FCC 47 CFR PART 22 SUBPART H AND PART 24 SUBPART E

TEST REPORT

For

Portable wireless modem

Model / Trade Name:
GT2000 / GOLDTEK,
TDL 3G / TRIMBLE

Issued to

GOLDTEK TECHNOLOGY CO., LTD.
3F, No, Ln.768, Sec.4, Patch Rd. Taipei 115, Taiwan, R.O.C

Issued by

Compliance Certification Services Inc.
No. 11, Wu-Gong 6th Rd., Wugu Industrial Park,
Taipei Hsien 248, Taiwan (R.O.C.)
http://www.ccsemc.com.tw
service@ccsrf.com

Testing Laboratory
1309

TABLE OF CONTENTS

1. TEST RESULT CERTIFICATION

Applicant: GOLDTEK TECHNOLOGY CO., LTD.
3F, No, Ln.768, Sec.4, Patch Rd. Taipei 115, Taiwan, R.O.C

Equipment Under Test: Portable wireless modem

Model / Trade Name: GT2000 / GOLDTEK,
TDL 3G / TRIMBLE

Date of Test: November 5 ~ 15, 2009

APPLICABLE STANDARDS	
STANDARD	**TEST RESULT**
FCC 47 CFR Part 22 Subpart H & Part 24 Subpart E	No non-compliance noted

We hereby certify that:

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in TIA/EIA-603-C: 2004 and the energy emitted by the sample EUT tested as described in this report is in compliance with conducted and radiated emission limits of FCC Rule FCC PART 22 Subpart H and PART 24 Subpart E.

The test results of this report relate only to the tested sample identified in this report.

Approved by:

Rex Lai
Section Manager
Compliance Certification Services Inc.

Reviewed by:

Gina Lo
Section Manager
Compliance Certification Services Inc.

2. EUT DESCRIPTION

Product	Portable wireless modem
Model / Trade Name	GT2000 / GOLDTEK, TDL 3G / TRIMBLE
Model Discrepancy	All the specification and layout are identical except they come with different model numbers for marketing purposes.
Power Supply	1. Power Adapter: JPC / Model: KSAS0100500200D5 I/P: 100-240V, 50-60Hz, 0.4A O/P: 5.0V, 2.0A 2. VDC from Battery Rating: DC3.7V, 3000mAh, 11.1W/hr
Frequency Range	GPRS / EDGE: 850: 824 ~ 849 MHz GPRS / EDGE: 1900: 1850 ~ 1910 MHz WCDMA Band II: 1852.4 ~ 1907.6 MHz WCDMA Band V: 826.4 ~ 846.6MHz
Transmit Power (ERP & EIRP Power)	GPRS 850: 27.49 dBm GPRS 1900: 29.38 dBm EDGE 850: 21.45 dBm EDGE 1900: 26.61 dBm WCDMA Band II: 22.92 dBm HSDPA Band II: 23.68 dBm WCDMA Band V: 22.46 dBm HSDPA Band V: 18.56 dBm
Modulation Technique	GSM: GMSK GPRS: GMSK EDGE: 8PSK
Type of Emission	GPRS 850 MHz: 244KGXW--- GPRS 1900 MHz: 246KGXW--- EDGE 850 MHz: 247KG7W--- EDGE 1900 MHz: 255KG7W--- WCDMA Band II: 4M16F9W--- WCDMA Band V: 4M16F9W--- WCDMA HSDPA Band II: 4M17F9W--- WCDMA HSDPA Band V: 4M14F9W---
Antenna Gain	GSM / GPRS / EDGE 850 MHz: 1.45 dBi GSM / GPRS / EDGE 1900 MHz: 2.53dBi WCDMA band II: 2.53 dBi WCDMA band V: 1.45 dBi
Antenna Type	PIFA Antenna

Remark:

1. *The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.*
2. *This submittal(s) (test report) is intended for FCC ID: **XTFGT2000** filing to comply with Part 22 and Part 24 of the FCC 47 CFR Rules.*

3. TEST METHODOLOGY

Both conducted and radiated testing were performed according to the procedures document on chapter 13 of ANSI C63.4: 2003, TIA/EIA-603-C: 2004 and FCC CFR 47, Part 2, PART 22 SUBPART H AND PART 24 SUBPART E

3.1EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

3.2EUT EXERCISE

The EUT was operated in the engineering mode to fix the TX frequency that was for the purpose of the measurements.

3.3GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4: 2003.Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4: 2003.

3.4DESCRIPTION OF TEST MODES

The EUT (model: GT2000) had been tested under operating condition.

EUT staying in continuous transmitting mode was programmed.

GPRS / EDGE 850:
Channel Low (CH128), Channel Mid (CH190) and Channel High (CH251) were chosen for full testing.

GPRS / EDGE 1900:
Channel Low (CH512), Channel Mid (CH661) and Channel High (CH810) were chosen for full testing.

WCDMA Band II:
Channel Low (CH9262), Channel Mid (CH9400) and Channel High (CH9538) were chosen for full testing.

WCDMA Band V:
Channel Low (CH4132), Channel Mid (CH4182) and Channel High (CH4233) were chosen for full testing.

WCDMA / HSDPA Band II:
Channel Low (CH9262), Channel Mid (CH9400) and Channel High (CH9538) were chosen for full testing.
WCDMA / HSDPA Band V:
Channel Low (CH4132), Channel Mid (CH4182) and Channel High (CH4233) were chosen for full testing.

WCDMA Band II:
Channel Low (CH9262), Channel Mid (CH9400) and Channel High (CH9538) were chosen for full testing.

WCDMA Band V:
Channel Low (CH4132), Channel Mid (CH4182) and Channel High (CH4233) were chosen for full testing.

After verification, all tests were carried out with the worst case test modes as shown below except radiated spurious emission below 1GHz and power line conducted emissions below 30MHz, which worst case was in normal link mode only.

4. INSTRUMENT CALIBRATION

4.1 MEASURING INSTRUMENT CALIBRATION

The measuring equipment, which was utilized in performing the tests documented herein, has been calibrated in accordance with the manufacturer's recommendations for utilizing calibration equipment, which is traceable to recognized national standards.

4.2MEASUREMENT EQUIPMENT USED

Equipment Used for Emissions Measurement

Remark: *Each piece of equipment is scheduled for calibration once a year.*

Conducted Emissions Test Site				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	Agilent	E4446A	MY43360131	03/05/2010
Power Meter	Agilent	E4416A	GB41291611	06/28/2010
Power Sensor	Agilent	E9327A	US40441097	06/28/2010
Temp. / Humidity Chamber	Terchy	MHG-150LF	930619	09/15/2010
DC Power Source	Agilent	E3640A	MY40001774	01/09/2010

3M Semi Anechoic Chamber				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	Agilent	E4446A	US42510252	10/26/2010
Test Receiver	Rohde&Schwarz	ESCI	100064	12/24/2009
Switch Controller	TRC	Switch Controller	SC94050010	05/02/2010
4 Port Switch	TRC	4 Port Switch	SC94050020	05/02/2010
Loop Antenna	EMCO	6502	8905/2356	05/28/2010
Horn-Antenna	TRC	HA-0502	06	06/03/2010
Horn-Antenna	TRC	HA-0801	04	10/19/2010
Horn-Antenna	TRC	HA-1201A	01	10/14/2010
Horn-Antenna	TRC	HA-1301A	01	10/14/2010
Bilog- Antenna	Sunol Sciences	JB3	A030205	09/11/2010
Turn Table	Max-Full	MFT-120S	T120S940302	N.C.R.
Antenna Tower	Max-Full	MFA-430	A440940302	N.C.R.
Controller	Max-Full	MF-CM886	CC-C-1F-13	N.C.R.
Site NSA	CCS	N/A	FCC MRA: TW1039 IC: IC 2324G-1/-2	10/17/2010 11/04/2010
Test S/W	LABVIEW (V 6.1)			

Powerline Conducted Emissions Test Site				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
EMI Test Receiver 9kHz-30MHz	Rohde & Schwarz	ESHS30	828144/003	11/24/2010
Two-Line V-Network 9kHz-30MHz	Schaffner	NNB41	03/10013	06/10/2010
LISN 10kHz-100MHz	EMCO	3825/2	9106-1809	04/08/2010
Test S/W	LABVIEW (V 6.1)			

4.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
Powerline Conducted Emission	+/- 2.81
3M Semi Anechoic Chamber / 30MHz ~ 1GHz	+/-3.7046
3M Semi Anechoic Chamber / Above 1GHz	+/-3.0958

***Remark**: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.*

5. FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

☐ No.199, Chunghsen Road, Hsintien City, Taipei Hsien, Taiwan, R.O.C.
Tel: 886-2-2217-0894 / Fax: 886-2-2217-1029

☒ No.11, Wugong 6th Rd., Wugu Industrial Park, Taipei Hsien 248, Taiwan
Tel: 886-2-2299-9720 / Fax: 886-2-2298-4045

☐ No.81-1, Lane 210, Bade 2nd Rd., Luchu Hsiang, Taoyuan Hsien 338, Taiwan
Tel: 886-3-324-0332 / Fax: 886-3-324-5235

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

5.2 EQUIPMENT

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, “Radio Interference Measuring Apparatus and Measurement Methods.”

5.3TABLE OF ACCREDITATIONS AND LISTINGS

Country	Agency	Scope of Accreditation	Logo
USA	FCC	3M Semi Anechoic Chamber (FCC MRA: TW1039) to perform FCC Part 15 measurements	FCC MRA: TW1039
Taiwan	TAF	LP0002, RTTE01, FCC Method-47 CFR Part 15 Subpart C, D, E, RSS-210, RSS-310 IDA TS SRD, AS/NZS 4268, AS/NZS 4771, TS 12.1 & 12,2, ETSI EN 300 440-1, ETSI EN 300 440-2, ETSI EN 300 328, ETSI EN 300 220-1, ETSI EN 300 220-2, ETSI EN 301 893, ETSI EN 301 489-1/3/7/17 FCC OET Bulletin 65 + Supplement C, EN 50360, EN 50361, EN 50371, RSS 102, EN 50383, EN 50385, EN 50392, IEC 62209, CNS 14958-1, CNS 14959 FCC Method –47 CFR Part 15 Subpart B IEC / EN 61000-3-2, IEC / EN 61000-3-3, IEC / EN 61000-4-2/3/4/5/6/8/11	TAF Testing Laboratory 1309
Canada	Industry Canada	3M Semi Anechoic Chamber (IC 2324G-1 / IC 2324G-2) to perform	Canada IC 2324G-1 IC 2324G-2

** No part of this report may be used to claim or imply product endorsement by A2LA or any agency of the US Government.*

6. SETUP OF EQUIPMENT UNDER TEST

6.1SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix I for the actual connections between EUT and support equipment.

6.2SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	FCC ID	Series No.	Data Cable	Power Cord
1.	8960 Series 10 Wireless Communication test set (Remote)	Agilent	E5515C	GB44051665	N/A	N/A	Unshielded, 1.8m

Remark:

1. *All the equipment/cables were placed in the worst-case configuration to maximize the emission during the test.*
2. *Grounding was established in accordance with the manufacturer's requirements and conditions for the intended use.*

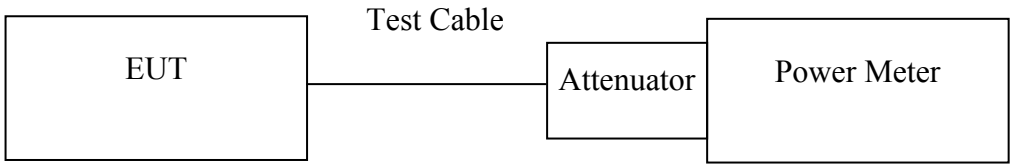
7. FCC PART 22 & 24 REQUIREMENTS

7.1PEAK POWER

LIMIT

According to FCC §2.1046.

Test Configuration



Remark: *Measurement setup for testing on Antenna connector*

TEST PROCEDURE

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a power meter. Transmitter output was read off the power meter in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to the power meter reading.

TEST RESULTS

No non-compliance noted.

Test Data

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power (W)
GPRS 850 (Class 10)	128	824.20	31.48	1.40605
	190	836.60	32.24	1.67494
	251	848.80	32.20	1.65959
EDGE 850 (Class 10)	128	824.20	26.11	0.40832
	190	836.60	26.54	0.45082
	251	848.80	26.68	0.46559

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power (W)
GPRS 1900 (Class 10)	512	1850.20	28.63	0.72946
	661	1880.00	28.34	0.68234
	810	1909.80	28.45	0.69984
EDGE 1900 (Class 10)	512	1850.20	25.79	0.37931
	661	1880.00	25.69	0.37068
	810	1909.80	25.68	0.36983

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power (W)
WCDMA (BAND II)	9262	1852.40	22.50	0.17783
	9400	1880.00	21.58	0.14388
	9538	1907.60	21.58	0.14388
WCDMA (BAND V)	4132	826.40	21.46	0.13996
	4182	836.40	21.90	0.15488
	4233	846.60	21.50	0.14125

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power (W)
WCDMA / HSDPA (BAND II)	9262	1852.40	22.56	0.18030
	9400	1880.00	21.53	0.14223
	9538	1907.60	21.39	0.13772
WCDMA / HSDPA (BAND V)	4132	826.40	21.56	0.14322
	4182	836.40	21.88	0.15417
	4233	846.60	21.85	0.15311

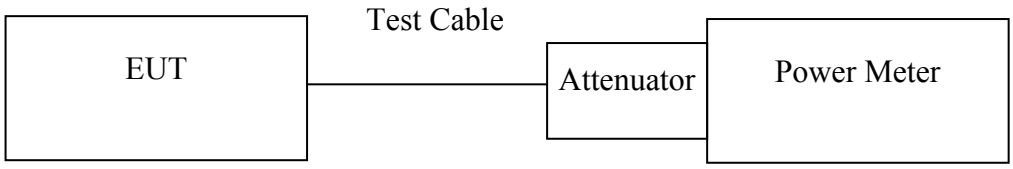
Remark: *The value of factor includes both the loss of cable and external attenuator*

7.2AVERAGE POWER

LIMIT

For reporting purposes only.

Test Configuration



Remark: *Measurement setup for testing on Antenna connector*

TEST PROCEDURE

The transmitter output was connected to a calibrated attenuator, the other end of which was connected to a power meter. Transmitter output was read off the power meter in dBm. The power output at the transmitter antenna port was determined by adding the value of the attenuator to the power meter reading.

TEST RESULTS

No non-compliance noted.

Test Data

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power (W)
GPRS 850 (Class 10)	128	824.20	25.46	0.35151
	190	836.60	26.22	0.41874
	251	848.80	26.18	0.41490
EDGE 850 (Class 10)	128	824.20	20.09	0.10208
	190	836.60	20.52	0.11270
	251	848.80	20.66	0.11640

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power (W)
GPRS 1900 (Class 10)	512	1850.20	22.61	0.18236
	661	1880.00	22.32	0.17058
	810	1909.80	22.43	0.17496
EDGE 1900 (Class 10)	512	1850.20	19.77	0.09483
	661	1880.00	19.67	0.09267
	810	1909.80	19.66	0.09246

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power (W)
WCDMA (BAND II)	9262	1852.40	22.30	0.16982
	9400	1880.00	21.53	0.14223
	9538	1907.60	21.36	0.13677
WCDMA (BAND V)	4132	826.40	21.29	0.13459
	4182	836.40	21.74	0.14928
	4233	846.60	21.33	0.13583

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power (W)
WCDMA / HSDPA (BAND II)	9262	1852.40	22.33	0.13366
	9400	1880.00	21.26	0.13305
	9538	1907.60	21.24	0.13552
WCDMA / HSDPA (BAND V)	4132	826.40	21.32	0.14825
	4182	836.40	21.71	0.14689
	4233	846.60	21.67	0.13366

Remark: *The value of factor includes both the loss of cable and external attenuator*

7.1ERP & EIRP MEASUREMENT

LIMIT

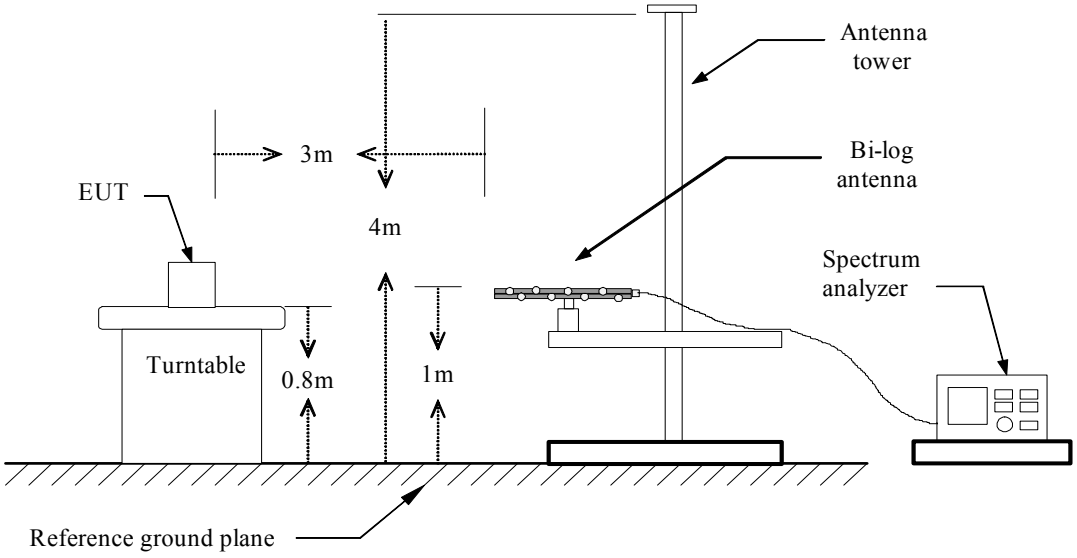
According to FCC §2.1046

FCC 22.913(a): The Effective Radiated Power (ERP) of mobile transmitters must not exceed 7 Watts.

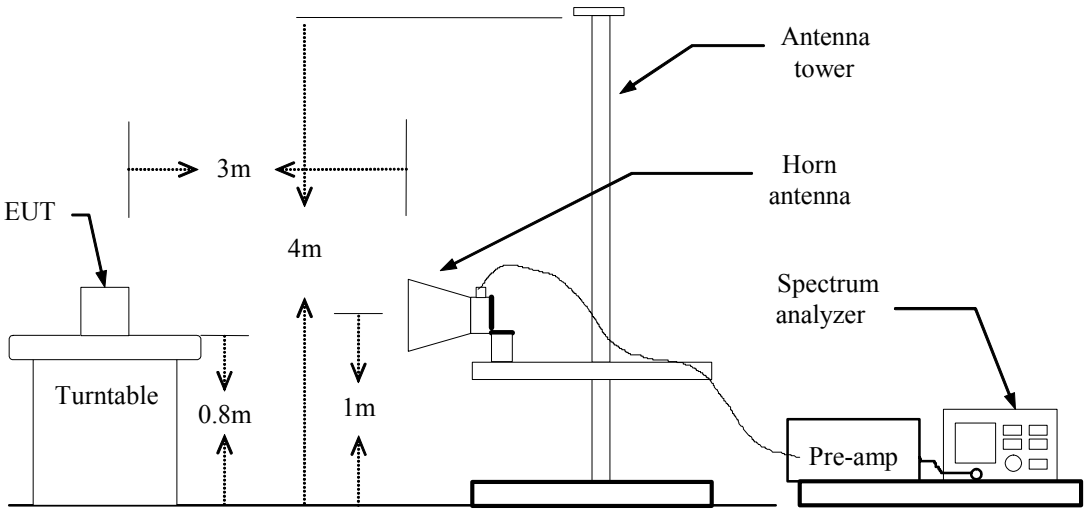
FCC 24.232(b): The equivalent Isotropic Radiated Power (EIRP) must not exceed 2 Watts.

Test Configuration

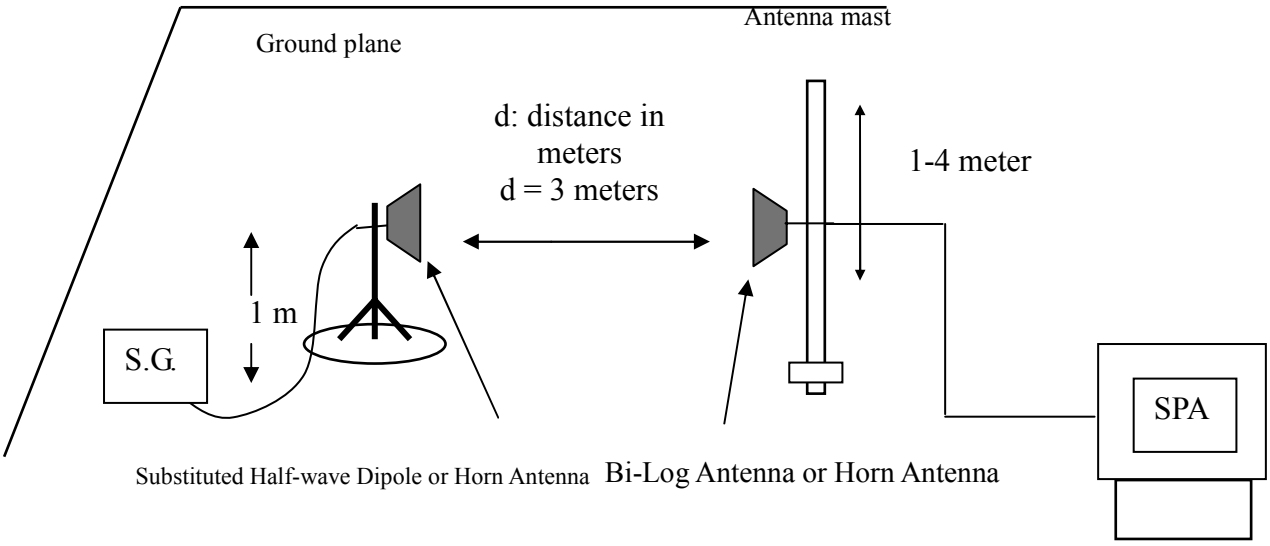
Below 1 GHz



Above 1 GHz



For Substituted Method Test Set-UP



TEST PROCEDURE

The EUT was placed on an non-conductive turntable using a non-conductive support. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and EMI spectrum analyzer.

During the measurement of the EUT, the resolution bandwidth was set to 3MHz and the average bandwidth was set to 3MHz. The highest emission was recorded with the rotation of the turntable and the lowering of the test antenna. The reading was recorded and the field strength (E in dBuV/m) was calculated.

ERP in frequency band 824-849MHz, and EIRP in frequency band 1851.25 –1910MHz were measured using a substitution method. The EUT was replaced by half-wave dipole (824-849MHz) or horn antenna (1851.25-1910MHz) connected to a signal generator. The spectrum analyzer reading was recorded and ERP/EIRP was calculated as follows:

ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable (dB)
EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable (dB)

TEST RESULTS

No non-compliance noted.

GPRS 850 TEST DATA (CLASS 10)

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.20	V	-16.82	34.62	17.80	38.50	-20.70
	824.20	H	-7.15	34.65	***27.49**	38.50	-11.01
190	836.60	V	-17.28	34.53	17.24	38.50	-21.26
	836.60	H	-7.58	34.63	27.05	38.50	-11.45
251	848.80	V	-16.66	34.64	17.98	38.50	-20.52
	848.80	H	-7.61	34.75	27.14	38.50	-11.36

GPRS 1900 TEST DATA (CLASS 10)

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.20	V	-18.84	41.17	22.33	33.00	-10.67
	1850.20	H	-11.74	40.79	29.05	33.00	-3.95
661	1880.00	V	-18.58	41.23	22.65	33.00	-10.35
	1880.00	H	-11.77	41.15	***29.38**	33.00	-3.62
810	1909.80	V	-20.18	41.30	21.13	33.00	-11.87
	1909.80	H	-13.43	41.38	27.95	33.00	-5.05

EDGE 850 Test Data (Class 10)

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.20	V	-22.97	34.62	11.65	38.50	-26.85
	824.20	H	-13.32	34.65	21.33	38.50	-17.17
190	836.60	V	-23.23	34.52	11.29	38.50	-27.21
	836.60	H	-13.56	34.63	21.08	38.50	-17.42
251	848.80	V	-22.38	34.64	12.26	38.50	-26.24
	848.80	H	-13.30	34.75	***21.45**	38.50	-17.05

EDGE 1900 Test Data (Class 10)

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.20	V	-21.45	41.17	19.72	33.00	-13.28
	1850.20	H	-14.18	40.79	***26.61**	33.00	-6.39
661	1880.00	V	-21.56	41.23	19.67	33.00	-13.33
	1880.00	H	-14.53	41.14	26.61	33.00	-6.39
810	1909.80	V	-23.06	41.30	18.25	33.00	-14.75
	1909.80	H	-14.87	41.38	26.50	33.00	-6.50

WCDMA Test Data (BAND II)

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
9262	1850.20	V	-24.51	41.18	16.67	33.00	-16.33
	1850.20	H	-17.92	40.83	***22.92**	33.00	-10.08
9400	1880.00	V	-24.25	41.23	16.97	33.00	-16.03
	1880.00	H	-18.76	41.13	22.38	33.00	-10.62
9538	1909.80	V	-25.31	41.30	15.98	33.00	-17.02
	1909.80	H	-19.21	41.38	22.16	33.00	-10.84

WCDMA Test Data (BAND V)

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	824.20	V	-18.67	34.60	15.93	38.45	-22.57
	824.20	H	-15.51	34.64	19.14	38.45	-19.36
4182	836.60	V	-17.68	34.52	16.84	38.45	-21.66
	836.60	H	-12.17	34.63	***22.46**	38.45	-16.04
4233	848.80	V	-22.25	34.61	12.36	38.45	-26.14
	848.80	H	-14.54	34.73	20.19	38.45	-18.31

WCDMA / HSDPA BAND II Test Data

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
9262	1850.20	V	-22.48	41.18	18.70	33.00	-14.30
	1850.20	H	-17.33	40.83	23.50	33.00	-9.50
9400	1880.00	V	-23.72	41.23	17.51	33.00	-15.49
	1880.00	H	-17.45	41.14	***23.68**	33.00	-9.32
9538	1909.80	V	-25.47	41.29	15.82	33.00	-17.18
	1909.80	H	-19.59	41.38	21.78	33.00	-11.22

WCDMA / HSDPA BAND V Test Data

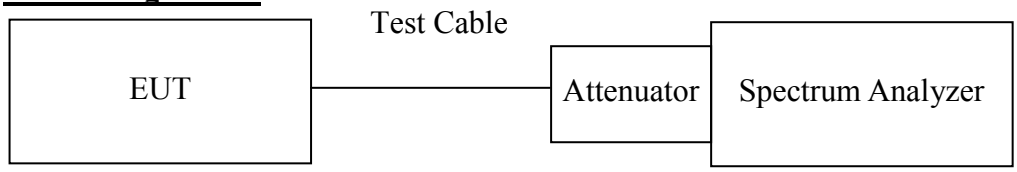
Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	824.20	V	-20.79	34.61	13.83	38.45	-24.67
	824.20	H	-16.09	34.64	***18.56**	38.45	-19.94
4182	836.60	V	-19.96	34.52	14.55	38.45	-23.95
	836.60	H	-16.21	34.63	18.42	38.45	-20.08
4233	848.80	V	-20.34	34.60	14.26	38.45	-24.24
	848.80	H	-18.31	34.71	16.40	38.45	-22.10

7.2OCCUPIED BANDWIDTH MEASUREMENT

LIMIT

According to §FCC 2.1049.

Test Configuration



Remark: *Measurement setup for testing on Antenna connector*

TEST PROCEDURE

The EUT's output RF connector was connected with a short cable to the spectrum analyzer, RBW was set to about 1% of emission BW, VBW is set to 3 times the RBW, -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

TEST RESULTS

No non-compliance noted

Test Data

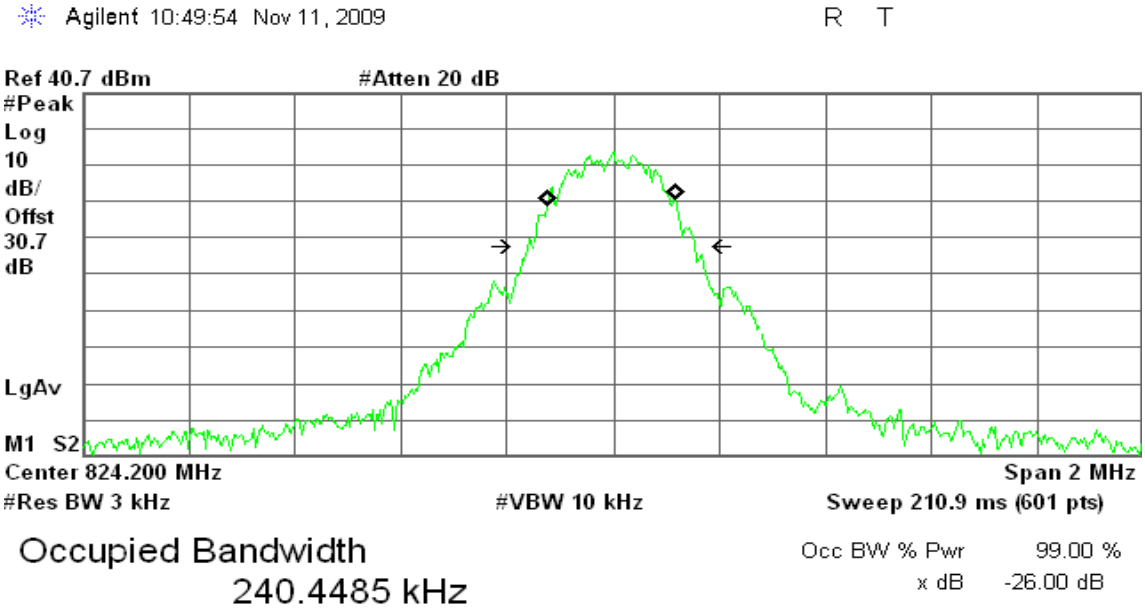
Test Mode	CH	Frequency (MHz)	99% Bandwidth (kHz)
GPRS 850 (Class 10)	128	824.20	240.4485
	190	836.60	244.0295
	251	848.80	243.7097
EDGE 850 (Class 10)	128	824.20	247.9213
	190	836.60	246.8512
	251	848.80	243.3884

Test Mode	CH	Frequency (MHz)	99% Bandwidth (kHz)
GPRS 1900 (Class 10)	512	1850.20	246.0648
	661	1880.00	244.6921
	810	1909.80	243.0596
EDGE 1900 (Class 10)	512	1850.20	248.0259
	661	1880.00	231.0654
	810	1909.80	255.0526

Test Mode	CH	Frequency (MHz)	99% Bandwidth (MHz)
WCDMA (Band II)	9262	1852.40	4.1579
	9400	1880.00	4.1688
	9538	1907.60	4.1519
WCDMA (Band V)	4132	826.40	4.1382
	4182	836.40	4.1308
	4233	846.60	4.1614
WCDMA / HSDPA (BAND II)	9262	1852.40	4.1644
	9400	1880.00	4.1733
	9538	1907.60	4.1715
WCDMA / HSDPA (BAND V)	4132	826.40	4.1112
	4182	836.40	4.1321
	4233	846.60	4.1485

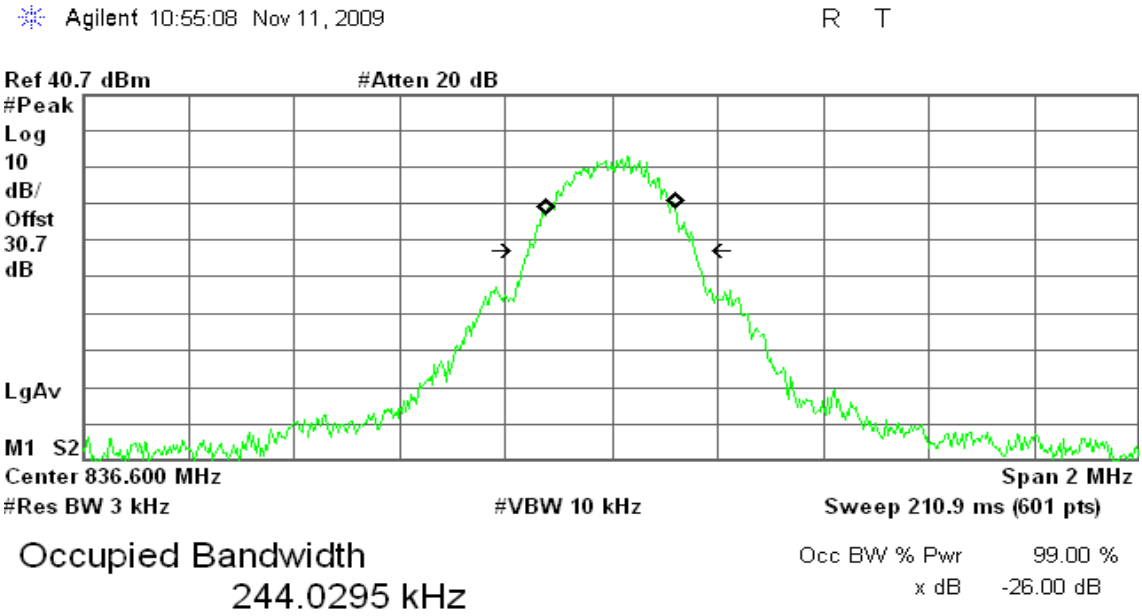
Test Plot

GPRS 850 (CH Low)



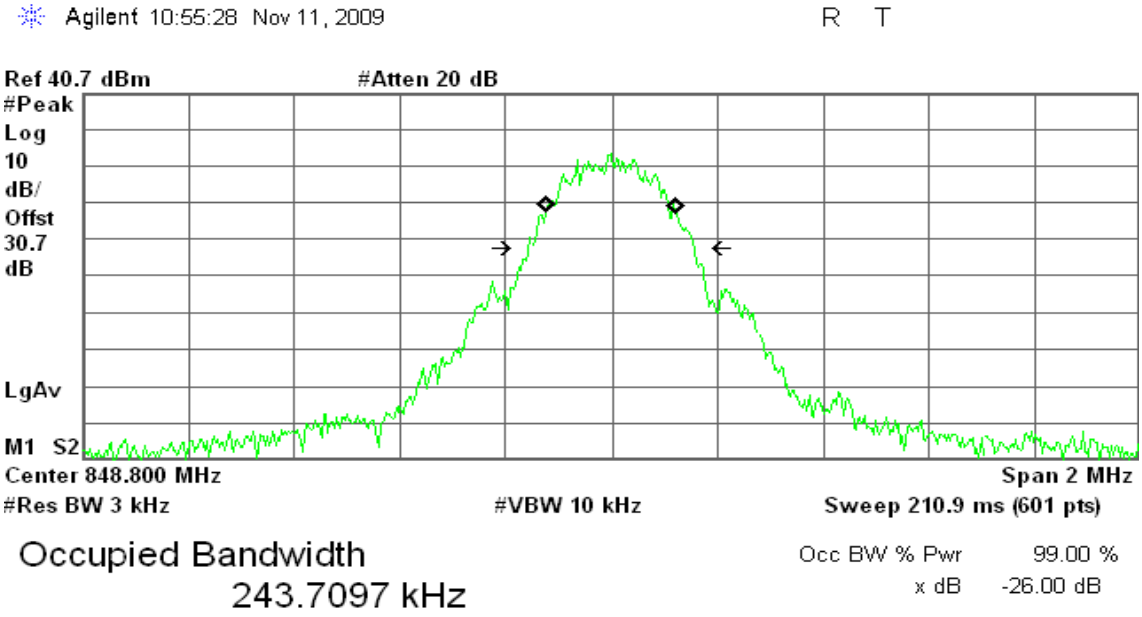
Transmit Freq Error	-3.034 kHz
x dB Bandwidth	313.894 kHz

GPRS 850 (CH Mid)



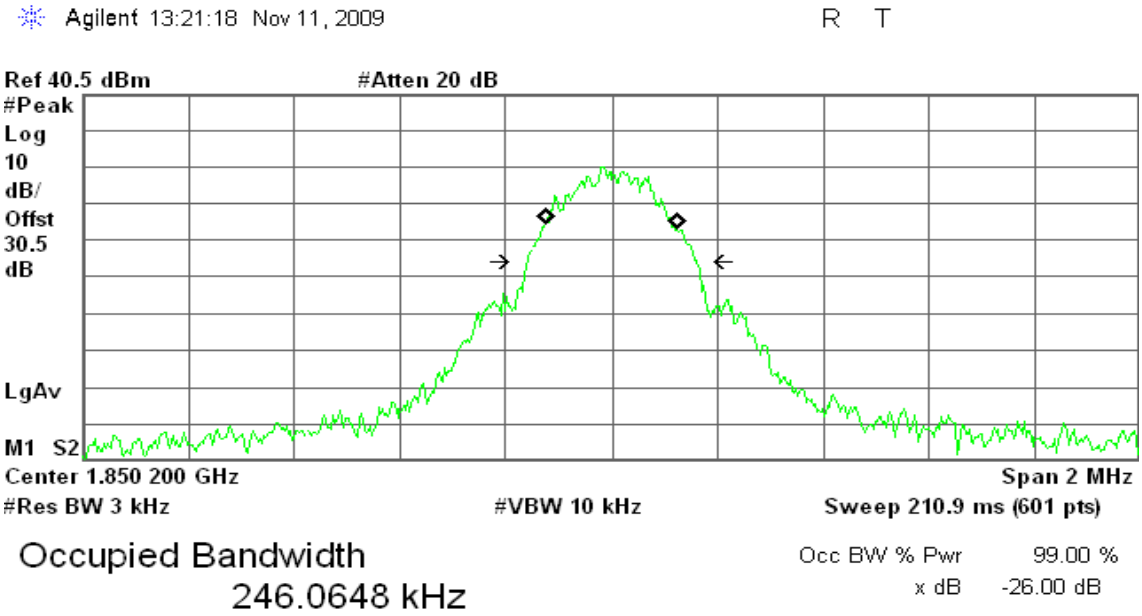
Transmit Freq Error	-2.004 kHz
x dB Bandwidth	312.201 kHz

GPRS 850(CH High)



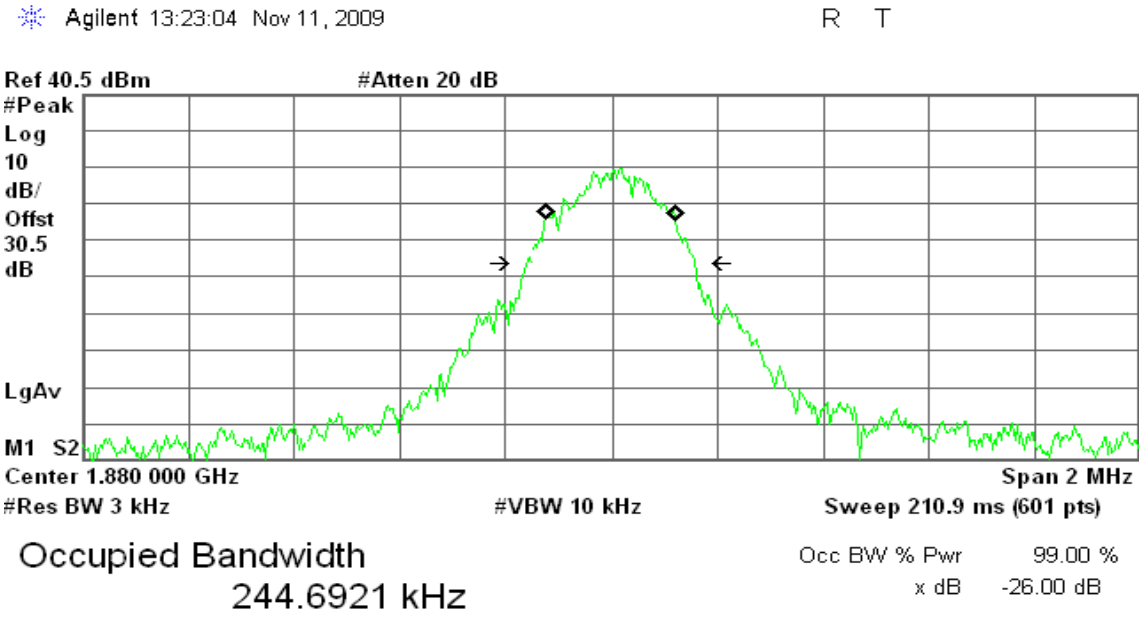
Transmit Freq Error	-1.274 kHz
x dB Bandwidth	312.098 kHz

GPRS 1900 (CH Low)



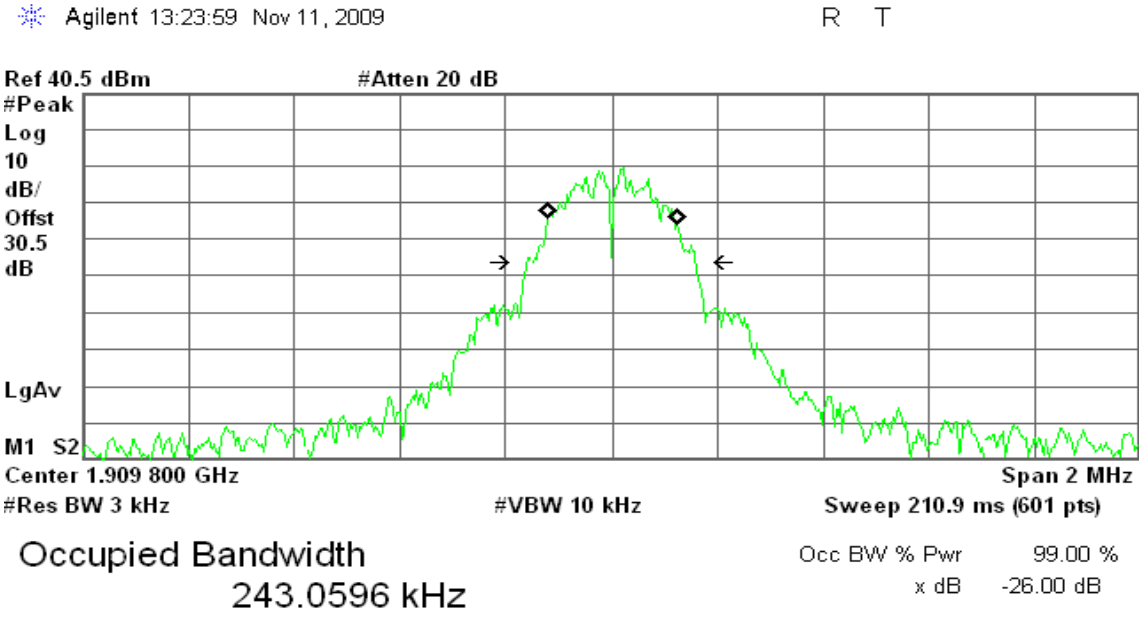
Transmit Freq Error	-410.437 Hz
x dB Bandwidth	319.020 kHz

GPRS 1900 (CH Mid)



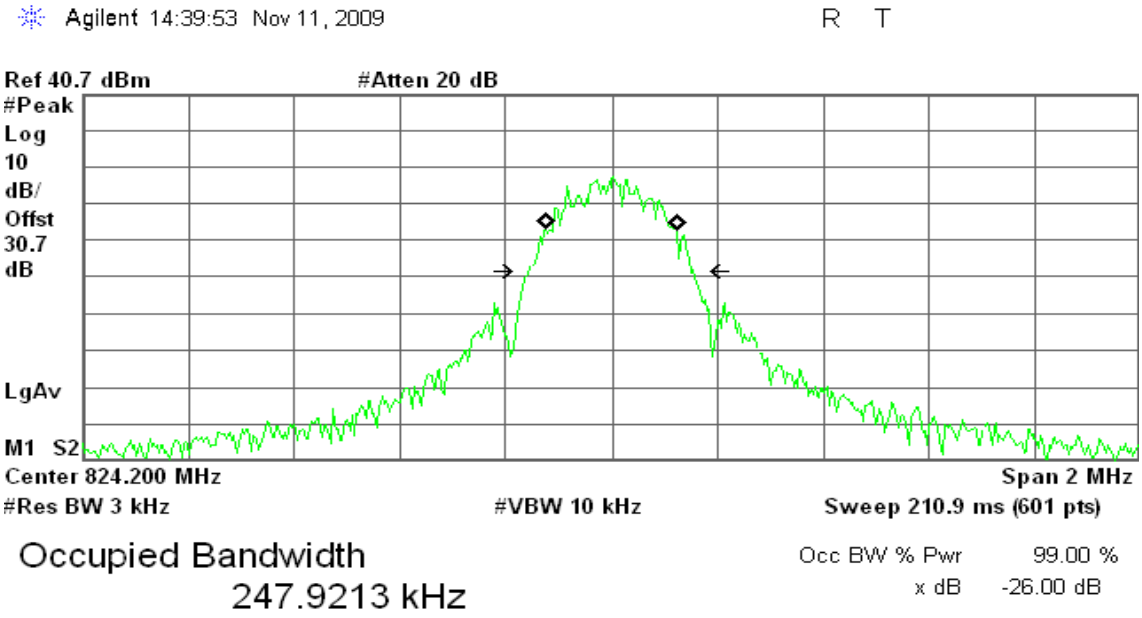
Transmit Freq Error	-1.367 kHz
x dB Bandwidth	316.588 kHz

GPRS 1900 (CH High)



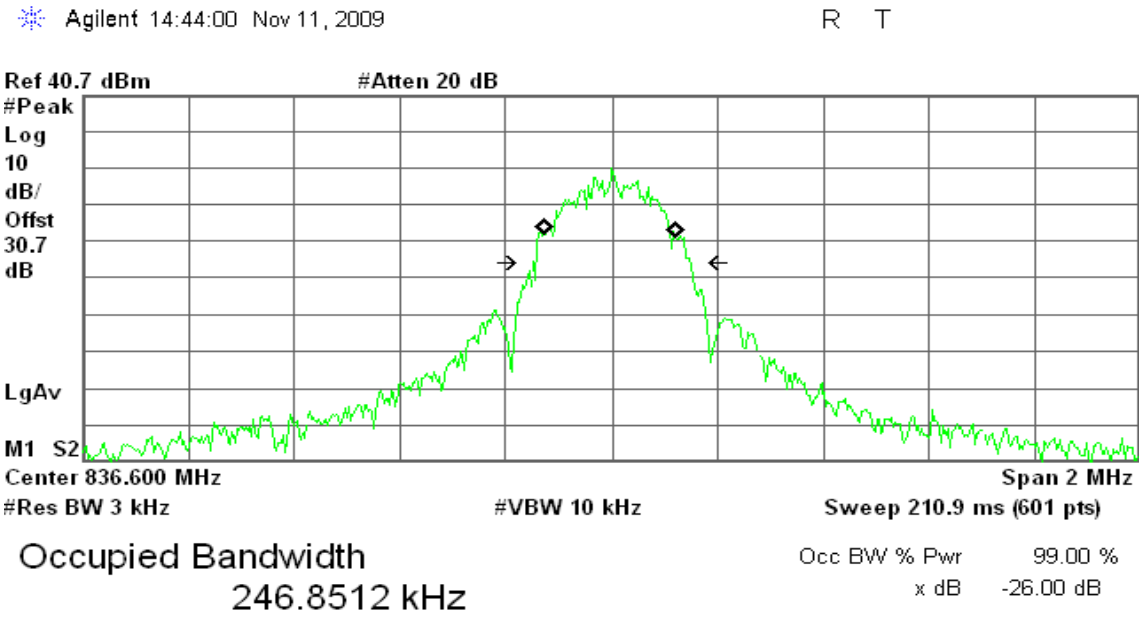
Transmit Freq Error	2.024 kHz
x dB Bandwidth	317.875 kHz

EDGE 850 (CH Low)



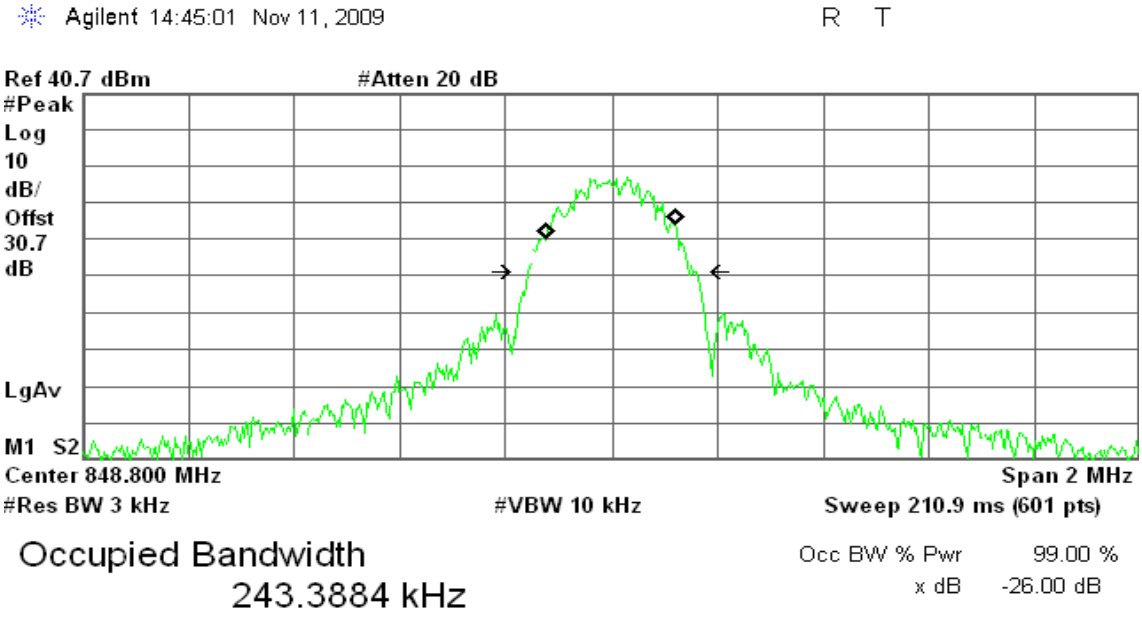
Transmit Freq Error	-206.669 Hz
Occupied Bandwidth	309.451 kHz

EDGE 850 (CH Mid)



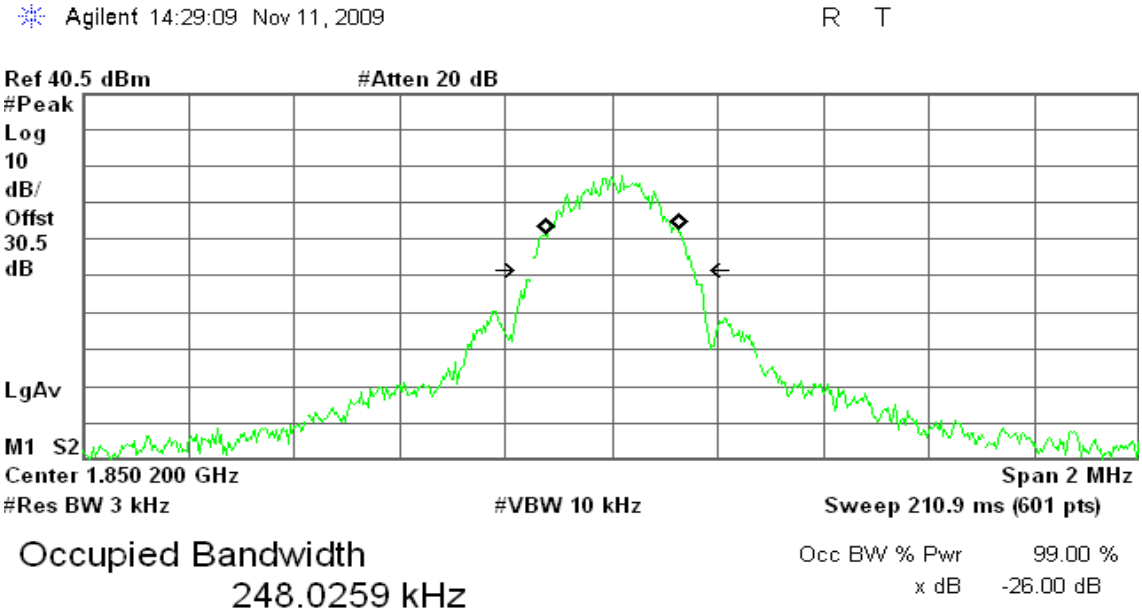
Transmit Freq Error	-2.334 kHz
Occupied Bandwidth	295.612 kHz

EDGE 850 (CH High)



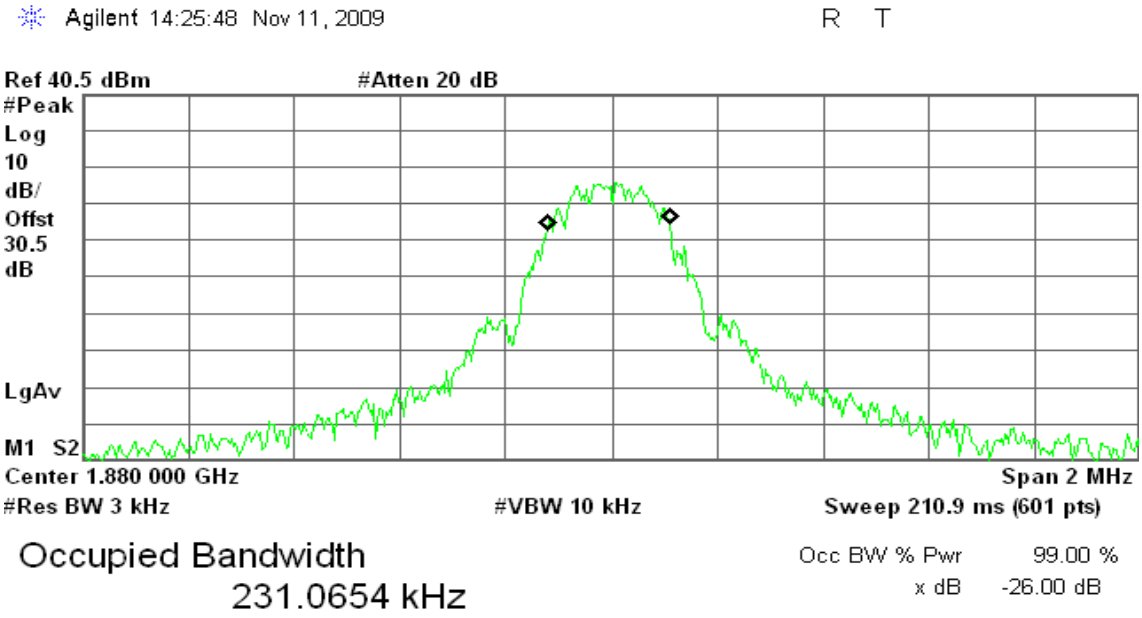
Transmit Freq Error	-895.833 Hz
x dB Bandwidth	310.080 kHz

EDGE 1900 (CH Low)



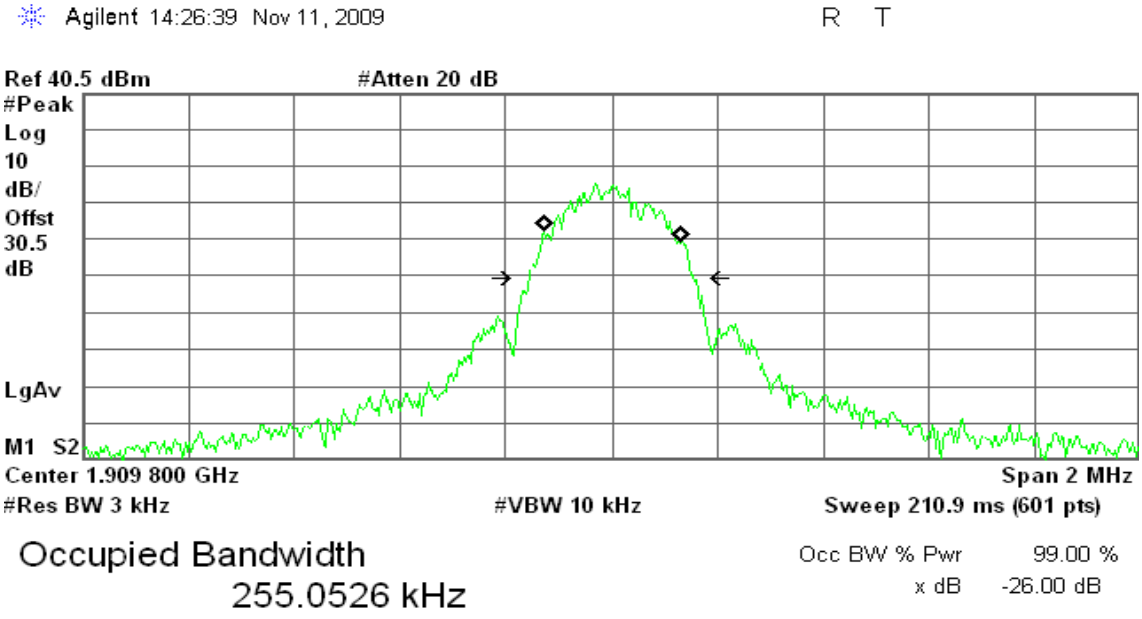
Transmit Freq Error	1.049 kHz
x dB Bandwidth	302.271 kHz

EDGE 1900 (CH Mid)



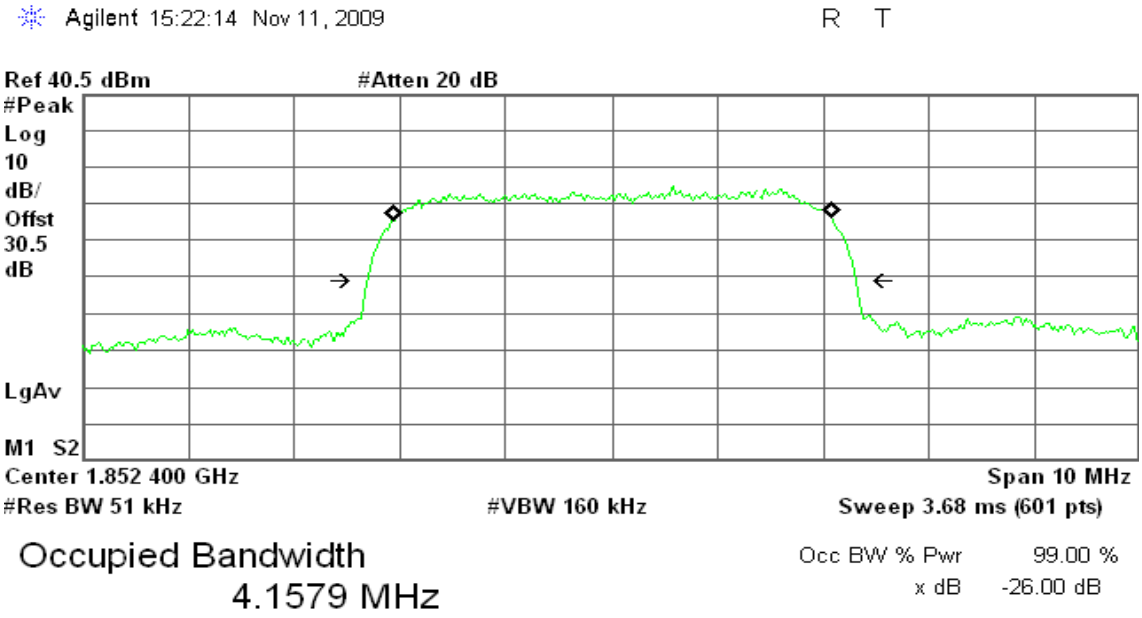
Transmit Freq Error	-5.031 kHz
x dB Bandwidth	314.869 kHz

EDGE 1900 (CH High)



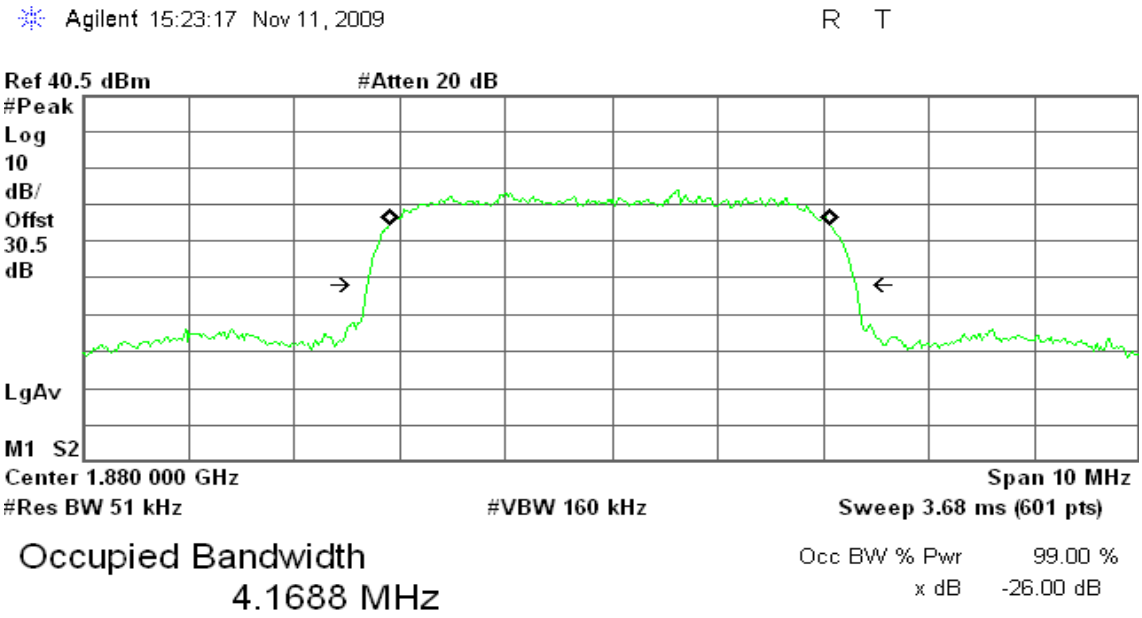
Transmit Freq Error	1.266 kHz
x dB Bandwidth	309.871 kHz

WCDMA Band II (CH Low)



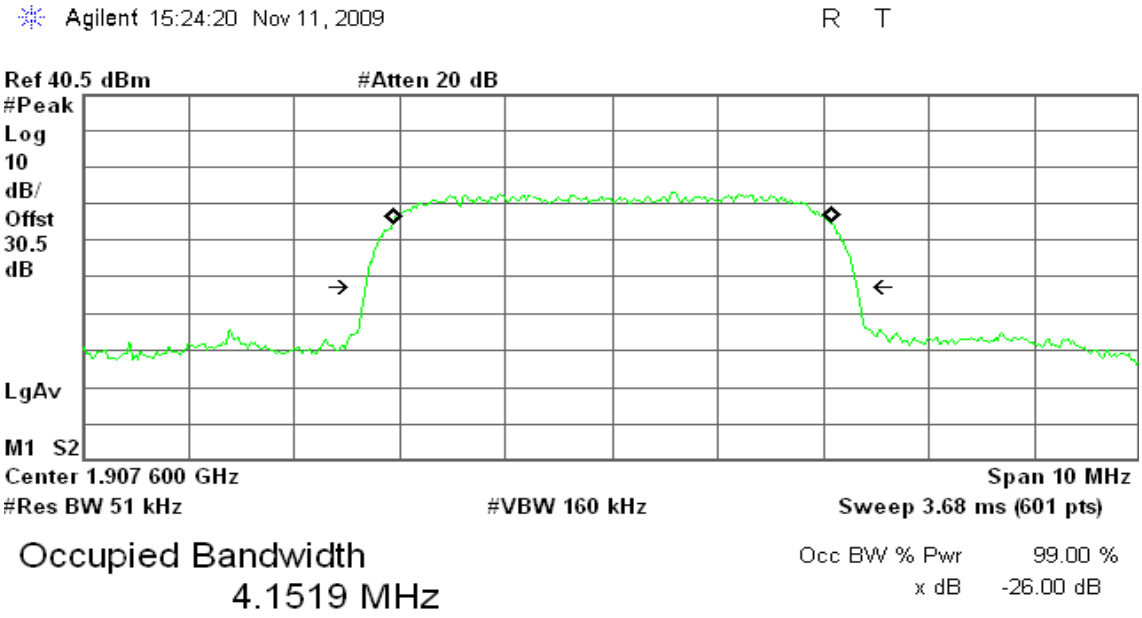
Transmit Freq Error	12.161 kHz
x dB Bandwidth	4.632 MHz

WCDMA Band II (CH Mid)



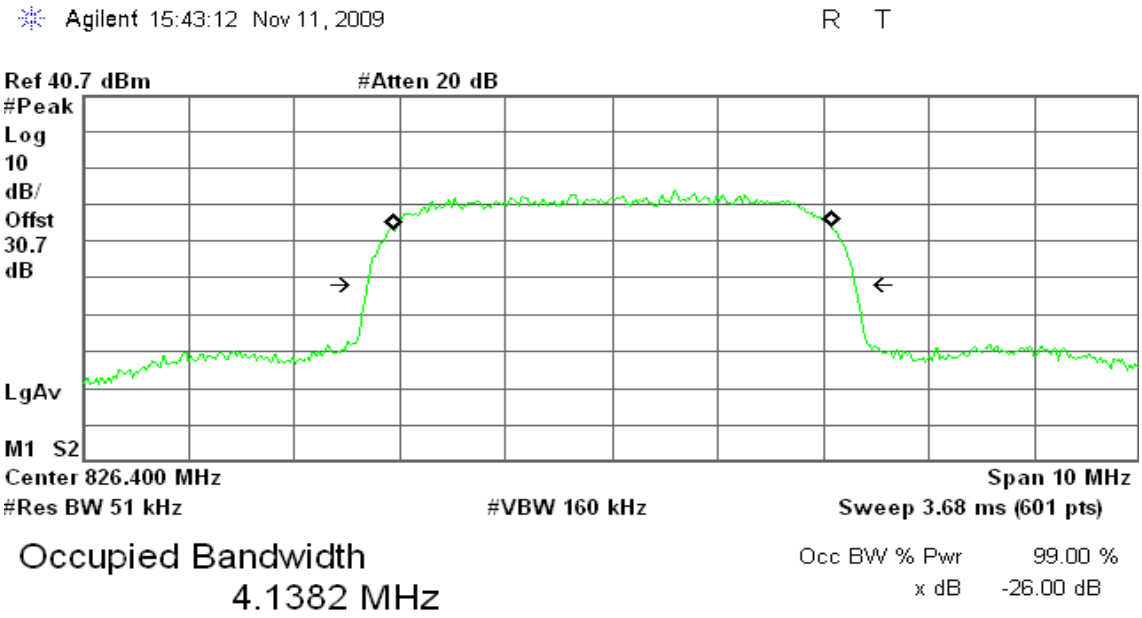
Transmit Freq Error	-11.017 kHz
x dB Bandwidth	4.631 MHz

WCDMA Band II (CH High)



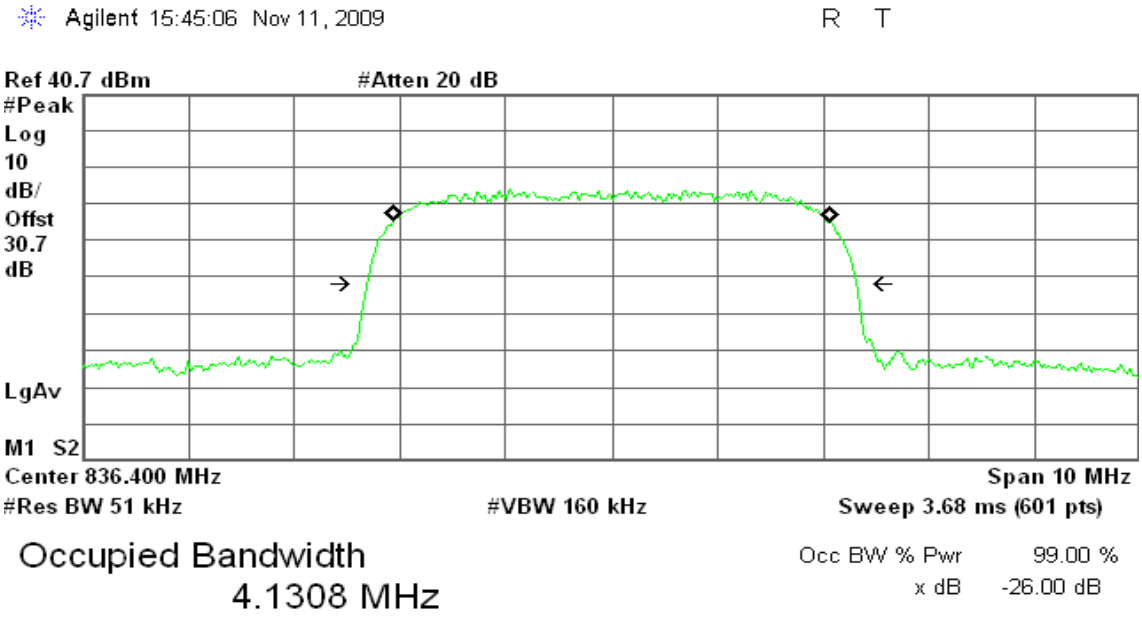
Transmit Freq Error	3.110 kHz
x dB Bandwidth	4.649 MHz

WCDMA Band V (CH Low)



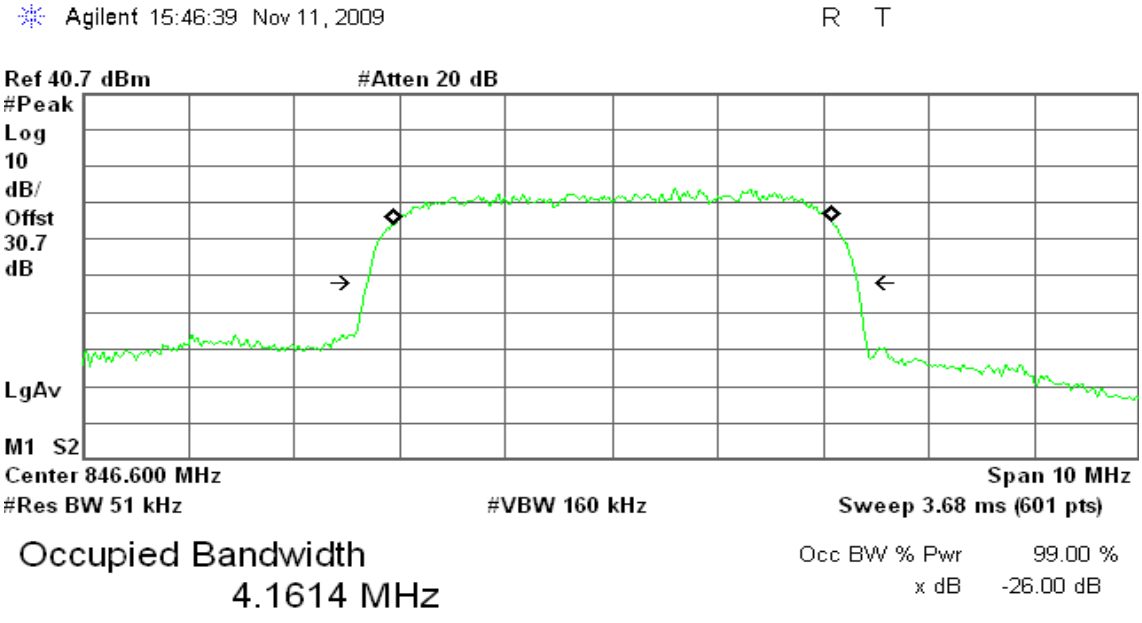
Transmit Freq Error	7.141 kHz
x dB Bandwidth	4.618 MHz

WCDMA Band V (CH Mid)



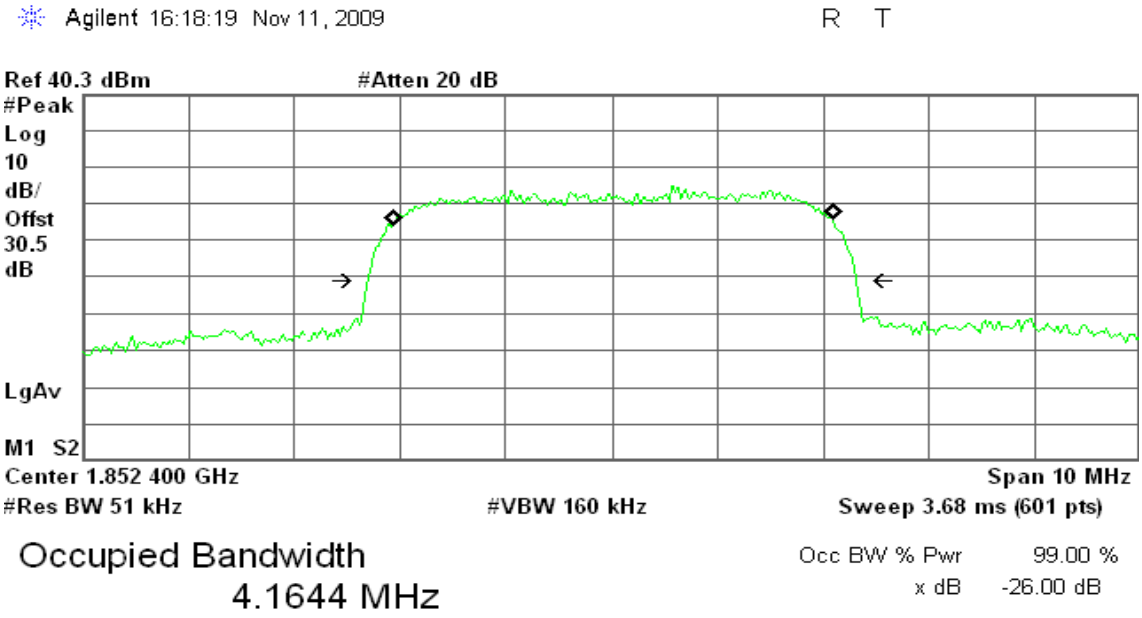
Transmit Freq Error	-426.070 Hz
x dB Bandwidth	4.640 MHz

WCDMA Band V (CH High)



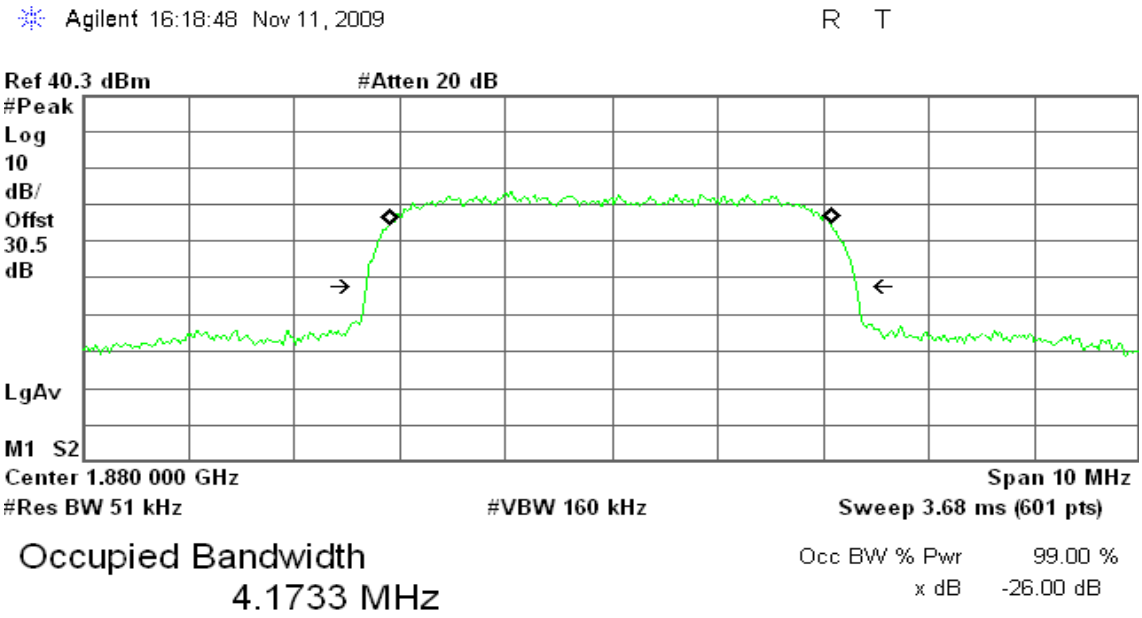
Transmit Freq Error	8.813 kHz
x dB Bandwidth	4.642 MHz

WCDMA / HSDPA Band II (CH Low)



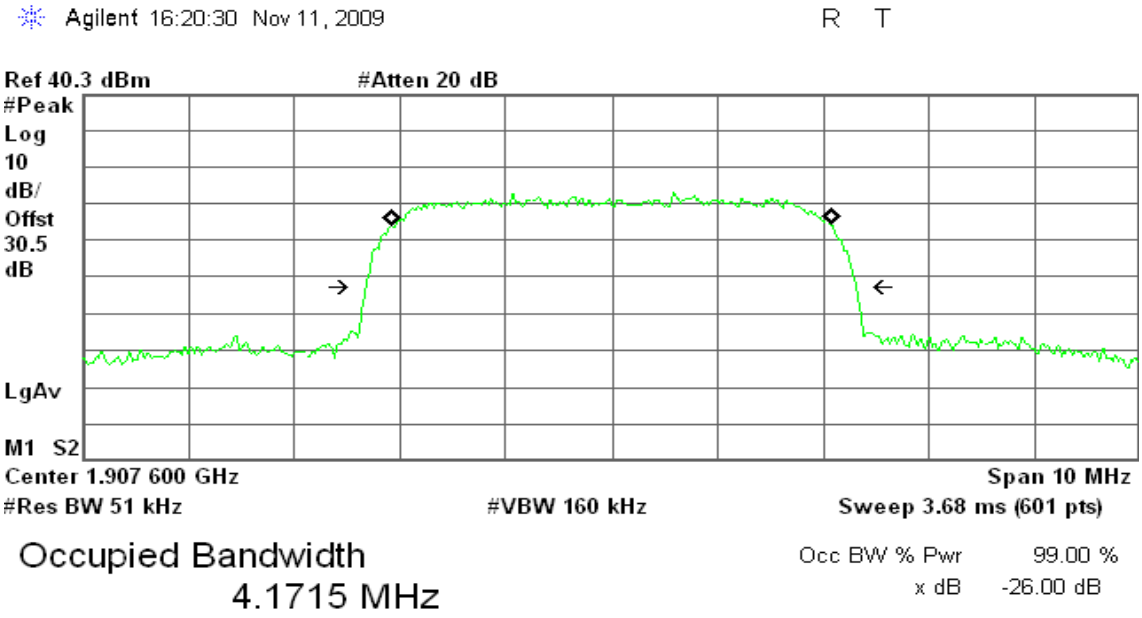
Transmit Freq Error	13.703 kHz
x dB Bandwidth	4.625 MHz

WCDMA / HSDPA Band II (CH Mid)



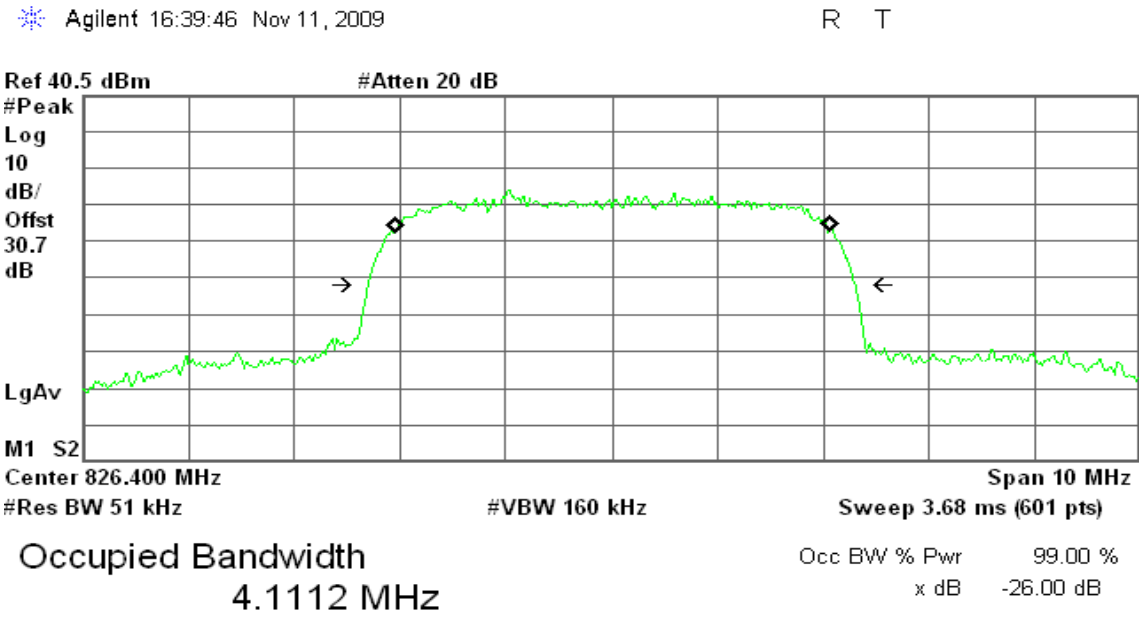
Transmit Freq Error	-10.869 kHz
x dB Bandwidth	4.646 MHz

WCDMA / HSDPA Band II (CH High)



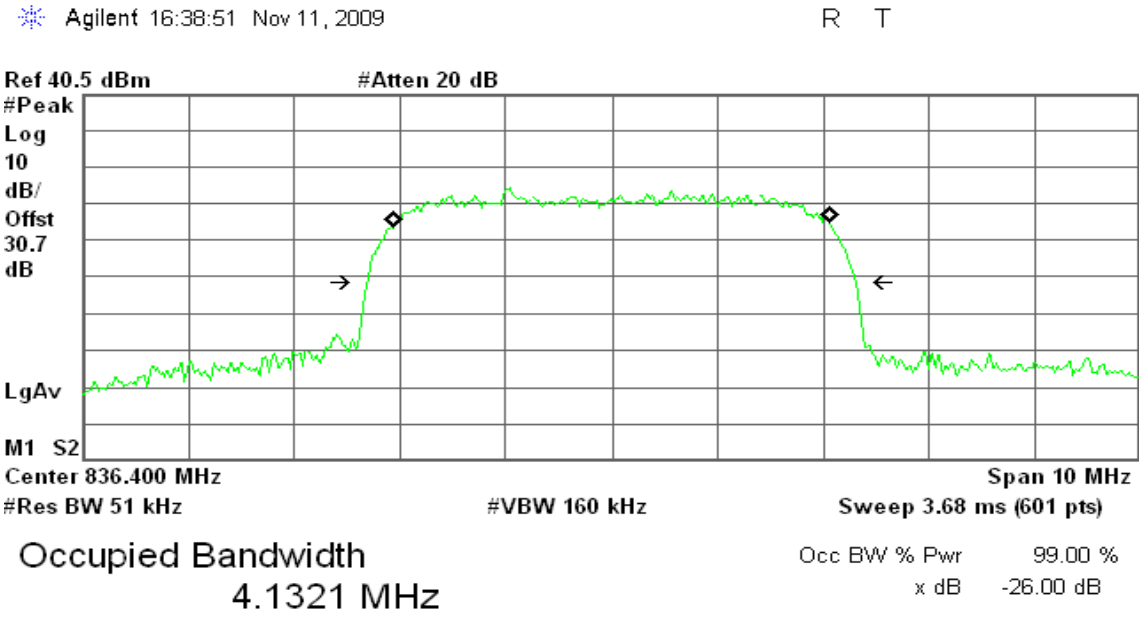
Transmit Freq Error	-5.183 kHz
x dB Bandwidth	4.651 MHz

WCDMA / HSDPA Band V (CH Low)



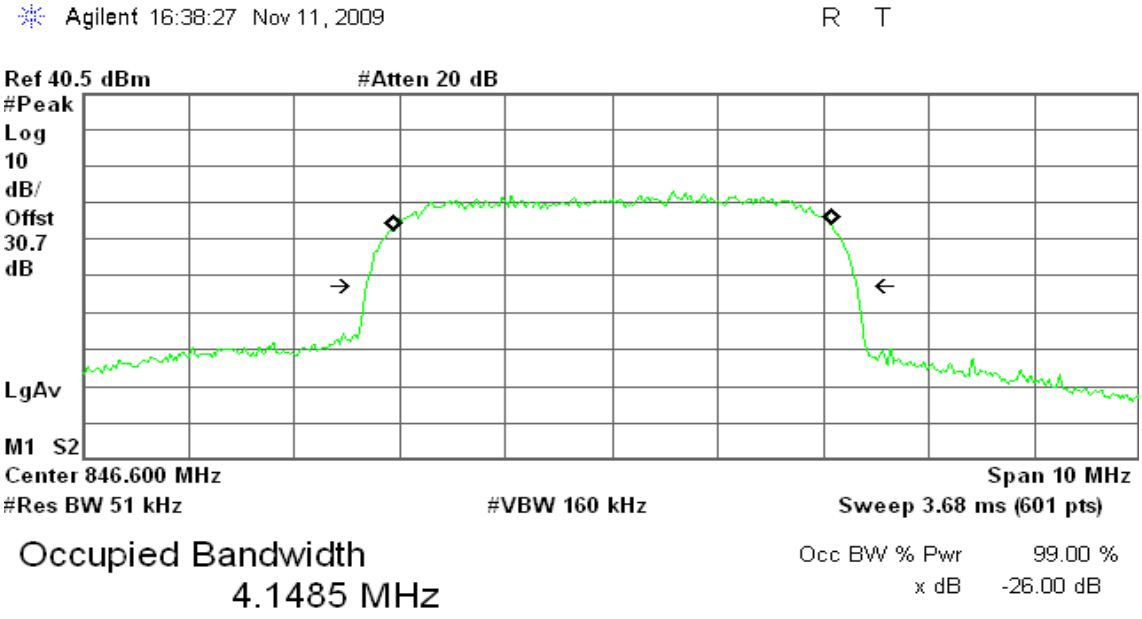
Transmit Freq Error	4.137 kHz
x dB Bandwidth	4.616 MHz

WCDMA / HSDPA Band V (CH Mid)



Transmit Freq Error	-4.134 kHz
x dB Bandwidth	4.627 MHz

WCDMA / HSDPA Band V (CH High)



Transmit Freq Error	9.668 kHz
x dB Bandwidth	4.646 MHz

7.3OUT OF BAND EMISSION AT ANTENNA TERMINALS

LIMIT

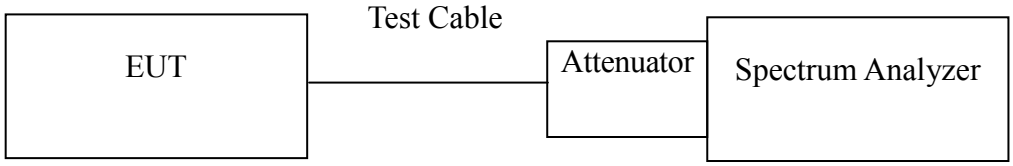
According to FCC §2.1051, FCC §22.917, FCC §24.238(a).

Out of Band Emissions: The mean power of emission must be attenuated below the mean power of the non-modulated carrier (P) on any frequency twice or more than twice the fundamental frequency by at lease 43 + 10 log P dB.

Mobile Emissions in Base Frequency Range: The mean power of any emissions appearing in the base station frequency range from cellular mobile transmitters operated must be attenuated to a level not exceed –80 dBm at the transmit antenna connector.
Band Edge Requirements: In the 1MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at lease 1% of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the Out of band Emission

Test Configuration

Out of band emission at antenna terminals:



TEST PROCEDURE

The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation. The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.

For the out of band: Set the RBW, VBW = 1MHz, Start=30MHz, Stop= 10 th harmonic. Limit = -13dBm

Band Edge Requirements (824 MHz and 849 MHz /1850MHz and 1910MHz): In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions. Limit, -13dBm.

TEST RESULTS

No non-compliance noted.

Test Data

Mode	CH	Location	Description
GPRS 850 (Class 10)	128	Figure 7-1	Conducted spurious emissions, 30MHz - 20GHz
	190	Figure 7-2	Conducted spurious emissions, 30MHz - 20GHz
	251	Figure 7-3	Conducted spurious emissions, 30MHz - 20GHz
GPRS 1900 (Class 10)	512	Figure 8-1	Conducted spurious emissions, 30MHz - 20GHz
	661	Figure 8-2	Conducted spurious emissions, 30MHz - 20GHz
	810	Figure 8-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
GPRS 850 (Class 10)	128	Figure 9-1	Band Edge emissions
	251	Figure 9-2	Band Edge emissions
GPRS 1900 (Class 10)	512	Figure 10-1	Band Edge emissions
	810	Figure 10-2	Band Edge emissions

Mode	CH	Location	Description
EDGE 850 (Class 10)	128	Figure 11-1	Conducted spurious emissions, 30MHz - 20GHz
	190	Figure 11-2	Conducted spurious emissions, 30MHz - 20GHz
	251	Figure 11-3	Conducted spurious emissions, 30MHz - 20GHz
EDGE 1900 (Class 10)	512	Figure 11-4	Conducted spurious emissions, 30MHz - 20GHz
	661	Figure 11-5	Conducted spurious emissions, 30MHz - 20GHz
	810	Figure 11-6	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
EDGE 850 (Class 10)	128	Figure 12-1	Band Edge emissions
	251	Figure 12-2	Band Edge emissions
EDGE 1900 (Class 10)	512	Figure 12-3	Band Edge emissions
	810	Figure 12-4	Band Edge emissions

Mode	CH	Location	Description
WCDMA (Band II)	9262	Figure 13-1	Conducted spurious emissions, 30MHz - 20GHz
	9400	Figure 13-2	Conducted spurious emissions, 30MHz - 20GHz
	9538	Figure 13-3	Conducted spurious emissions, 30MHz - 20GHz
WCDMA (Band V)	4132	Figure 13-4	Conducted spurious emissions, 30MHz - 20GHz
	4182	Figure 13-5	Conducted spurious emissions, 30MHz - 20GHz
	4233	Figure 13-6	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
WCDMA (Band II)	9262	Figure 14-1	Band Edge emissions
	9538	Figure 14-2	Band Edge emissions
WCDMA (Band V)	4132	Figure 14-3	Band Edge emissions
	4233	Figure 14-4	Band Edge emissions

Mode	CH	Location	Description
HSDPA WCDMA (Band II)	9262	Figure 15-1	Conducted spurious emissions, 30MHz - 20GHz
	9400	Figure 15-2	Conducted spurious emissions, 30MHz - 20GHz
	9538	Figure 15-3	Conducted spurious emissions, 30MHz - 20GHz
HSDPA WCDMA (Band V)	4132	Figure 15-4	Conducted spurious emissions, 30MHz - 20GHz
	4182	Figure 15-5	Conducted spurious emissions, 30MHz - 20GHz
	4233	Figure 15-6	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
HSDPA WCDMA (Band II)	9262	Figure 16-1	Band Edge emissions
	9538	Figure 16-2	Band Edge emissions
HSDPA WCDMA (Band V)	4132	Figure 16-3	Band Edge emissions
	4233	Figure 16-4	Band Edge emissions

Test Plot

GPRS 850

Figure 7-1: Out of Band emission at antenna terminals – GPRS CH Low

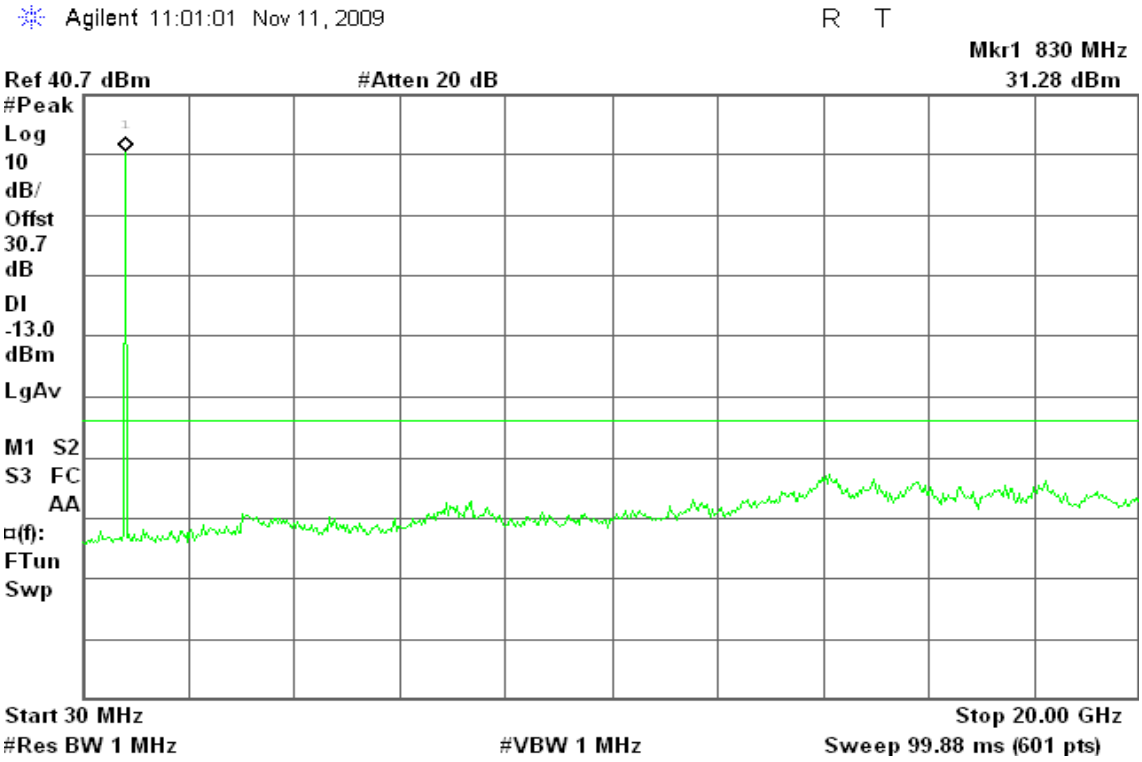


Figure 7-2: Out of Band emission at antenna terminals – GPRS CH Mid

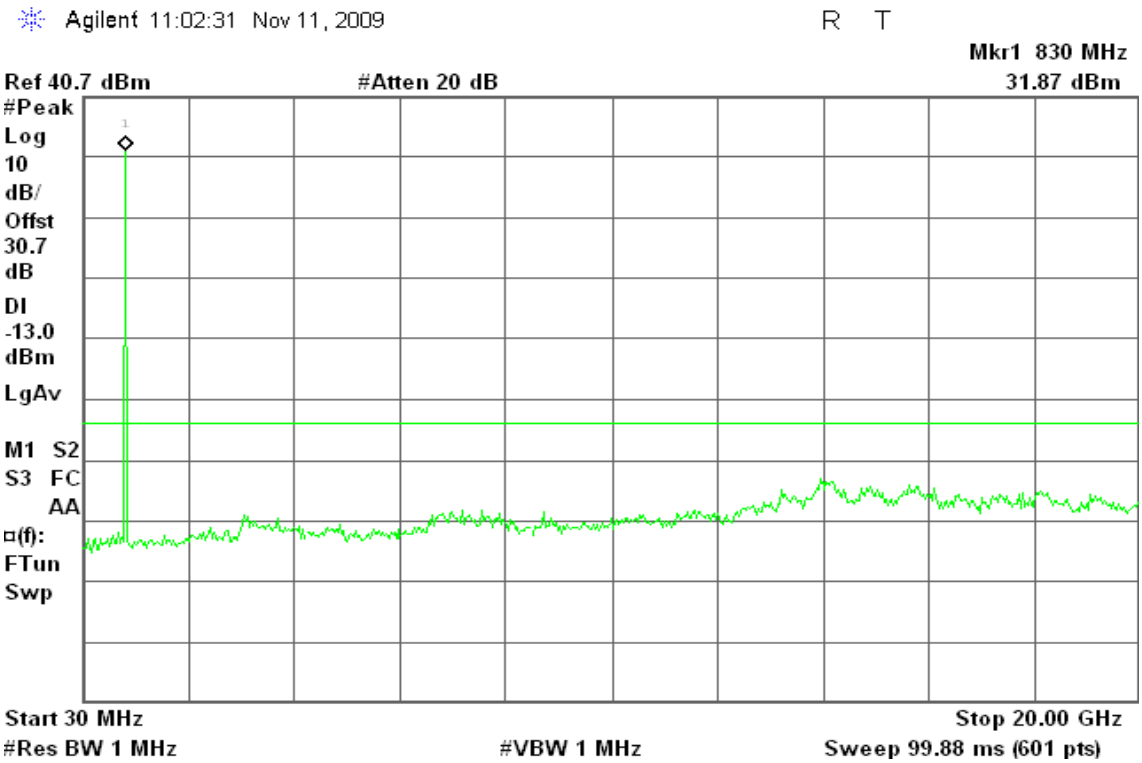
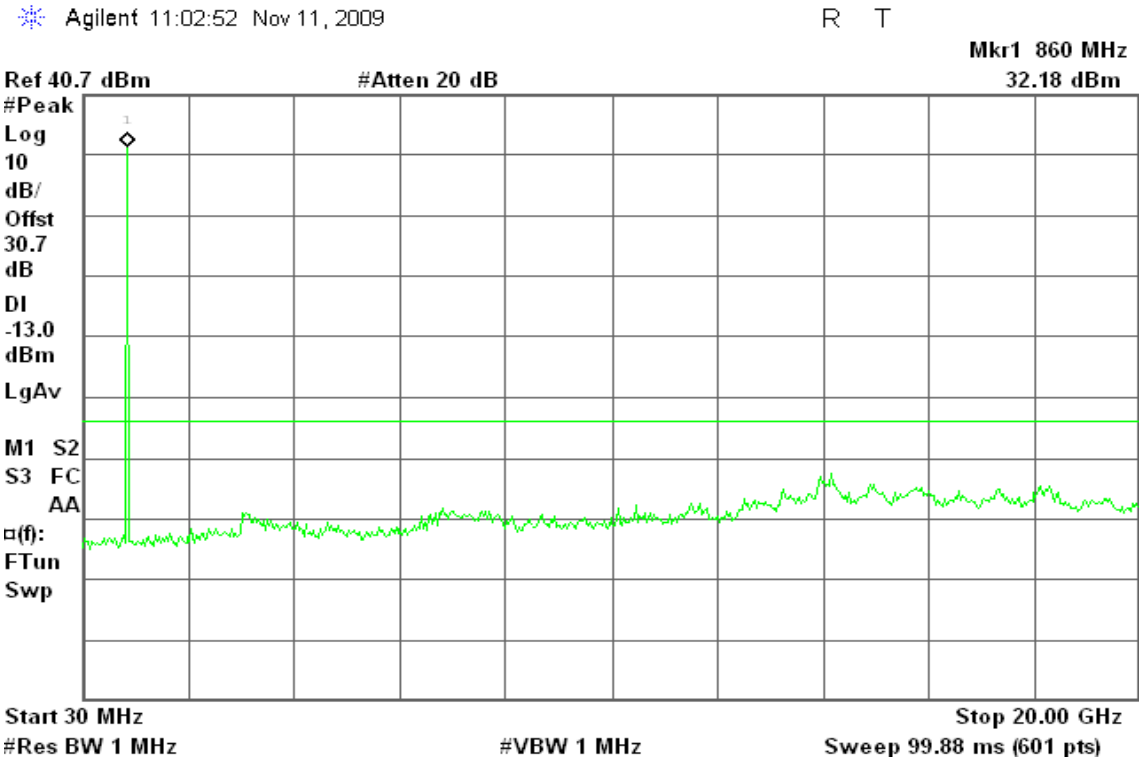


Figure 7-3: Out of Band emission at antenna terminals – GPRS CH High



GPRS 1900

Figure 8-1: Out of Band emission at antenna terminals – GPRS CH Low

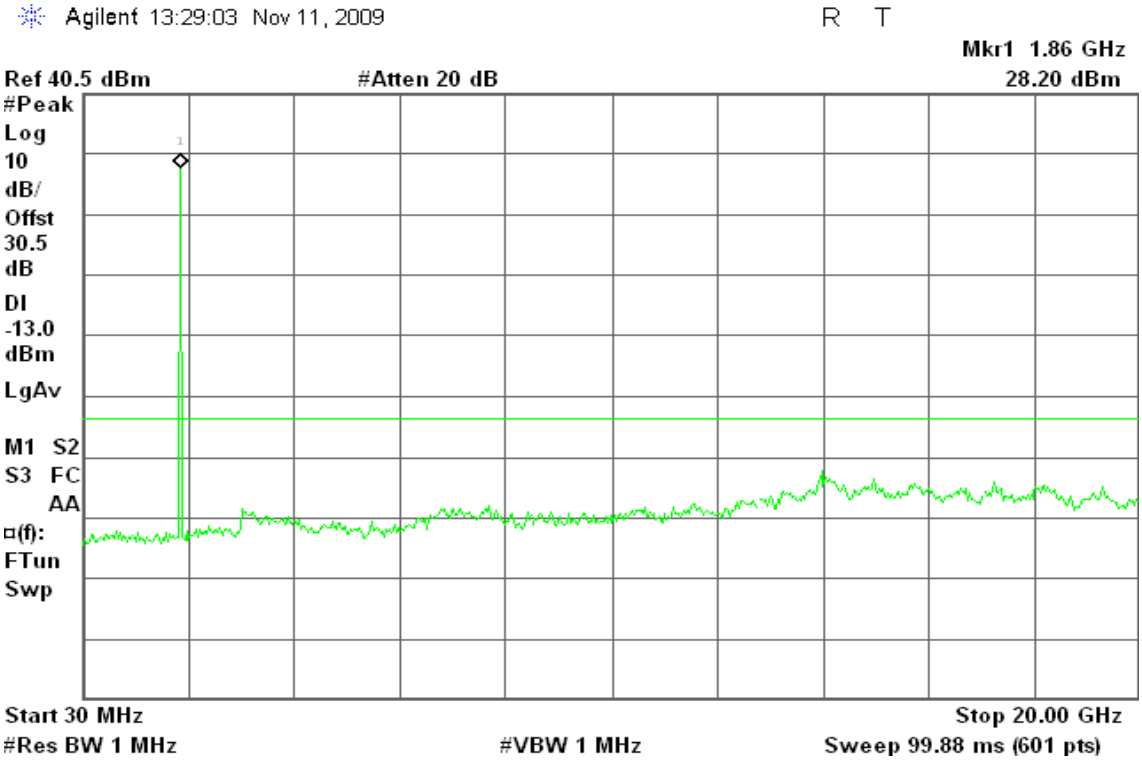


Figure 8-2: Out of Band emission at antenna terminals – GPRS CH Mid

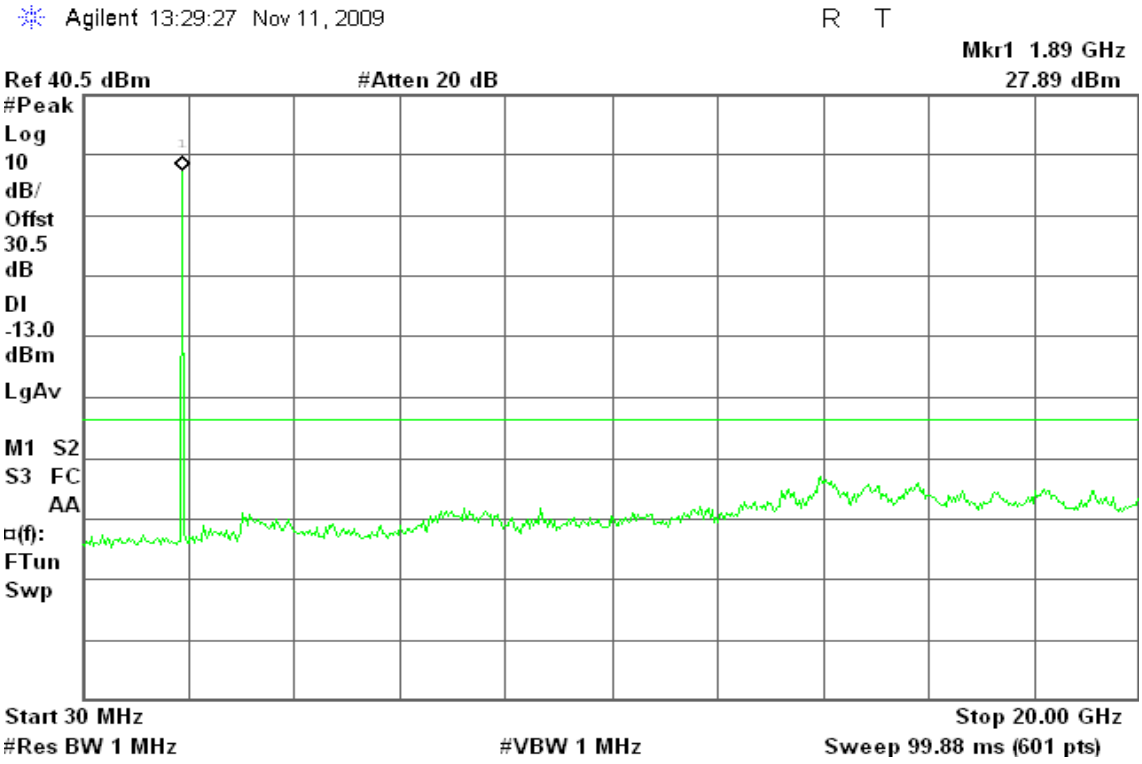
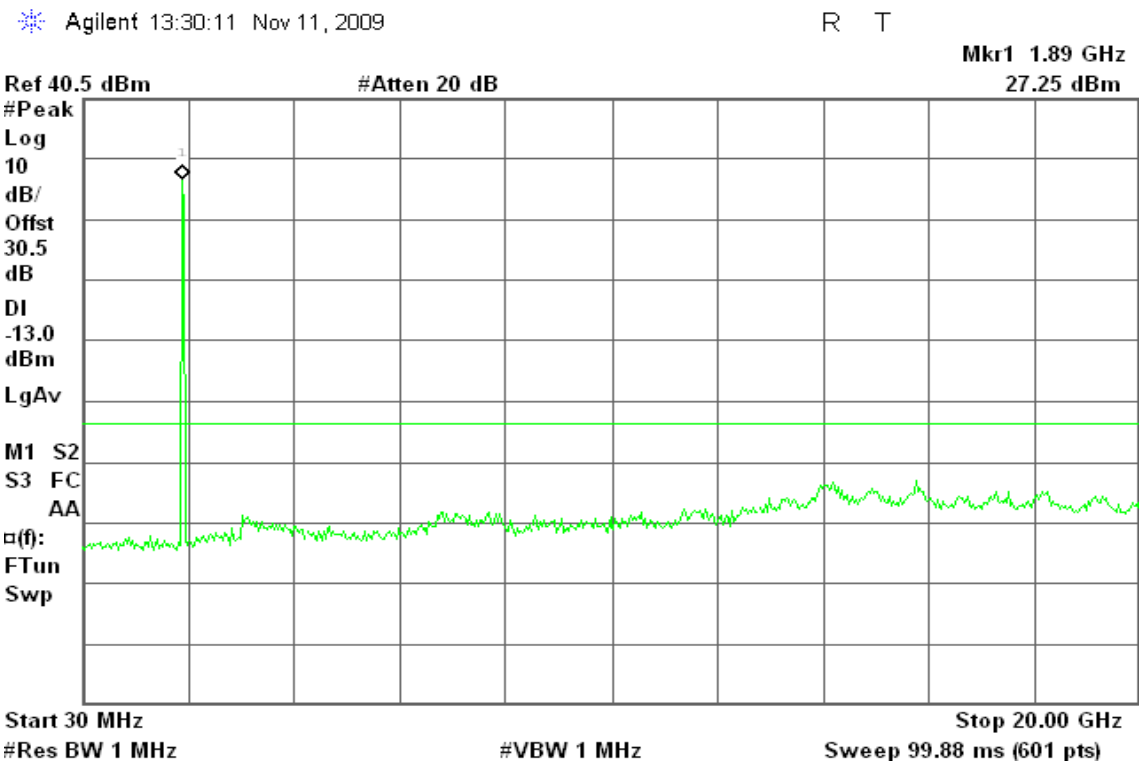


Figure 8-3: Out of Band emission at antenna terminals – GPRS CH High



GPRS 850

Figure 9-1: Band Edge emissions – GPRS CH Low

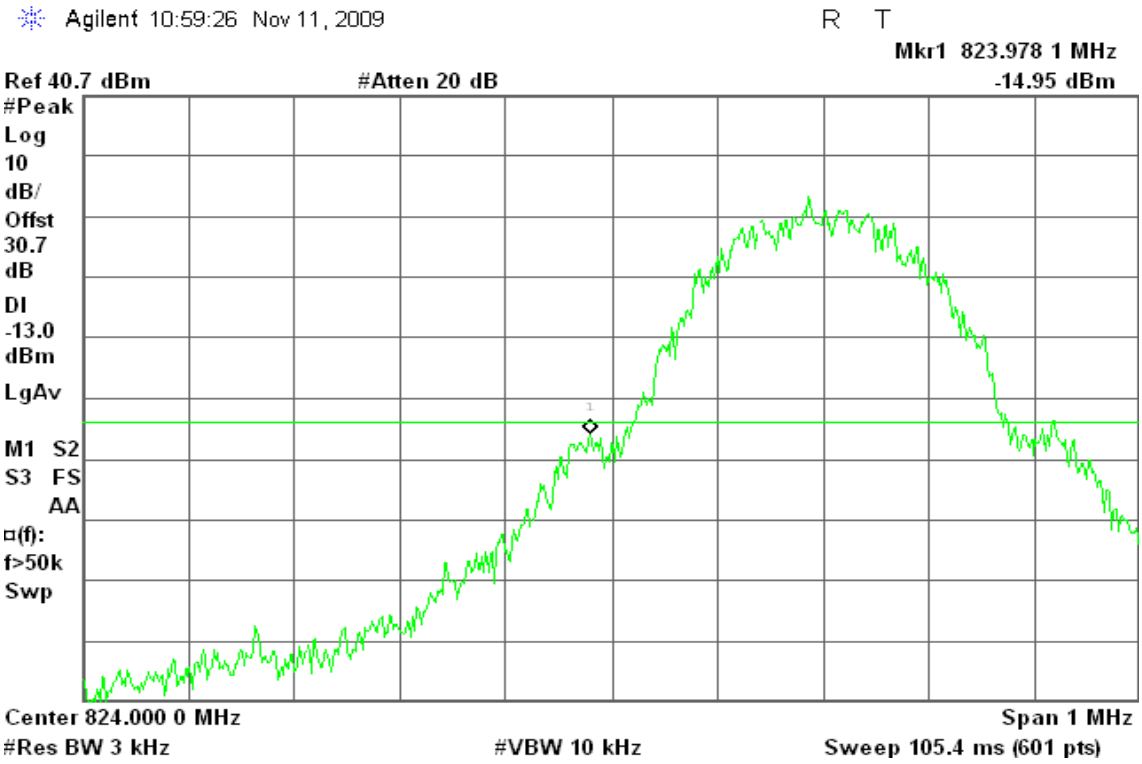
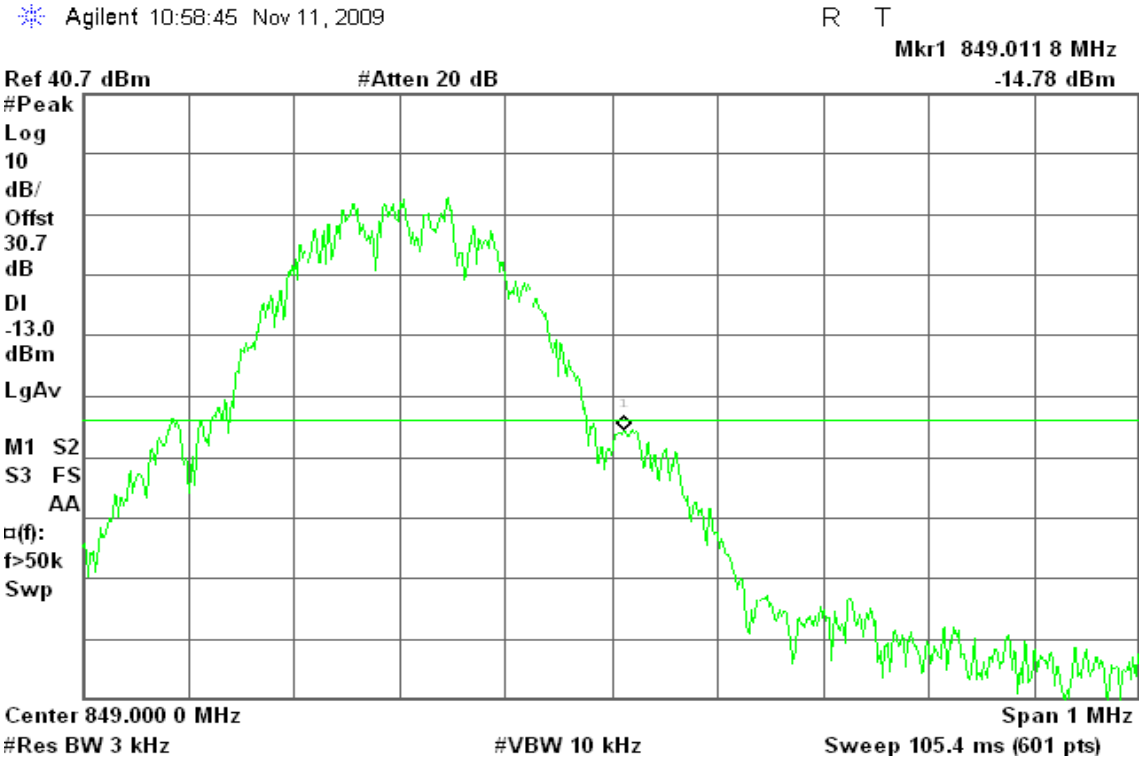


Figure 9-2: Band Edge emissions –GPRS CH High



GPRS 1900

Figure 10-1: Band Edge emissions – GPRS CH Low

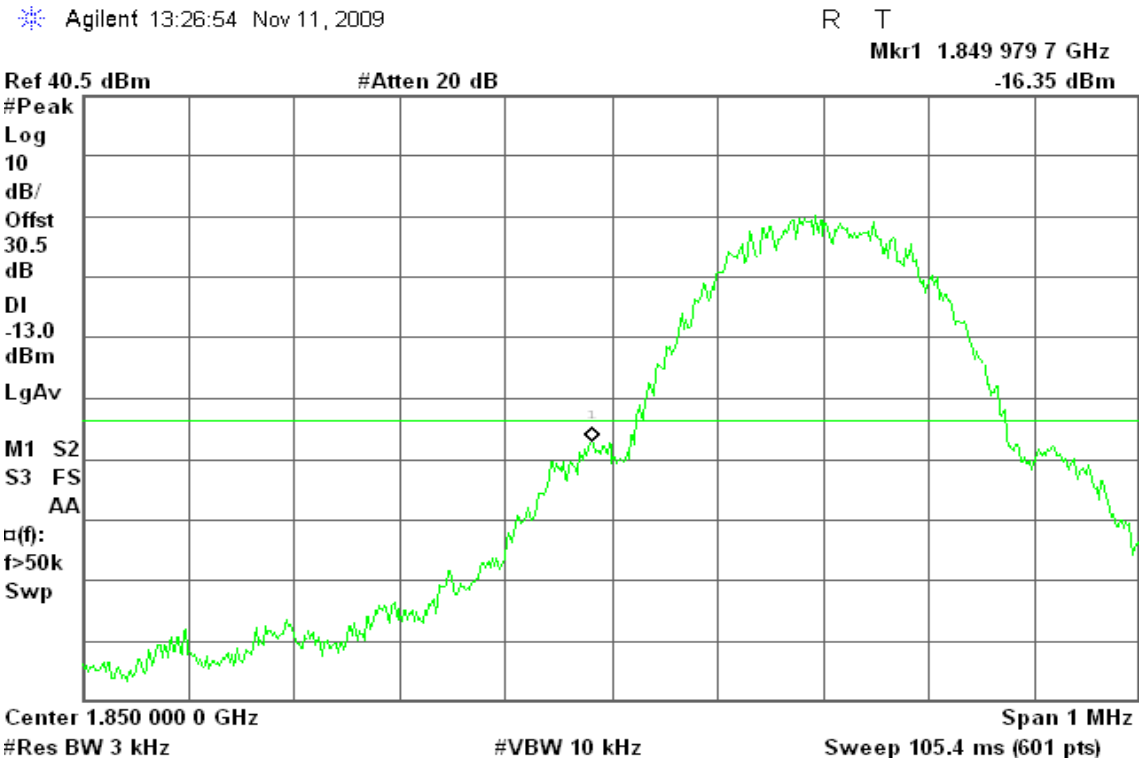
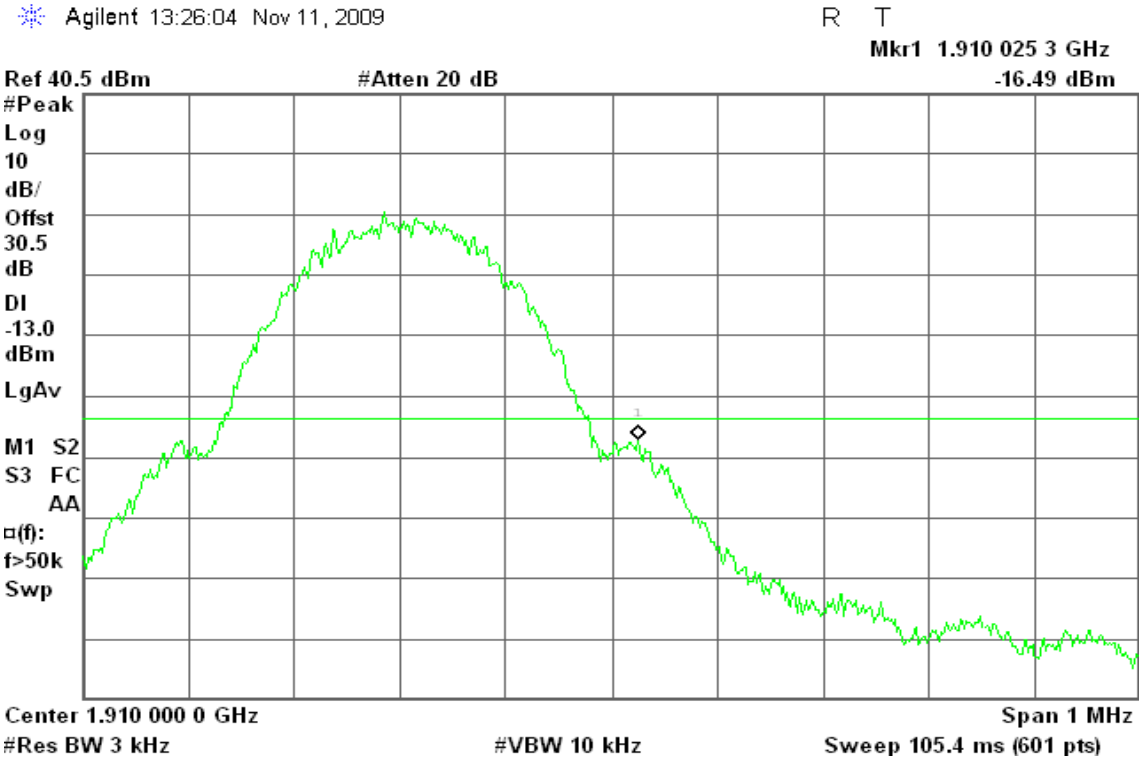


Figure 10-2: Band Edge emissions – GPRS CH High



EDGE 850

Figure 11-1: Out of Band emission at antenna terminals –EDGE CH Low

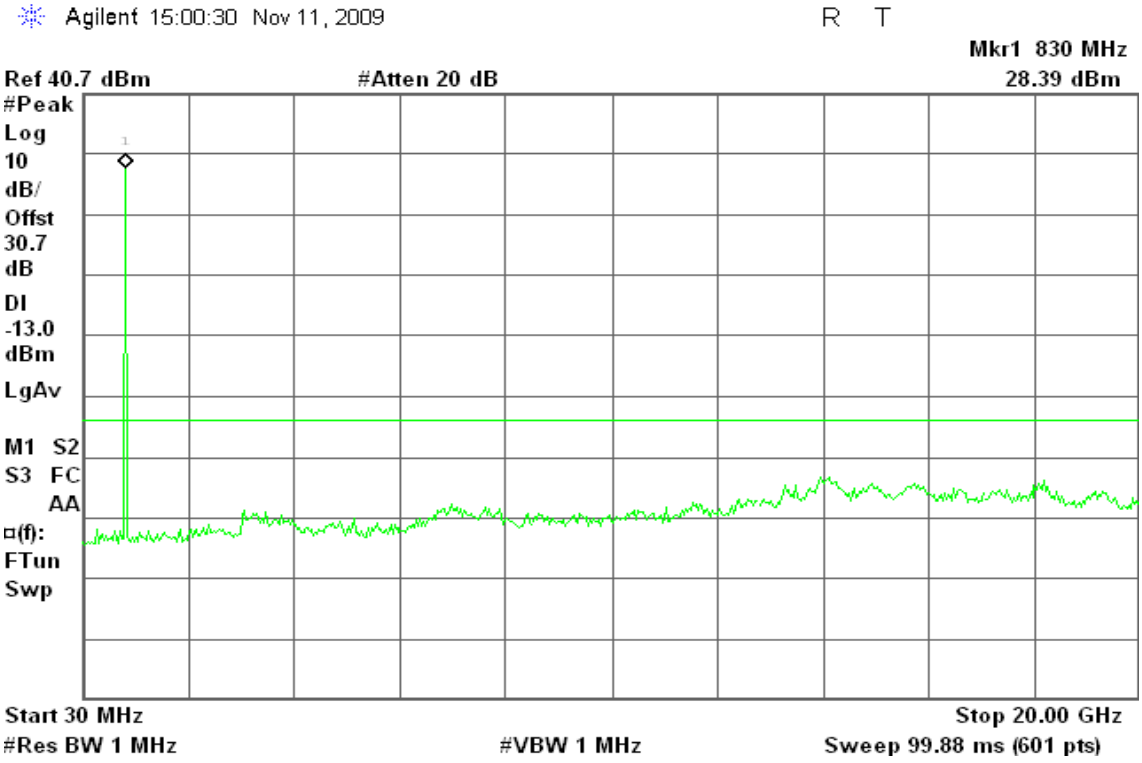


Figure 11-2: Out of Band emission at antenna terminals –EDGE CH Mid

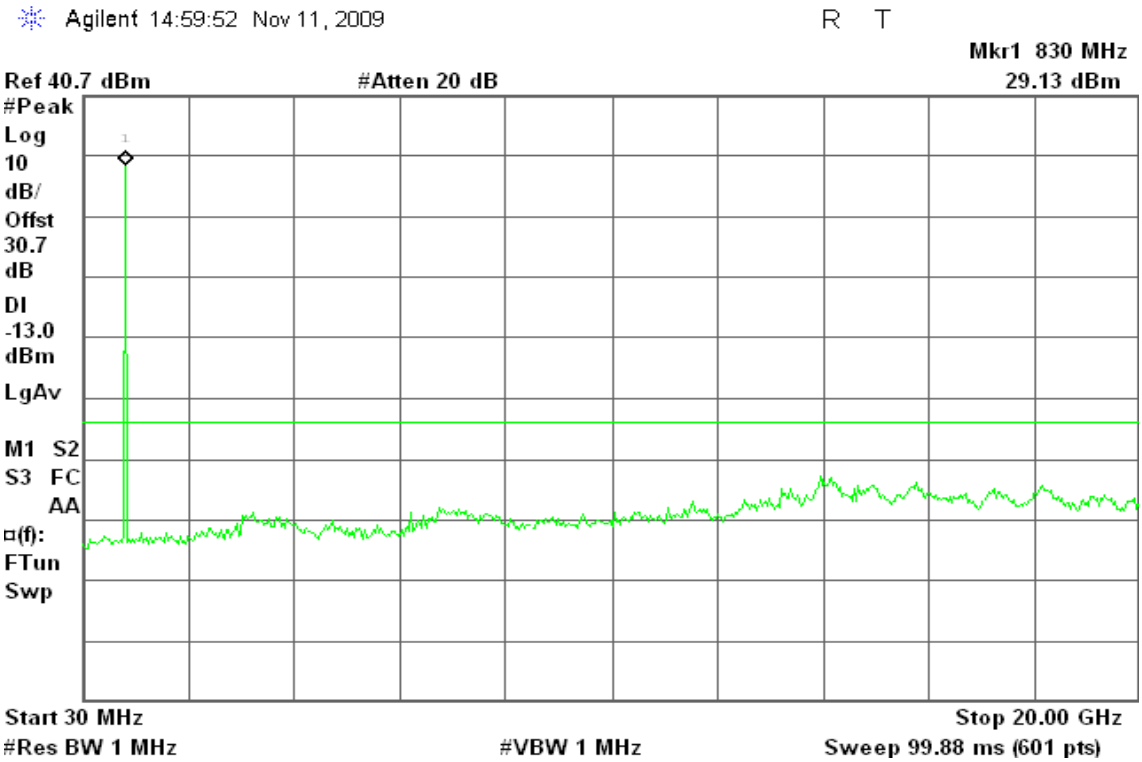
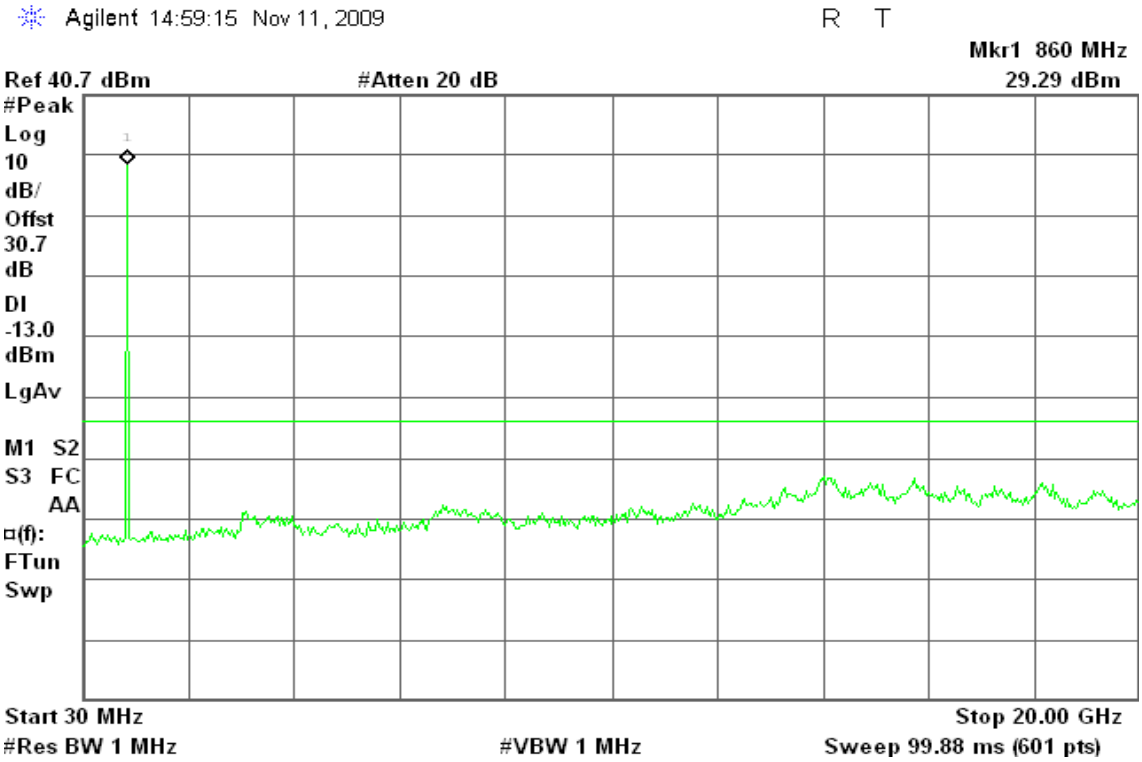


Figure 11-3: Out of Band emission at antenna terminals –EDGE CH High



EDGE 1900

Figure 11-4: Out of Band emission at antenna terminals –EDGE CH Low

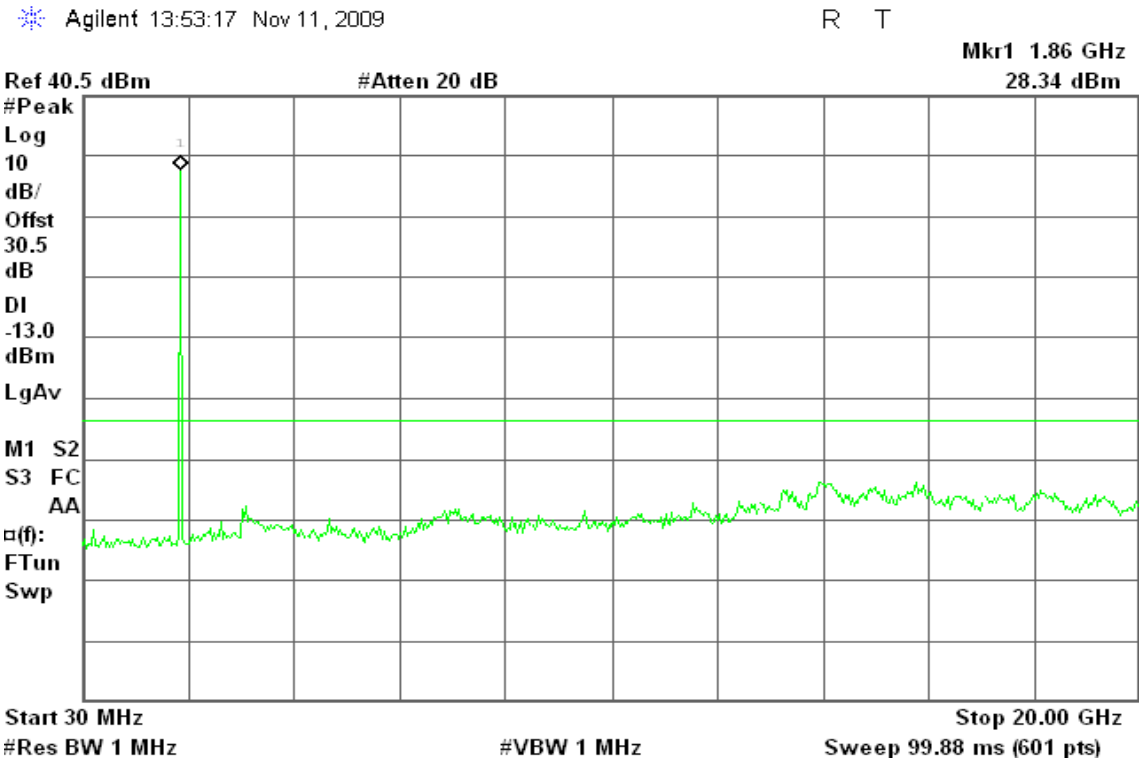


Figure 11-5: Out of Band emission at antenna terminals –EDGE CH Mid

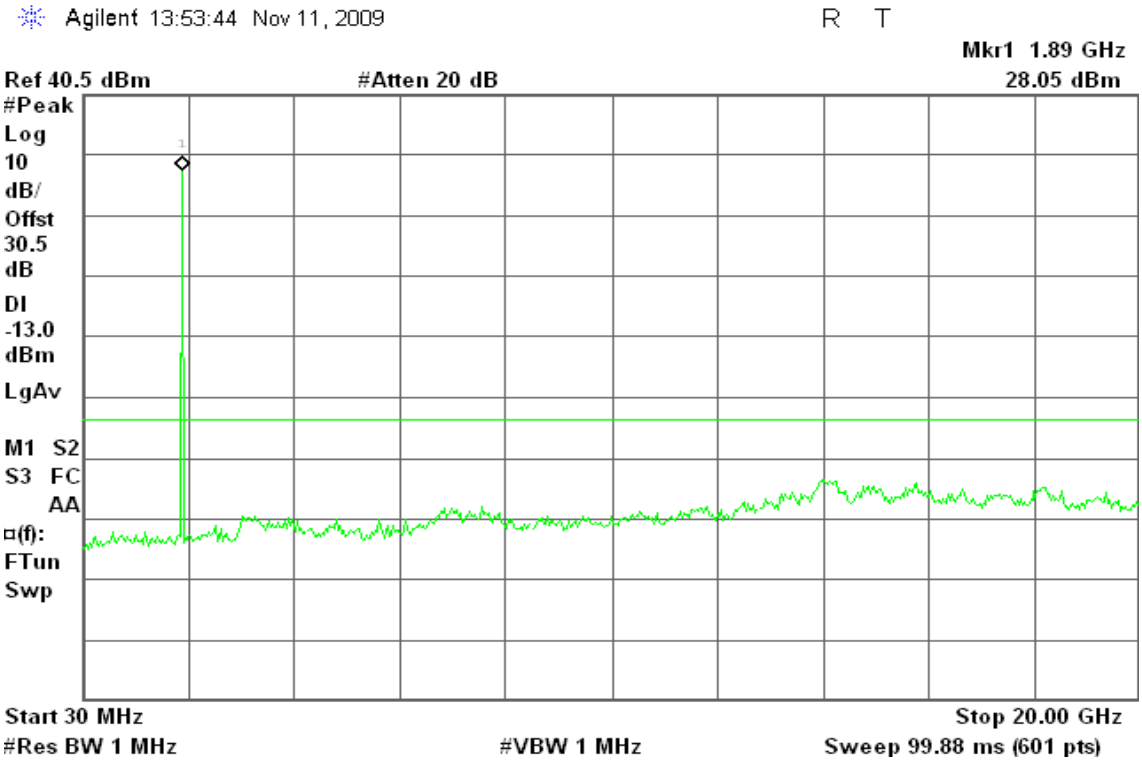
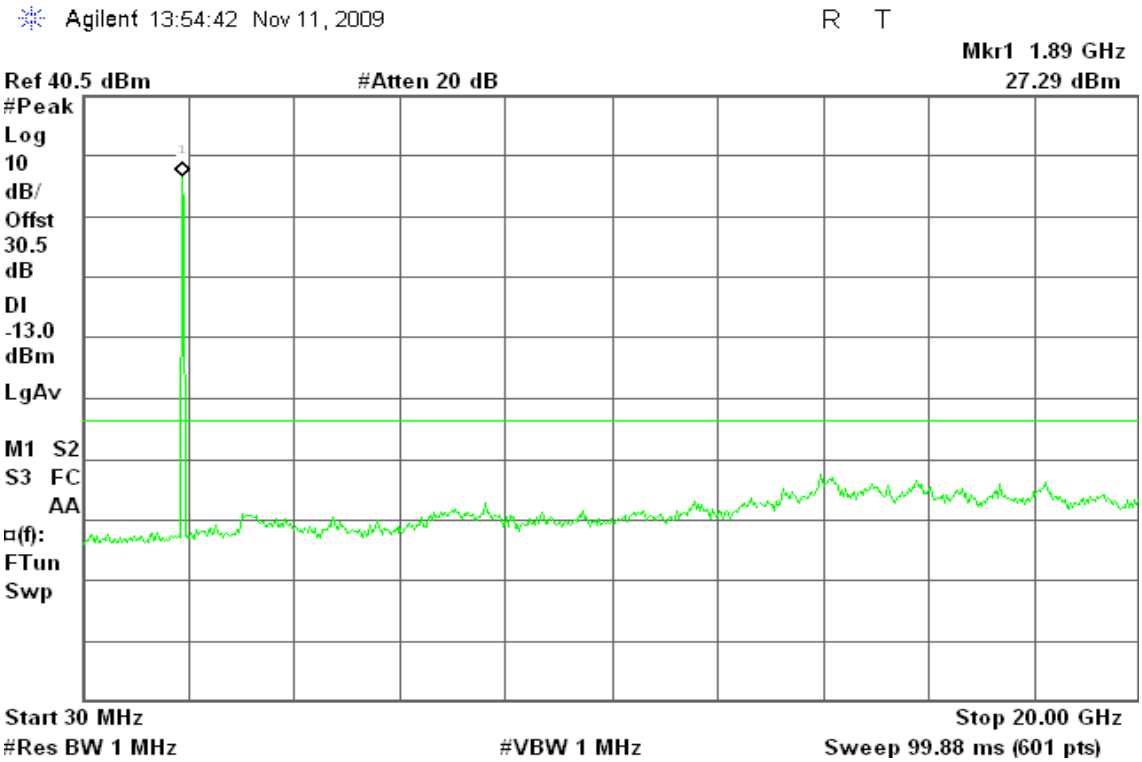


Figure 11-6: Out of Band emission at antenna terminals –EDGE CH High



EDGE 850

Figure 12-1: Band Edge emissions – EDGE CH Low

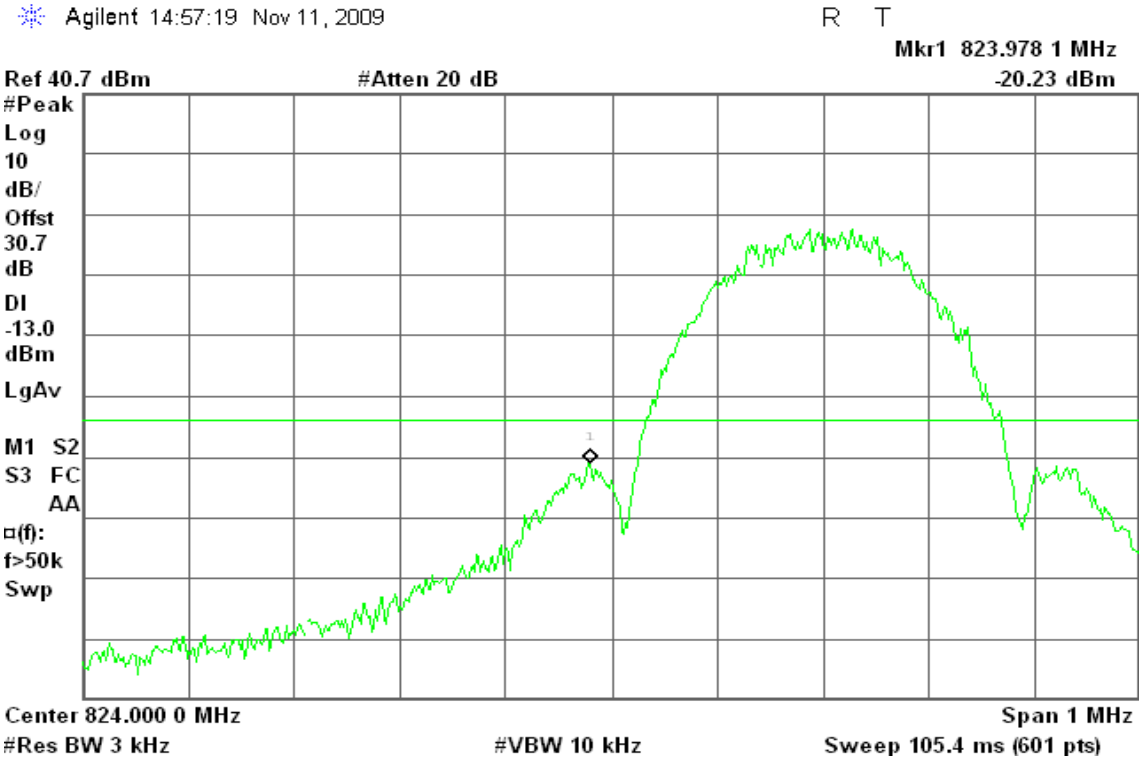
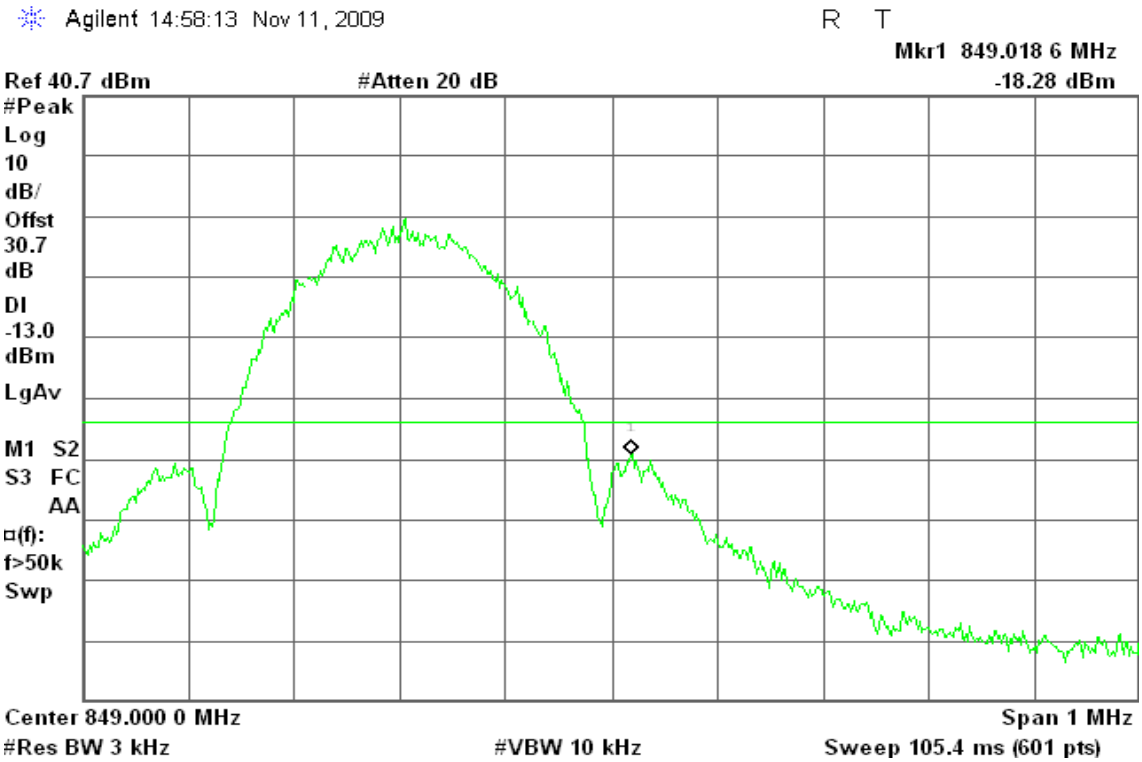


Figure 12-2: Band Edge emissions – EDGE CH High



EDGE 1900

Figure 12-3: Band Edge emissions – EDGE CH Low

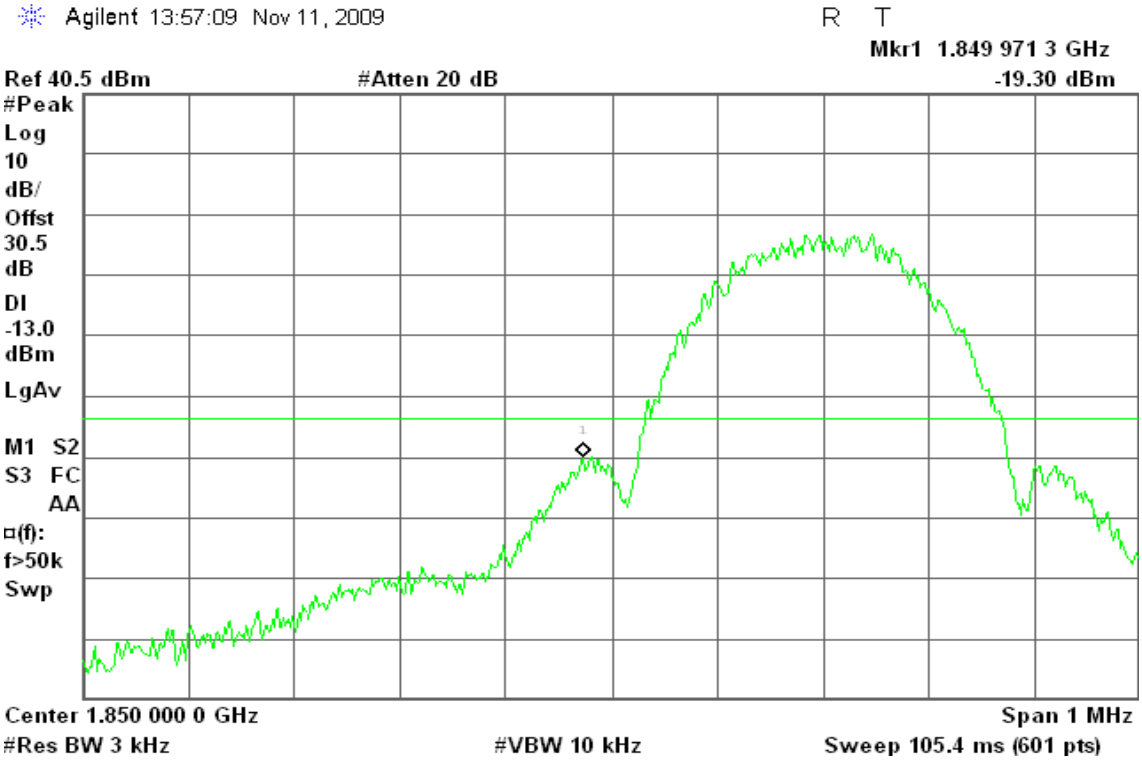
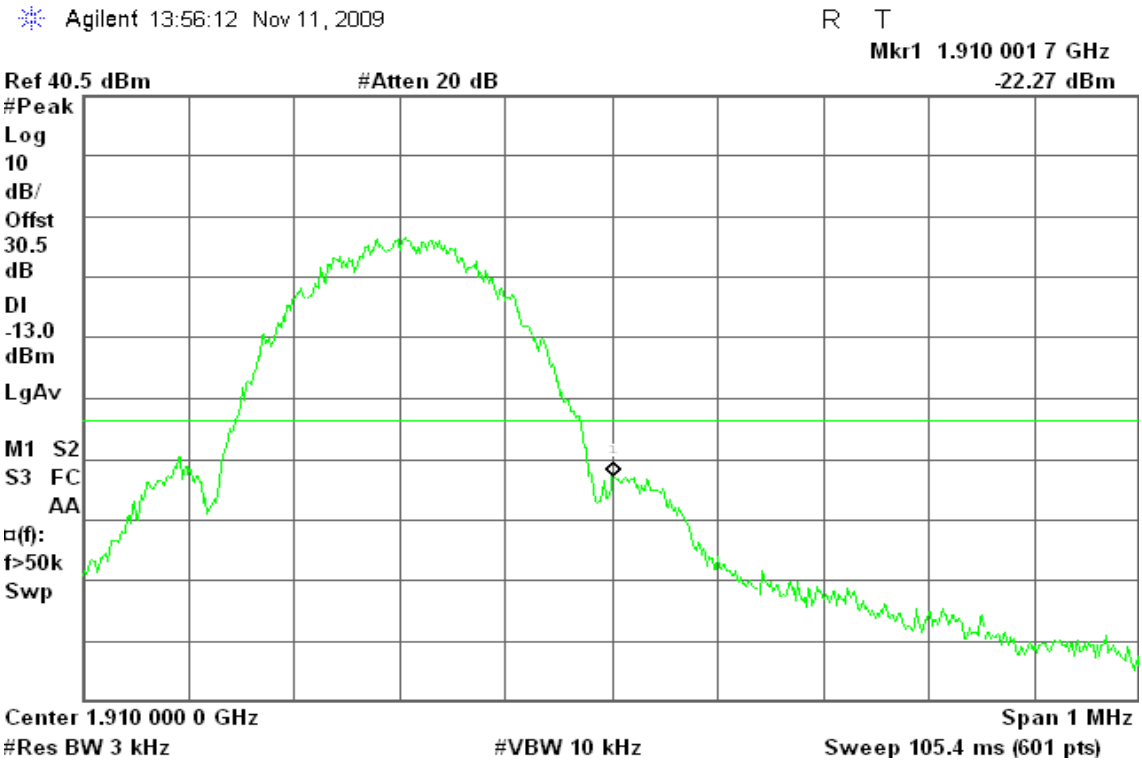


Figure 12-4: Band Edge emissions – EDGE CH High



WCDMA Band II

Figure 13-1: Out of Band emission at antenna terminals – WCDMA CH Low

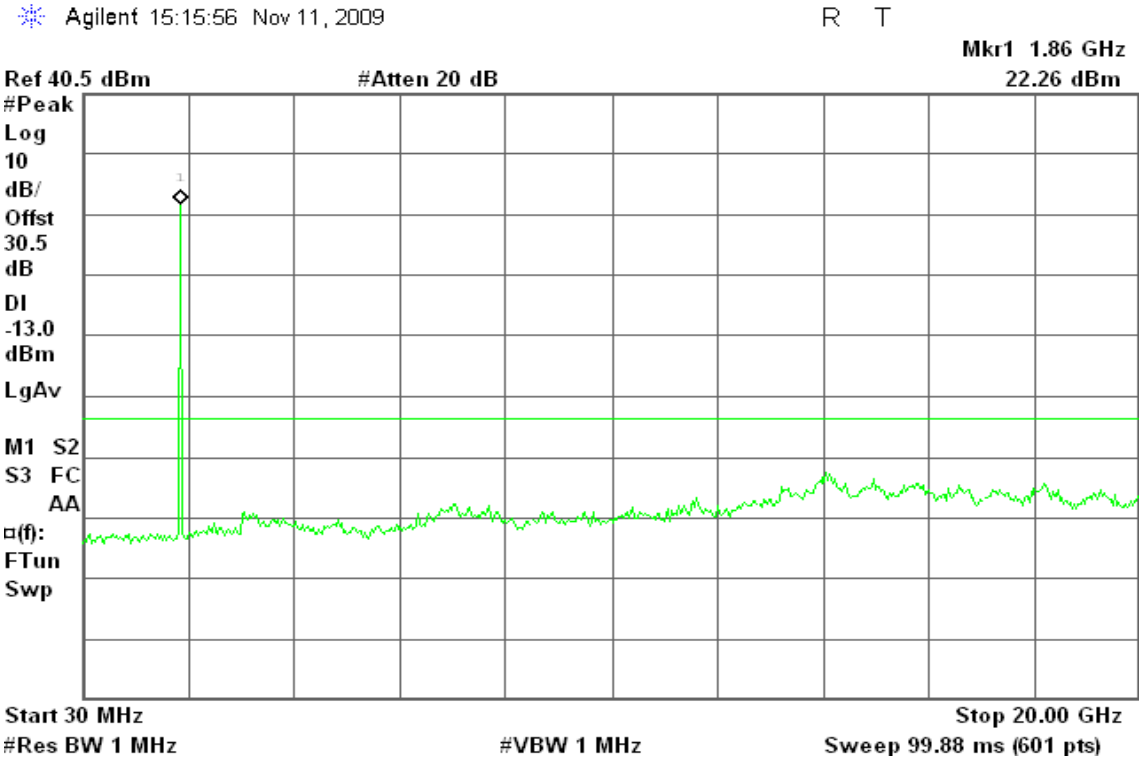


Figure 13-2: Out of Band emission at antenna terminals – WCDMA CH Mid

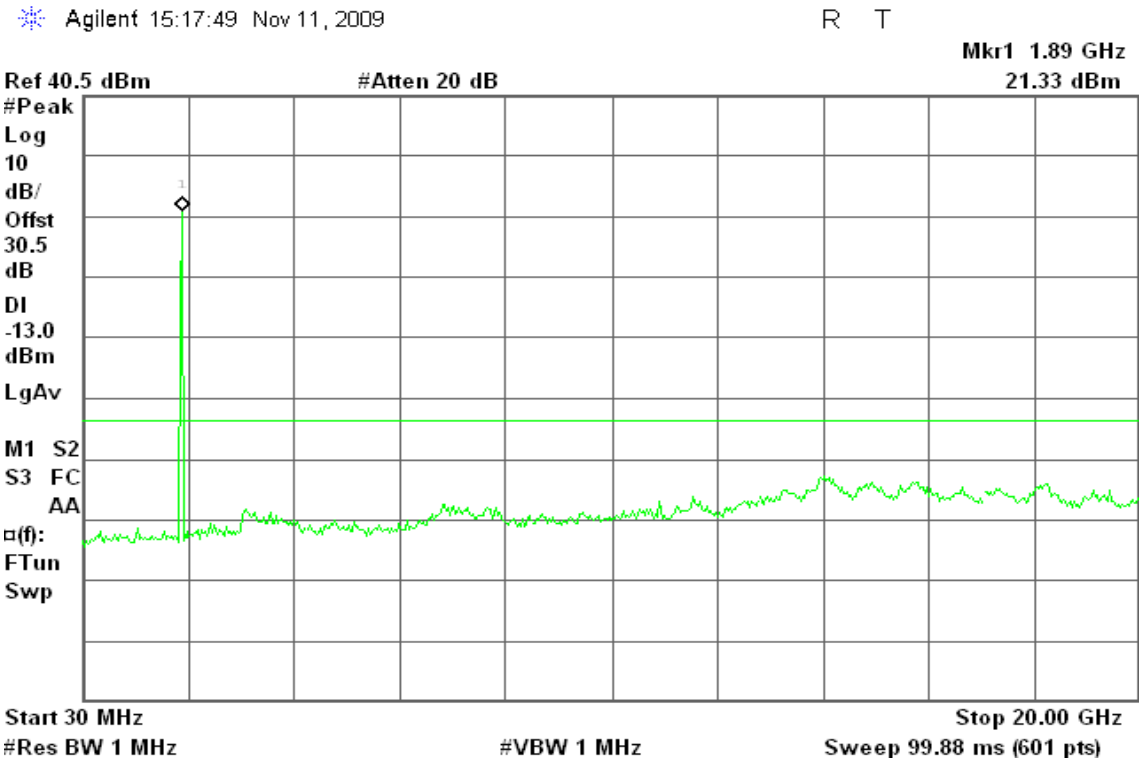
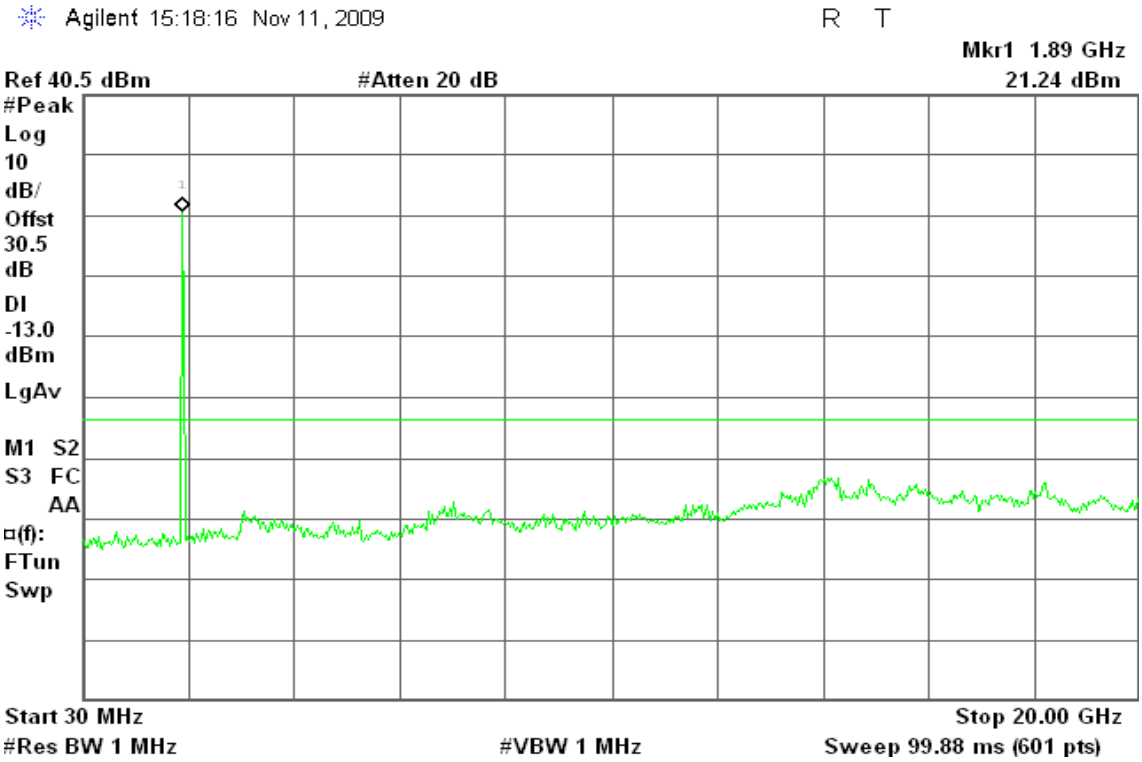


Figure 13-3: Out of Band emission at antenna terminals – WCDMA CH High



WCDMA Band V

Figure 13-4: Out of Band emission at antenna terminals – WCDMA CH Low

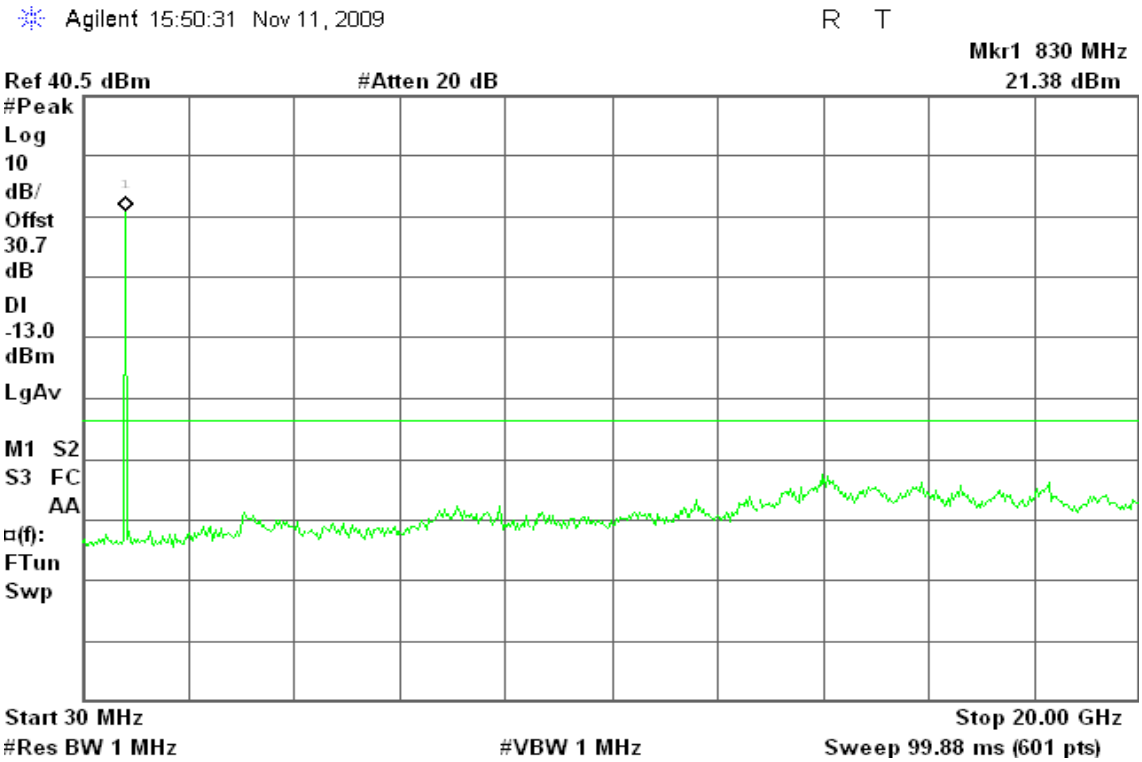


Figure 13-5: Out of Band emission at antenna terminals – WCDMA CH Mid

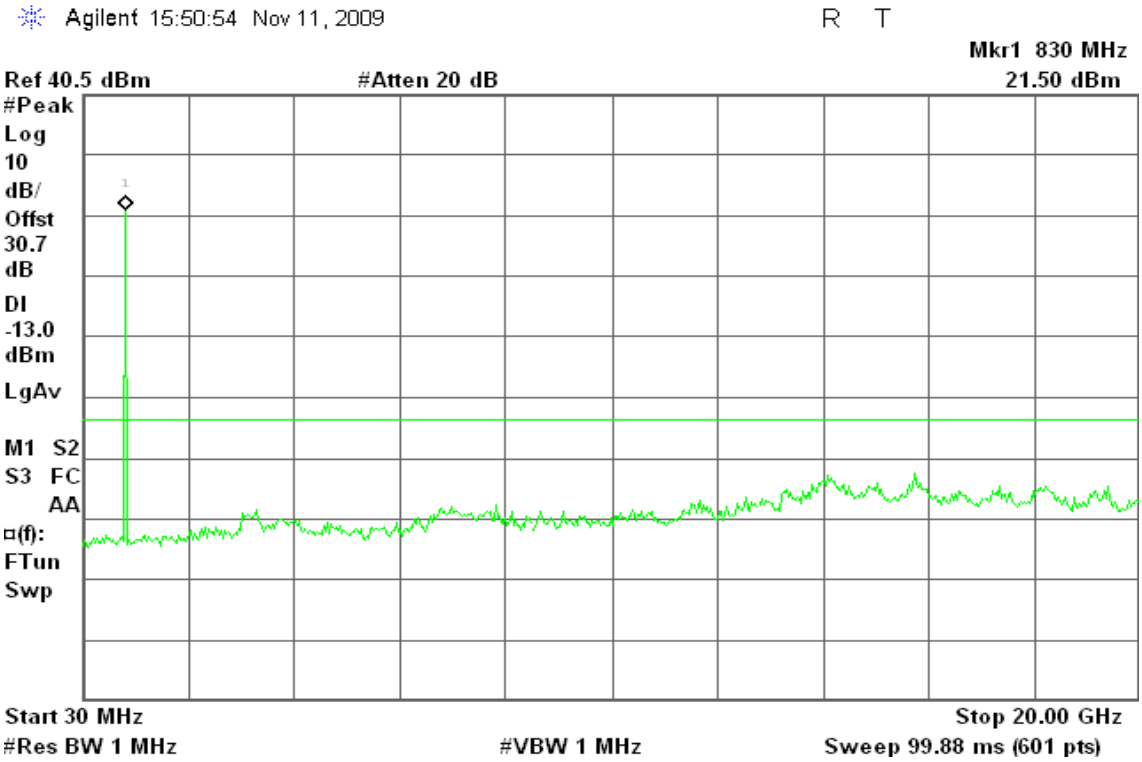
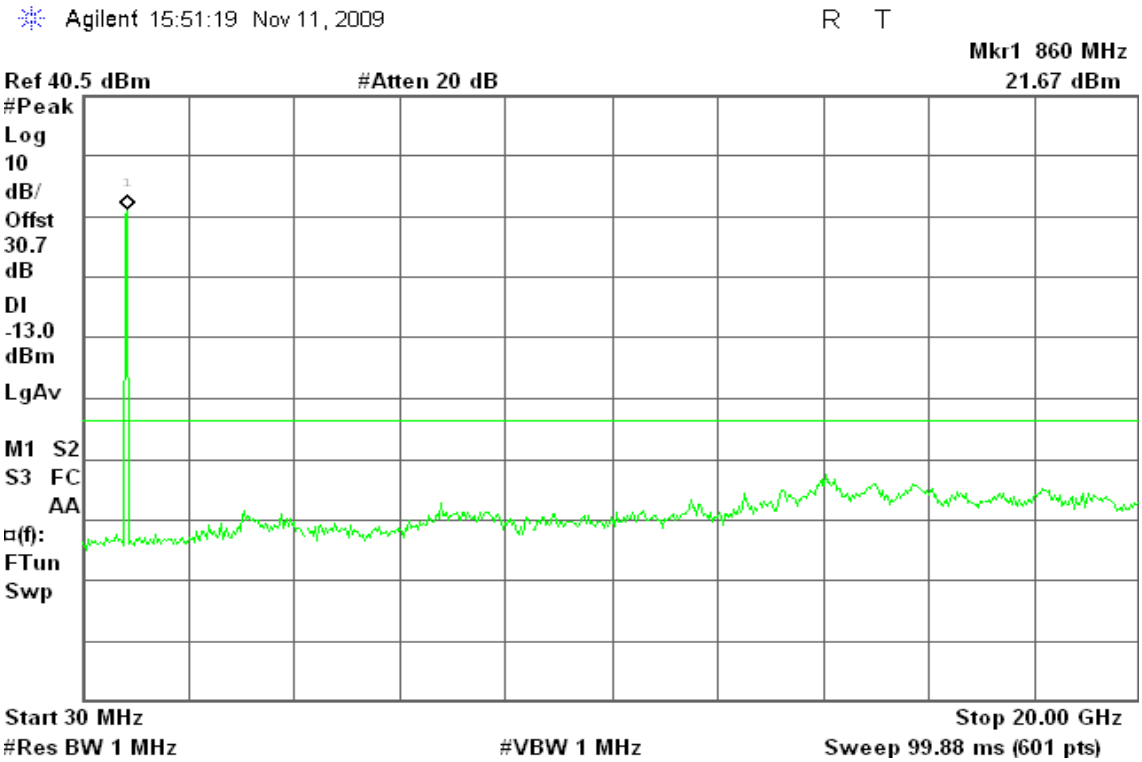


Figure 13-6: Out of Band emission at antenna terminals – WCDMA CH High



WCDMA Band II

Figure 14-1: Band Edge emissions – WCDMA CH Low

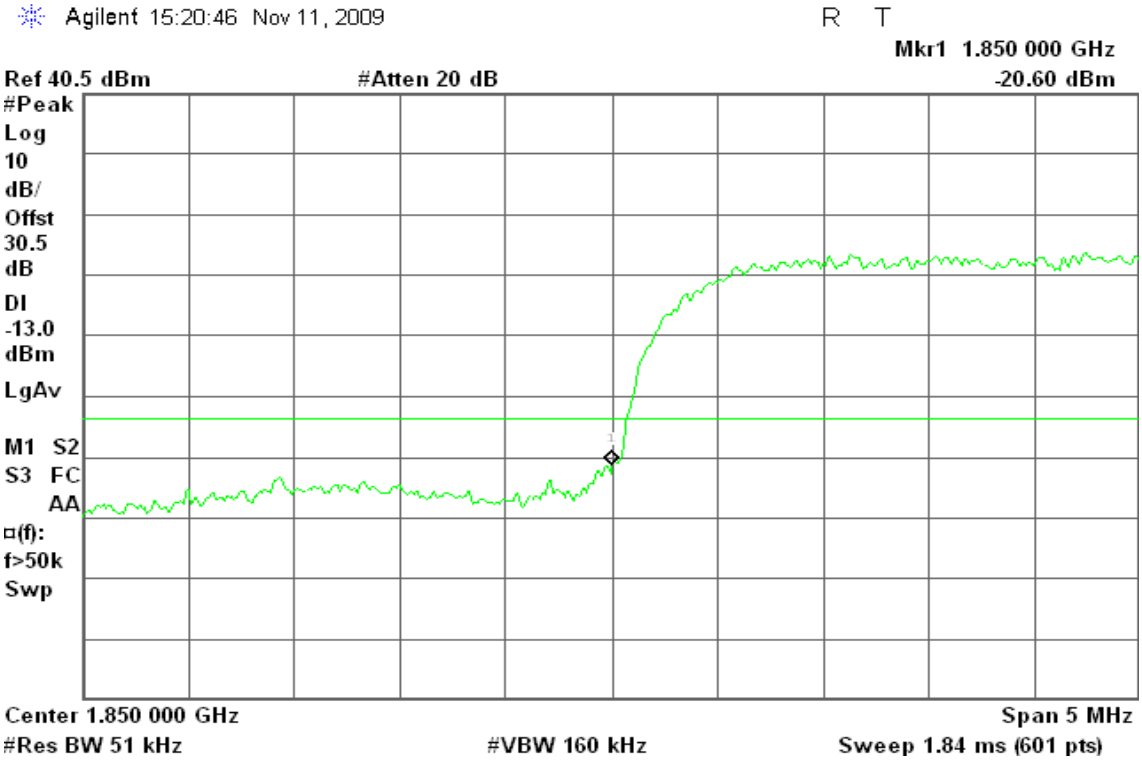
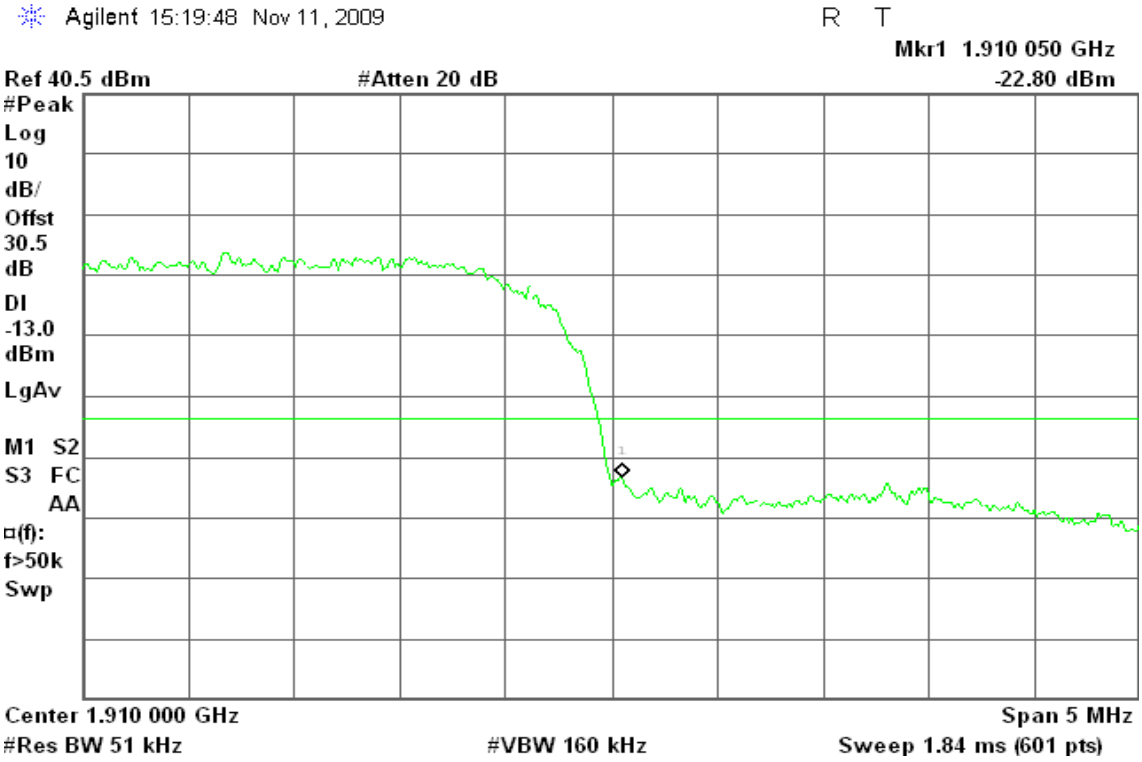


Figure 14-2: Band Edge emissions –WCDMA CH High



WCDMA Band V

Figure 14-3: Band Edge emissions –WCDMA CH Low

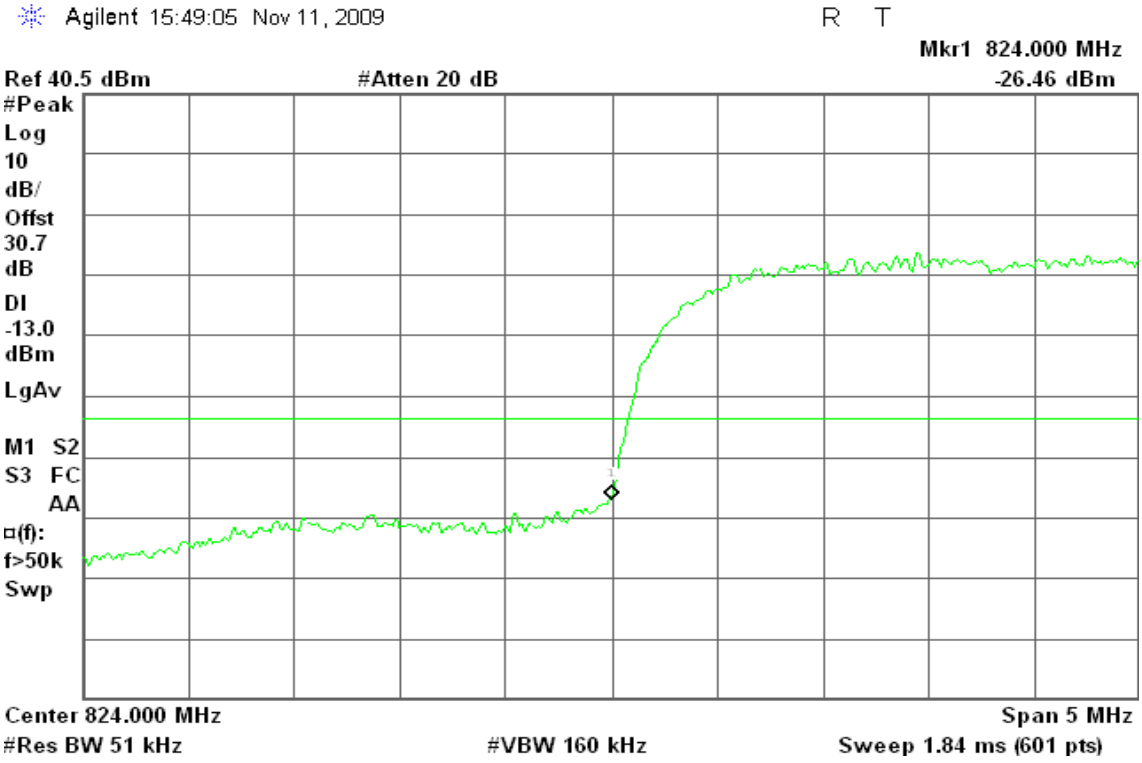
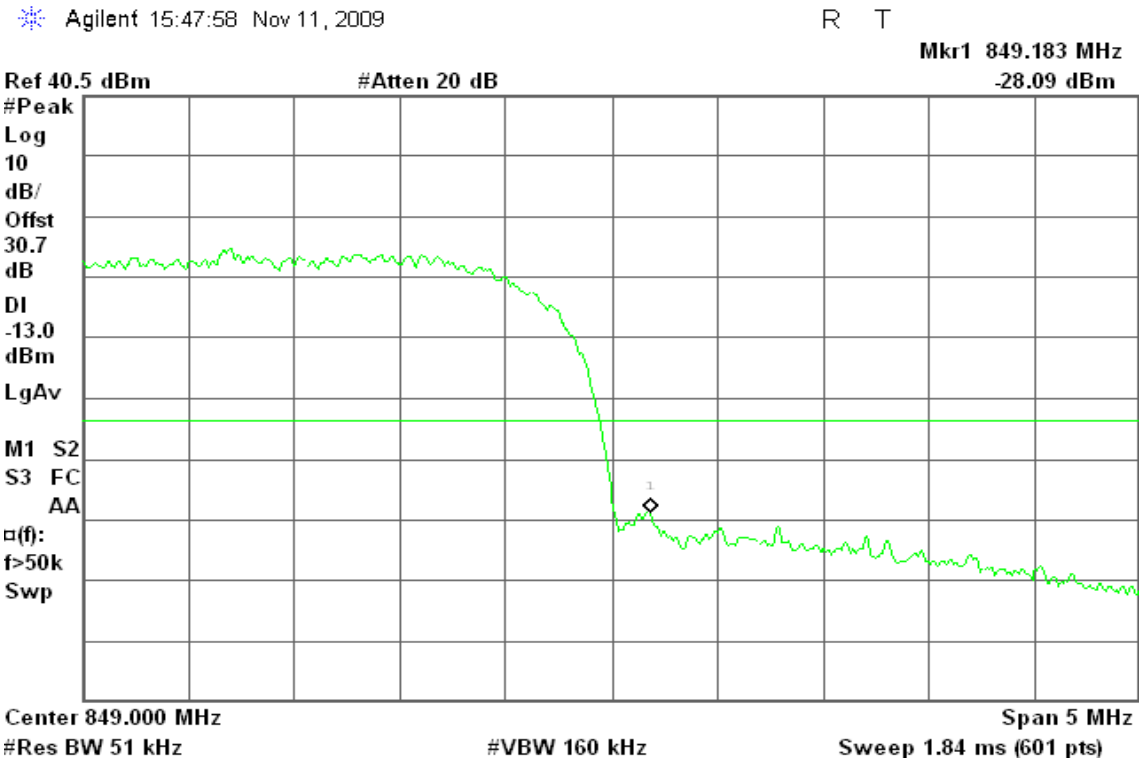


Figure 14-4: Band Edge emissions –WCDMA CH High



WCDMA / HSDPA Band II

Figure 15-1: Out of Band emission at antenna terminals – HSDPA CH Low

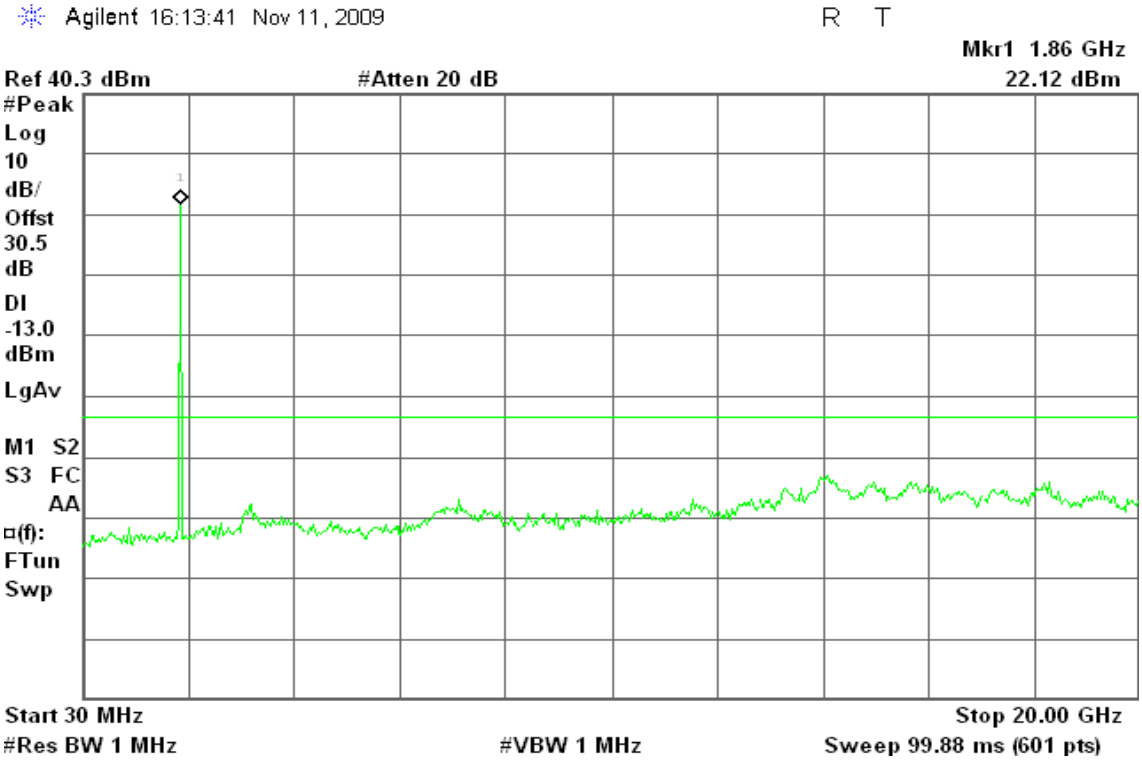


Figure 15-2: Out of Band emission at antenna terminals – HSDPA CH Mid

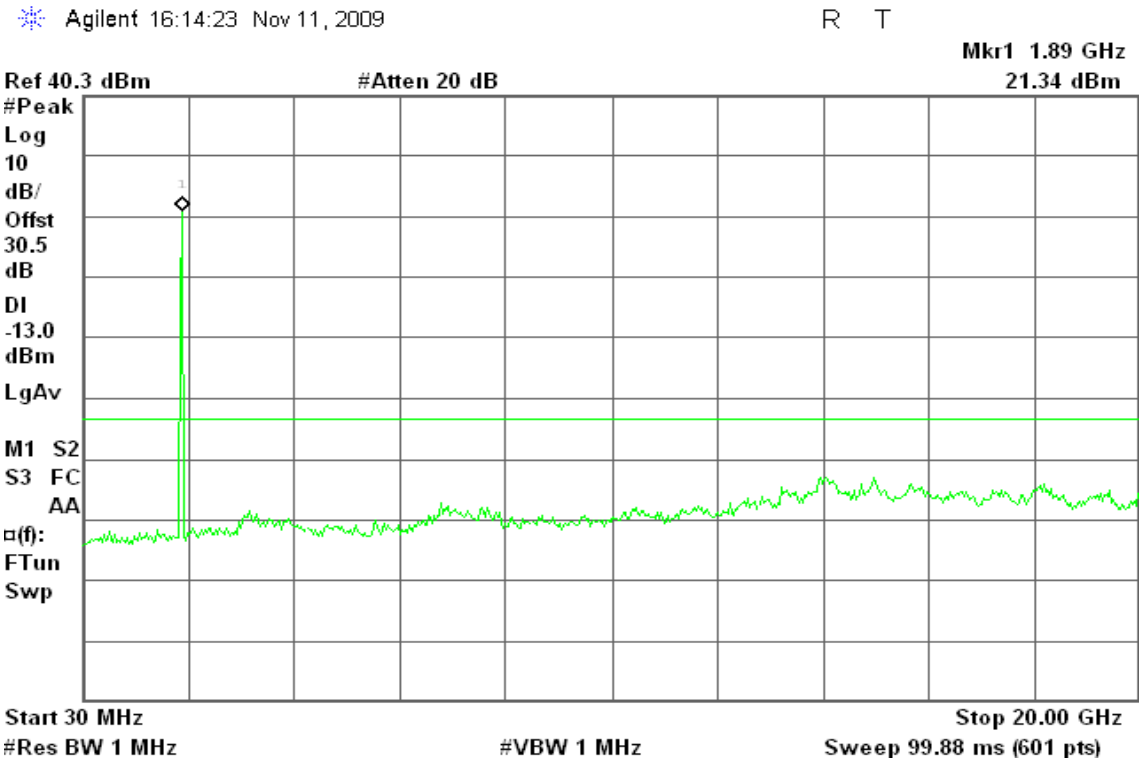
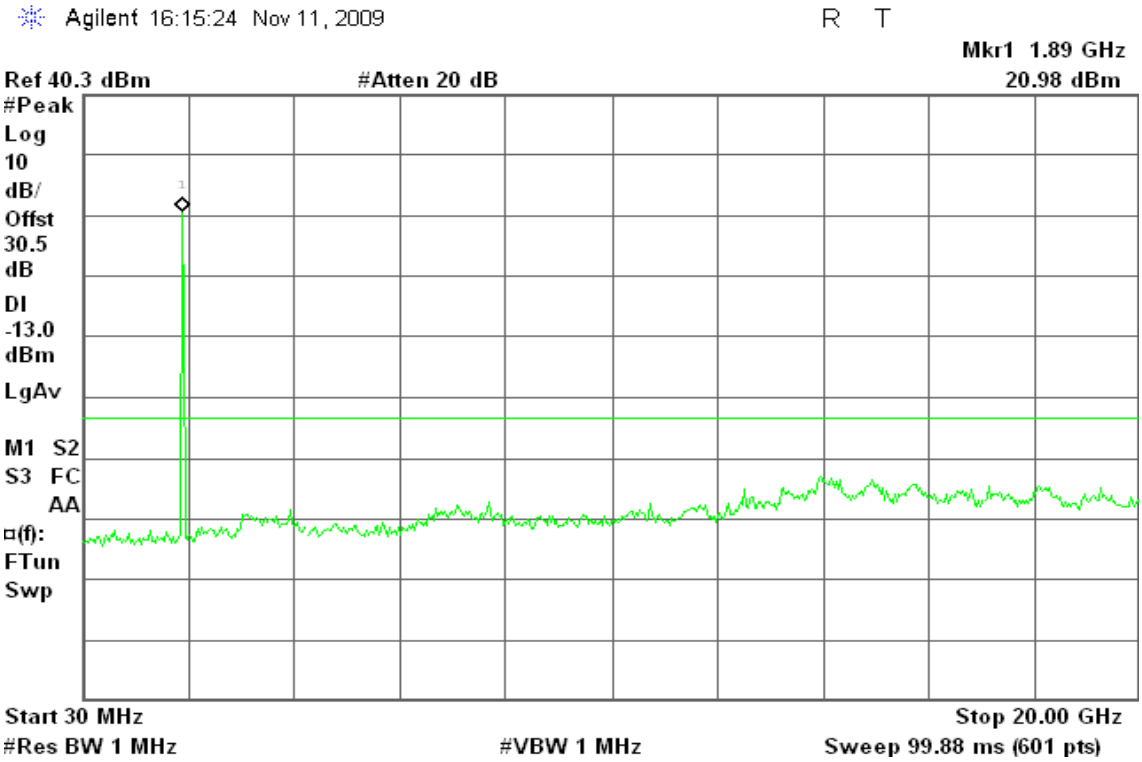


Figure 15-3: Out of Band emission at antenna terminals – HSDPA CH High



WCDMA / HSDPA Band V

Figure 15-4: Out of Band emission at antenna terminals – HSDPA CH Low

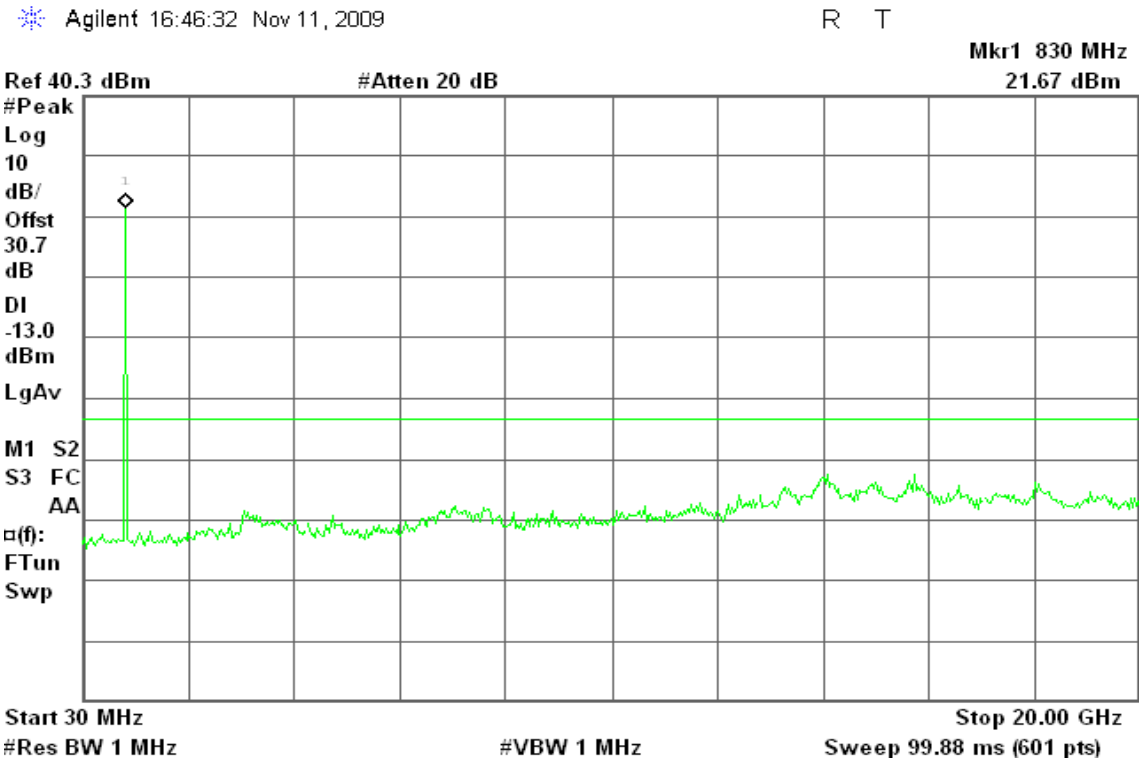


Figure 15-5: Out of Band emission at antenna terminals – HSDPA CH Mid

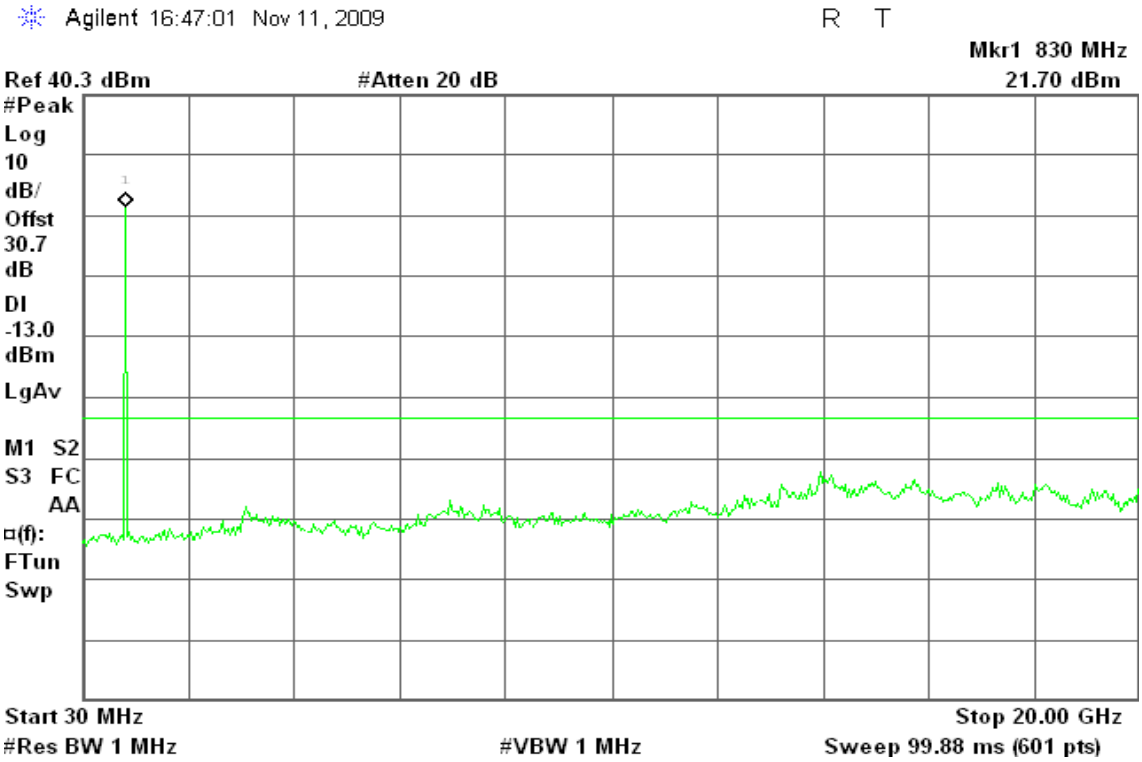
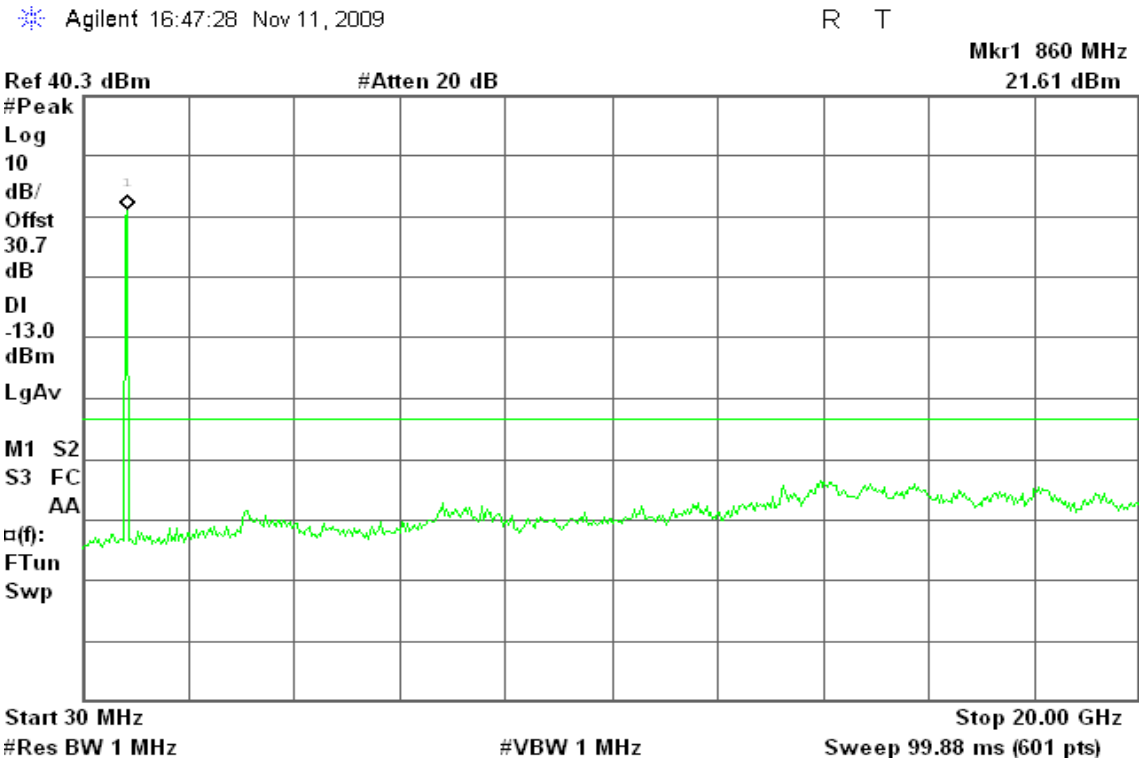


Figure 15-6: Out of Band emission at antenna terminals – HSDPA CH High



WCDMA / HSDPA Band II

Figure 16-1: Band Edge emissions – HSDPA CH Low

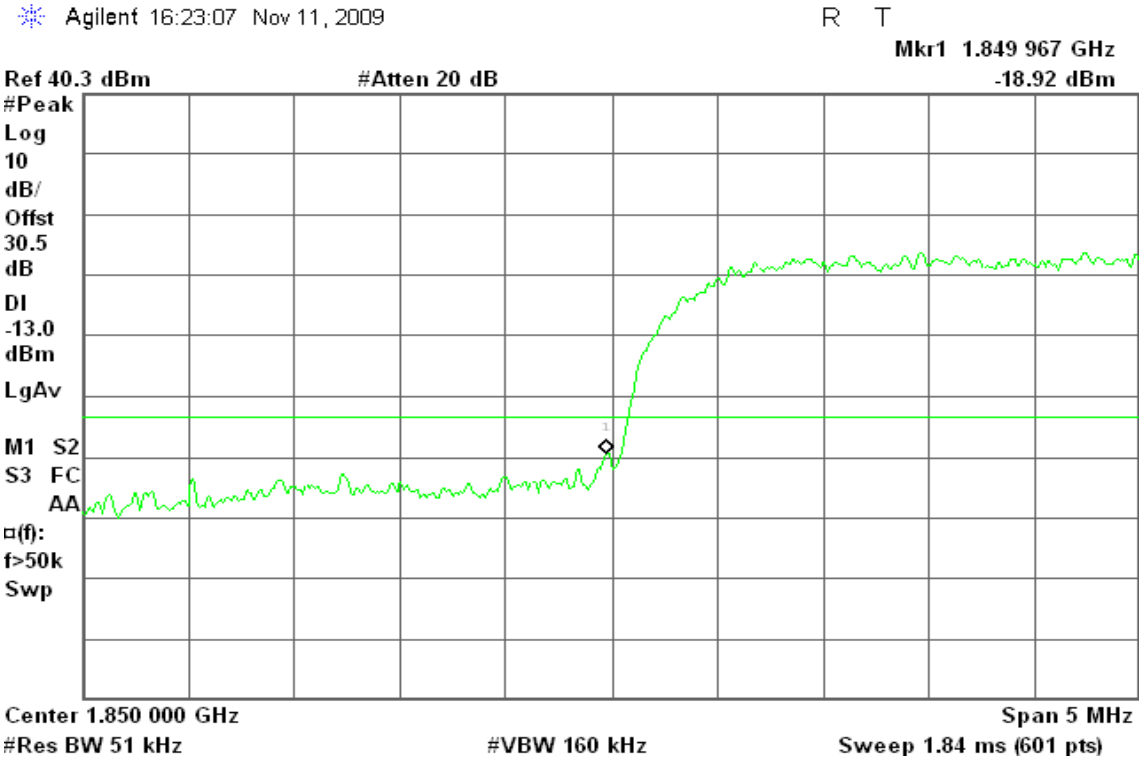
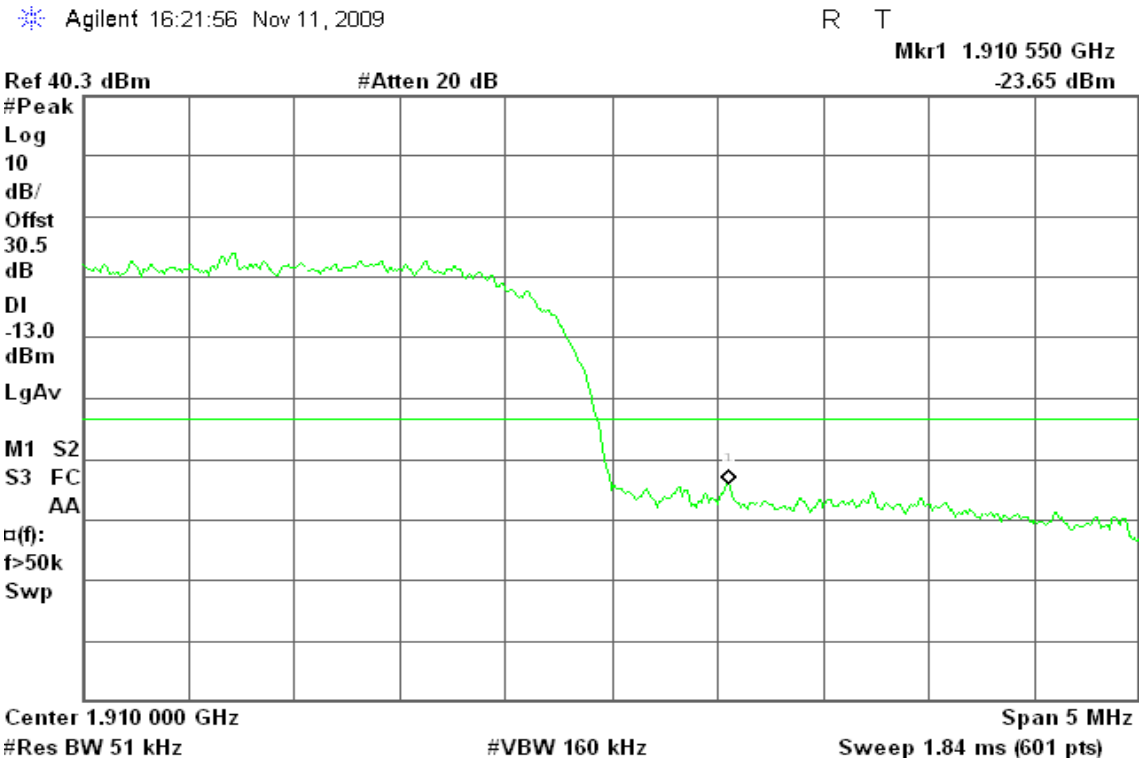


Figure 16-2: Band Edge emissions – HSDPA CH High



WCDMA / HSDPA Band V

Figure 16-3: Band Edge emissions – HSDPA CH Low

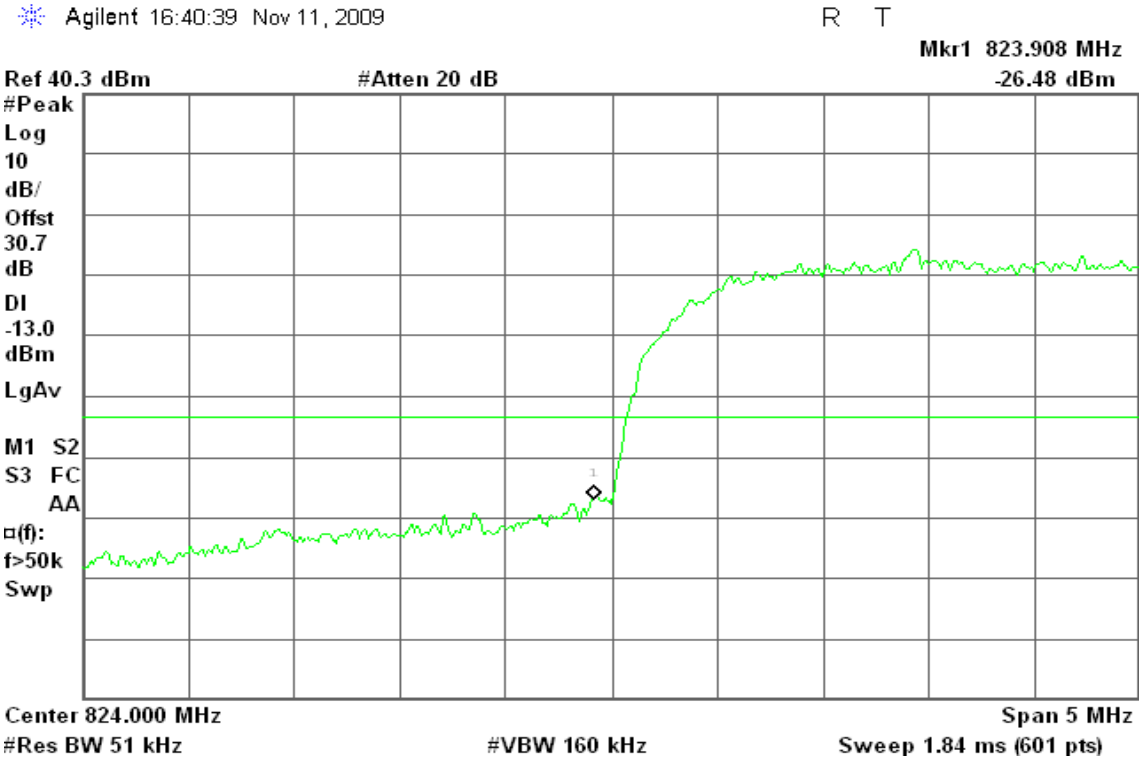
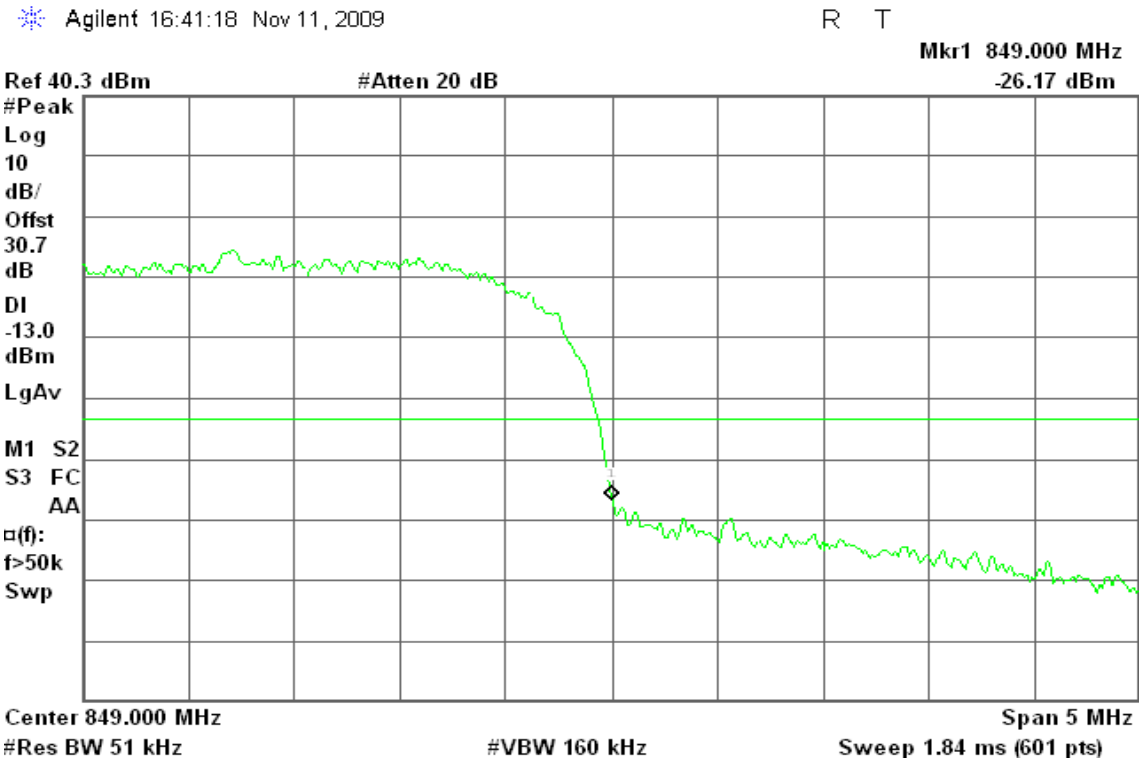


Figure 16-4: Band Edge emissions – HSDPA CH High



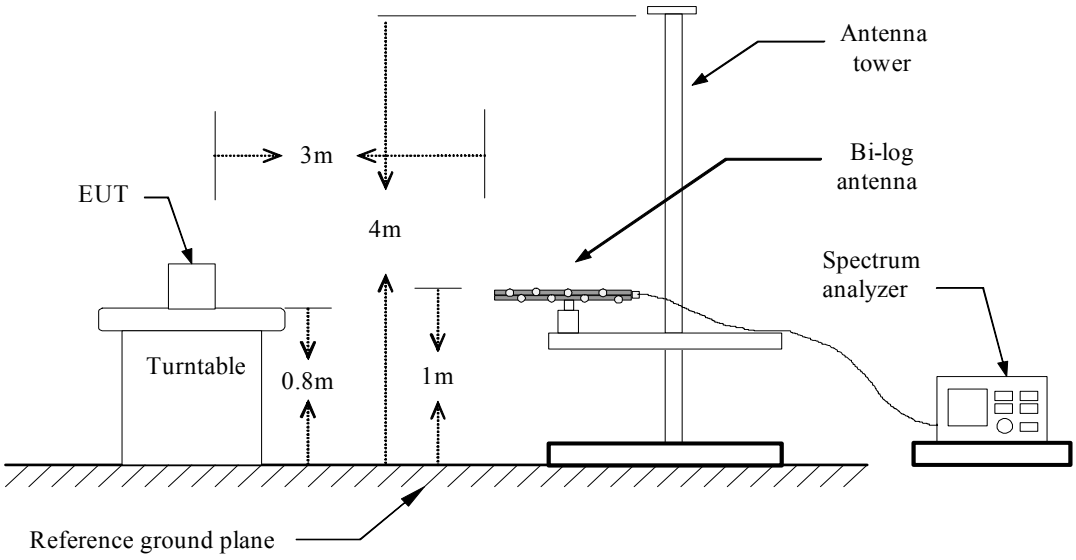
7.4FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

LIMIT

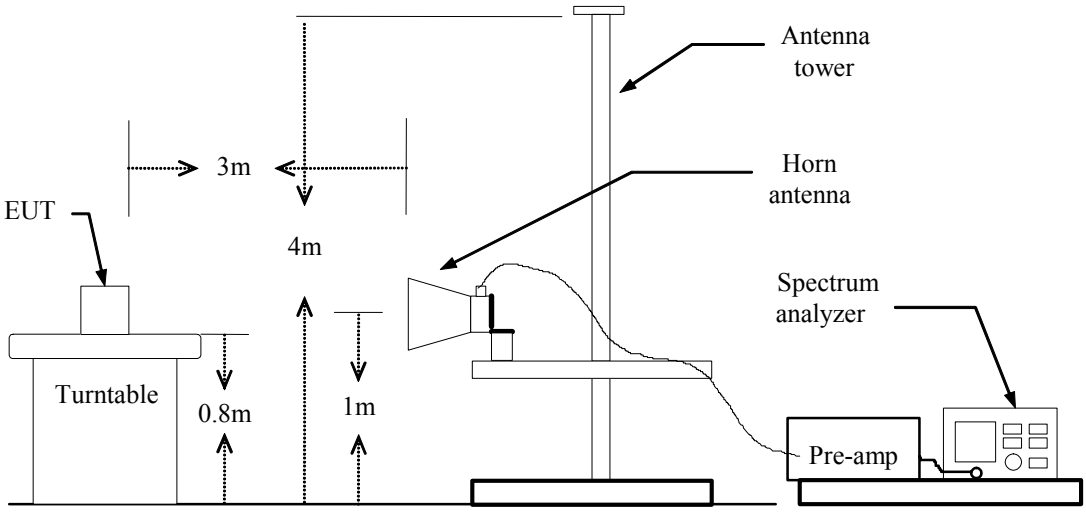
According to FCC §2.1053

Test Configuration

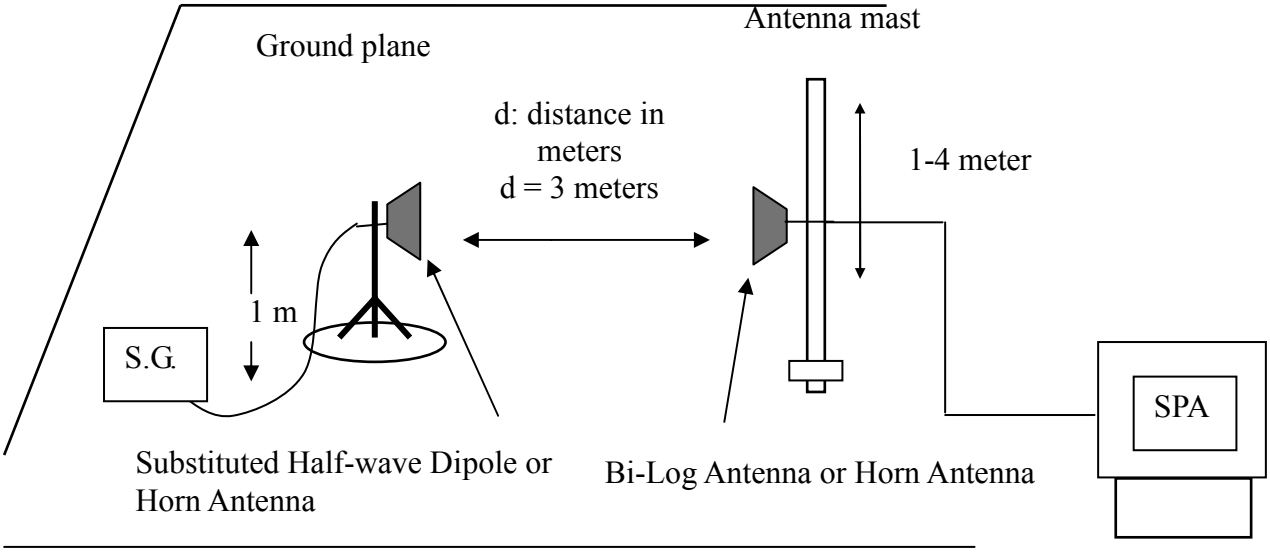
Below 1 GHz



Above 1 GHz



Substituted Method Test Set-up



TEST PROCEDURE

The EUT was placed on a non-conductive, the measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and the EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. This maximization process was repeated with the EUT positioned in each of its three orthogonal orientations.

The frequency range up to tenth harmonic was investigated for each of three fundamental frequency (low, middle and high channels). Once spurious emission were identified, the power of the emission was determined using the substitution method.

The spurious emissions attenuation was calculated as the difference between radiated power at the fundamental frequency and the spurious emissions frequency.

ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable (dB)

EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable (dB)

TEST RESULTS

Refer to the attached tabular data sheets.

Radiated Spurious Emission Measurement Result / Below 1GHz

Operation Mode: GPRS 850 / TX / CH 128 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 55 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
99.84	V	-45.96	-17.68	-63.64	-13.00	-50.64
132.82	V	-59.39	-12.50	-71.90	-13.00	-58.90
408.30	V	-52.79	-10.85	-63.64	-13.00	-50.64
512.09	V	-60.75	-8.19	-68.94	-13.00	-55.94
681.84	V	-59.63	-6.39	-66.02	-13.00	-53.02
869.05	V	-62.82	-4.12	-66.94	-13.00	-53.94
99.84	H	-46.53	-17.49	-64.01	-13.00	-51.01
132.82	H	-59.12	-13.74	-72.85	-13.00	-59.85
408.30	H	-53.81	-10.59	-64.40	-13.00	-51.40
512.09	H	-59.71	-8.20	-67.91	-13.00	-54.91
681.84	H	-60.96	-6.12	-67.08	-13.00	-54.08
924.34	H	-66.50	-3.35	-69.85	-13.00	-56.85

Remark:

1. *The emission behaviour belongs to narrowband spurious emission.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: GPRS 850 / TX / CH 190 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
40.67	V	-63.69	-12.34	-76.03	-13.00	-63.03
130.88	V	-45.84	-12.34	-58.18	-13.00	-45.18
181.32	V	-61.47	-14.35	-75.83	-13.00	-62.83
452.92	V	-53.96	-9.78	-63.74	-13.00	-50.74
522.76	V	-60.25	-8.07	-68.32	-13.00	-55.32
967.02	V	-61.71	-3.05	-64.75	-13.00	-51.75
40.67	H	-65.03	-10.56	-75.59	-13.00	-62.59
130.88	H	-46.76	-13.66	-60.42	-13.00	-47.42
182.29	H	-61.52	-14.06	-75.58	-13.00	-62.58
453.89	H	-57.31	-9.60	-66.91	-13.00	-53.91
523.73	H	-60.85	-8.13	-68.99	-13.00	-55.99
967.02	H	-59.69	-3.10	-62.78	-13.00	-49.78

Remark:

1. *The emission behaviour belongs to narrowband spurious emission.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: GPRS 850 / TX / CH 251 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
132.82	V	-63.67	-12.50	-76.17	-13.00	-63.17
161.92	V	-47.61	-13.86	-61.47	-13.00	-48.47
252.13	V	-60.08	-14.61	-74.69	-13.00	-61.69
498.51	V	-60.57	-8.40	-68.97	-13.00	-55.97
585.81	V	-60.05	-7.76	-67.80	-13.00	-54.80
644.98	V	-60.53	-6.36	-66.89	-13.00	-53.89
40.67	H	-63.47	-10.56	-74.04	-13.00	-61.04
161.92	H	-61.40	-14.11	-75.51	-13.00	-62.51
183.26	H	-61.91	-14.04	-75.95	-13.00	-62.95
255.04	H	-63.56	-14.57	-78.13	-13.00	-65.13
452.92	H	-66.72	-9.64	-76.36	-13.00	-63.36
772.05	H	-65.73	-4.94	-70.67	-13.00	-57.67

Remark:

1. *The emission behaviour belongs to narrowband spurious emission.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: GPRS 1900 / TX / CH 512 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
40.67	V	-63.56	-12.34	-75.89	-13.00	-62.89
116.33	V	-61.87	-13.90	-75.77	-13.00	-62.77
182.29	V	-60.82	-14.36	-75.19	-13.00	-62.19
217.21	V	-63.31	-15.42	-78.73	-13.00	-65.73
277.35	V	-66.60	-12.20	-78.80	-13.00	-65.80
880.69	V	-69.28	-3.87	-73.15	-13.00	-60.15
40.67	H	-63.53	-10.56	-74.09	-13.00	-61.09
72.68	H	-59.79	-18.55	-78.33	-13.00	-65.33
126.03	H	-65.13	-13.61	-78.74	-13.00	-65.74
191.99	H	-58.65	-13.61	-72.26	-13.00	-59.26
244.37	H	-64.44	-14.39	-78.83	-13.00	-65.83
452.92	H	-65.67	-9.64	-75.31	-13.00	-62.31

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: GPRS 1900 / TX / CH 661 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
35.82	V	-61.30	-14.35	-75.65	-13.00	-62.65
132.82	V	-63.44	-12.50	-75.94	-13.00	-62.94
183.26	V	-60.39	-14.37	-74.76	-13.00	-61.76
219.15	V	-60.00	-15.32	-75.32	-13.00	-62.32
243.40	V	-55.77	-14.22	-70.00	-13.00	-57.00
286.08	V	-58.91	-11.86	-70.77	-13.00	-57.77
43.58	H	-63.41	-10.80	-74.21	-13.00	-61.21
171.62	H	-56.14	-13.83	-69.97	-13.00	-56.97
184.23	H	-56.98	-14.02	-71.00	-13.00	-58.00
258.92	H	-55.42	-14.53	-69.95	-13.00	-56.95
322.94	H	-62.53	-13.57	-76.09	-13.00	-63.09
385.99	H	-62.67	-11.78	-74.45	-13.00	-61.45

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: GPRS 1900 / TX / CH 810 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
44.55	V	-63.07	-12.37	-75.44	-13.00	-62.44
129.91	V	-62.82	-12.27	-75.09	-13.00	-62.09
182.29	V	-61.81	-14.36	-76.18	-13.00	-63.18
198.78	V	-60.36	-13.60	-73.96	-13.00	-60.96
277.35	V	-67.34	-12.20	-79.53	-13.00	-66.53
358.83	V	-67.20	-12.75	-79.95	-13.00	-66.95
40.67	H	-62.77	-10.56	-73.34	-13.00	-60.34
100.81	H	-63.79	-17.28	-81.07	-13.00	-68.07
181.32	H	-60.15	-14.08	-74.23	-13.00	-61.23
280.26	H	-68.06	-12.80	-80.86	-13.00	-67.86
452.92	H	-66.44	-9.64	-76.08	-13.00	-63.08
598.42	H	-69.03	-7.31	-76.34	-13.00	-63.34

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: EDGE 850 / TX / CH 128 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
99.84	V	-45.57	-17.68	-63.25	-13.00	-50.25
204.60	V	-56.99	-14.54	-71.52	-13.00	-58.52
408.30	V	-54.33	-10.85	-65.17	-13.00	-52.17
512.09	V	-61.41	-8.19	-69.60	-13.00	-56.60
682.81	V	-60.20	-6.38	-66.58	-13.00	-53.58
869.05	V	-63.65	-4.12	-67.77	-13.00	-54.77
99.84	H	-48.09	-17.49	-65.58	-13.00	-52.58
136.70	H	-56.23	-13.89	-70.12	-13.00	-57.12
194.90	H	-52.29	-13.20	-65.50	-13.00	-52.50
399.57	H	-58.28	-10.96	-69.23	-13.00	-56.23
512.09	H	-61.00	-8.20	-69.20	-13.00	-56.20
682.81	H	-65.21	-6.12	-71.33	-13.00	-58.33

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: EDGE 850 / TX / CH 190 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
130.88	V	-45.97	-12.34	-58.31	-13.00	-45.31
288.02	V	-58.36	-11.80	-70.16	-13.00	-57.16
452.92	V	-54.86	-9.78	-64.64	-13.00	-51.64
523.73	V	-60.69	-8.06	-68.75	-13.00	-55.75
967.99	V	-62.80	-3.03	-65.84	-13.00	-52.84
N/A						
39.70	H	-62.85	-10.74	-73.59	-13.00	-60.59
130.88	H	-51.35	-13.66	-65.02	-13.00	-52.02
256.98	H	-59.27	-14.55	-73.82	-13.00	-60.82
452.92	H	-65.14	-9.64	-74.77	-13.00	-61.77
548.95	H	-65.59	-7.86	-73.45	-13.00	-60.45
967.99	H	-61.02	-3.09	-64.10	-13.00	-51.10

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: EDGE 850 / TX / CH 251 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
69.77	V	-59.62	-15.04	-74.66	-13.00	-61.66
118.27	V	-56.15	-13.44	-69.58	-13.00	-56.58
161.92	V	-52.06	-13.86	-65.92	-13.00	-52.92
197.81	V	-60.35	-13.69	-74.04	-13.00	-61.04
645.95	V	-67.48	-6.38	-73.86	-13.00	-60.86
875.84	V	-66.01	-3.97	-69.97	-13.00	-56.97
42.61	H	-64.00	-10.72	-74.72	-13.00	-61.72
134.76	H	-65.87	-13.82	-79.68	-13.00	-66.68
182.29	H	-61.01	-14.06	-75.07	-13.00	-62.07
394.72	H	-65.03	-11.25	-76.28	-13.00	-63.28
477.17	H	-68.66	-8.67	-77.32	-13.00	-64.32
671.17	H	-68.73	-6.29	-75.02	-13.00	-62.02

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: EDGE 1900 / TX / CH 512 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
40.67	V	-63.33	-12.34	-75.66	-13.00	-62.66
116.33	V	-64.22	-13.90	-78.13	-13.00	-65.13
132.82	V	-64.82	-12.50	-77.32	-13.00	-64.32
181.32	V	-65.76	-14.35	-80.11	-13.00	-67.11
277.35	V	-66.33	-12.20	-78.53	-13.00	-65.53
774.96	V	-69.55	-5.20	-74.74	-13.00	-61.74
40.67	H	-64.36	-10.56	-74.92	-13.00	-61.92
126.03	H	-65.70	-13.61	-79.31	-13.00	-66.31
183.26	H	-61.24	-14.04	-75.28	-13.00	-62.28
300.63	H	-63.58	-14.00	-77.58	-13.00	-64.58
475.23	H	-68.17	-8.75	-76.91	-13.00	-63.91
884.57	H	-69.59	-3.65	-73.25	-13.00	-60.25

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: EDGE 1900 / TX / CH 661 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
44.55	V	-63.40	-12.37	-75.77	-13.00	-62.77
132.82	V	-64.60	-12.50	-77.10	-13.00	-64.10
195.87	V	-66.04	-13.88	-79.92	-13.00	-66.92
277.35	V	-67.98	-12.20	-80.18	-13.00	-67.18
441.28	V	-69.00	-10.01	-79.01	-13.00	-66.01
660.50	V	-69.02	-6.61	-75.62	-13.00	-62.62
42.61	H	-63.98	-10.72	-74.71	-13.00	-61.71
90.14	H	-60.88	-20.34	-81.22	-13.00	-68.22
183.26	H	-61.68	-14.04	-75.72	-13.00	-62.72
372.41	H	-68.03	-12.35	-80.38	-13.00	-67.38
682.81	H	-70.41	-6.12	-76.53	-13.00	-63.53
741.98	H	-70.46	-5.62	-76.08	-13.00	-63.08

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: EDGE 1900 / TX / CH 810 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
43.58	V	-64.55	-12.36	-76.90	-13.00	-63.90
66.86	V	-64.49	-15.12	-79.61	-13.00	-66.61
132.82	V	-62.61	-12.50	-75.11	-13.00	-62.11
191.99	V	-66.90	-14.25	-81.15	-13.00	-68.15
277.35	V	-67.54	-12.20	-79.74	-13.00	-66.74
425.76	V	-68.56	-10.27	-78.84	-13.00	-65.84
42.61	H	-65.09	-10.72	-75.82	-13.00	-62.82
90.14	H	-62.15	-20.34	-82.49	-13.00	-69.49
119.24	H	-68.01	-13.72	-81.72	-13.00	-68.72
185.20	H	-61.23	-14.00	-75.22	-13.00	-62.22
430.61	H	-69.09	-10.12	-79.20	-13.00	-66.20
785.63	H	-69.18	-4.81	-73.99	-13.00	-60.99

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: WCDMA Band II / TX / CH 9262 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
37.76	V	-51.30	-13.41	-64.71	-13.00	-51.71
62.01	V	-57.19	-15.26	-72.45	-13.00	-59.45
95.96	V	-55.74	-18.69	-74.43	-13.00	-61.43
128.94	V	-60.77	-12.34	-73.11	-13.00	-60.11
174.53	V	-48.27	-14.16	-62.44	-13.00	-49.44
198.78	V	-57.21	-13.60	-70.81	-13.00	-57.81
31.94	H	-54.37	-16.92	-71.28	-13.00	-58.28
62.01	H	-57.27	-16.34	-73.61	-13.00	-60.61
175.50	H	-55.13	-13.96	-69.10	-13.00	-56.10
206.54	H	-51.87	-13.41	-65.28	-13.00	-52.28
276.38	H	-62.42	-12.98	-75.39	-13.00	-62.39
340.40	H	-60.17	-13.47	-73.64	-13.00	-60.64

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: WCDMA Band II / TX / CH 9400 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
36.79	V	-50.63	-13.88	-64.52	-13.00	-51.52
62.01	V	-56.69	-15.26	-71.95	-13.00	-58.95
95.96	V	-54.75	-18.69	-73.44	-13.00	-60.44
126.03	V	-60.19	-12.56	-72.76	-13.00	-59.76
175.50	V	-48.55	-14.20	-62.75	-13.00	-49.75
207.51	V	-55.92	-15.21	-71.12	-13.00	-58.12
43.58	H	-63.06	-10.80	-73.86	-13.00	-60.86
62.01	H	-59.23	-16.34	-75.56	-13.00	-62.56
174.53	H	-52.31	-13.93	-66.24	-13.00	-53.24
206.54	H	-58.86	-13.41	-72.27	-13.00	-59.27
283.17	H	-62.46	-12.83	-75.29	-13.00	-62.29
489.78	H	-64.21	-8.41	-72.62	-13.00	-59.62

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: WCDMA Band II / TX / CH 9538 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
36.79	V	-53.38	-13.88	-67.27	-13.00	-54.27
62.01	V	-58.81	-15.26	-74.07	-13.00	-61.07
104.69	V	-56.38	-16.60	-72.98	-13.00	-59.98
128.94	V	-62.95	-12.34	-75.29	-13.00	-62.29
238.55	V	-63.21	-14.06	-77.27	-13.00	-64.27
277.35	V	-67.14	-12.20	-79.34	-13.00	-66.34
62.01	H	-57.93	-16.34	-74.27	-13.00	-61.27
154.16	H	-62.01	-13.54	-75.55	-13.00	-62.55
173.56	H	-56.34	-13.90	-70.24	-13.00	-57.24
202.66	H	-59.03	-12.87	-71.90	-13.00	-58.90
229.82	H	-62.53	-14.29	-76.82	-13.00	-63.82
274.44	H	-63.72	-13.07	-76.79	-13.00	-63.79

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: WCDMA Band V / TX / CH 4132 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Mark Yang

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
36.79	V	-49.84	-13.88	-63.73	-13.00	-50.73
61.04	V	-57.38	-15.29	-72.67	-13.00	-59.67
95.96	V	-56.60	-18.69	-75.29	-13.00	-62.29
132.82	V	-61.59	-12.50	-74.09	-13.00	-61.09
181.32	V	-49.69	-14.35	-64.05	-13.00	-51.05
517.91	V	-67.80	-8.11	-75.91	-13.00	-62.91
44.55	H	-61.41	-10.88	-72.29	-13.00	-59.29
102.75	H	-54.42	-16.90	-71.33	-13.00	-58.33
137.67	H	-59.80	-13.93	-73.73	-13.00	-60.73
181.32	H	-55.26	-14.08	-69.34	-13.00	-56.34
260.86	H	-60.91	-14.41	-75.32	-13.00	-62.32
411.21	H	-66.72	-10.46	-77.18	-13.00	-64.18

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: WCDMA Band V / TX / CH 4182 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Mark Yang

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
37.76	V	-50.06	-13.41	-63.47	-13.00	-50.47
62.01	V	-56.32	-15.26	-71.58	-13.00	-58.58
127.97	V	-58.70	-12.41	-71.12	-13.00	-58.12
180.35	V	-47.09	-14.34	-61.43	-13.00	-48.43
207.51	V	-52.98	-15.21	-68.19	-13.00	-55.19
285.11	V	-65.42	-11.89	-77.30	-13.00	-64.30
43.58	H	-63.13	-10.80	-73.93	-13.00	-60.93
127.97	H	-57.24	-13.62	-70.86	-13.00	-57.86
180.35	H	-49.46	-14.10	-63.57	-13.00	-50.57
207.51	H	-58.12	-13.55	-71.67	-13.00	-58.67
291.90	H	-62.92	-13.10	-76.02	-13.00	-63.02
445.16	H	-66.60	-9.93	-76.53	-13.00	-63.53

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: WCDMA Band V / TX / CH 4233 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Mark Yang

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
37.76	V	-53.92	-13.41	-67.33	-13.00	-54.33
62.98	V	-61.38	-15.23	-76.62	-13.00	-63.62
127.00	V	-60.72	-12.49	-73.21	-13.00	-60.21
180.35	V	-48.11	-14.34	-62.45	-13.00	-49.45
208.48	V	-53.71	-15.43	-69.14	-13.00	-56.14
237.58	V	-61.95	-14.11	-76.06	-13.00	-63.06
42.61	H	-62.30	-10.72	-73.03	-13.00	-60.03
126.03	H	-62.50	-13.61	-76.11	-13.00	-63.11
182.29	H	-51.51	-14.06	-65.57	-13.00	-52.57
209.45	H	-58.11	-13.82	-71.93	-13.00	-58.93
240.49	H	-61.08	-14.23	-75.31	-13.00	-62.31
290.93	H	-63.29	-12.99	-76.28	-13.00	-63.28

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	WCDMA / HSDPA Band II / TX / CH 9262	**Test Date:**	November 5, 2009
Temperature:	25°C	**Tested by:**	Mark Yang
Humidity:	50 % RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
37.76	V	-55.87	-13.41	-69.28	-13.00	-56.28
94.99	V	-53.53	-18.95	-72.47	-13.00	-59.47
126.03	V	-56.08	-12.56	-68.64	-13.00	-55.64
174.53	V	-46.59	-14.16	-60.76	-13.00	-47.76
204.60	V	-56.73	-14.54	-71.27	-13.00	-58.27
283.17	V	-66.25	-11.94	-78.20	-13.00	-65.20
38.73	H	-63.72	-11.46	-75.18	-13.00	-62.18
124.09	H	-59.49	-13.59	-73.08	-13.00	-60.08
174.53	H	-51.25	-13.93	-65.18	-13.00	-52.18
207.51	H	-59.15	-13.55	-72.70	-13.00	-59.70
336.52	H	-61.05	-13.51	-74.55	-13.00	-61.55
442.25	H	-62.19	-10.04	-72.24	-13.00	-59.24

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	WCDMA / HSDPA Band II / TX / CH 9400	**Test Date:**	November 5, 2009
Temperature:	25°C	**Tested by:**	Mark Yang
Humidity:	50 % RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
36.79	V	-55.33	-13.88	-69.22	-13.00	-56.22
66.86	V	-58.68	-15.12	-73.80	-13.00	-60.80
95.96	V	-52.73	-18.69	-71.42	-13.00	-58.42
124.09	V	-56.90	-12.71	-69.61	-13.00	-56.61
173.56	V	-48.31	-14.13	-62.45	-13.00	-49.45
208.48	V	-56.56	-15.43	-71.99	-13.00	-58.99
30.97	H	-41.48	-17.76	-59.24	-13.00	-46.24
110.51	H	-59.09	-15.39	-74.48	-13.00	-61.48
124.09	H	-59.81	-13.59	-73.41	-13.00	-60.41
140.58	H	-56.49	-13.97	-70.45	-13.00	-57.45
174.53	H	-52.30	-13.93	-66.23	-13.00	-53.23
208.48	H	-59.56	-13.69	-73.24	-13.00	-60.24

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	WCDMA / HSDPA Band II / TX / CH 9538	**Test Date:**	November 5, 2009
Temperature:	25°C	**Tested by:**	Mark Yang
Humidity:	50 % RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
36.79	V	-54.73	-13.88	-68.62	-13.00	-55.62
94.99	V	-52.85	-18.95	-71.80	-13.00	-58.80
127.97	V	-56.35	-12.41	-68.77	-13.00	-55.77
174.53	V	-46.58	-14.16	-60.75	-13.00	-47.75
208.48	V	-56.08	-15.43	-71.51	-13.00	-58.51
285.11	V	-66.35	-11.89	-78.23	-13.00	-65.23
40.67	H	-64.35	-10.56	-74.91	-13.00	-61.91
109.54	H	-59.56	-15.58	-75.14	-13.00	-62.14
127.97	H	-58.80	-13.62	-72.42	-13.00	-59.42
174.53	H	-51.13	-13.93	-65.06	-13.00	-52.06
209.45	H	-58.92	-13.82	-72.74	-13.00	-59.74
289.96	H	-64.68	-12.89	-77.57	-13.00	-64.57

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	WCDMA / HSDPA Band V / TX / CH 4132	**Test Date:**	November 5, 2009
Temperature:	25°C	**Tested by:**	Mark Yang
Humidity:	50 % RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
36.79	V	-54.97	-13.88	-68.85	-13.00	-55.85
68.80	V	-60.42	-15.06	-75.49	-13.00	-62.49
97.90	V	-53.57	-18.19	-71.76	-13.00	-58.76
128.94	V	-57.22	-12.34	-69.56	-13.00	-56.56
176.47	V	-49.29	-14.23	-63.52	-13.00	-50.52
270.56	V	-63.88	-12.60	-76.48	-13.00	-63.48
41.64	H	-63.53	-10.64	-74.18	-13.00	-61.18
110.51	H	-59.35	-15.39	-74.74	-13.00	-61.74
123.12	H	-60.45	-13.59	-74.03	-13.00	-61.03
173.56	H	-55.52	-13.90	-69.42	-13.00	-56.42
204.60	H	-60.46	-13.14	-73.60	-13.00	-60.60
459.71	H	-67.49	-9.38	-76.88	-13.00	-63.88

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	WCDMA / HSDPA Band V / TX / CH 4182	**Test Date:**	November 5, 2009
Temperature:	25°C	**Tested by:**	Mark Yang
Humidity:	50 % RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
36.79	V	-57.79	-13.88	-71.68	-13.00	-58.68
67.83	V	-60.37	-15.09	-75.46	-13.00	-62.46
97.90	V	-57.11	-18.19	-75.30	-13.00	-62.30
174.53	V	-48.17	-14.16	-62.33	-13.00	-49.33
207.51	V	-60.31	-15.21	-75.52	-13.00	-62.52
277.35	V	-66.86	-12.20	-79.05	-13.00	-66.05
39.70	H	-63.91	-10.74	-74.64	-13.00	-61.64
109.54	H	-60.26	-15.58	-75.84	-13.00	-62.84
124.09	H	-60.70	-13.59	-74.29	-13.00	-61.29
174.53	H	-53.57	-13.93	-67.50	-13.00	-54.50
208.48	H	-60.02	-13.69	-73.71	-13.00	-60.71
279.29	H	-65.17	-12.83	-78.01	-13.00	-65.01

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	WCDMA / HSDPA Band V / TX / CH 4233	**Test Date:**	November 5, 2009
Temperature:	25°C	**Tested by:**	Mark Yang
Humidity:	50 % RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
36.79	V	-54.48	-13.88	-68.36	-13.00	-55.36
94.99	V	-52.11	-18.95	-71.06	-13.00	-58.06
126.03	V	-55.59	-12.56	-68.15	-13.00	-55.15
175.50	V	-48.13	-14.20	-62.33	-13.00	-49.33
208.48	V	-56.20	-15.43	-71.63	-13.00	-58.63
298.69	V	-60.38	-13.33	-73.71	-13.00	-60.71
30.97	H	-38.96	-17.76	-56.72	-13.00	-43.72
96.93	H	-58.65	-18.34	-76.99	-13.00	-63.99
124.09	H	-60.53	-13.59	-74.12	-13.00	-61.12
174.53	H	-54.67	-13.93	-68.60	-13.00	-55.60
207.51	H	-58.48	-13.55	-72.02	-13.00	-59.02
266.68	H	-61.66	-13.70	-75.36	-13.00	-62.36

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Above 1GHz

Operation Mode: GPRS 850 / TX / CH 128 **Test Date:** November 9, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1651.00	V	-42.66	0.69	-41.96	-13.00	-28.96
2470.00	V	-42.45	3.49	-38.96	-13.00	-25.96
3296.00	V	-44.94	5.57	-39.37	-13.00	-26.37
4122.00	V	-49.71	7.58	-42.13	-13.00	-29.13
4948.00	V	-54.02	9.53	-44.50	-13.00	-31.50
5767.00	V	-58.48	9.97	-48.51	-13.00	-35.51
1651.00	H	-45.84	0.80	-45.04	-13.00	-32.04
2470.00	H	-39.06	3.78	-35.28	-13.00	-22.28
3296.00	H	-49.23	6.27	-42.95	-13.00	-29.95
4122.00	H	-53.25	9.39	-43.86	-13.00	-30.86
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: GPRS 850 / TX / CH 190 **Test Date:** November 9, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1672.00	V	-48.97	0.73	-48.23	-13.00	-35.23
2512.00	V	-46.42	3.66	-42.77	-13.00	-29.77
3345.00	V	-43.06	5.63	-37.43	-13.00	-24.43
4185.00	V	-44.62	7.69	-36.93	-13.00	-23.93
5018.00	V	-53.99	9.69	-44.30	-13.00	-31.30
N/A						
1672.00	H	-49.73	0.84	-48.89	-13.00	-35.89
2512.00	H	-46.40	3.96	-42.44	-13.00	-29.44
3345.00	H	-47.51	6.41	-41.10	-13.00	-28.10
4185.00	H	-49.30	9.42	-39.88	-13.00	-26.88
5018.00	H	-58.72	10.20	-48.52	-13.00	-35.52
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: GPRS 850 / TX / CH 251 **Test Date:** November 9, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1700.00	V	-51.37	0.79	-50.58	-13.00	-37.58
2547.00	V	-48.17	3.77	-44.40	-13.00	-31.40
3394.00	V	-41.22	5.70	-35.52	-13.00	-22.52
4241.00	V	-40.11	7.78	-32.33	-13.00	-19.33
5095.00	V	-54.04	9.72	-44.32	-13.00	-31.32
N/A						
1700.00	H	-51.75	0.90	-50.85	-13.00	-37.85
2547.00	H	-47.23	4.06	-43.17	-13.00	-30.17
3394.00	H	-45.20	6.55	-38.65	-13.00	-25.65
4248.00	H	-45.59	9.44	-36.14	-13.00	-23.14
5095.00	H	-57.61	10.21	-47.41	-13.00	-34.41
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: GPRS 1900 / TX / CH 512 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3702.00	V	-42.36	6.46	-35.90	-13.00	-22.90
5550.00	V	-40.35	9.92	-30.43	-13.00	-17.43
7398.00	V	-51.80	15.11	-36.69	-13.00	-23.69
N/A						
3702.00	H	-43.14	7.85	-35.30	-13.00	-22.30
5550.00	H	-48.60	10.26	-38.35	-13.00	-25.35
7398.00	H	-55.90	15.48	-40.42	-13.00	-27.42
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: GPRS 1900 / TX / CH 661 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3758.00	V	-45.87	6.63	-39.24	-13.00	-26.24
5641.00	V	-49.05	9.94	-39.11	-13.00	-26.11
7524.00	V	-50.58	15.47	-35.10	-13.00	-22.10
N/A						
3758.00	H	-45.89	8.12	-37.76	-13.00	-24.76
5641.00	H	-49.10	10.28	-38.82	-13.00	-25.82
7524.00	H	-54.33	15.89	-38.44	-13.00	-25.44
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: GPRS 1900 / TX / CH 810 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3821.00	V	-42.58	6.83	-35.75	-13.00	-22.75
5732.00	V	-48.37	9.96	-38.41	-13.00	-25.41
7643.00	V	-49.82	15.78	-34.03	-13.00	-21.03
N/A						
3821.00	H	-46.75	8.44	-38.31	-13.00	-25.31
5732.00	H	-51.67	10.31	-41.36	-13.00	-28.36
7643.00	H	-52.88	16.19	-36.68	-13.00	-23.68
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: EDGE 850 / TX / CH 128 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1651.00	V	-50.54	0.69	-49.85	-13.00	-36.85
3296.00	V	-52.20	5.57	-46.64	-13.00	-33.64
4122.00	V	-54.37	7.58	-46.79	-13.00	-33.79
N/A						
1651.00	H	-53.81	0.80	-53.01	-13.00	-40.01
2470.00	H	-58.46	3.78	-54.68	-13.00	-41.68
3296.00	H	-56.85	6.27	-50.57	-13.00	-37.57
4122.00	H	-58.80	9.39	-49.41	-13.00	-36.41
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: EDGE 850 / TX / CH 190 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1672.00	V	-54.98	0.73	-54.24	-13.00	-41.24
3345.00	V	-48.77	5.63	-43.13	-13.00	-30.13
4185.00	V	-48.97	7.69	-41.29	-13.00	-28.29
N/A						
1672.00	H	-55.99	0.84	-55.14	-13.00	-42.14
2512.00	H	-58.88	3.96	-54.92	-13.00	-41.92
3345.00	H	-53.31	6.41	-46.90	-13.00	-33.90
4185.00	H	-54.20	9.42	-44.78	-13.00	-31.78
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: EDGE 850 / TX / CH 251 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1700.00	V	-56.52	0.79	-55.73	-13.00	-42.73
2547.00	V	-54.01	3.77	-50.24	-13.00	-37.24
3394.00	V	-47.81	5.70	-42.11	-13.00	-29.11
4248.00	V	-46.48	7.79	-38.69	-13.00	-25.69
N/A						
1700.00	H	-57.26	0.90	-56.35	-13.00	-43.35
2547.00	H	-54.97	4.06	-50.91	-13.00	-37.91
3394.00	H	-50.98	6.55	-44.44	-13.00	-31.44
4241.00	H	-51.22	9.44	-41.78	-13.00	-28.78
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: EDGE 1900 / TX / CH 512 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3702.00	V	-51.96	6.46	-45.50	-13.00	-32.50
5550.00	V	-48.87	9.92	-38.95	-13.00	-25.95
N/A						
3702.00	H	-46.70	7.85	-38.85	-13.00	-25.85
5550.00	H	-50.65	10.26	-40.39	-13.00	-27.39
7398.00	H	-57.02	15.48	-41.54	-13.00	-28.54
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: EDGE 1900 / TX / CH 661 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3758.00	V	-49.61	6.63	-42.98	-13.00	-29.98
5641.00	V	-52.77	9.94	-42.83	-13.00	-29.83
7524.00	V	-54.63	15.47	-39.16	-13.00	-26.16
N/A						
3758.00	H	-51.48	8.12	-43.35	-13.00	-30.35
5641.00	H	-52.81	10.28	-42.53	-13.00	-29.53
7524.00	H	-59.41	15.89	-43.52	-13.00	-30.52
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: EDGE 1900 / TX / CH 810 **Test Date:** November 6, 2009

Temperature: 25°C **Tested by:** Lawrence Lee

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3821.00	V	-45.63	6.83	-38.81	-13.00	-25.81
5732.00	V	-51.90	9.96	-41.94	-13.00	-28.94
7643.00	V	-52.48	15.78	-36.69	-13.00	-23.69
N/A						
3821.00	H	-49.61	8.44	-41.17	-13.00	-28.17
5732.00	H	-53.51	10.31	-43.20	-13.00	-30.20
7643.00	H	-53.62	16.19	-37.43	-13.00	-24.43
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: WCDMA Band II / TX / CH 9262 **Test Date:** November 5, 2009

Temperature: 25°C **Tested by:** Mark Yang

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3863.00	V	-59.35	6.96	-52.39	-13.00	-39.39
N/A						
3702.00	H	-60.93	7.85	-53.08	-13.00	-40.08
3863.00	H	-59.93	8.65	-51.28	-13.00	-38.28
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: WCDMA Band II / TX / CH 9400 **Test Date:** November 5, 2009

Temperature: 25°C **Tested by:** Mark Yang

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3919.00	V	-60.21	7.13	-53.08	-13.00	-40.08
N/A						
3758.00	H	-61.84	8.12	-53.71	-13.00	-40.71
3919.00	H	-59.84	8.93	-50.92	-13.00	-37.92
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: WCDMA Band II / TX / CH 9538 **Test Date:** November 5, 2009

Temperature: 25°C **Tested by:** Mark Yang

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3975.00	V	-58.16	7.30	-50.86	-13.00	-37.86
N/A						
3814.00	H	-59.94	8.40	-51.53	-13.00	-38.53
3975.00	H	-60.73	9.21	-51.52	-13.00	-38.52
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: WCDMA Band V / TX / CH 4132 **Test Date:** November 5, 2009

Temperature: 25°C **Tested by:** Mark Yang

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1651.00	V	-46.56	0.69	-45.87	-13.00	-32.87
2484.00	V	-51.66	3.55	-48.11	-13.00	-35.11
3485.00	V	-52.12	5.82	-46.30	-13.00	-33.30
N/A						
1658.00	H	-43.42	0.81	-42.61	-13.00	-29.61
2484.00	H	-46.65	3.84	-42.80	-13.00	-29.80
3485.00	H	-51.66	6.80	-44.86	-13.00	-31.86
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: WCDMA Band V / TX / CH 4182 **Test Date:** November 5, 2009

Temperature: 25°C **Tested by:** Mark Yang

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1672.00	V	-47.46	0.73	-46.72	-13.00	-33.72
2512.00	V	-48.78	3.66	-45.12	-13.00	-32.12
3527.00	V	-53.78	5.92	-47.86	-13.00	-34.86
N/A						
1672.00	H	-43.54	0.84	-42.70	-13.00	-29.70
2512.00	H	-48.28	3.96	-44.32	-13.00	-31.32
3527.00	H	-55.87	6.97	-48.90	-13.00	-35.90
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode: WCDMA Band V / TX / CH 4233 **Test Date:** November 5, 2009

Temperature: 25°C **Tested by:** Mark Yang

Humidity: 50 % RH **Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1693.00	V	-47.65	0.78	-46.87	-13.00	-33.87
2540.00	V	-52.71	3.74	-48.97	-13.00	-35.97
3569.00	V	-52.97	6.05	-46.92	-13.00	-33.92
N/A						
1693.00	H	-40.38	0.89	-39.49	-13.00	-26.49
2547.00	H	-49.10	4.06	-45.04	-13.00	-32.04
3569.00	H	-53.89	7.18	-46.71	-13.00	-33.71
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	WCDMA / HSDPA Band II / TX / CH 9262	**Test Date:**	November 5, 2009
Temperature:	25°C	**Tested by:**	Mark Yang
Humidity:	50 % RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3863.00	V	-60.43	6.96	-53.47	-13.00	-40.47
N/A						
3863.00	H	-59.67	8.65	-51.02	-13.00	-38.02
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	WCDMA / HSDPA Band II / TX / CH 9400	**Test Date:**	November 5, 2009
Temperature:	25°C	**Tested by:**	Mark Yang
Humidity:	50 % RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3919.00	V	-59.40	7.13	-52.27	-13.00	-39.27
N/A						
3975.00	H	-59.64	7.30	-52.34	-13.00	-39.34
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	WCDMA / HSDPA Band II / TX / CH 9538	**Test Date:**	November 5, 2009
Temperature:	25°C	**Tested by:**	Mark Yang
Humidity:	50 % RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3919.00	V	-58.87	8.93	-49.94	-13.00	-36.94
N/A						
3814.00	H	-60.74	8.40	-52.34	-13.00	-39.34
3975.00	H	-59.85	9.21	-50.65	-13.00	-37.65
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	WCDMA / HSDPA Band V / TX / CH 4132	**Test Date:**	November 5, 2009
Temperature:	25°C	**Tested by:**	Mark Yang
Humidity:	50 % RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1651.00	V	-51.66	0.69	-50.97	-13.00	-37.97
2484.00	V	-57.71	3.55	-54.16	-13.00	-41.16
3485.00	V	-53.33	5.82	-47.51	-13.00	-34.51
N/A						
1651.00	H	-48.69	0.80	-47.89	-13.00	-34.89
2484.00	H	-52.36	3.84	-48.51	-13.00	-35.51
3485.00	H	-57.32	6.80	-50.53	-13.00	-37.53
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	WCDMA / HSDPA Band V / TX / CH 4182	**Test Date:**	November 5, 2009
Temperature:	25°C	**Tested by:**	Mark Yang
Humidity:	50 % RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1672.00	V	-48.35	0.73	-47.62	-13.00	-34.62
2512.00	V	-50.70	3.66	-47.04	-13.00	-34.04
3527.00	V	-52.75	5.92	-46.82	-13.00	-33.82
N/A						
1672.00	H	-42.19	0.84	-41.35	-13.00	-28.35
2512.00	H	-45.42	3.96	-41.47	-13.00	-28.47
3527.00	H	-51.87	6.97	-44.89	-13.00	-31.89
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

Operation Mode:	WCDMA / HSDPA Band V / TX / CH 4233	**Test Date:**	November 5, 2009
Temperature:	25°C	**Tested by:**	Mark Yang
Humidity:	50 % RH	**Polarity:**	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1693.00	V	-50.20	0.78	-49.42	-13.00	-36.42
2540.00	V	-56.44	3.74	-52.70	-13.00	-39.70
3569.00	V	-54.24	6.05	-48.18	-13.00	-35.18
N/A						
1693.00	H	-44.23	0.89	-43.34	-13.00	-30.34
2540.00	H	-50.25	4.04	-46.21	-13.00	-33.21
3569.00	H	-52.20	7.18	-45.02	-13.00	-32.02
N/A						

Remark:

1. *Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.*
2. *Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no specific emissions from the EUT are recorded (ie: margin>20dB from the applicable limit) and considered that's already beyond the background noise floor.*

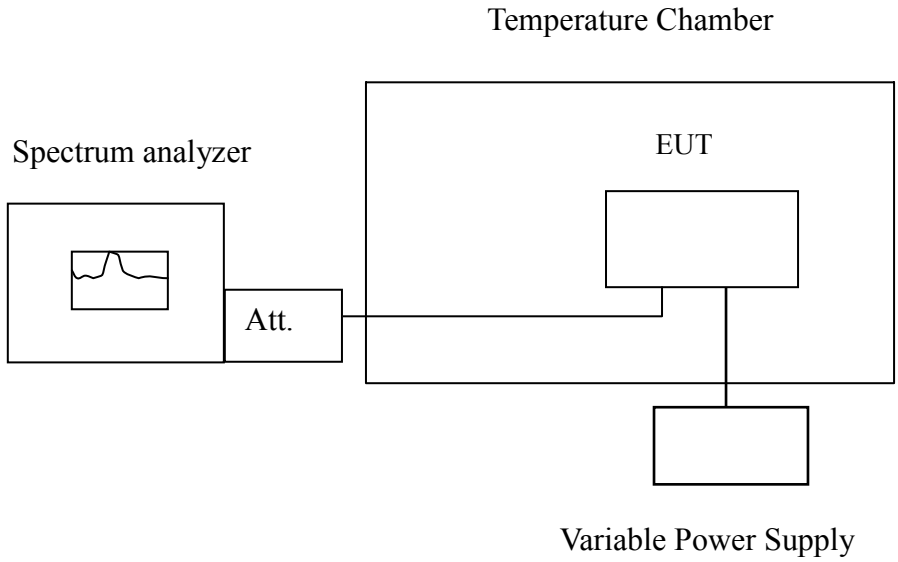
7.5FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

LIMIT

According to FCC §2.1055, FCC §22.355, .FCC §24.235.

Frequency Tolerance: 2.5 ppm

Test Configuration



Remark: *Measurement setup for testing on Antenna connector*

TEST PROCEDURE

The equipment under test was connected to an external AC or DC power supply and input rated voltage. RF output was connected to a frequency counter or spectrum analyzer via feed through attenuators. The EUT was placed inside the temperature chamber. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and measure EUT 20°C operating frequency as reference frequency. Turn EUT off and set the chamber temperature to –30°C. After the temperature stabilized for approximately 30 minutes recorded the frequency. Repeat step measure with 10°C increased per stage until the highest temperature of +50°C reached.

TEST RESULTS

No non-compliance noted.

Reference Frequency: GPRS Mid Channel 836.6 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	83600010	0	2090
	40	83599995	-15	
	30	83599982	-28	
	20	83600010	0	
	10	83600015	5	
	0	83600008	-2	
	-10	83599989	-21	
	-20	83600026	16	
	-30	83600030	20	

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	1880000060	95	4700
	40	1880000039	74	
	30	1880000049	84	
	20	1879999965	0	
	10	1880000035	70	
	0	1880000057	92	
	-10	1880000019	54	
	-20	1880000061	96	
	-30	1880000064	99	

Reference Frequency: EDGE Mid Channel 836.6 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	83600030	56	2090
	40	83600028	54	
	30	83600020	46	
	20	83599974	0	
	10	83600031	57	
	0	83600054	80	
	-10	83600032	58	
	-20	83600040	66	
	-30	83600030	56	

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	1880000044	80	4700
	40	1880000046	82	
	30	1880000052	88	
	20	1879999964	0	
	10	1880000048	84	
	0	1880000055	91	
	-10	1880000011	47	
	-20	1880000045	81	
	-30	1880000029	65	

Reference Frequency: WCDMA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	1880000016	31	4700
	40	1879999981	-4	
	30	1879999978	-7	
	20	1879999985	0	
	10	1879999975	-10	
	0	1879999979	-6	
	-10	1880000023	38	
	-20	1880000020	35	
	-30	1880000013	28	

Reference Frequency: WCDMA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	83599989	-10	2090
	40	83600005	6	
	30	83599990	-9	
	20	83599999	0	
	10	83600008	9	
	0	83599990	-9	
	-10	83600011	12	
	-20	83600009	10	
	-30	83600014	15	

Reference Frequency: WCDMA / HSDPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	1880000013	27	4700
	40	1880000025	39	
	30	1880000028	42	
	20	1879999986	0	
	10	1880000019	33	
	0	1879999980	-6	
	-10	1880000029	43	
	-20	1880000018	32	
	-30	1880000032	46	

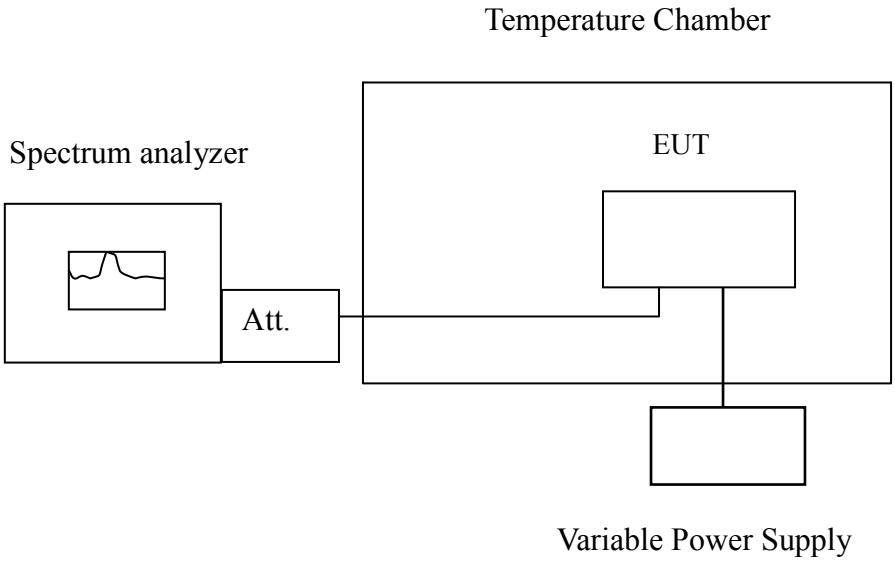
Reference Frequency: WCDMA / HSDPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	83599990	7	2090
	40	83599994	11	
	30	83600006	23	
	20	83599983	0	
	10	83599984	1	
	0	83600015	32	
	-10	83599997	14	
	-20	83599993	10	
	-30	83600019	36	

7.6FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

LIMIT

According to FCC §2.1055, FCC §22.355, .FCC §24.235,

Test Configuration



Remark: *Measurement setup for testing on Antenna connector.*

TEST PROCEDURE

Set chamber temperature to 20°C. Use a variable AC power supply / DC power source to power the EUT and set the voltage to rated voltage. Set the spectrum analyzer RBW low enough to obtain the desired frequency resolution and recorded the frequency.

Reduce the input voltage to specify extreme voltage variation (± 15%) and endpoint, record the maximum frequency change.

TEST RESULTS

No non-compliance noted.

Reference Frequency: GPRS Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	83599987	-23	2090
3.7		83600010	0	
3.145		83600022	12	
2.9END		83599570	-440	

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	1879999963	-2	4700
3.7		1879999965	0	
3.145		1879999954	-11	
2.9END		1879999850	-115	

Reference Frequency: EDGE Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	83599968	-6	2090
3.7		83599974	0	
3.145		83599962	-12	
2.9End		83599850	-124	

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	1879999950	-14	4700
3.7		1879999964	0	
3.145		1879999964	0	
2.9End		1879999702	-262	

Reference Frequency: WCDMA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	1880000014	29	4700
3.7		1879999985	0	
3.145		1880000030	45	
2.9End		1880000060	75	

Reference Frequency: WCDMA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	83600012	13	2090
3.7		83599999	0	
3.145		83599989	-10	
2.9End		83599984	-15	

Reference Frequency: WCDMA HSDPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	1879999974	-12	4700
3.7		1879999986	0	
3.145		1879999964	-22	
2.9End		1879999950	-36	

Reference Frequency: WCDMA HSDPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	83599982	-1	2090
3.7		83599983	0	
3.145		83599980	-3	
2.9End		83599970	-13	

7.7POWERLINE CONDUCTED EMISSIONS

LIMIT

For an intentional radiator which 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 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

Frequency Range (MHz)	Limits (dBμV)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

Compliance with this provision shall be based on the measurement of the radio frequency voltage between each power line (LINE and NEUTRAL) and ground at the power terminals.

Test Configuration

See test photographs attached in Appendix I for the actual connections between EUT and support equipment.

TEST PROCEDURE

1. The EUT was placed on a table, which is 0.8m above ground plane.
2. Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
3. Repeat above procedures until all frequency measured were complete.

TEST RESULTS

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Operation Mode:	Normal Link	**Test Date:**	November 15, 2009
Temperature:	22°C	**Tested by:**	Lawrence Lee
Humidity:	56% RH		

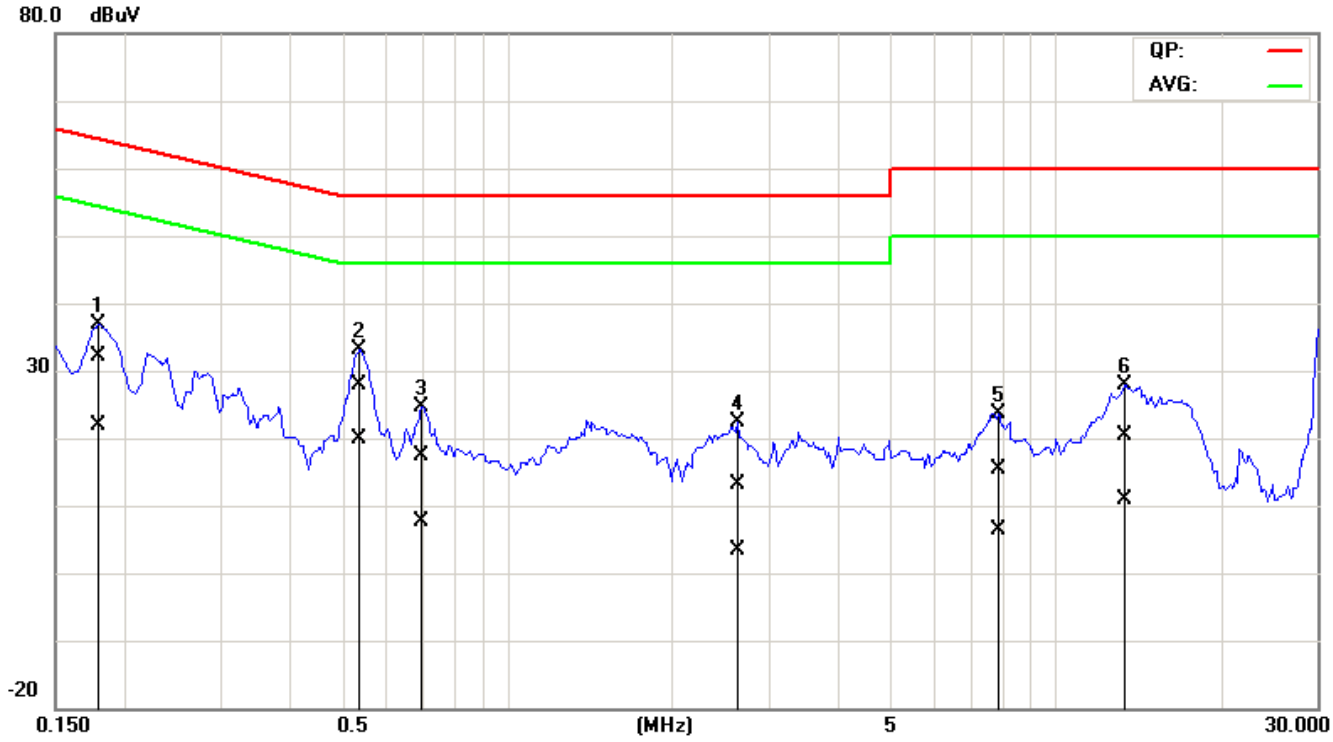
Freq. (MHz)	QP Reading (dBuV)	AV Reading (dBuV)	Corr. factor (dB)	QP Result (dBuV)	AV Result (dBuV)	QP Limit (dBuV)	AV Limit (dBuV)	QP Margin (dB)	AV Margin (dB)	Note
0.1800	32.00	21.70	0.10	32.10	21.80	64.49	54.49	-32.39	-32.69	L1
0.5400	27.94	19.94	0.06	28.00	20.00	56.00	46.00	-28.00	-26.00	L1
0.7000	17.34	7.64	0.06	17.40	7.70	56.00	46.00	-38.60	-38.30	L1
2.6350	13.04	3.34	0.06	13.10	3.40	56.00	46.00	-42.90	-42.60	L1
7.8850	15.31	6.41	0.09	15.40	6.50	60.00	50.00	-44.60	-43.50	L1
13.3800	20.24	10.74	0.26	20.50	11.00	60.00	50.00	-39.50	-39.00	L1
0.2000	52.20	39.80	0.10	52.30	39.90	63.61	53.61	-11.31	-13.71	L2
0.3000	42.11	27.71	0.09	42.20	27.80	60.24	50.24	-18.04	-22.44	L2
0.4050	34.61	22.81	0.09	34.70	22.90	57.75	47.75	-23.05	-24.85	L2
1.4950	30.12	12.42	0.08	30.20	12.50	56.00	46.00	-25.80	-33.50	L2
10.3650	27.56	17.26	0.14	27.70	17.40	60.00	50.00	-32.30	-32.60	L2
13.9500	36.70	24.80	0.20	36.90	25.00	60.00	50.00	-23.10	-25.00	L2

Remark:

1. *Measuring frequencies from 0.15 MHz to 30MHz.*
2. *The emissions measured in frequency range from 0.15 MHz to 30MHz were made with an instrument using Quasi-peak detector and average detector.*
3. *The IF bandwidth of SPA between 0.15MHz to 30MHz was 10kHz; the IF bandwidth of Test Receiver between 0.15MHz to 30MHz was 9kHz;*
4. *L1 = Line One (Live Line) / L2 = Line Two (Neutral Line)*
5. *"-" means Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary.*

Test Plots

Conducted emissions (Line 1)



Conducted emissions (Line 2)