9	-42.7	-13.0	-29.7	
5.091	48.8	H	-46.6	3.0	11.2	9.0	-40.7	-13.0	-27.7	
Note: No other emissions were detected above the system noise floor.										

GSM1900 / GPRS1900 / EGPRS1900 Band (EIRP), 30-1000MHz:

Test Engr: Chin Pang
Project #: 05T3459-1
Company: High Tech Computer
EUT Descrip.: Smatphone (GSM800/1900/EDGE/BT/802.11b)
EUT M/N: ST22A
Test Target: FCC 24
Mode Oper: GSM1900

Test Equipment:

Bilog Antenna	Cable	Pre-amplifier 8447D	Limit
5m Chamber Sunol Bilog	5m Chamber Cable	T5 8447D	EIRP

f MHz	SA reading (dBuV/m)	Ant. Pol. (H/V)	SG reading (dBm)	CL (dB)	Gain (dBi)	Gain (dBd)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
122.00	58.8	H	-48.9	1.4	-2.6	-4.7	-52.8	-13.0	-39.8	
150.00	60.0	H	-48.7	1.6	0.4	-1.8	-49.8	-13.0	-36.8	
212.50	58.5	H	-51.9	1.9	5.8	3.6	-48.0	-13.0	-35.0	
260.56	57.6	H	-51.0	2.0	6.1	3.9	-46.9	-13.0	-33.9	
500.00	60.3	H	-43.2	2.7	6.2	4.0	-39.7	-13.0	-26.7	
120.00	63.0	V	-44.6	1.4	-2.7	-4.8	-48.7	-13.0	-35.7	
142.52	61.3	V	-47.3	1.5	-0.6	-2.7	-49.4	-13.0	-36.4	
240.50	62.4	V	-47.1	1.9	6.0	3.8	-43.0	-13.0	-30.0	
371.44	60.0	V	-45.7	2.3	6.0	3.9	-42.0	-13.0	-29.0	
550.00	59.3	V	-43.5	2.8	6.5	4.4	-39.7	-13.0	-26.7	
Both GPRS1900 and EGPRS1900 have the same readings as above.										

GSM1900 Spurious & Harmonic (EIRP)

07/01/05 **High Frequency Substitution Measurement**
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr:Chin Pang
Project #:05T3459-1
Company:High Tech Computer
EUT Descrip.:Smartphone (GSM800/1900/EDGE/BT/802.11b)
EUT M/N:ST22A
Test Target:Part 24
Mode Oper: GSM1900, PCS Band

Test Equipment:

EMCO Horn 1-18GHz: T60; S/N: 2238 @3m
Horn > 18GHz:
Limit: FCC 24
☑ 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)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
GSM1900										
Low Ch										
3.700	62.8	V	-37.3	2.4	9.7	7.5	-30.1	-13.0	-17.1	
5.550	52.5	V	-42.9	3.2	11.0	8.8	-35.2	-13.0	-22.2	
7.400	54.8	V	-37.0	3.7	11.6	9.5	-29.0	-13.0	-16.0	
9.251	56.9	V	-33.0	4.2	11.7	9.6	-25.4	-13.0	-12.4	
9.251	46.0	V	-43.9	4.2	11.7	9.6	-36.3	-13.0	-23.3	
3.700	66.1	H	-33.9	2.4	9.7	7.5	-26.7	-13.0	-13.7	
5.550	56.0	H	-38.4	3.2	11.0	8.8	-30.7	-13.0	-17.7	
7.400	55.2	H	-35.8	3.7	11.6	9.5	-27.8	-13.0	-14.8	
9.251	51.0	H	-38.9	4.2	11.7	9.6	-31.3	-13.0	-18.3	
Mid Ch										
3.760	63.2	V	-36.7	2.5	9.7	7.5	-29.5	-13.0	-16.5	
5.640	52.3	V	-43.1	3.3	11.1	8.9	-35.2	-13.0	-22.2	
7.520	53.0	V	-38.4	3.7	11.6	9.5	-30.6	-13.0	-17.6	
9.400	53.2	V	-36.5	4.2	11.8	9.6	-29.0	-13.0	-16.0	
3.760	66.8	H	-33.0	2.5	9.7	7.5	-25.8	-13.0	-12.8	
5.640	54.6	H	-39.8	3.3	11.1	8.9	-31.9	-13.0	-18.9	
7.520	52.8	H	-37.8	3.7	11.6	9.5	-30.0	-13.0	-17.0	
9.400	50.3	H	-39.4	4.2	11.8	9.6	-31.9	-13.0	-18.9	
High Ch										
3.820	64.4	V	-35.3	2.5	9.7	7.5	-28.1	-13.0	-15.1	
5.730	51.2	V	-44.1	3.3	11.2	9.1	-36.2	-13.0	-23.2	
7.640	47.2	V	-43.9	3.8	11.6	9.4	-36.1	-13.0	-23.1	
9.550	49.5	V	-40.0	4.3	11.8	9.6	-32.5	-13.0	-19.5	
11.458	46.5	V	-42.7	4.8	13.4	11.2	-34.2	-13.0	-21.2	
3.820	63.1	H	-36.5	2.5	9.7	7.5	-29.3	-13.0	-16.3	
5.730	48.5	H	-45.8	3.3	11.2	9.1	-37.9	-13.0	-24.9	
7.640	50.2	H	-40.1	3.8	11.6	9.4	-32.3	-13.0	-19.3	
9.550	49.4	H	-40.1	4.3	11.8	9.6	-32.6	-13.0	-19.6	
Note: No other emissions were detected above the system noise floor										

GPRS1900 Spurious & Harmonic (ERP)

07/01/05 **High Frequency Substitution Measurement**
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr:Chin Pang
Project #:05T3459-1
Company:High Tech Computer
EUT Descrip.:Smartphone (GSM800/1900/EDGE/BT/802.11b)
EUT M/N:ST22A
Test Target:Part 24
Mode Oper: GPRS1900, PCS Band

Test Equipment:

EMCO Horn 1-18GHz: T60; S/N: 2238 @3m
Horn > 18GHz:
Limit: FCC 24
☑ 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)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
GPRS1900										
Low Ch										
3.700	64.5	V	-35.6	2.4	9.7	7.5	-28.4	-13.0	-15.4	
5.550	54.4	V	-41.0	3.2	11.0	8.8	-33.3	-13.0	-20.3	
7.400	52.0	V	-39.8	3.7	11.6	9.5	-31.8	-13.0	-18.8	
9.251	51.4	V	-38.5	4.2	11.7	9.6	-30.9	-13.0	-17.9	
3.700	66.2	H	-33.8	2.4	9.7	7.5	-26.6	-13.0	-13.6	
5.550	57.3	H	-37.1	3.2	11.0	8.8	-29.4	-13.0	-16.4	
7.400	55.0	H	-36.0	3.7	11.6	9.5	-28.0	-13.0	-15.0	
9.251	52.3	H	-37.6	4.2	11.7	9.6	-30.0	-13.0	-17.0	
Mid Ch										
3.760	65.3	V	-34.6	2.5	9.7	7.5	-27.4	-13.0	-14.4	
5.640	51.3	V	-44.1	3.3	11.1	8.9	-36.2	-13.0	-23.2	
7.520	49.3	V	-42.1	3.7	11.6	9.5	-34.3	-13.0	-21.3	
9.400	48.7	V	-41.0	4.2	11.8	9.6	-33.5	-13.0	-20.5	
3.760	65.2	H	-34.6	2.5	9.7	7.5	-27.3	-13.0	-14.3	
5.640	54.4	H	-40.0	3.3	11.1	8.9	-32.1	-13.0	-19.1	
7.520	52.5	H	-38.1	3.7	11.6	9.5	-30.3	-13.0	-17.3	
9.400	48.0	H	-41.7	4.2	11.8	9.6	-34.2	-13.0	-21.2	
High Ch										
3.820	66.6	V	-33.1	2.5	9.7	7.5	-25.9	-13.0	-12.9	
5.730	50.0	V	-45.3	3.3	11.2	9.1	-37.4	-13.0	-24.4	
7.640	49.6	V	-41.5	3.8	11.6	9.4	-33.7	-13.0	-20.7	
9.550	48.6	V	-40.9	4.3	11.8	9.6	-33.4	-13.0	-20.4	
11.458	46.0	V	-43.2	4.8	13.4	11.2	-34.7	-13.0	-21.7	
3.820	63.5	H	-36.1	2.5	9.7	7.5	-28.9	-13.0	-15.9	
5.730	52.0	H	-42.3	3.3	11.2	9.1	-34.4	-13.0	-21.4	
7.640	50.3	H	-40.0	3.8	11.6	9.4	-32.2	-13.0	-19.2	
9.550	48.5	H	-41.0	4.3	11.8	9.6	-33.5	-13.0	-20.5	
Note: No other emissions were detected above the system noise floor										

EGPRS1900 Spurious & Harmonic (ERP)

07/01/05 **High Frequency Substitution Measurement**
Compliance Certification Services, Morgan Hill 5m Chamber Site

Test Engr:Chin Pang
Project #:05T3459-1
Company:High Tech Computer
EUT Descrip.:Smartphone (GSM800/1900/EDGE/BT/802.11b)
EUT M/N:ST22A
Test Target:Part 24
Mode Oper: EGPRS1900, PCS Band

Test Equipment:

EMCO Horn 1-18GHz: T60; S/N: 2238 @3m
Horn > 18GHz:
Limit: FCC 24
☑ 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)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Notes
GPRS1900										
Low Ch										
3.700	60.0	V	-40.1	2.4	9.7	7.5	-32.9	-13.0	-19.9	
5.550	48.3	V	-47.1	3.2	11.0	8.8	-39.4	-13.0	-26.4	
7.400	52.5	V	-39.3	3.7	11.6	9.5	-31.3	-13.0	-18.3	
9.251	47.8	V	-42.1	4.2	11.7	9.6	-34.5	-13.0	-21.5	
3.700	64.4	H	-35.6	2.4	9.7	7.5	-28.4	-13.0	-15.4	
5.550	54.0	H	-40.4	3.2	11.0	8.8	-32.7	-13.0	-19.7	
7.400	54.5	H	-36.5	3.7	11.6	9.5	-28.5	-13.0	-15.5	
9.251	51.3	H	-38.6	4.2	11.7	9.6	-31.0	-13.0	-18.0	
Mid Ch										
3.760	65.9	V	-34.0	2.5	9.7	7.5	-26.8	-13.0	-13.8	
5.640	50.0	V	-45.4	3.3	11.1	8.9	-37.5	-13.0	-24.5	
7.520	48.6	V	-42.8	3.7	11.6	9.5	-35.0	-13.0	-22.0	
9.400	47.7	V	-42.0	4.2	11.8	9.6	-34.5	-13.0	-21.5	
3.760	63.8	H	-36.0	2.5	9.7	7.5	-28.8	-13.0	-15.8	
5.640	52.0	H	-42.4	3.3	11.1	8.9	-34.5	-13.0	-21.5	
7.520	51.7	H	-38.9	3.7	11.6	9.5	-31.1	-13.0	-18.1	
9.400	47.5	H	-42.2	4.2	11.8	9.6	-34.7	-13.0	-21.7	
High Ch										
3.820	62.0	V	-37.7	2.5	9.7	7.5	-30.5	-13.0	-17.5	
5.730	48.7	V	-46.6	3.3	11.2	9.1	-38.7	-13.0	-25.7	
7.640	50.1	V	-41.0	3.8	11.6	9.4	-33.2	-13.0	-20.2	
9.550	44.5	V	-45.0	4.3	11.8	9.6	-37.5	-13.0	-24.5	
11.458	46.0	V	-43.2	4.8	13.4	11.2	-34.7	-13.0	-21.7	
3.820	62.0	H	-37.6	2.5	9.7	7.5	-30.4	-13.0	-17.4	
5.730	51.0	H	-43.3	3.3	11.2	9.1	-35.4	-13.0	-22.4	
7.640	50.5	H	-39.8	3.8	11.6	9.4	-32.0	-13.0	-19.0	
9.550	44.8	H	-44.7	4.3	11.8	9.6	-37.2	-13.0	-24.2	
Note: No other emissions were detected above the system noise floor										

8.6. POWERLINE CONDUCTED EMISSIONS

LIMIT

§15.207 (a) Except as shown in paragraphs (b) and (c) of this section, for an intentional radiator 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 µH/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 boundary between the frequency ranges.

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

The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.4.

The resolution bandwidth is set to 9 kHz for both peak detection and quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

Line conducted data is recorded for both NEUTRAL and HOT lines.

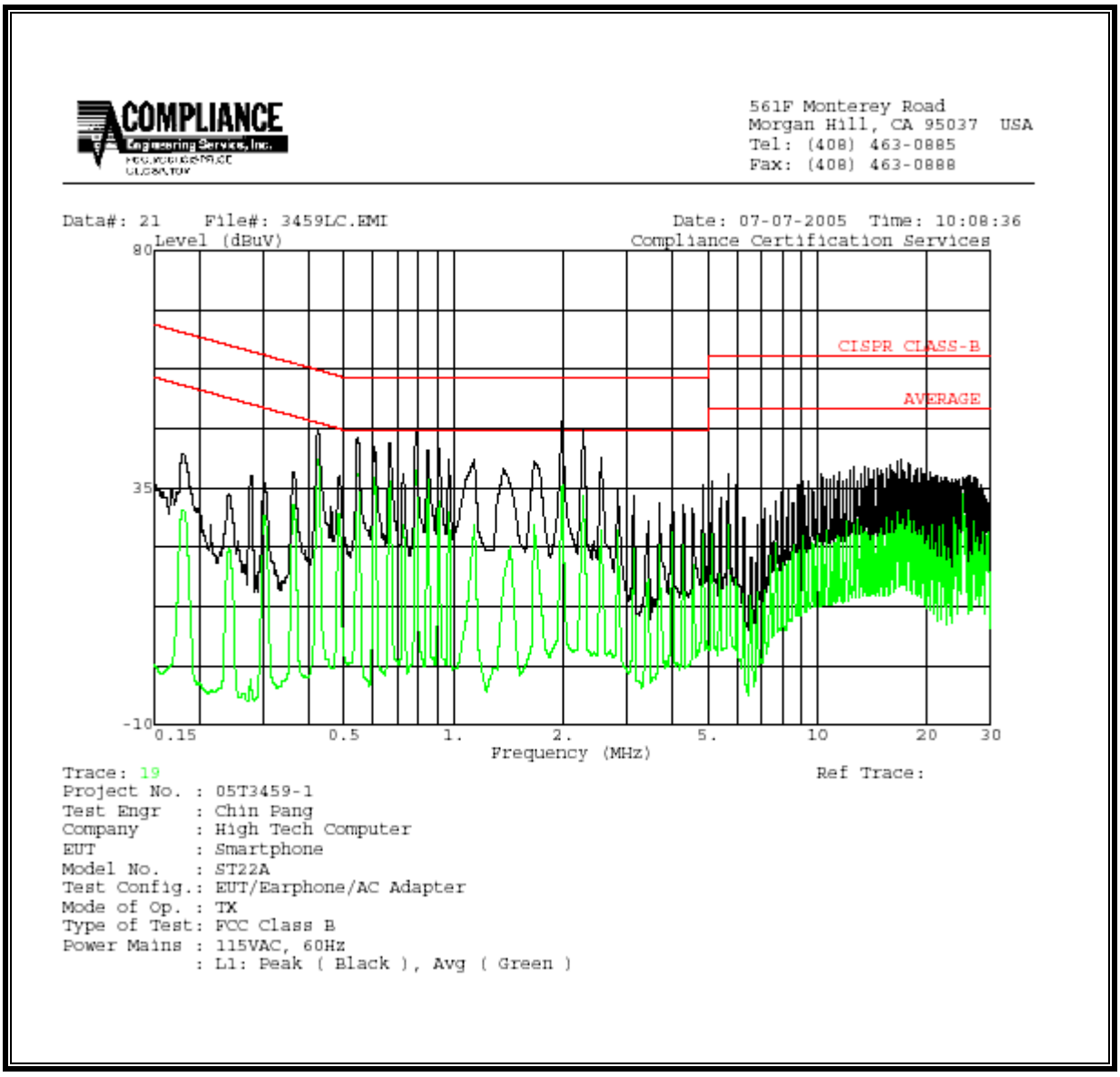
RESULTS

No non-compliance noted:

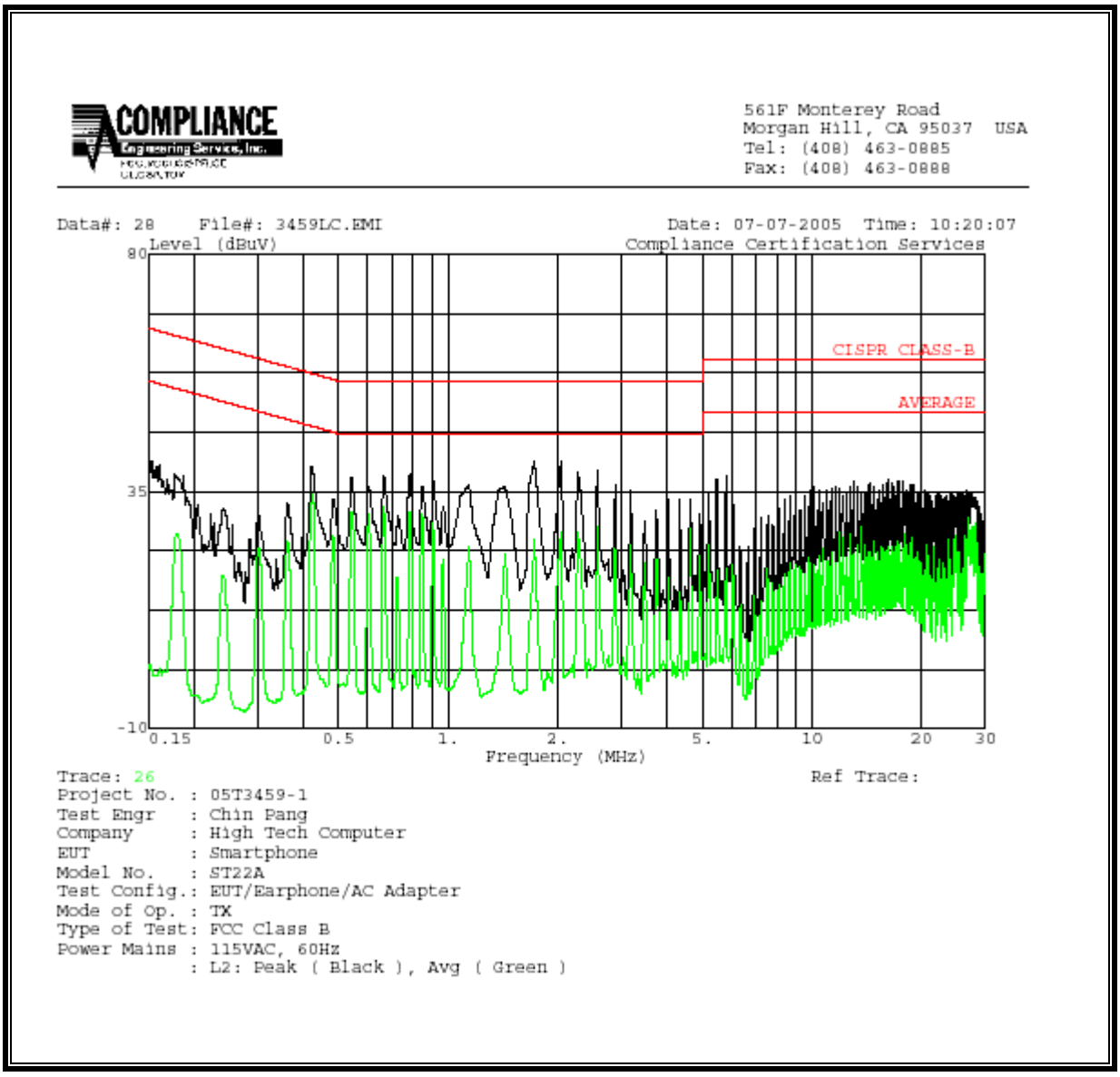
6 WORST EMISSIONS

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	45.84	--	40.28	0.00	57.37	47.37	-11.53	-7.09	L1
1.99	47.80	--	35.65	0.00	56.00	46.00	-8.20	-10.35	L1
2.27	46.16	--	33.41	0.00	56.00	46.00	-9.84	-12.59	L1
0.42	39.88	--	34.66	0.00	57.43	47.43	-17.55	-12.77	L2
1.73	40.94	--	26.03	0.00	56.00	46.00	-15.06	-19.97	L2
2.57	39.18	--	29.80	0.00	56.00	46.00	-16.82	-16.20	L2
6 Worst Data									

LINE 1 RESULTS



LINE 2 RESULTS



(Please note that the setup photos on pages 71 through 80 have been extracted under a separate file.)