



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

**TEST REPORT**

**For**

**PDA Phone**

**Trade Name / Model:  
i-mate / ULTIMATE 9502,  
Mobinnova / PP5400**

*Issued to*

**Mobinnova Corp.  
11F, No.845, Jhongshan Rd., Tayouan City,  
Taoyuan County 330, Taiwan (R.O.C.)**

*Issued by*

**Compliance Certification Services Inc.  
No. 81-1, Lane 210, Bade Rd. 2, Luchu Hsiang,  
Taoyuan Hsien, (338) Taiwan, R.O.C.  
<http://www.ccsemc.com.tw>  
[service@tw.ccsemc.com](mailto:service@tw.ccsemc.com)**



---

**Note:** This report shall not be reproduced except in full, without the written approval of Compliance Certification Services Inc. This document may be altered or revised by Compliance Certification Services Inc. personnel only, and shall be noted in the revision section of the document.



## **TABLE OF CONTENTS**

<b>1. TEST RESULT CERTIFICATION.....</b>	<b>3</b>
<b>2. EUT DESCRIPTION .....</b>	<b>4</b>
<b>3. TEST METHODOLOGY .....</b>	<b>6</b>
3.1 EUT CONFIGURATION .....	6
3.2 EUT EXERCISE .....	6
3.3 GENERAL TEST PROCEDURES .....	6
3.4 DESCRIPTION OF TEST MODES .....	7
<b>4. INSTRUMENT CALIBRATION.....</b>	<b>8</b>
4.1 MEASURING INSTRUMENT CALIBRATION .....	8
4.2 MEASUREMENT EQUIPMENT USED .....	8
<b>5. FACILITIES AND ACCREDITATIONS .....</b>	<b>10</b>
5.1 FACILITIES .....	10
5.2 EQUIPMENT .....	10
5.3 TABLE OF ACCREDITATIONS AND LISTINGS .....	11
<b>6. SETUP OF EQUIPMENT UNDER TEST .....</b>	<b>12</b>
6.1 SETUP CONFIGURATION OF EUT .....	12
6.2 SUPPORT EQUIPMENT .....	12
<b>7. FCC PART 22 &amp; 24 REQUIREMENTS .....</b>	<b>13</b>
7.1 AVERAGE POWER .....	13
7.2 ERP & EIRP MEASUREMENT .....	16
7.3 OCCUPIED BANDWIDTH MEASUREMENT .....	30
7.4 OUT OF BAND EMISSION AT ANTENNA TERMINALS .....	51
7.5 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT .....	86
7.6 FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT .....	160
7.7 FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT .....	167
7.8 POWERLINE CONDUCTED EMISSIONS .....	174
<b>APPENDIX I PHOTOGRAPHS OF TEST SETUP.....</b>	<b>177</b>
<b>APPENDIX II WCDMA SETTING .....</b>	<b>181</b>



## 1. TEST RESULT CERTIFICATION

**Applicant:** Mobinnova Corp.  
11F, No.845, Jhongshan Rd., Tayouan City,  
Taoyuan County 330, Taiwan (R.O.C.)

**Equipment Under Test:** PDA Phone

**Trade Name / Model Number:** i-mate / ULTIMATE 9502,  
Mobinnova / PP5400

**Date of Test:** November 14 ~ January 15, 2008

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
FCC 47 CFR PART 22 SUBPART H AND 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 ANSI/TIA/EIA-603-A-2001 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:*

---

Amanda Wu  
Section Manager  
Compliance Certification Services Inc.



## 2. EUT DESCRIPTION

<b>Product</b>	PDA Phone
<b>Trade Name / Model Number</b>	i-mate / ULTIMATE 9502, Mobinnova / PP5400
<b>Model Discrepancy</b>	All the above models are identical except for the designation of model numbers. Please refer to the external photographs.
<b>Power Supply</b>	<b>1. Power Adapter:</b> PHIHONG / PSAA05R-050 I/P: AC 100-240V, 50-60Hz, 0.3A O/P: DC 5V, 1A MAX <b>2. Rechargeable Lithium Battery:</b> Model: Atlas Rating: 3.7VDC, 1660mAh <b>3. Powered from PC via USB cable.</b>
<b>Accessories</b>	<b>1. Headset:</b> MERRY (model name: EMC147-022-01), Unshielded, 2.5 m <b>2. USB cable:</b> MEC IMEX (model name: 60-4346-100), Unshielded, 1.2m <b>3. TV Out cable:</b> MEC IMEX (model name: 60-4346-400D), Unshielded, 1.5m
<b>Frequency Range</b>	GSM / GPRS / EDGE: 850: 824 ~ 849 MHz GSM / GPRS / EDGE: 1900: 1850 ~ 1910 MHz WCDMA Band II: 1852.4 ~ 1907.6 MHz WCDMA Band V: 826.4 ~ 846.6 MHz
<b>Modulation Technique</b>	GSM: GMSK GPRS: GMSK EDGE: 8PSK WCDMA: Quadrature Phase Shift Keying (QPSK) with Root-raised cosine pulse shaping filters (roll off = 0.22)



<b>Transmit Power (ERP &amp; EIRP Power)</b>	GSM 850: 27.42dBm (Close Mode) GSM 1900: 24.36 dBm (Slide Mode) GPRS 850: 27.30 dBm (Close Mode) GPRS 1900: 21.68 dBm (Close Mode) EDGE 850: 21.33 dBm (Close / Slide Mode) EDGE 1900: 22.67 dBm (Slide Mode) WCDMA Band II: 24.28 dBm (Slide Mode) HSDPA Band II: 22.69 dBm (Slide Mode) HSUPA Band II: 20.85 dBm (Slide Mode) WCDMA Band V: 23.20 dBm (Slide Mode) HSDPA Band V: 23.44 dBm (Slide Mode) HSUPA Band V: 20.55 dBm (Slide Mode)
<b>Cellular Phone Protocol</b>	GSM: Class B GPRS: Class 12 EDGE: Class 12
<b>Type of Emission</b>	GSM 850 MHz: 247KGXW--- GSM 1900 MHz: 253KGXW--- GPRS 850 MHz: 246KGXW--- GPRS 1900 MHz: 244KGXW--- EDGE 850 MHz: 238KG7W--- EDGE 1900 MHz: 238KG7W--- WCDMA Band II: 4M18F9W--- WCDMA Band V: 4M16F9W--- WCDMA HSDPA Band II: 4M18F9W--- WCDMA HSDPA Band V: 4M16F9W--- WCDMA HSUPA Band II: 4M17F9W--- WCDMA HSUPA Band V: 4M17F9W---
<b>Antenna Gain</b>	GSM / GPRS / EDGE 850 MHz: -0.40 dBi GSM / GPRS / EDGE 1900 MHz: 1.09 dBi WCDMA band II: 1.61 dBi WCDMA band V: -0.53 dBi
<b>Antenna Type</b>	Shorting Monopole 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: **UK9ATL9D** 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 and FCC CFR 47, 2.1046, 2.1047, 2.1049, 2.1051, 2.1053, 2.1055 and 2.1057.

#### **3.1 EUT 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.

#### **3.2 EUT EXERCISE**

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

#### **3.3 GENERAL 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. 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.



### **3.4 DESCRIPTION OF TEST MODES**

The EUT (model: ULTIMATE 9502) had been tested under operating condition.

EUT staying in continuous transmitting mode was programmed.

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.

GSM / GPRS / EDGE 850:

Channel Low (CH128), Channel Mid (CH190) and Channel High (CH251) were chosen for full testing.

GSM / 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 (CH4183) 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 (CH4183) and Channel High (CH4233) were chosen for full testing.

WCDMA / HSUPA 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 (CH4183) and Channel High (CH4233) were chosen for full testing.

The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) for power line conducted emission testing and the worst case was recorded.

Based on the above results from the different modulations, GSM850 / GSM1900 / GPRS 850 / GPRS1900 / EDGE 850 / EDGE 1900 / WCDMA Band II / WCDMA Band V / HSDPA Band II / HSDPA Band V / HSUPA Band II / HSUPA Band V were determined to be the worst-case scenario for all tests.

The worst emission was found: slide mode

in lie-down (X axis) for GSM850 / GSM1900 / GPRS 850 / GPRS1900 / EDGE 850 closed mode and EDGE 1900 / WCDMA Band II / HSDPA Band II / HSDPA Band V / HSUPA Band II / HSUPA Band V slide mode

and in lie-down (Y axis) for WCDMA Band V slide mode.



## 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.

### 4.2 MEASUREMENT 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	01/29/2009
Power Meter	Agilent	E4416A	GB41291611	03/20/2008
Power Sensor	Agilent	E9327A	US40441097	05/23/2008
Temp. / Humidity Chamber	Terchy	MHG-150LF	930619	08/08/2008
DC Power Source	Agilent	E3640A	MY40001774	01/10/2009

3M Semi Anechoic Chamber				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	US42510252	08/01/2008
Test Receiver	Rohde & Schwarz	ESCI	100064	11/12/2008
Switch Controller	TRC	Switch Controller	SC94050010	05/03/2008
4 Port Switch	TRC	4 Port Switch	SC94050020	05/03/2008
Horn-Antenna	TRC	HA-0502	06	05/31/2008
Horn-Antenna	TRC	HA-0801	04	05/03/2008
Bilog- Antenna	Sunol Sciences	JB3	A030205	03/29/2008
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	N/A	FCC: 965860 IC: IC 6106	09/25/2008	09/25/2008
Reject Filter	Micro-Tronics	HPM13194	003	04/25/2008
S.G.	HP	83630B	3844A01022	04/08/2008
Substituted Dipole	Schwazbeck	VHAP/UHAP	998 +999/ 981+982	06/10/2008
Substituted Horn	EMCO	3115	00022257	12/17/2008
Test S/W	LABVIEW (V 6.1)			

*Remark: The measurement uncertainty is less than  $\pm 2.0065\text{dB}$  (30MHz ~ 1GHz),  $\pm 3.0958\text{dB}$  (Above 1GHz) which is evaluated as per the NAMAS NIS 81 and CISPR/A/291/CDV.*





Powerline Conducted Emissions Test Site				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver 9kHz-30MHz	Rohde & Schwarz	ESHS30	828144/003	10/30/2008
Two-Line V-Network 9kHz-30MHz	Schaffner	NNB41	03/10013	06/12/2008
LISN 10kHz-100MHz	EMCO	3825/2	9106-1809	04/01/2008
Test S/W	LABVIEW (V 6.1)			

**Remark:** The measurement uncertainty is less than +/- 2.81dB, which is evaluated as per the NAMAS NIS 81 and CISPR/A/291/CDV.



## **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**







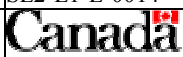
Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, biconical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements.

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."

### 5.3 TABLE OF ACCREDITATIONS AND LISTINGS

Country	Agency	Scope of Accreditation	Logo
USA	A2LA	EN 55011, EN 55014-1/2, CISPR 11, CISPR 14-1/2, EN 55022, EN 55015, CISPR 22, CISPR 15, AS/NZS 3548, VCCI V3 (2001), CFR 47, FCC Part 15/18, CNS 13783-1, CNS 13439, CNS 13438, CNS 13803, CNS 14115, EN 55024, IEC 801-2, IEC 801-3, IEC 801-4, IEC/EN 61000-3-2, IEC/EN 61000-3-3, IEC/EN 61000-4-2/3/4/5/6/8/11, EN 50081-1/ EN 61000-6-3, EN 50081-2/EN 61000-6-4, EN 50081-2/EN 61000-6-1: 2001	 TESTING CERT #0824.01
USA	FCC	3/10 meter Open Area Test Sites (93105, 90471) / 3M Semi Anechoic Chamber (965860) to perform FCC Part 15/18 measurements	 93105, 90471 965860
Japan	VCCI	3/10 meter Open Area Test Sites to perform conducted/radiated measurements	 R-393/1066/725/879 C-402/747/912
Norway	NEMKO	EN 50081-1/2, EN 50082-1/2, IEC 61000-6-1/2, EN 50091-2, EN 50130-4, EN 55011, EN 55013, EN 55014-1/2, EN 55015, EN 55022, EN 55024, EN 61000-3-2/3, EN 61326-1, IEC 61000-4-2/3/4/5/6/8/11, EN 60601-1-2, EN 300 328, EN 300 422-2, EN 301 419-1, EN 301 489-01/03/07/08/09/17, EN 301 419-2/3, EN 300 454-2, EN 301 357-2	 ELA 124a ELA 124b ELA 124c
Taiwan	TAF	EN 300 328, EN 300 220-1, EN 300 220-2, EN 300 220-3, 47 CFR FCC Part 15 Subpart C, EN 61000-3-2, EN 61000-3-3, CNS 13439, CNS 13783-1, CNS 14115, CNS 13438, AS/NZS CISPR 22, CNS 13022-1, IEC 61000-4-2/3/4/5/6/8/11, CNS 13022-2/3	 Testing Laboratory 0363
Taiwan	BSMI	CNS 13438, CNS 13783-1, CNS 13439, CNS 14115	 SL2-IS-E-0014 SL2-IN-E-0014 SL2-A1-E-0014 SL2-R1-E-0014 SL2-R2-E-0014 SL2-L1-E-0014
Canada	Industry Canada	3/10 meter Open Area Test Sites (IC 2324C-3, IC 2324C-5) / 3M Semi Anechoic Chamber (IC 6106)	 IC 2324C-3 IC 2324C-5 IC 6106

\* 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

### 6.1 SETUP CONFIGURATION OF EUT

See test photographs attached in Appendix 1 for the actual connections between EUT and support equipment.

### 6.2 SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	Series No.	FCC ID	Data Cable	Power Cord
1.	Universal Radio Communication tester	R&S	CMU 200	1100.000.8.02	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.*



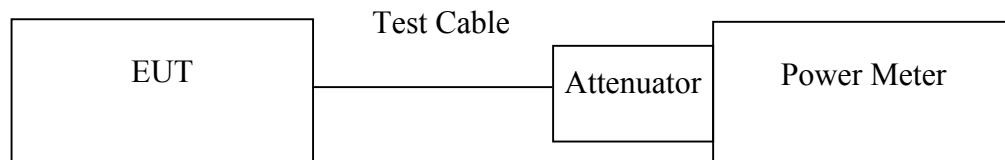
## 7. FCC PART 22 & 24 REQUIREMENTS

### 7.1 AVERAGE 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)	Power Meter Reading (dBm)	Attenuator (dB)	Average Power (dBm)
GSM 850 (Class B)	128	824.20	-0.71	33.10	32.39
	190	836.60	-0.53		32.57
	251	848.80	-0.71		32.39
GPRS 850 (Class 12)	128	824.20	-0.78		32.32
	190	836.60	-0.55		32.55
	251	848.80	-0.72		32.38
EDGE 850 (Class 12)	128	824.20	1.12	24.40	25.52
	190	836.60	0.98		25.38
	251	848.80	1.05		25.45

Test Mode	CH	Frequency (MHz)	Power Meter Reading (dBm)	Attenuator (dB)	Average Power (dBm)
GSM 1900 (Class B)	512	1850.20	-5.52	33.10	27.58
	661	1880.00	-5.21		27.89
	810	1910.00	-4.69		28.41
GPRS 1900 (Class 12)	512	1850.20	-5.41		27.69
	661	1880.00	-5.44		27.66
	810	1910.00	-4.95		28.15
EDGE 1900 (Class 12)	512	1850.20	1.03	24.40	25.43
	661	1880.00	0.87		25.27
	810	1910.00	0.92		25.32

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



Test Mode	CH	Frequency (MHz)	Power Meter Reading (dBm)	Attenuator (dB)	Average Power (dBm)
WCDMA (BAND II)	9262	1852.40	0.13	24.40	24.53
	9400	1880.00	0.08		24.48
	9538	1907.60	0.11		24.51
WCDMA (BAND V)	4132	826.40	0.87		25.27
	4183	836.60	0.08		24.48
	4233	846.60	1.02		25.42
Test Mode	CH	Frequency (MHz)	Power Meter Reading (dBm)	Attenuator (dB)	Average Power (dBm)
WCDMA / HSDPA (BAND II)	9262	1852.40	2.73	24.40	27.13
	9400	1880.00	2.79		27.19
	9538	1907.60	2.84		27.24
WCDMA / HSDPA (BAND V)	4132	826.40	3.12		27.52
	4183	836.60	3.05		27.45
	4233	846.60	3.15		27.55
Test Mode	CH	Frequency (MHz)	Power Meter Reading (dBm)	Attenuator (dB)	Average Power (dBm)
WCDMA / HSUPA (BAND II)	9262	1852.40	7.62	20.40	28.02
	9400	1880.00	7.87		28.27
	9538	1907.60	8.02		28.42
WCDMA / HSUPA (BAND V)	4132	826.40	7.54		27.94
	4183	836.60	7.62		28.02
	4233	846.60	7.83		28.23

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

## 7.2 ERP & EIRP MEASUREMENT

### LIMIT

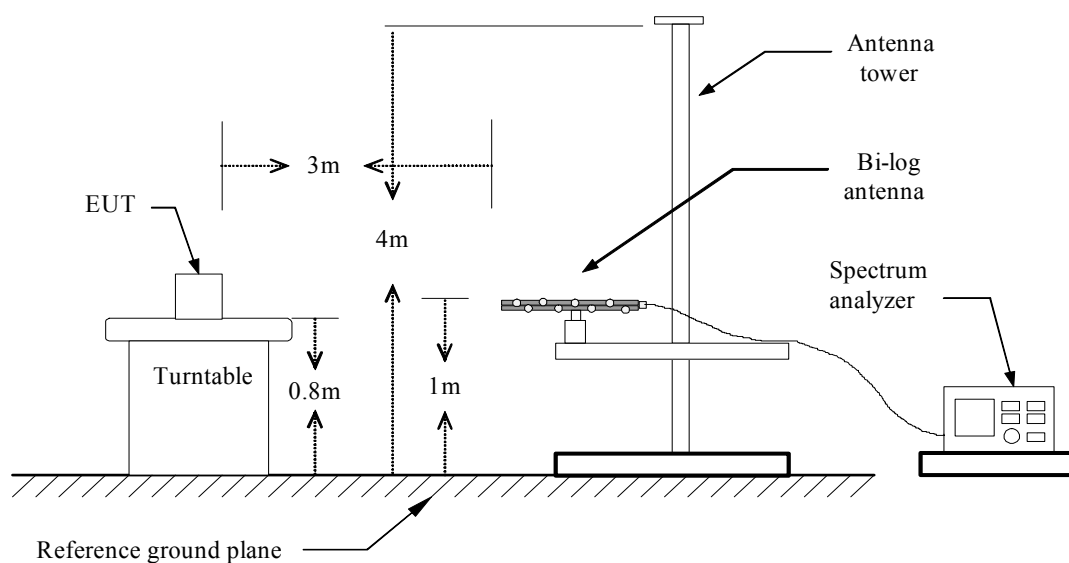
According to FCC §2.1046

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

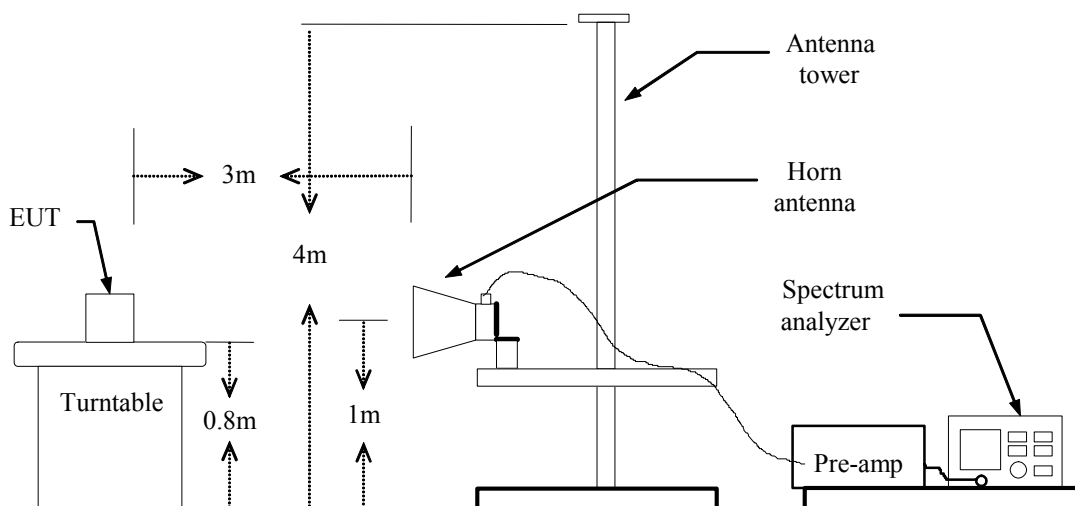
FCC 24.232(b): The equivalent Isotropic Radiated Power (EIRP) must not exceed 2 Watts.

### TEST CONFIGURATION

#### Below 1 GHz

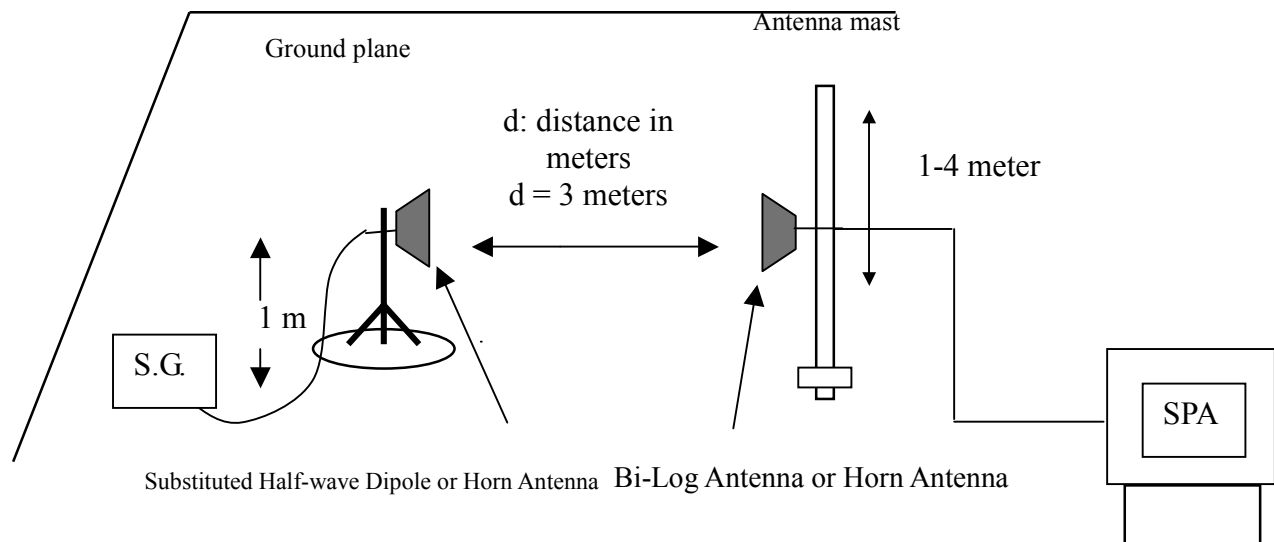


#### Above 1 GHz





## For Substituted Method Test Set-UP



## TEST PROCEDURE

The EUT was placed on a 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:

$$\text{ERP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBd)} - \text{Cable (dB)}$$

$$\text{EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable (dB)}$$

**TEST RESULTS***No non-compliance noted.***Close Mode****GSM 850 Test Data (Class B)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	128	824.25	V	-17.46	36.28	18.82	38.50	-19.68
		824.22	H	-9.74	35.30	25.56	38.50	-12.94
	190	836.59	V	-15.11	36.20	21.08	38.50	-17.42
		836.68	H	-8.71	35.33	26.61	38.50	-11.89
	251	848.87	V	-14.76	36.16	21.40	38.50	-17.10
		849.05	H	-8.14	35.56	<b>*27.42</b>	38.50	-11.08
Y	128	824.13	V	-16.60	36.28	19.68	38.50	-18.82
		824.25	H	-11.08	35.30	24.21	38.50	-14.29
	190	836.65	V	-14.49	36.20	21.70	38.50	-16.80
		836.71	H	-9.57	35.33	25.75	38.50	-12.75
	251	848.81	V	-13.26	36.16	22.90	38.50	-15.60
		848.90	H	-9.13	35.56	26.42	38.50	-12.08
Z	128	824.22	V	-12.49	36.28	23.79	38.50	-14.71
		823.98	H	-15.25	35.30	20.05	38.50	-18.45
	190	836.98	V	-10.44	36.19	25.76	38.50	-12.74
		836.47	H	-15.36	35.32	19.96	38.50	-18.54
	251	848.87	V	-9.51	36.16	26.65	38.50	-11.85
		848.72	H	-15.15	35.55	20.41	38.50	-18.09

**GPRS 850 Test Data (Class 12)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	128	824.16	V	-17.96	36.28	18.32	38.50	-20.18
		824.19	H	-10.26	35.30	25.04	38.50	-13.46
	190	836.50	V	-15.53	36.20	20.66	38.50	-17.84
		836.56	H	-9.14	35.32	26.18	38.50	-12.32
	251	848.78	V	-14.78	36.16	21.38	38.50	-17.12
		848.93	H	-8.26	35.56	<b>*27.30</b>	38.50	-11.20
Y	128	824.13	V	-15.87	36.28	20.41	38.50	-18.09
		824.25	H	-11.12	35.30	24.18	38.50	-14.32
	190	836.56	V	-13.80	36.20	22.39	38.50	-16.11
		836.74	H	-9.65	35.33	25.68	38.50	-12.82
	251	848.75	V	-12.64	36.16	23.52	38.50	-14.98
		848.81	H	-9.09	35.56	26.46	38.50	-12.04
Z	128	824.34	V	-12.62	36.28	23.65	38.50	-14.85
		824.22	H	-15.28	35.30	20.02	38.50	-18.48
	190	836.47	V	-10.31	36.20	25.89	38.50	-12.61
		836.44	H	-15.56	35.32	19.76	38.50	-18.74
	251	848.78	V	-9.67	36.16	26.49	38.50	-12.01
		848.66	H	-15.46	35.55	20.10	38.50	-18.40

**GSM 1900 Test Data (Class B)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	512	1850.04	V	-20.75	35.61	14.86	33.00	-18.14
		1850.04	H	-13.95	36.15	22.21	33.00	-10.79
	661	1880.08	V	-21.40	35.54	14.14	33.00	-18.86
		1879.92	H	-13.97	36.37	<b>*22.40</b>	33.00	-10.60
	810	1909.80	V	-21.07	35.58	14.51	33.00	-18.49
		1909.48	H	-14.58	36.44	21.86	33.00	-11.14
Y	512	1850.20	V	-15.58	35.61	20.04	33.00	-12.96
		1850.12	H	-17.49	36.15	18.66	33.00	-14.34
	661	1880.00	V	-15.21	35.54	20.33	33.00	-12.67
		1880.00	H	-18.40	36.37	17.97	33.00	-15.03
	810	1909.76	V	-15.32	35.58	20.26	33.00	-12.74
		1909.72	H	-16.95	36.43	19.48	33.00	-13.52
Z	512	1850.20	V	-16.48	35.61	19.13	33.00	-13.87
		1850.08	H	-15.35	36.15	20.81	33.00	-12.19
	661	1879.96	V	-17.92	35.54	17.62	33.00	-15.38
		1879.88	H	-15.14	36.37	21.22	33.00	-11.78
	810	1909.76	V	-18.60	35.58	16.98	33.00	-16.02
		1909.96	H	-15.48	36.43	20.95	33.00	-12.05

**GPRS 1900 Test Data (Class 12)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	512	1850.04	V	-21.20	35.61	14.41	33.00	-18.59
		1850.08	H	-14.47	36.15	<b>*21.68</b>	33.00	-11.32
	661	1880.00	V	-22.19	35.54	13.35	33.00	-19.65
		1879.88	H	-15.33	36.37	21.04	33.00	-11.96
	810	1909.68	V	-21.24	35.58	14.35	33.00	-18.65
		1909.64	H	-14.98	36.43	21.45	33.00	-11.55
Y	512	1850.08	V	-15.60	35.61	20.02	33.00	-12.98
		1850.08	H	-17.67	36.15	18.48	33.00	-14.52
	661	1879.92	V	-15.31	35.54	20.22	33.00	-12.78
		1880.00	H	-18.22	36.37	18.15	33.00	-14.85
	810	1909.68	V	-15.18	35.58	20.41	33.00	-12.59
		1909.68	H	-17.03	36.43	19.40	33.00	-13.60
Z	512	1850.20	V	-16.61	35.61	19.01	33.00	-13.99
		1850.16	H	-15.32	36.15	20.83	33.00	-12.17
	661	1879.96	V	-18.03	35.54	17.50	33.00	-15.50
		1879.80	H	-15.28	36.37	21.09	33.00	-11.91
	810	1909.76	V	-18.52	35.58	17.07	33.00	-15.93
		1909.72	H	-15.63	36.43	20.81	33.00	-12.19

**EDGE 850 Test Data (Class 12)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	128	824.27	V	-22.96	35.68	12.72	38.50	-25.78
		824.27	H	-17.62	35.48	17.86	38.50	-20.64
	190	836.64	V	-22.40	35.73	13.33	38.50	-25.17
		836.64	H	-15.71	35.79	20.08	38.50	-18.42
	251	848.79	V	-22.47	35.88	13.41	38.50	-25.09
		848.79	H	-14.72	36.06	<b>*21.33</b>	38.50	-17.17
Y	128	824.27	V	-20.32	35.68	15.36	38.50	-23.14
		824.13	H	-17.57	35.48	17.91	38.50	-20.59
	190	836.73	V	-20.77	35.73	14.96	38.50	-23.54
		836.60	H	-15.99	35.79	19.79	38.50	-18.71
	251	849.02	V	-21.16	35.88	14.72	38.50	-23.78
		848.88	H	-15.50	36.06	20.56	38.50	-17.94
Z	128	824.22	V	-17.73	35.68	17.95	38.50	-20.55
		824.13	H	-23.26	35.48	12.21	38.50	-26.29
	190	836.64	V	-16.21	35.73	19.52	38.50	-18.98
		836.55	H	-23.61	35.79	12.18	38.50	-26.32
	251	849.02	V	-15.54	35.88	20.34	38.50	-18.16
		848.70	H	-23.53	36.06	12.52	38.50	-25.98

**EDGE 1900 Test Data (Class 12)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	512	1850.16	V	-23.58	36.54	12.97	33.00	-20.03
		1849.98	H	-17.33	36.64	19.31	33.00	-13.69
	661	1879.86	V	-20.89	36.50	15.62	33.00	-17.38
		1879.86	H	-14.77	36.92	22.15	33.00	-10.85
	810	1910.01	V	-22.75	36.54	13.79	33.00	-19.21
		1910.01	H	-14.88	37.11	22.23	33.00	-10.77
Y	512	1850.34	V	-14.09	36.54	<b>*22.46</b>	33.00	-10.54
		1850.34	H	-15.74	36.65	20.91	33.00	-12.09
	661	1880.04	V	-14.31	36.50	22.20	33.00	-10.80
		1880.31	H	-17.80	36.92	19.11	33.00	-13.89
	810	1910.01	V	-14.62	36.54	21.92	33.00	-11.08
		1910.01	H	-16.69	37.11	20.42	33.00	-12.58
Z	512	1849.98	V	-17.00	36.54	19.54	33.00	-13.46
		1850.16	H	-15.59	36.64	21.05	33.00	-11.95
	661	1880.04	V	-18.49	36.50	18.01	33.00	-14.99
		1880.04	H	-15.99	36.92	20.93	33.00	-12.07
	810	1880.04	V	-18.47	36.50	18.03	33.00	-14.97
		1909.56	H	-16.36	37.11	20.75	33.00	-12.25

**WCDMA Test Data (BAND II)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	9262	1853.52	V	-27.42	44.20	16.78	33.00	-16.22
		1853.36	H	-19.91	42.90	22.99	33.00	-10.01
	9400	1880.88	V	-27.59	44.01	16.42	33.00	-16.58
		1881.12	H	-20.00	43.01	23.01	33.00	-9.99
	9538	1908.32	V	-28.06	43.88	15.82	33.00	-17.18
		1908.40	H	-21.62	43.10	21.48	33.00	-11.52
Y	9262	1853.36	V	-20.52	44.20	<b>*23.68</b>	33.00	-9.32
		1853.52	H	-22.97	42.90	19.93	33.00	-13.07
	9400	1881.20	V	-20.56	44.01	23.45	33.00	-9.55
		1880.80	H	-22.79	43.01	20.22	33.00	-12.78
	9538	1906.56	V	-22.12	43.88	21.76	33.00	-11.24
		1906.72	H	-24.64	43.09	18.46	33.00	-14.54
Z	9262	1853.12	V	-23.38	44.20	20.81	33.00	-12.19
		1853.28	H	-22.89	42.90	20.01	33.00	-12.99
	9400	1881.04	V	-24.16	44.01	19.84	33.00	-13.16
		1880.80	H	-22.48	43.01	20.53	33.00	-12.47
	9538	1908.80	V	-24.23	43.88	19.66	33.00	-13.34
		1908.56	H	-22.79	43.10	20.31	33.00	-12.69

**WCDMA Test Data (BAND V)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	4132	826.91	V	-18.63	36.44	17.81	38.45	-20.64
		826.91	H	-15.04	36.27	21.23	38.45	-17.22
	4183	837.49	V	-19.30	36.55	17.24	38.45	-21.21
		837.49	H	-15.53	36.50	20.97	38.45	-17.48
	4233	845.59	V	-18.65	36.63	17.99	38.45	-20.46
		846.05	H	-13.91	36.62	<b>*22.71</b>	38.45	-15.74
Y	4132	825.49	V	-19.77	36.42	16.65	38.45	-21.80
		826.87	H	-16.18	36.27	20.09	38.45	-18.36
	4183	837.22	V	-20.37	36.55	16.17	38.45	-22.28
		837.40	H	-15.84	36.50	20.66	38.45	-17.79
	4233	845.77	V	-19.64	36.63	17.00	38.45	-21.45
		846.05	H	-14.36	36.62	22.26	38.45	-16.19
Z	4132	825.49	V	-15.36	36.42	21.07	38.45	-17.38
		825.49	H	-21.39	36.24	14.84	38.45	-23.61
	4183	837.63	V	-15.50	36.55	21.05	38.45	-17.40
		837.63	H	-21.22	36.50	15.29	38.45	-23.16
	4233	846.60	V	-14.46	36.64	22.18	38.45	-16.27
		846.00	H	-19.61	36.62	17.00	38.45	-21.45

**WCDMA / HSDPA BAND II Test Data**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	9262	1851.20	V	-29.19	44.21	15.02	33.00	-17.98
		1851.36	H	-21.22	42.89	21.67	33.00	-11.33
	9400	1878.96	V	-28.27	44.02	15.75	33.00	-17.25
		1878.96	H	-21.56	43.00	21.45	33.00	-11.55
	9538	1906.64	V	-29.81	43.88	14.07	33.00	-18.93
		1906.56	H	-24.27	43.09	18.83	33.00	-14.17
Y	9262	1851.44	V	-22.43	44.21	21.78	33.00	-11.22
		1851.36	H	-23.62	42.89	19.27	33.00	-13.73
	9400	1881.20	V	-22.11	44.01	<b>*21.89</b>	33.00	-11.11
		1881.36	H	-24.78	43.01	18.23	33.00	-14.77
	9538	1908.88	V	-23.30	43.88	20.58	33.00	-12.42
		1909.20	H	-27.71	43.10	15.38	33.00	-17.62
Z	9262	1851.20	V	-25.85	44.21	18.36	33.00	-14.64
		1851.44	H	-23.09	42.89	19.80	33.00	-13.20
	9400	1878.88	V	-25.98	44.02	18.04	33.00	-14.96
		1878.88	H	-24.03	43.00	18.98	33.00	-14.02
	9538	1906.32	V	-26.71	43.88	17.17	33.00	-15.83
		1906.48	H	-24.52	43.09	18.57	33.00	-14.43

**WCDMA / HSDPA BAND V Test Data**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	4132	827.33	V	-22.94	36.44	13.50	38.45	-24.95
		827.42	H	-13.85	36.28	22.43	38.45	-16.02
	4183	837.50	V	-22.66	36.55	13.89	38.45	-24.56
		837.50	H	-13.85	36.50	22.65	38.45	-15.80
	4233	847.89	V	-21.95	36.66	14.70	38.45	-23.75
		845.82	H	-13.56	36.62	23.05	38.45	-15.40
Y	4132	826.43	V	-20.56	36.43	15.87	38.45	-22.58
		827.73	H	-15.87	36.29	20.41	38.45	-18.04
	4183	837.81	V	-20.53	36.55	16.02	38.45	-22.43
		837.59	H	-15.51	36.50	20.99	38.45	-17.46
	4233	845.55	V	-18.64	36.63	17.99	38.45	-20.46
		845.69	H	-13.81	36.61	22.80	38.45	-15.65
Z	4132	827.82	V	-15.47	36.45	20.98	38.45	-17.47
		827.51	H	-22.42	36.28	13.86	38.45	-24.59
	4183	838.04	V	-15.14	36.55	21.41	38.45	-17.04
		837.72	H	-21.07	36.50	15.44	38.45	-23.01
	4233	845.51	V	-13.27	36.63	<b>*23.36</b>	38.45	-15.09
		845.55	H	-18.79	36.61	17.82	38.45	-20.63

**WCDMA / HSUPA BAND II Test Data**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	9262	1853.31	V	-22.50	36.54	14.04	33.00	-18.96
		1851.24	H	-17.28	36.65	19.37	33.00	-13.63
	9400	1880.22	V	-22.36	36.50	14.14	33.00	-18.86
		1881.21	H	-17.35	36.93	19.57	33.00	-13.43
	9538	1908.03	V	-24.36	36.53	12.16	33.00	-20.84
		1907.85	H	-17.85	37.11	19.26	33.00	-13.74
Y	9262	1851.24	V	-16.89	36.54	19.65	33.00	-13.35
		1852.86	H	-18.61	36.67	18.06	33.00	-14.94
	9400	1880.31	V	-16.27	36.50	<b>*20.23</b>	33.00	-12.77
		1878.60	H	-17.78	36.90	19.13	33.00	-13.87
	9538	1906.32	V	-17.60	36.52	18.92	33.00	-14.08
		1907.94	H	-18.42	37.11	18.69	33.00	-14.31
Z	9262	1853.04	V	-20.04	36.54	16.50	33.00	-16.50
		1852.68	H	-18.53	36.67	18.14	33.00	-14.86
	9400	1881.03	V	-19.33	36.50	17.17	33.00	-15.83
		1880.40	H	-17.92	36.92	19.00	33.00	-14.00
	9538	1907.40	V	-21.59	36.52	14.93	33.00	-18.07
		1907.85	H	-19.74	37.11	17.36	33.00	-15.64

**WCDMA / HSUPA BAND V Test Data**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	4132	825.35	V	-26.34	35.68	9.34	38.50	-29.16
		826.16	H	-17.45	35.53	18.08	38.50	-20.42
	4183	835.61	V	-25.83	35.72	9.90	38.50	-28.60
		837.72	H	-17.78	35.82	18.04	38.50	-20.46
	4233	845.73	V	-23.30	35.83	12.53	38.50	-25.97
		845.69	H	-16.46	35.99	<b>*19.53</b>	38.50	-18.97
Y	4132	826.70	V	-24.64	35.69	11.05	38.50	-27.45
		827.55	H	-18.21	35.56	17.35	38.50	-21.15
	4183	835.97	V	-24.90	35.73	10.82	38.50	-27.68
		835.97	H	-17.99	35.77	17.78	38.50	-20.72
	4233	845.55	V	-25.33	35.83	10.50	38.50	-28.00
		845.87	H	-17.52	36.00	18.48	38.50	-20.02
Z	4132	825.21	V	-19.86	35.68	15.82	38.50	-22.68
		827.64	H	-23.47	35.56	12.09	38.50	-26.41
	4183	835.92	V	-19.94	35.73	15.78	38.50	-22.72
		835.56	H	-22.70	35.76	13.07	38.50	-25.43
	4233	845.46	V	-17.30	35.83	18.53	38.50	-19.97
		846.00	H	-21.10	36.00	14.90	38.50	-23.60

**Slide Mode****GSM 850 Test Data (Class B)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	128	824.36	V	-22.13	35.68	13.55	38.50	-24.95
		824.27	H	-12.29	35.48	23.19	38.50	-15.31
	190	836.55	V	-19.60	35.73	16.13	38.50	-22.37
		836.78	H	-11.38	35.79	24.41	38.50	-14.09
	251	848.66	V	-19.75	35.87	16.13	38.50	-22.37
		848.79	H	-10.82	36.06	25.24	38.50	-13.26
Y	128	824.36	V	-19.13	35.68	16.55	38.50	-21.95
		824.36	H	-12.11	35.48	23.37	38.50	-15.13
	190	836.64	V	-17.36	35.73	18.37	38.50	-20.13
		836.64	H	-10.41	35.79	25.37	38.50	-13.13
	251	848.88	V	-16.22	35.88	19.66	38.50	-18.84
		848.88	H	-9.49	36.06	26.57	38.50	-11.93
Z	128	824.22	V	-9.49	35.68	26.19	38.50	-12.31
		824.22	H	-16.70	35.48	18.78	38.50	-19.72
	190	836.55	V	-8.74	35.73	<b>*26.99</b>	38.50	-11.51
		836.55	H	-12.21	35.79	23.58	38.50	-14.92
	251	848.93	V	-9.46	35.88	26.42	38.50	-12.08
		848.93	H	-12.46	36.06	23.61	38.50	-14.89

**GPRS 850 Test Data (Class 12)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	128	824.04	V	-21.88	35.68	13.80	38.50	-24.70
		824.22	H	-12.60	35.48	22.88	38.50	-15.62
	190	836.64	V	-20.30	35.73	15.43	38.50	-23.07
		836.64	H	-11.80	35.79	23.99	38.50	-14.51
	251	848.79	V	-20.09	35.88	15.79	38.50	-22.71
		848.93	H	-11.42	36.06	24.64	38.50	-13.86
Y	128	824.13	V	-19.39	35.68	16.29	38.50	-22.21
		824.36	H	-12.15	35.48	23.33	38.50	-15.17
	190	836.64	V	-17.58	35.73	18.15	38.50	-20.35
		836.64	H	-10.62	35.79	25.17	38.50	-13.33
	251	848.79	V	-16.32	35.88	19.56	38.50	-18.94
		848.79	H	-10.01	36.06	<b>*26.05</b>	38.50	-12.45
Z	128	824.36	V	-13.56	35.68	22.12	38.50	-16.38
		824.36	H	-19.52	35.48	15.96	38.50	-22.54
	190	836.73	V	-12.43	35.73	23.30	38.50	-15.20
		836.73	H	-15.20	35.79	20.59	38.50	-17.91
	251	848.88	V	-11.22	35.88	24.66	38.50	-13.84
		848.79	H	-13.72	36.06	22.34	38.50	-16.16



**GSM 1900 Test Data (Class B)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	512	1850.28	V	-19.72	36.54	16.83	33.00	-16.17
		1850.16	H	-12.80	36.64	23.84	33.00	-9.16
	661	1880.13	V	-21.93	36.50	14.57	33.00	-18.43
		1880.13	H	-13.02	36.92	23.90	33.00	-9.10
	810	1909.83	V	-22.14	36.54	14.40	33.00	-18.60
		1909.83	H	-12.75	37.11	<b>*24.36</b>	33.00	-8.64
Y	512	1850.34	V	-14.48	36.54	22.06	33.00	-10.94
		1850.34	H	-15.15	36.65	21.49	33.00	-11.51
	661	1880.13	V	-14.61	36.50	21.90	33.00	-11.10
		1880.13	H	-15.67	36.92	21.24	33.00	-11.76
	810	1909.83	V	-14.65	36.54	21.89	33.00	-11.11
		1909.83	H	-16.37	37.11	20.73	33.00	-12.27
Z	512	1850.34	V	-13.37	36.54	23.18	33.00	-9.82
		1850.34	H	-16.23	36.65	20.41	33.00	-12.59
	661	1879.86	V	-14.73	36.50	21.78	33.00	-11.22
		1879.86	H	-17.70	36.92	19.22	33.00	-13.78
	810	1909.83	V	-15.47	36.54	21.07	33.00	-11.93
		1909.83	H	-16.49	37.11	20.61	33.00	-12.39

**GPRS 1900 Test Data (Class 12)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	512	1850.43	V	-22.57	36.54	13.97	33.00	-19.03
		1850.43	H	-15.45	36.65	<b>*21.20</b>	33.00	-11.80
	661	1880.04	V	-23.19	36.50	13.31	33.00	-19.69
		1880.04	H	-16.04	36.92	20.87	33.00	-12.13
	810	1909.83	V	-23.52	36.54	13.01	33.00	-19.99
		1909.83	H	-16.12	37.11	20.99	33.00	-12.01
Y	512	1850.43	V	-17.68	36.54	18.86	33.00	-14.14
		1850.43	H	-18.09	36.65	18.56	33.00	-14.44
	661	1879.77	V	-18.95	36.50	17.55	33.00	-15.45
		1880.04	H	-19.43	36.92	17.48	33.00	-15.52
	810	1910.01	V	-19.23	36.54	17.30	33.00	-15.70
		1910.01	H	-19.84	37.11	17.27	33.00	-15.73
Z	512	1850.16	V	-17.59	36.54	18.95	33.00	-14.05
		1849.98	H	-20.62	36.64	16.02	33.00	-16.98
	661	1880.13	V	-18.78	36.50	17.73	33.00	-15.27
		1880.31	H	-20.75	36.92	16.17	33.00	-16.83
	810	1910.01	V	-19.32	36.54	17.22	33.00	-15.78
		1910.01	H	-20.45	37.11	16.66	33.00	-16.34

**EDGE 850 Test Data (Class 12)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	128	824.22	V	-23.95	35.68	11.73	38.50	-26.77
		824.22	H	-17.80	35.48	17.67	38.50	-20.83
	190	836.78	V	-23.11	35.73	12.62	38.50	-25.88
		836.78	H	-15.82	35.79	19.97	38.50	-18.53
	251	849.02	V	-21.99	35.88	13.89	38.50	-24.61
		848.66	H	-14.72	36.06	<b>*21.33</b>	38.50	-17.17
Y	128	824.22	V	-19.25	35.68	16.42	38.50	-22.08
		824.22	H	-18.31	35.48	17.17	38.50	-21.33
	190	836.55	V	-19.45	35.73	16.27	38.50	-22.23
		836.55	H	-16.33	35.79	19.46	38.50	-19.04
	251	848.70	V	-19.11	35.87	16.77	38.50	-21.73
		848.70	H	-15.64	36.06	20.42	38.50	-18.08
Z	128	824.22	V	-17.85	35.68	17.83	38.50	-20.67
		824.22	H	-23.21	35.48	12.27	38.50	-26.23
	190	836.55	V	-16.04	35.73	19.69	38.50	-18.81
		836.78	H	-22.55	35.79	13.24	38.50	-25.26
	251	848.93	V	-15.22	35.88	20.66	38.50	-17.84
		848.93	H	-21.73	36.06	14.33	38.50	-24.17

**EDGE 1900 Test Data (Class 12)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	512	1850.34	V	-20.89	36.54	15.65	33.00	-17.35
		1850.34	H	-14.03	36.65	22.62	33.00	-10.38
	661	1880.04	V	-21.55	36.50	14.95	33.00	-18.05
		1880.13	H	-14.26	36.92	22.66	33.00	-10.34
	810	1909.83	V	-21.54	36.54	15.00	33.00	-18.00
		1910.19	H	-14.44	37.11	<b>*22.67</b>	33.00	-10.33
Y	512	1850.43	V	-15.16	36.54	21.38	33.00	-11.62
		1850.43	H	-16.85	36.65	19.80	33.00	-13.20
	661	1880.04	V	-15.45	36.50	21.06	33.00	-11.94
		1880.13	H	-17.50	36.92	19.42	33.00	-13.58
	810	1909.83	V	-15.56	36.54	20.98	33.00	-12.02
		1909.74	H	-16.95	37.11	20.16	33.00	-12.84
Z	512	1850.34	V	-14.72	36.54	21.83	33.00	-11.17
		1850.16	H	-16.89	36.64	19.76	33.00	-13.24
	661	1879.86	V	-15.84	36.50	20.67	33.00	-12.33
		1879.86	H	-16.88	36.92	20.04	33.00	-12.96
	810	1909.83	V	-15.87	36.54	20.67	33.00	-12.33
		1910.19	H	-17.74	37.11	19.37	33.00	-13.63

**WCDMA Test Data (BAND II)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	9262	1853.28	V	-25.25	44.20	18.95	33.00	-14.05
		1853.28	H	-19.29	42.90	23.61	33.00	-9.39
	9400	1881.28	V	-26.00	44.01	18.00	33.00	-15.00
		1880.96	H	-18.74	43.01	<b>*24.28</b>	33.00	-8.72
	9538	1908.64	V	-26.17	43.88	17.71	33.00	-15.29
		1906.32	H	-20.09	43.09	23.00	33.00	-10.00
Y	9262	1853.20	V	-19.96	44.20	24.24	33.00	-8.76
		1853.28	H	-21.68	42.90	21.21	33.00	-11.79
	9400	1880.48	V	-20.11	44.01	23.91	33.00	-9.09
		1881.20	H	-21.28	43.01	21.74	33.00	-11.26
	9538	1906.40	V	-21.75	43.88	22.13	33.00	-10.87
		1908.96	H	-22.70	43.10	20.40	33.00	-12.60
Z	9262	1851.36	V	-19.99	44.21	24.22	33.00	-8.78
		1853.76	H	-22.11	42.90	20.79	33.00	-12.21
	9400	1881.04	V	-19.96	44.01	24.05	33.00	-8.95
		1880.96	H	-22.09	43.01	20.92	33.00	-12.08
	9538	1908.64	V	-21.68	43.88	22.20	33.00	-10.80
		1908.88	H	-23.18	43.10	19.91	33.00	-13.09

**WCDMA Test Data (BAND V)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	4132	827.24	V	-21.32	36.44	15.12	38.45	-23.33
		825.90	H	-15.16	36.25	21.08	38.45	-17.37
	4183	835.70	V	-22.11	36.53	14.42	38.45	-24.03
		837.68	H	-15.12	36.50	21.39	38.45	-17.06
	4233	845.96	V	-22.01	36.64	14.63	38.45	-23.82
		845.18	H	-13.59	36.61	23.02	38.45	-15.43
Y	4132	825.53	V	-18.66	36.42	17.76	38.45	-20.69
		827.37	H	-16.08	36.28	20.20	38.45	-18.25
	4183	837.40	V	-18.77	36.55	17.78	38.45	-20.67
		837.49	H	-15.53	36.50	20.97	38.45	-17.48
	4233	845.36	V	-17.53	36.63	19.10	38.45	-19.35
		845.59	H	-13.41	36.61	<b>*23.20</b>	38.45	-15.25
Z	4132	827.28	V	-22.70	36.44	13.74	38.45	-24.71
		826.96	H	-15.70	36.27	20.57	38.45	-17.88
	4183	835.84	V	-16.30	36.53	20.23	38.45	-18.22
		837.36	H	-15.12	36.50	21.38	38.45	-17.07
	4233	845.13	V	-13.92	36.63	22.71	38.45	-15.74
		845.08	H	-18.79	36.61	17.81	38.45	-20.64

**WCDMA / HSDPA BAND II Test Data**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	9262	1851.04	V	-27.99	44.21	16.22	33.00	-16.78
		1853.76	H	-21.07	42.90	21.84	33.00	-11.16
	9400	1878.96	V	-27.08	44.02	16.95	33.00	-16.05
		1878.72	H	-20.31	43.00	<b>*22.69</b>	33.00	-10.31
	9538	1906.56	V	-28.04	43.88	15.84	33.00	-17.16
		1906.32	H	-21.98	43.09	21.12	33.00	-11.88
Y	9262	1850.96	V	-22.41	44.21	21.81	33.00	-11.19
		1851.36	H	-25.47	42.89	17.42	33.00	-15.58
	9400	1881.20	V	-22.43	44.01	21.58	33.00	-11.42
		1881.36	H	-25.86	43.01	17.15	33.00	-15.85
	9538	1908.96	V	-23.68	43.88	20.20	33.00	-12.80
		1908.72	H	-28.53	43.10	14.57	33.00	-18.43
Z	9262	1851.28	V	-22.36	44.21	21.85	33.00	-11.15
		1851.44	H	-24.83	42.89	18.06	33.00	-14.94
	9400	1881.36	V	-22.19	44.01	21.81	33.00	-11.19
		1881.36	H	-25.43	43.01	17.58	33.00	-15.42
	9538	1906.40	V	-23.65	43.88	20.23	33.00	-12.77
		1906.56	H	-26.91	43.09	16.19	33.00	-16.81

**WCDMA / HSDPA BAND V Test Data**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	4132	827.64	V	-24.30	36.45	12.14	38.45	-26.31
		827.51	H	-13.00	36.28	23.28	38.45	-15.17
	4183	837.72	V	-24.29	36.55	12.26	38.45	-26.19
		837.68	H	-13.54	36.50	22.96	38.45	-15.49
	4233	847.58	V	-22.87	36.65	13.79	38.45	-24.66
		845.24	H	-13.17	36.61	<b>*23.44</b>	38.45	-15.01
Y	4132	827.55	V	-19.30	36.44	17.14	38.45	-21.31
		827.55	H	-15.57	36.28	20.72	38.45	-17.73
	4183	837.95	V	-19.44	36.55	17.12	38.45	-21.33
		837.86	H	-15.49	36.51	21.01	38.45	-17.44
	4233	845.60	V	-17.27	36.63	19.37	38.45	-19.08
		845.51	H	-13.56	36.61	23.05	38.45	-15.40
Z	4132	827.64	V	-14.67	36.45	21.78	38.45	-16.67
		827.64	H	-20.52	36.28	15.76	38.45	-22.69
	4183	837.59	V	-14.58	36.55	21.97	38.45	-16.48
		837.54	H	-20.75	36.50	15.75	38.45	-22.70
	4233	845.51	V	-13.21	36.63	23.42	38.45	-15.03
		845.33	H	-19.61	36.61	17.00	38.45	-21.45

**WCDMA / HSUPA BAND II Test Data**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	9262	1853.22	V	-20.74	36.54	15.80	33.00	-17.20
		1853.04	H	-15.82	36.67	<b>*20.85</b>	33.00	-12.15
	9400	1881.03	V	-21.31	36.50	15.20	33.00	-17.80
		1880.76	H	-17.30	36.92	19.62	33.00	-13.38
	9538	1908.30	V	-21.95	36.53	14.58	33.00	-18.42
		1907.94	H	-18.15	37.11	18.95	33.00	-14.05
Y	9262	1853.58	V	-17.98	36.54	18.55	33.00	-14.45
		1853.67	H	-19.25	36.68	17.43	33.00	-15.57
	9400	1881.30	V	-16.61	36.50	19.89	33.00	-13.11
		1880.40	H	-18.55	36.92	18.37	33.00	-14.63
	9538	1907.67	V	-19.03	36.52	17.49	33.00	-15.51
		1908.57	H	-19.70	37.11	17.40	33.00	-15.60
Z	9262	1853.67	V	-17.37	36.54	19.17	33.00	-13.83
		1853.58	H	-20.14	36.68	16.54	33.00	-16.46
	9400	1880.13	V	-17.56	36.50	18.95	33.00	-14.05
		1879.86	H	-18.32	36.92	18.60	33.00	-14.40
	9538	1908.30	V	-20.07	36.53	16.46	33.00	-16.54
		1908.93	H	-20.29	37.11	16.81	33.00	-16.19

**WCDMA / HSUPA BAND V Test Data**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	4132	826.65	V	-26.33	35.69	9.36	38.50	-29.14
		826.52	H	-15.54	35.53	19.99	38.50	-18.51
	4183	835.43	V	-26.55	35.72	9.18	38.50	-29.32
		836.51	H	-16.91	35.78	18.88	38.50	-19.62
	4233	845.33	V	-25.17	35.82	10.66	38.50	-27.84
		845.82	H	-15.45	36.00	<b>*20.55</b>	38.50	-17.95
Y	4132	827.51	V	-22.65	35.69	13.04	38.50	-25.46
		825.57	H	-18.72	35.51	16.79	38.50	-21.71
	4183	835.79	V	-21.77	35.73	13.96	38.50	-24.54
		835.83	H	-18.01	35.77	17.76	38.50	-20.74
	4233	845.33	V	-21.54	35.82	14.28	38.50	-24.22
		845.60	H	-16.68	35.99	19.32	38.50	-19.18
Z	4132	826.61	V	-19.59	35.69	16.10	38.50	-22.40
		825.75	H	-22.49	35.52	13.03	38.50	-25.47
	4183	836.10	V	-18.99	35.73	16.74	38.50	-21.76
		835.65	H	-22.14	35.76	13.63	38.50	-24.87
	4233	846.18	V	-17.49	35.84	18.35	38.50	-20.15
		847.04	H	-20.37	36.02	15.65	38.50	-22.85

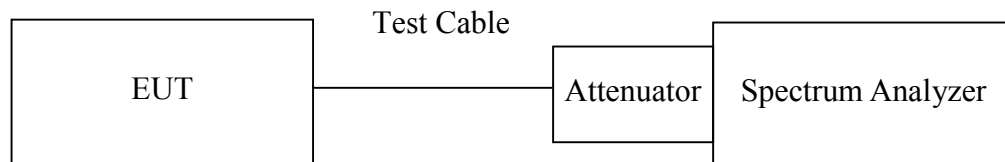


## 7.3 OCCUPIED BANDWIDTH MEASUREMENT

### 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)
GSM 850 (Class B)	128	824.215	241.3468
	190	836.585	247.1216
	251	848.835	245.9448
GPRS 850 (Class 12)	128	824.165	246.5571
	190	836.585	245.8601
	251	848.835	243.6597
EDGE 850 (Class B)	128	824.200	238.0809
	190	836.600	236.0771
	251	848.800	236.9841
GSM 1900 (Class B)	512	1850.180	246.3913
	661	1879.980	253.9942
	810	1909.865	245.6757
GPRS 1900 (Class 12)	512	1850.180	244.9512
	661	1879.980	244.6054
	810	1909.865	242.0565
EDGE 1900 (Class 12)	512	1850.200	238.8406
	661	1880.000	234.9929
	810	1909.800	236.3715



Test Mode	CH	Frequency (MHz)	99% Bandwidth (MHz)
WCDMA (Band II)	9262	1852.40	4.1699
	9400	1880.00	4.1813
	9538	1907.60	4.1658
WCDMA (Band V)	4132	826.40	4.1515
	4183	836.60	4.1618
	4233	846.60	4.1389
WCDMA / HSDPA (BAND II)	9262	1852.40	4.1886
	9400	1880.00	4.1874
	9538	1907.60	4.1642
WCDMA / HSDPA (BAND V)	4132	826.40	4.1551
	4183	836.60	4.1528
	4233	846.60	4.1608
WCDMA / HSUPA (BAND II)	9262	1852.40	4.1644
	9400	1880.00	4.1687
	9538	1907.60	4.1739
WCDMA / HSUPA (BAND V)	4132	826.40	4.1787
	4183	836.60	4.1536
	4233	846.60	4.1665





## Test Plot

### GSM 850 (CH Low)

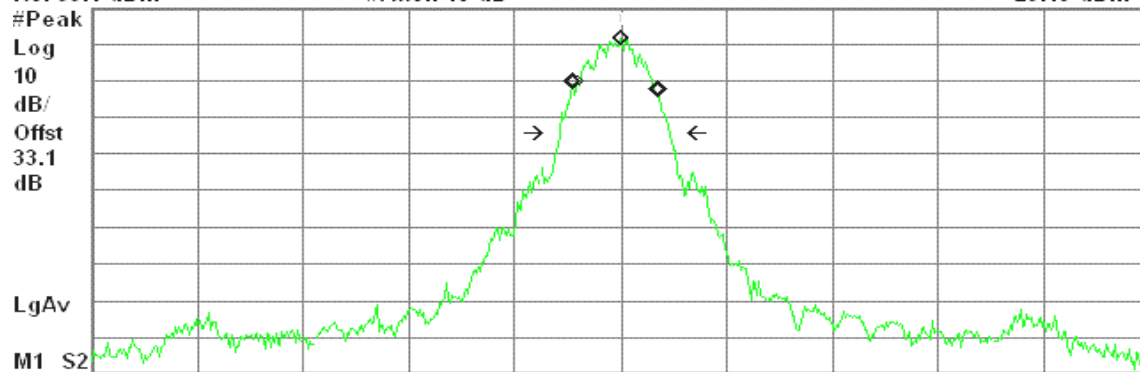
Agilent 12:30:41 Nov 21, 2007

R T

Mkr1 824.215 MHz  
23.19 dBm

Ref 33.1 dBm

#Atten 10 dB



Occupied Bandwidth  
241.3468 kHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -16.399 kHz  
x dB Bandwidth 308.543 kHz

### GSM 850 (CH Mid)

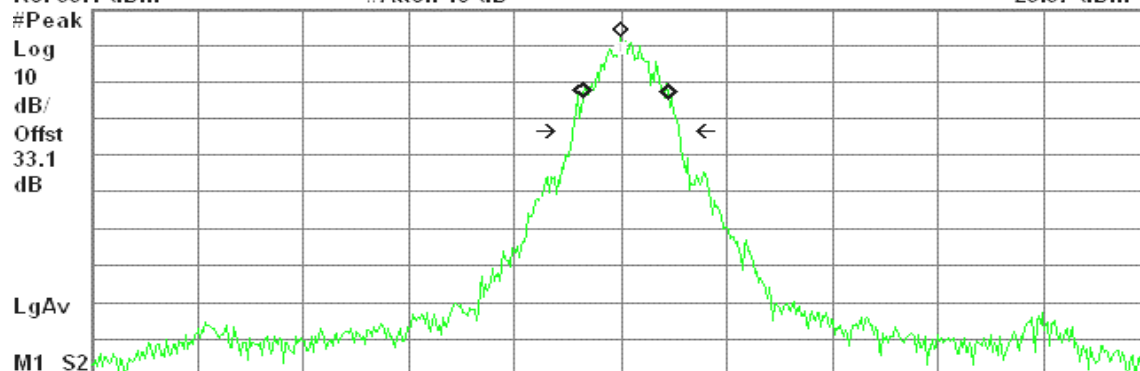
Agilent 12:31:09 Nov 21, 2007

R T

Mkr1 836.585 MHz  
25.57 dBm

Ref 33.1 dBm

#Atten 10 dB



Occupied Bandwidth  
247.1216 kHz

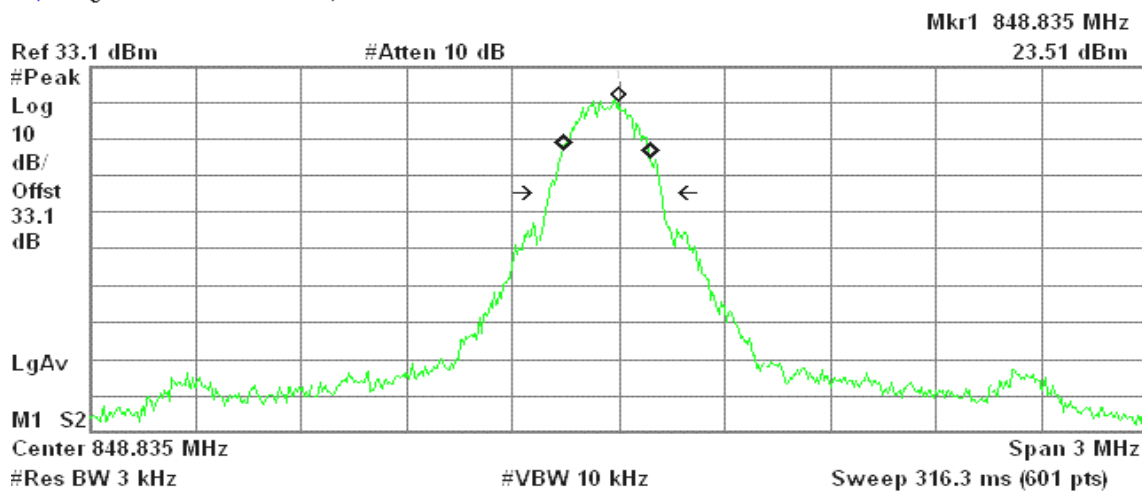
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error 13.307 kHz  
x dB Bandwidth 301.234 kHz

**GSM 850 (CH High)**

\* Agilent 12:31:53 Nov 21, 2007

R T



Occupied Bandwidth  
245.9448 kHz

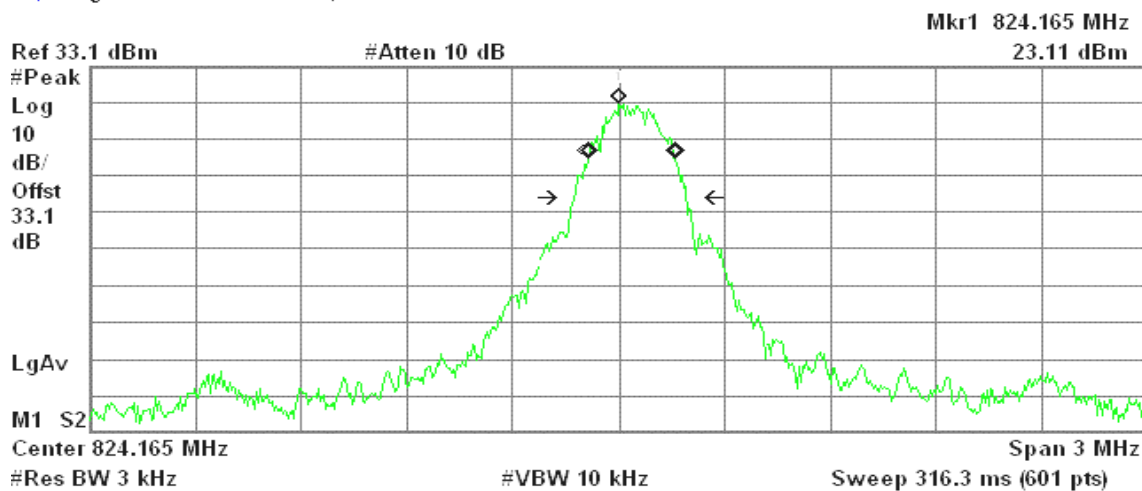
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -34.206 kHz  
x dB Bandwidth 318.644 kHz

**GPRS 850 (CH Low)**

\* Agilent 12:34:07 Nov 21, 2007

R T



Occupied Bandwidth  
246.5571 kHz

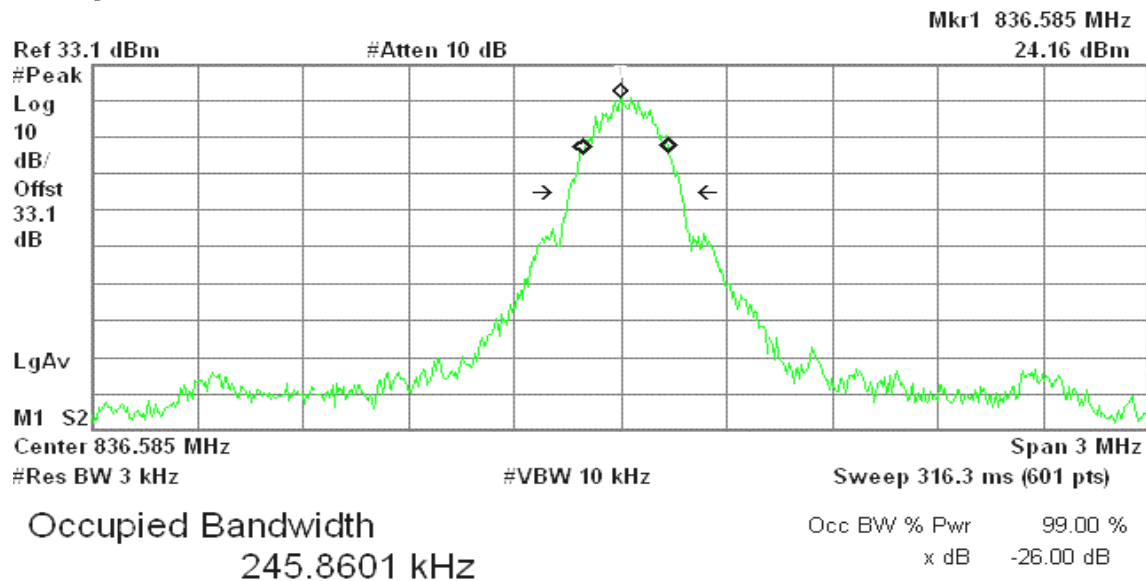
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error 34.371 kHz  
x dB Bandwidth 316.905 kHz

**GPRS 850 (CH Mid)**

\* Agilent 12:33:45 Nov 21, 2007

R T

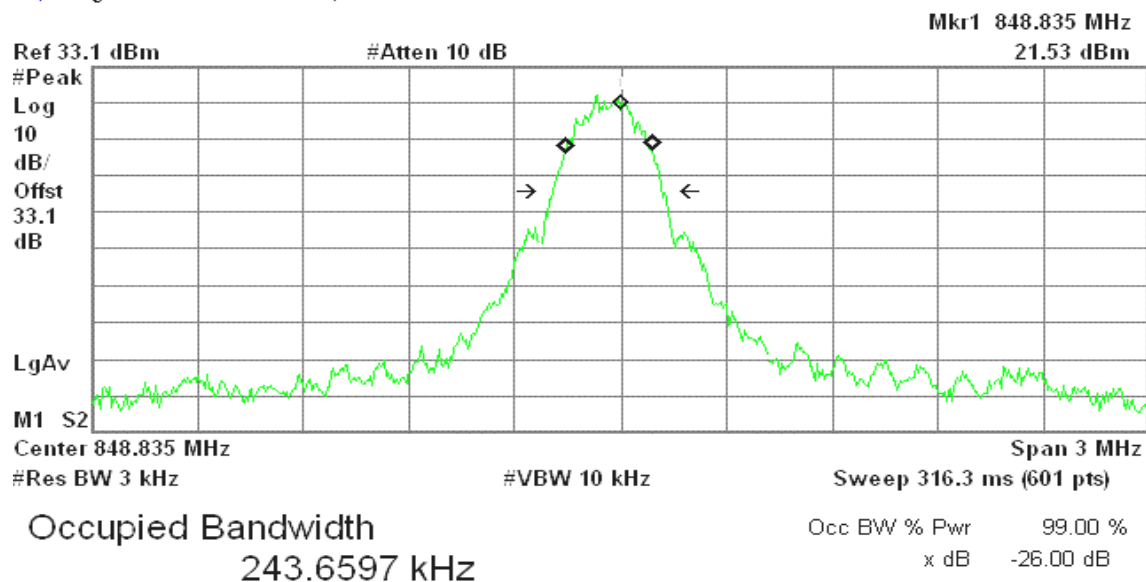


Transmit Freq Error 12.699 kHz  
x dB Bandwidth 315.775 kHz

**GPRS 850(CH High)**

\* Agilent 12:33:19 Nov 21, 2007

R T



Transmit Freq Error -32.700 kHz  
x dB Bandwidth 306.933 kHz



## GSM 1900 (CH Low)

Agilent 12:59:36 Nov 21, 2007

R T

Mkr1 1.850 180 GHz

17.09 dBm

Ref 33.1 dBm

#Atten 10 dB

#Peak  
Log  
10  
dB/  
Offst  
33.1  
dB

LgAv

M1 S2

Center 1.850 180 GHz

#Res BW 3 kHz

#VBW 10 kHz

Sweep 316.3 ms (601 pts)

Span 3 MHz

Occupied Bandwidth

246.3913 kHz

Occ BW % Pwr 99.00 %

x dB -26.00 dB

Transmit Freq Error

20.212 kHz

x dB Bandwidth

317.915 kHz

## GSM 1900 (CH Mid)

Agilent 13:00:33 Nov 21, 2007

R L

Mkr1 1.879 980 GHz

17.68 dBm

Ref 33.1 dBm

#Atten 10 dB

#Peak  
Log  
10  
dB/  
Offst  
33.1  
dB

LgAv

M1 S2

Center 1.879 980 GHz

#Res BW 3 kHz

#VBW 10 kHz

Sweep 316.3 ms (601 pts)

Span 3 MHz

Occupied Bandwidth

253.9942 kHz

Occ BW % Pwr 99.00 %

x dB -26.00 dB

Transmit Freq Error

18.749 kHz

x dB Bandwidth

319.606 kHz

**GSM 1900 (CH High)**

\* Agilent 13:00:55 Nov 21, 2007

R T

Mkr1 1.909 865 GHz

19.05 dBm

Ref 33.1 dBm

#Atten 10 dB

#Peak

Log

10

dB/

Offst

33.1

dB

LgAv

M1 S2

Center 1.909 865 GHz

#Res BW 3 kHz

#VBW 10 kHz

Sweep 316.3 ms (601 pts)

Span 3 MHz

Occupied Bandwidth

245.6757 kHz

Occ BW % Pwr 99.00 %

x dB -26.00 dB

Transmit Freq Error

-64.774 kHz

x dB Bandwidth

313.977 kHz

**GPRS 1900 (CH Low)**

\* Agilent 12:59:52 Nov 21, 2007

R T

Mkr1 1.850 180 GHz

14.44 dBm

Ref 33.1 dBm

#Atten 10 dB

#Peak

Log

10

dB/

Offst

33.1

dB

LgAv

M1 S2

Center 1.850 180 GHz

#Res BW 3 kHz

#VBW 10 kHz

Sweep 316.3 ms (601 pts)

Span 3 MHz

Occupied Bandwidth

244.9512 kHz

Occ BW % Pwr 99.00 %

x dB -26.00 dB

Transmit Freq Error

18.950 kHz

x dB Bandwidth

316.236 kHz

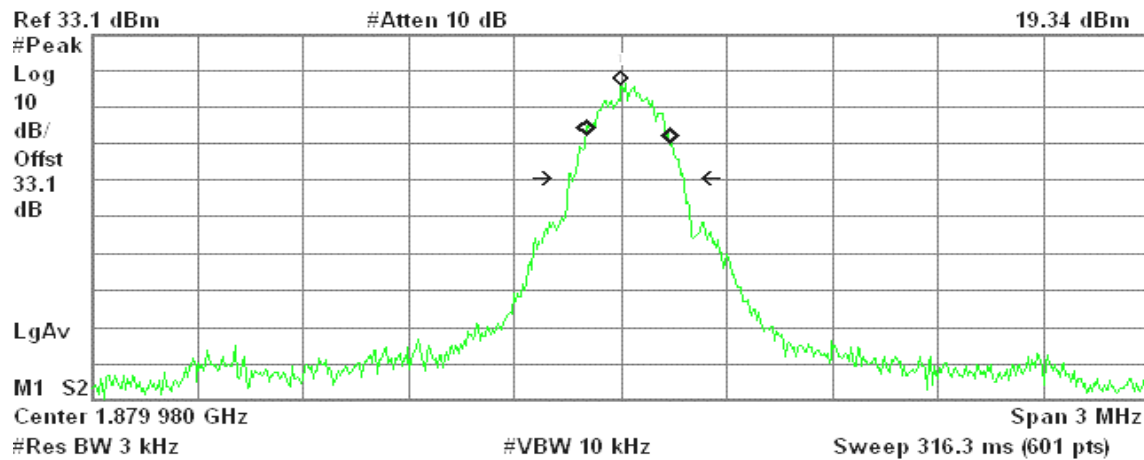
**GPRS 1900 (CH Mid)**

\* Agilent 13:00:20 Nov 21, 2007

R T

Mkr1 1.879 980 GHz

19.34 dBm



Transmit Freq Error 20.118 kHz  
x dB Bandwidth 324.510 kHz

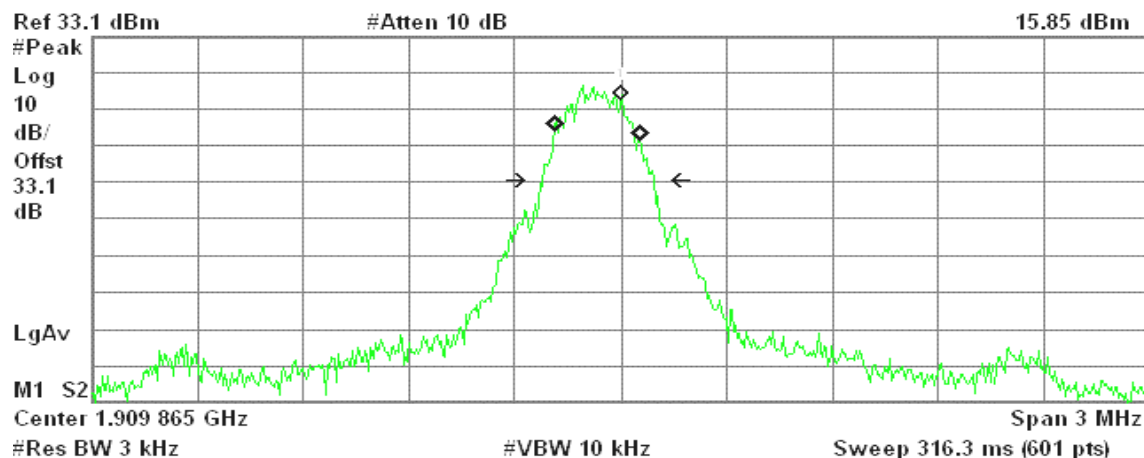
**GPRS 1900 (CH High)**

\* Agilent 13:01:10 Nov 21, 2007

R T

Mkr1 1.909 865 GHz

15.85 dBm

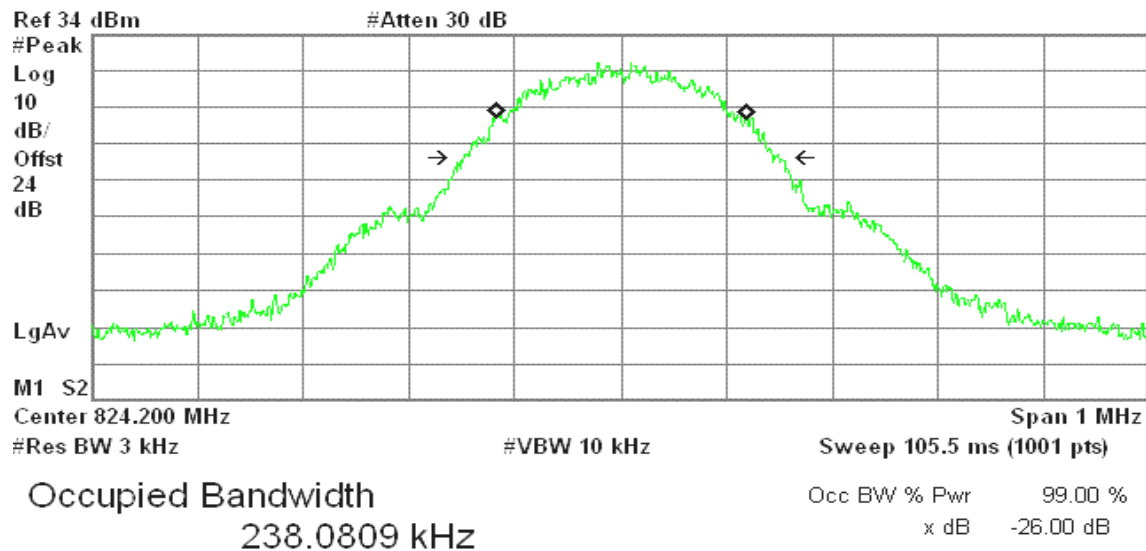


Transmit Freq Error -65.344 kHz  
x dB Bandwidth 315.329 kHz

**EDGE 850 (CH Low)**

\* Agilent 20:44:25 Nov 21, 2007

T

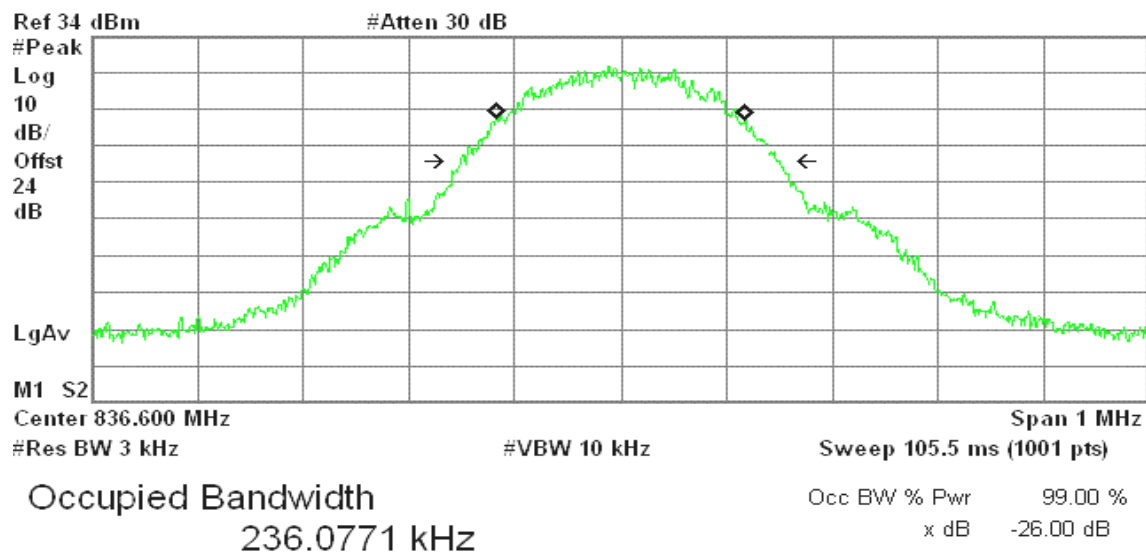


Transmit Freq Error 1.446 kHz  
x dB Bandwidth 300.441 kHz

**EDGE 850 (CH Mid)**

\* Agilent 20:45:11 Nov 21, 2007

T

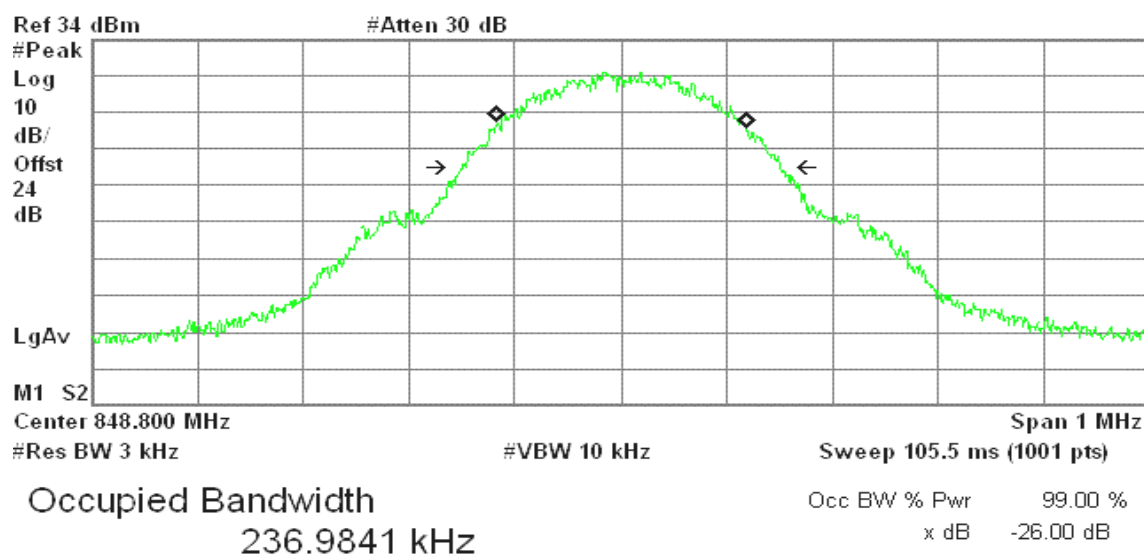


Transmit Freq Error 79.691 Hz  
x dB Bandwidth 304.593 kHz

**EDGE 850 (CH High)**

\* Agilent 20:46:08 Nov 21, 2007

T

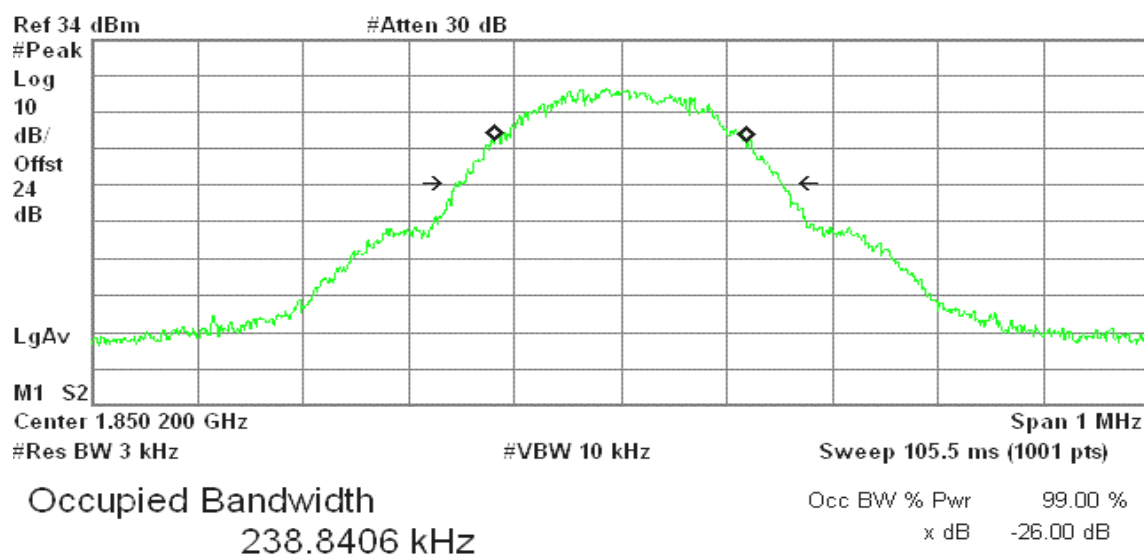


Transmit Freq Error 947.299 Hz  
x dB Bandwidth 304.140 kHz

**EDGE 1900 (CH Low)**

\* Agilent 20:19:12 Nov 21, 2007

T



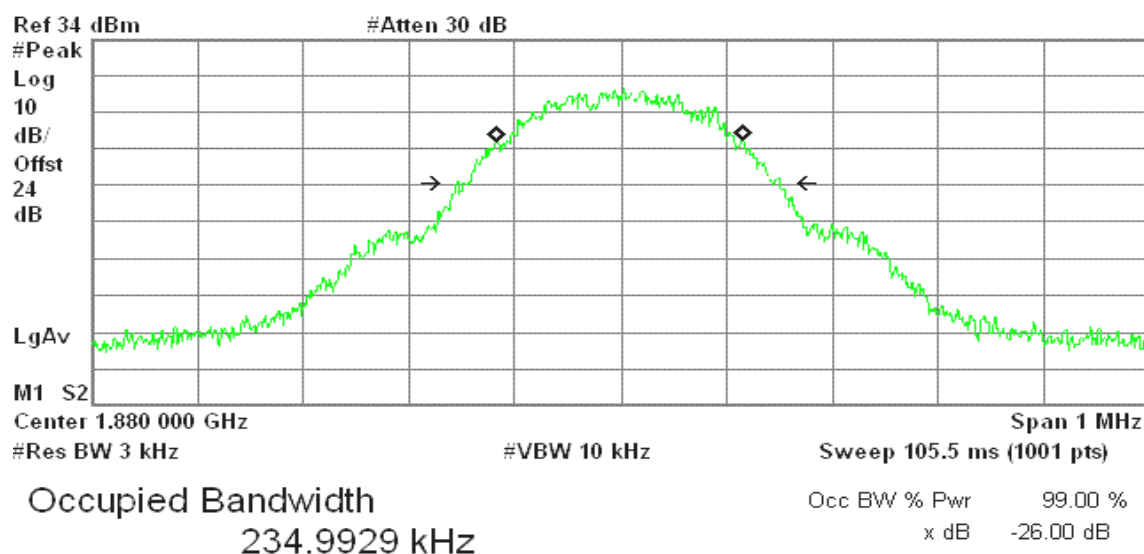
Transmit Freq Error -26.203 Hz  
x dB Bandwidth 307.745 kHz



**EDGE 1900 (CH Mid)**

\* Agilent 20:34:50 Nov 21, 2007

T

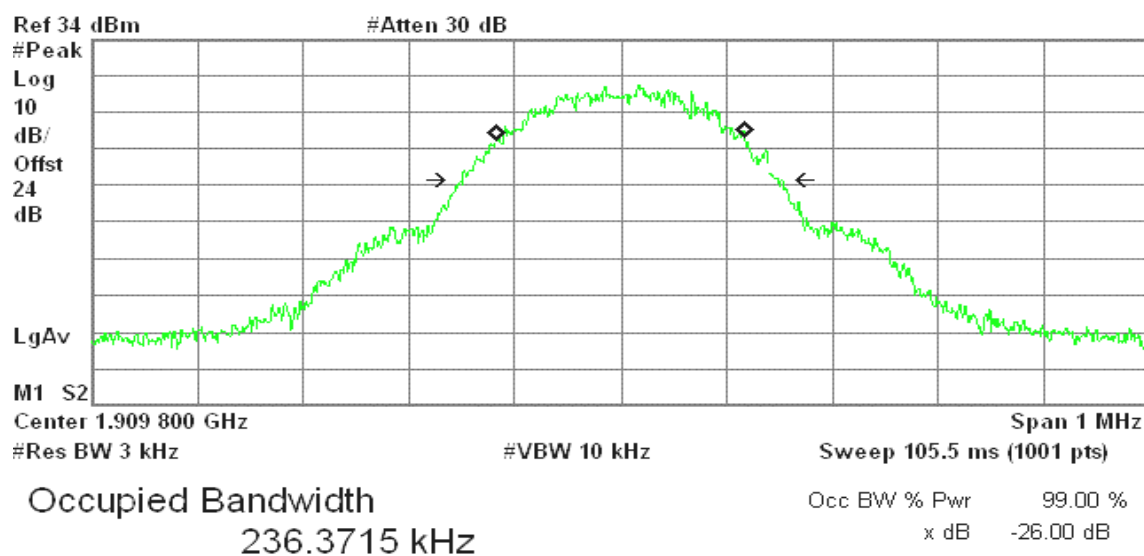


Transmit Freq Error -1.044 kHz  
x dB Bandwidth 308.445 kHz

**EDGE 1900 (CH High)**

\* Agilent 20:35:26 Nov 21, 2007

T



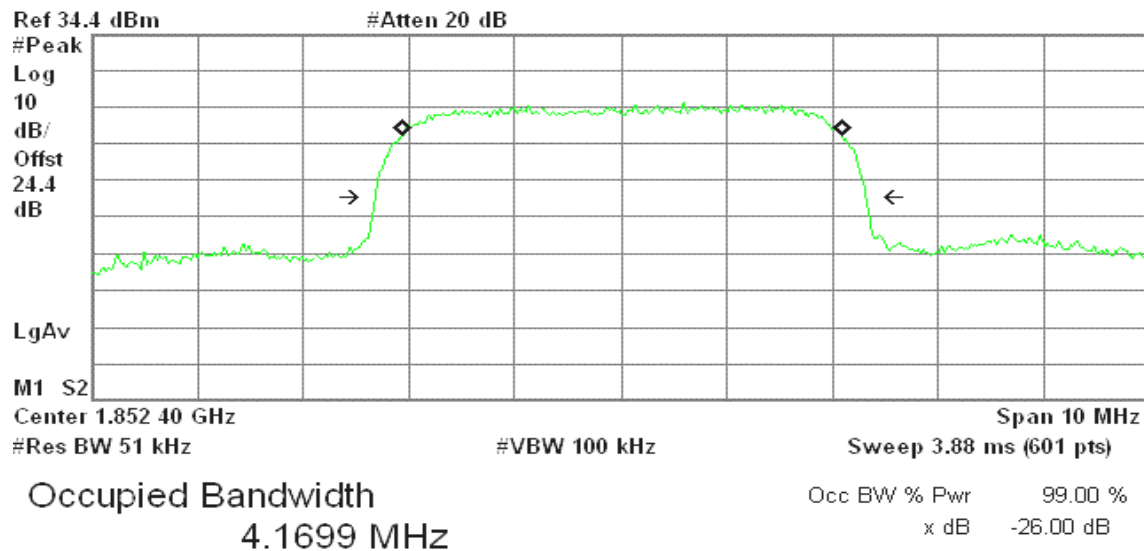
Transmit Freq Error -78.960 Hz  
x dB Bandwidth 300.790 kHz



## WCDMA Band II (CH Low)

Agilent 13:37:34 Dec 19, 2007

R T

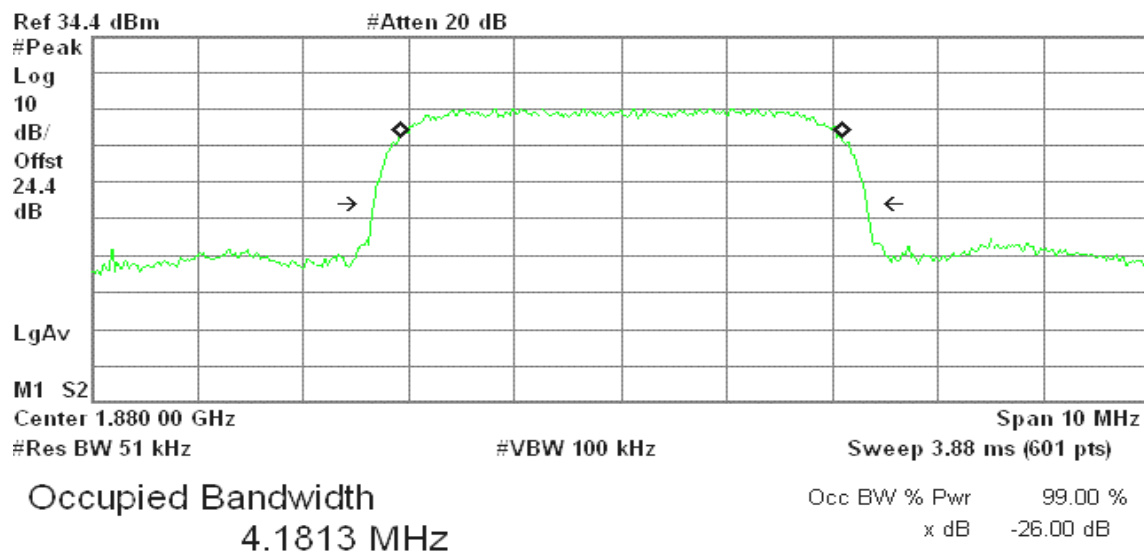


Transmit Freq Error 11.228 kHz  
x dB Bandwidth 4.650 MHz

## WCDMA Band II (CH Mid)

Agilent 13:38:10 Dec 19, 2007

R T

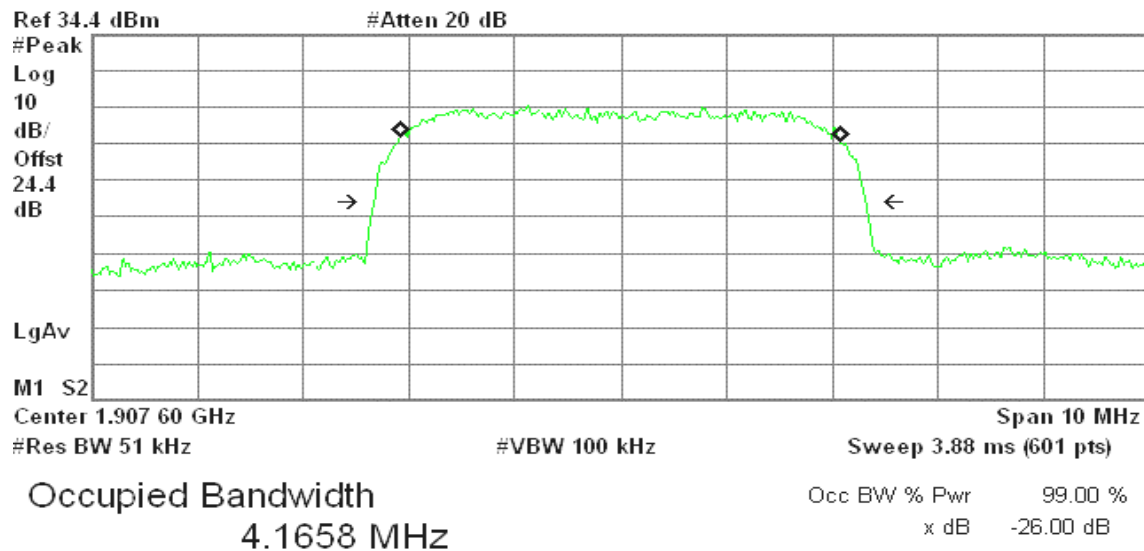


Transmit Freq Error 1.164 kHz  
x dB Bandwidth 4.663 MHz

**WCDMA Band II (CH High)**

\* Agilent 13:38:29 Dec 19, 2007

R T

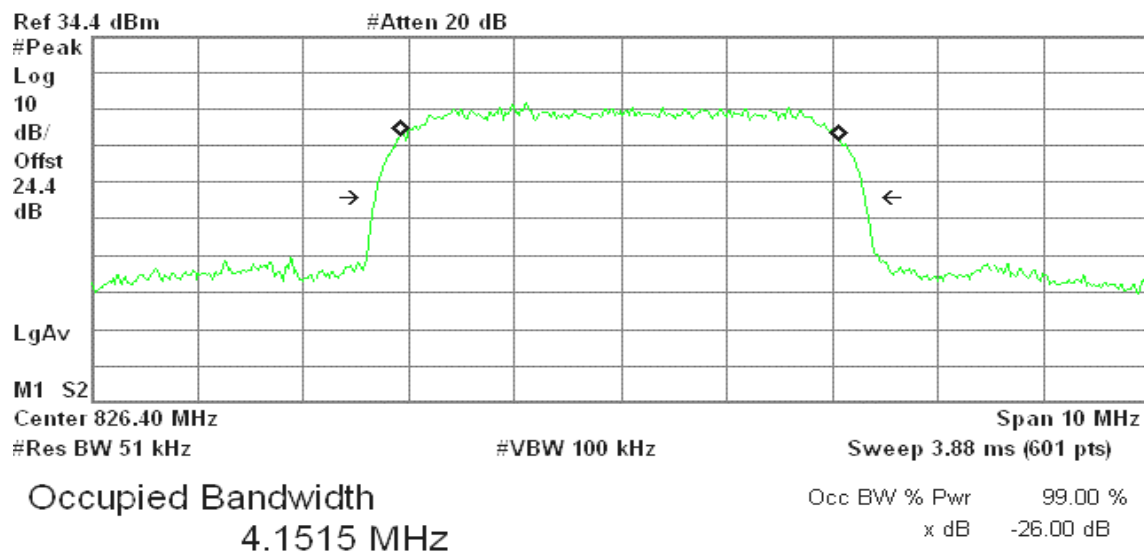


Transmit Freq Error -4.807 kHz  
x dB Bandwidth 4.654 MHz

**WCDMA Band V (CH Low)**

\* Agilent 13:38:58 Dec 19, 2007

R T



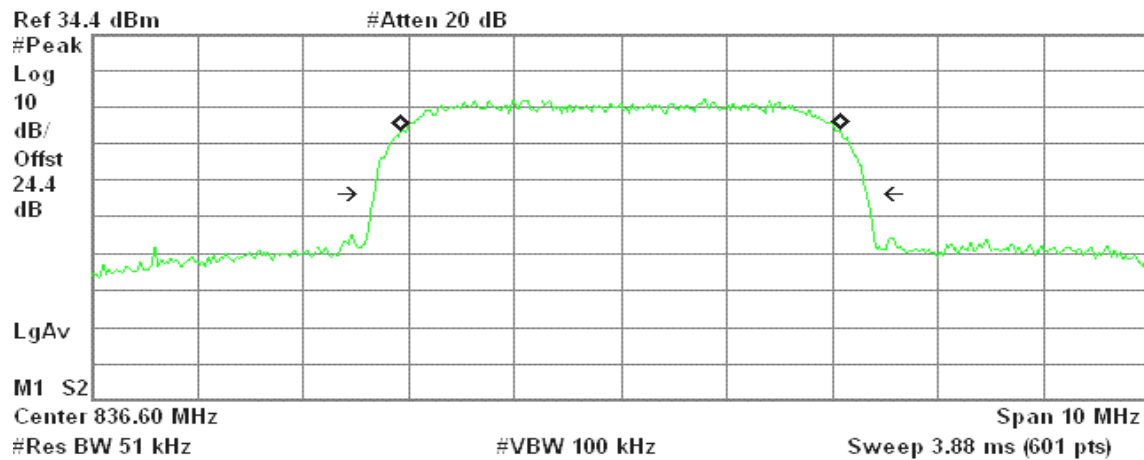
Transmit Freq Error -6.432 kHz  
x dB Bandwidth 4.627 MHz



## WCDMA Band V (CH Mid)

Agilent 13:39:15 Dec 19, 2007

R T



Occupied Bandwidth  
4.1618 MHz

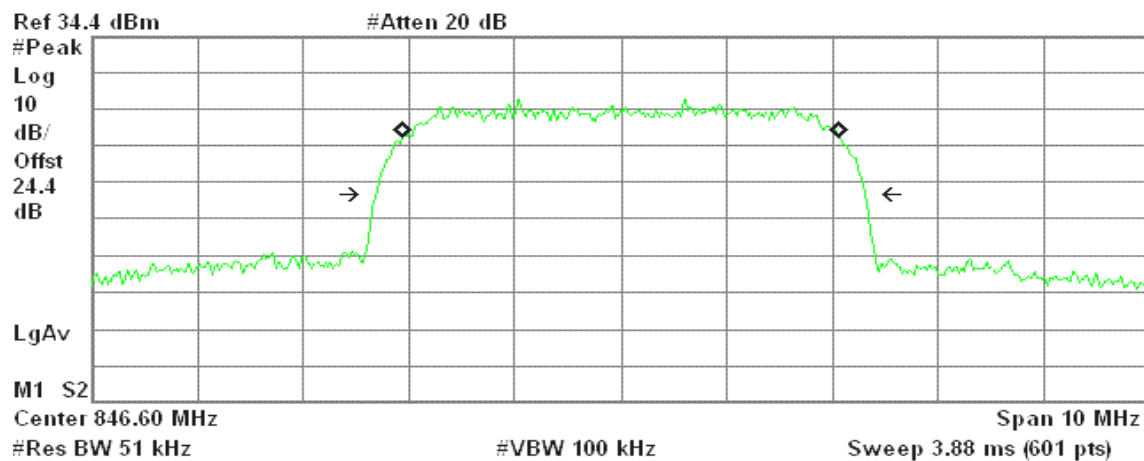
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -3.023 kHz  
x dB Bandwidth 4.664 MHz

## WCDMA Band V (CH High)

Agilent 13:39:31 Dec 19, 2007

R T



Occupied Bandwidth  
4.1389 MHz

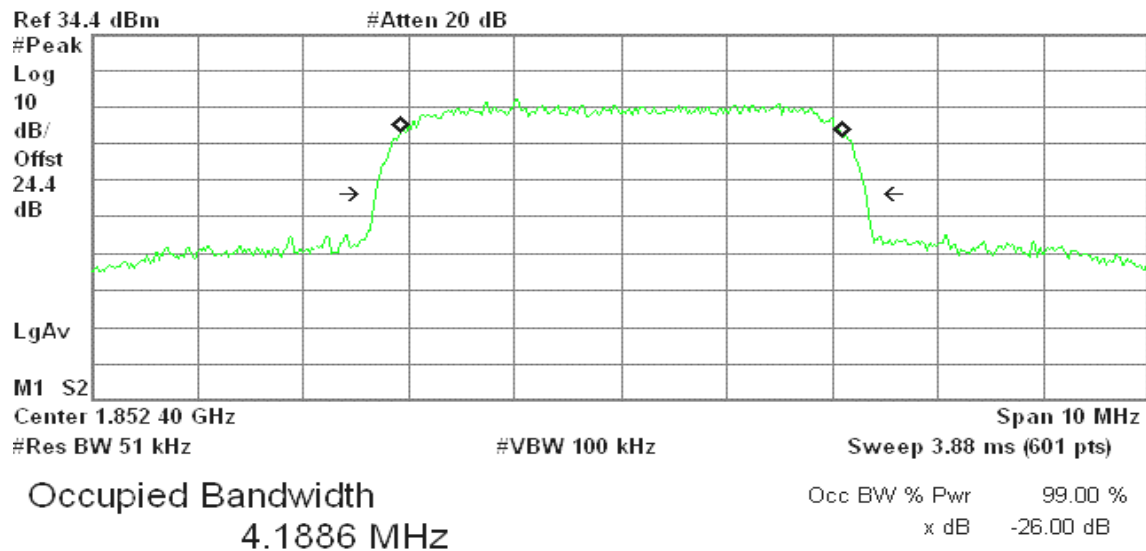
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error 3.905 kHz  
x dB Bandwidth 4.630 MHz

**WCDMA / HSDPA Band II (CH Low)**

\* Agilent 14:49:54 Dec 27, 2007

R T

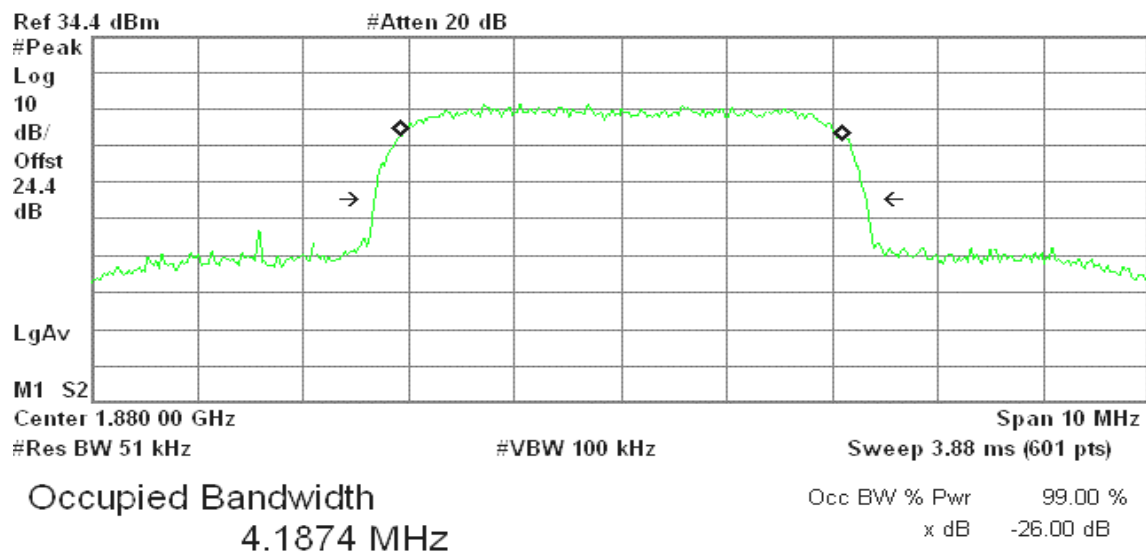


Transmit Freq Error 12.507 kHz  
x dB Bandwidth 4.643 MHz

**WCDMA / HSDPA Band II (CH Mid)**

\* Agilent 14:49:30 Dec 27, 2007

R T

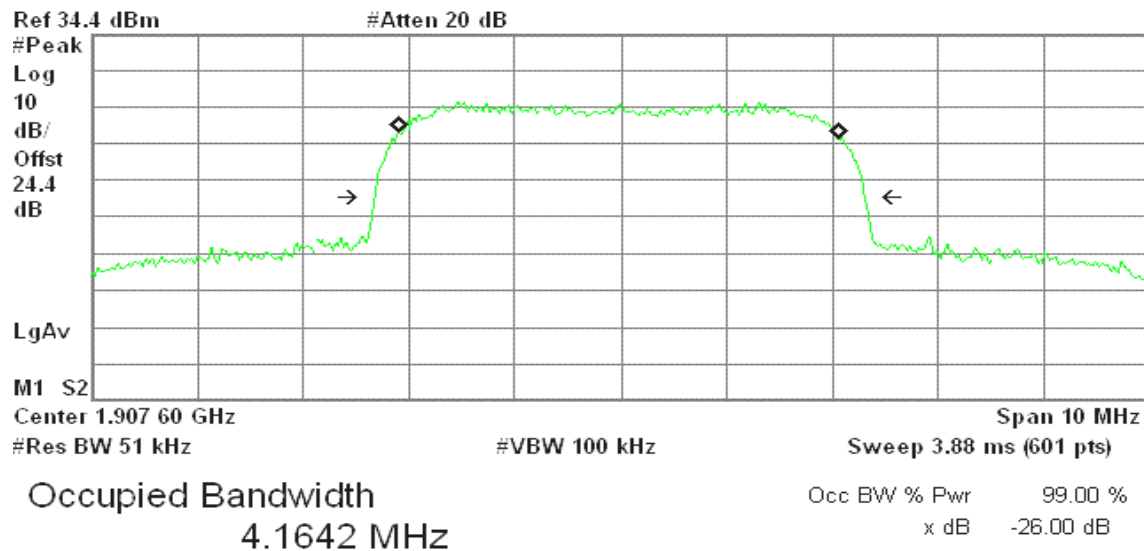


Transmit Freq Error 8.551 kHz  
x dB Bandwidth 4.652 MHz

**WCDMA / HSDPA Band II (CH High)**

\* Agilent 14:49:14 Dec 27, 2007

R T

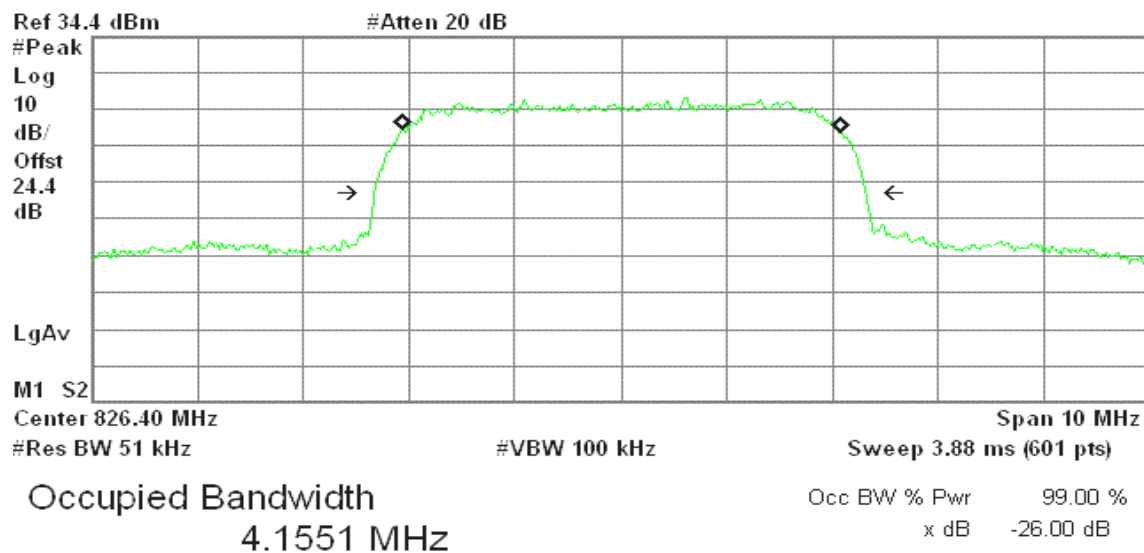


Transmit Freq Error -16.312 kHz  
x dB Bandwidth 4.640 MHz

**WCDMA / HSDPA Band V (CH Low)**

\* Agilent 14:42:10 Dec 27, 2007

R T



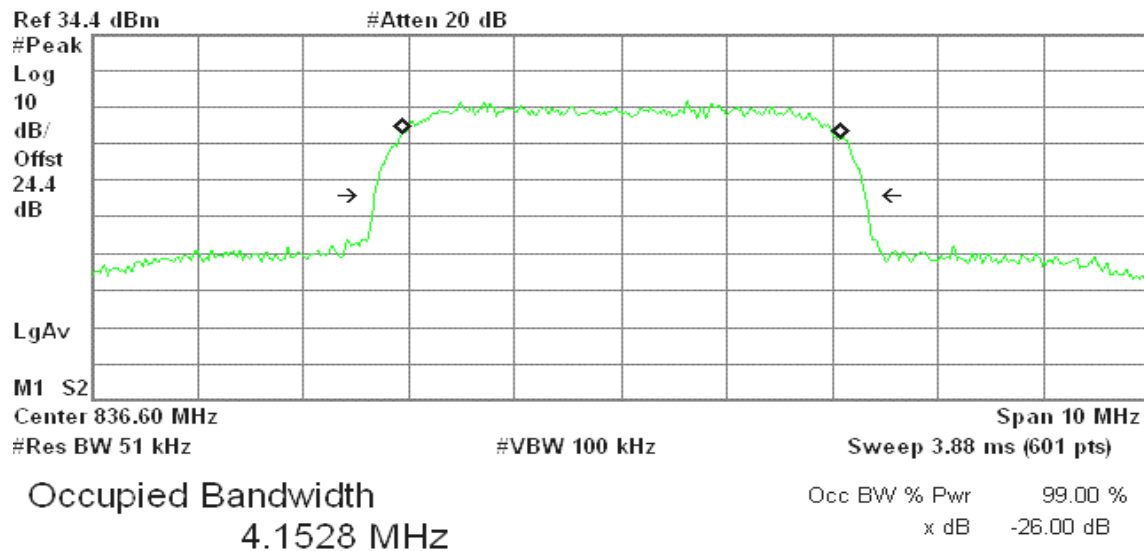
Transmit Freq Error 12.350 kHz  
x dB Bandwidth 4.656 MHz



## WCDMA / HSDPA Band V (CH Mid)

Agilent 14:42:28 Dec 27, 2007

R T

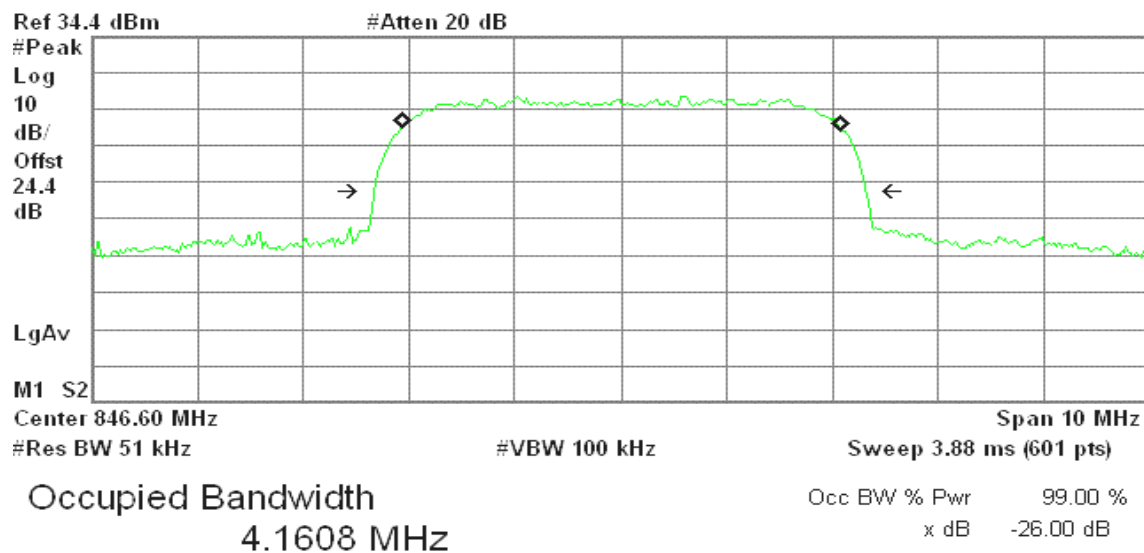


Transmit Freq Error 5.333 kHz  
x dB Bandwidth 4.648 MHz

## WCDMA / HSDPA Band V (CH High)

Agilent 14:47:51 Dec 27, 2007

R T



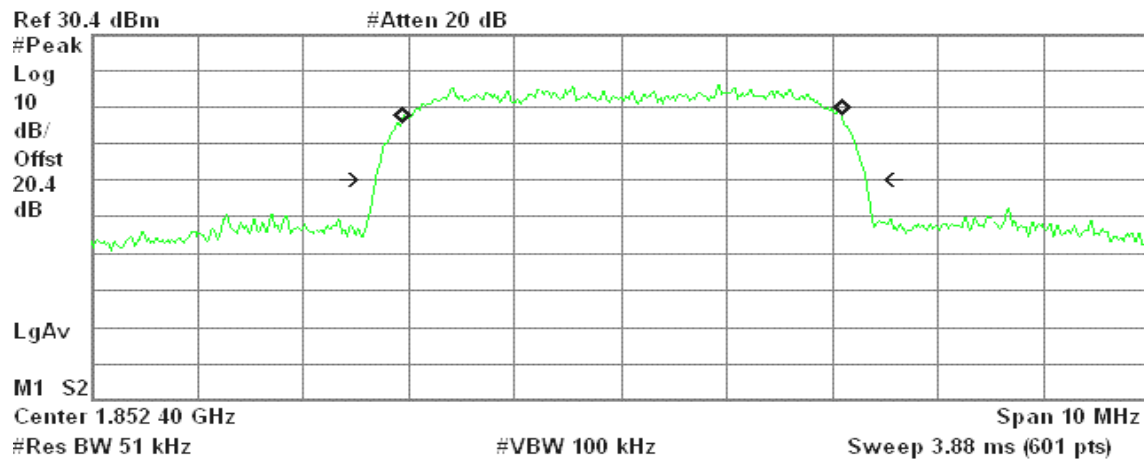
Transmit Freq Error 7.371 kHz  
x dB Bandwidth 4.654 MHz



## WCDMA / HSUPA Band II (CH Low)

\* Agilent 07:02:40 Jan 12, 2008

R T

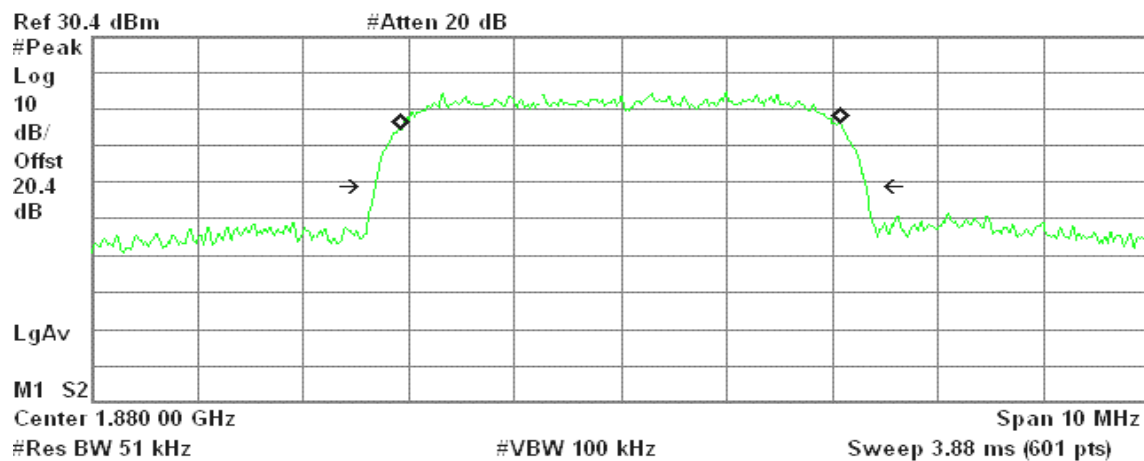


Transmit Freq Error 10.013 kHz  
x dB Bandwidth 4.642 MHz

## WCDMA / HSUPA Band II (CH Mid)

\* Agilent 07:04:43 Jan 12, 2008

R T



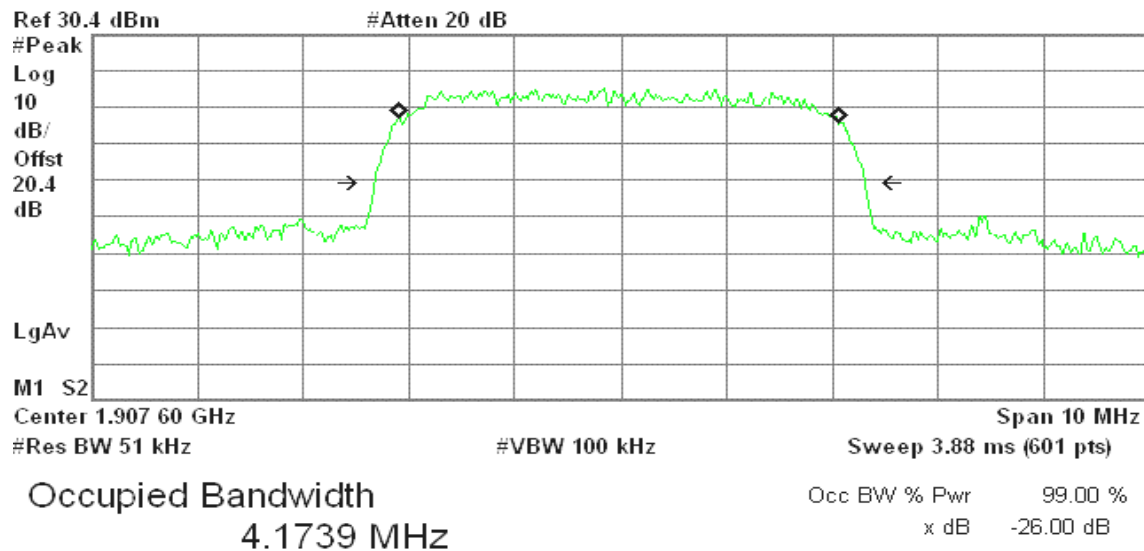
Transmit Freq Error 960.724 Hz  
x dB Bandwidth 4.656 MHz



**WCDMA / HSUPA Band II (CH High)**

\* Agilent 07:05:06 Jan 12, 2008

R T

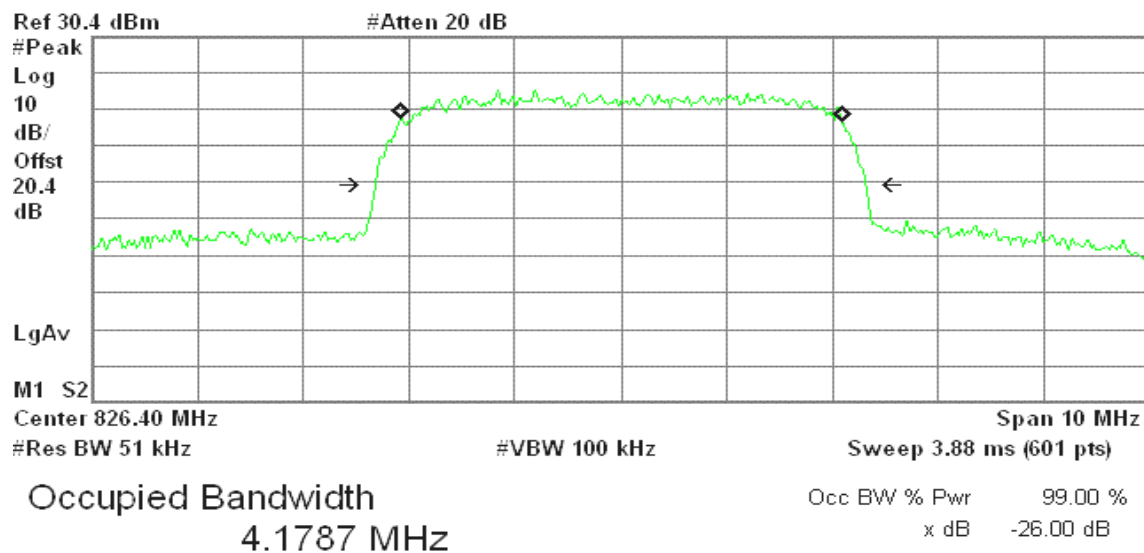


Transmit Freq Error -13.064 kHz  
x dB Bandwidth 4.646 MHz

**WCDMA / HSUPA Band V (CH Low).**

\* Agilent 06:42:10 Jan 12, 2008

R T



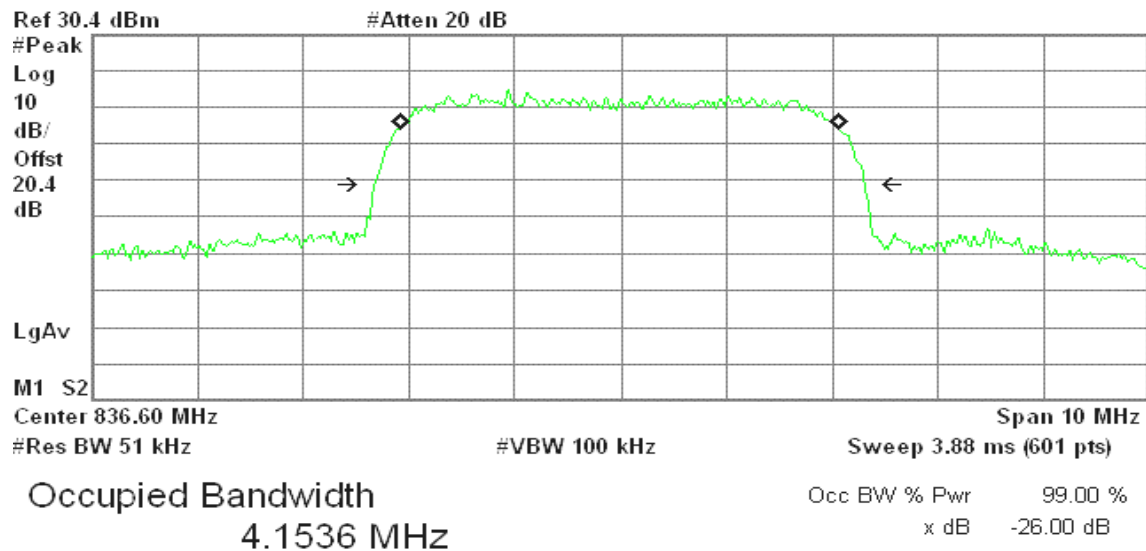
Transmit Freq Error 6.816 kHz  
x dB Bandwidth 4.639 MHz



## WCDMA / HSUPA Band V (CH Mid)

\* Agilent 06:34:46 Jan 12, 2008

R T

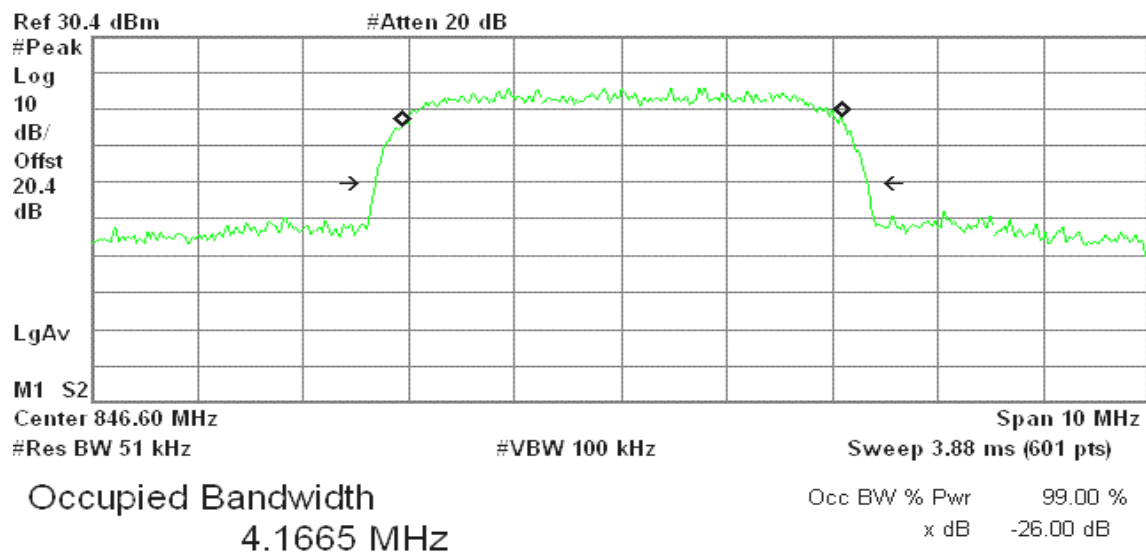


Transmit Freq Error -5.857 kHz  
x dB Bandwidth 4.641 MHz

## WCDMA / HSUPA Band V (CH Mid)

\* Agilent 06:43:15 Jan 12, 2008

R T



Transmit Freq Error 13.171 kHz  
x dB Bandwidth 4.656 MHz



## 7.4 OUT OF BAND EMISSION AT ANTENNA TERMINALS

### LIMIT

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

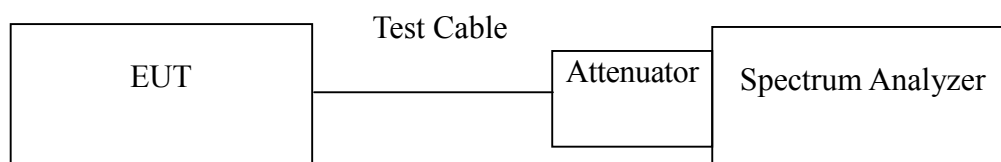
**Out of Band Emissions:** The mean power of emission must be attenuated below the mean power of the non-modulated carrier (P) on any frequency twice or more than twice the fundamental frequency by at least  $43 + 10 \log P$  dB.

**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 least 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**

<b>Mode</b>	<b>CH</b>	<b>Location</b>	<b>Description</b>
GSM 850 (Class B)	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 850 (Class 12)	128	Figure 7-4	Conducted spurious emissions, 30MHz - 20GHz
	190	Figure 7-5	Conducted spurious emissions, 30MHz - 20GHz
	251	Figure 7-6	Conducted spurious emissions, 30MHz - 20GHz

<b>Mode</b>	<b>CH</b>	<b>Location</b>	<b>Description</b>
GSM 1900 (Class B)	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
GPRS 1900 (Class 12)	512	Figure 8-4	Conducted spurious emissions, 30MHz - 20GHz
	661	Figure 8-5	Conducted spurious emissions, 30MHz - 20GHz
	810	Figure 8-6	Conducted spurious emissions, 30MHz - 20GHz

<b>Mode</b>	<b>CH</b>	<b>Location</b>	<b>Description</b>
GSM 850 (Class B)	128	Figure 9-1	Band Edge emissions
	251	Figure 9-2	Band Edge emissions
GPRS 850 (Class 12)	128	Figure 9-3	Band Edge emissions
	251	Figure 9-4	Band Edge emissions

<b>Mode</b>	<b>CH</b>	<b>Location</b>	<b>Description</b>
GSM 1900 (Class B)	512	Figure 10-1	Band Edge emissions
	810	Figure 10-2	Band Edge emissions
GPRS 1900 (Class 12)	512	Figure 10-3	Band Edge emissions
	810	Figure 10-4	Band Edge emissions



Mode	CH	Location	Description
EDGE 850 (Class 12)	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 12)	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 12)	128	Figure 12-1	Band Edge emissions
	251	Figure 12-2	Band Edge emissions
EDGE 1900 (Class 12)	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
	4183	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
	4183	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



Mode	CH	Location	Description
HSUPA WCDMA (Band II)	9262	Figure 17-1	Conducted spurious emissions, 30MHz - 20GHz
	9400	Figure 17-2	Conducted spurious emissions, 30MHz - 20GHz
	9538	Figure 17-3	Conducted spurious emissions, 30MHz - 20GHz
HSUPA WCDMA (Band V)	4132	Figure 17-4	Conducted spurious emissions, 30MHz - 20GHz
	4183	Figure 17-5	Conducted spurious emissions, 30MHz - 20GHz
	4233	Figure 17-6	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
HSUPA WCDMA (Band II)	9262	Figure 18-1	Band Edge emissions
	9538	Figure 18-2	Band Edge emissions
HSUPA WCDMA (Band V)	4132	Figure 18-3	Band Edge emissions
	4233	Figure 18-4	Band Edge emissions



## Test Plot

### GSM 850

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

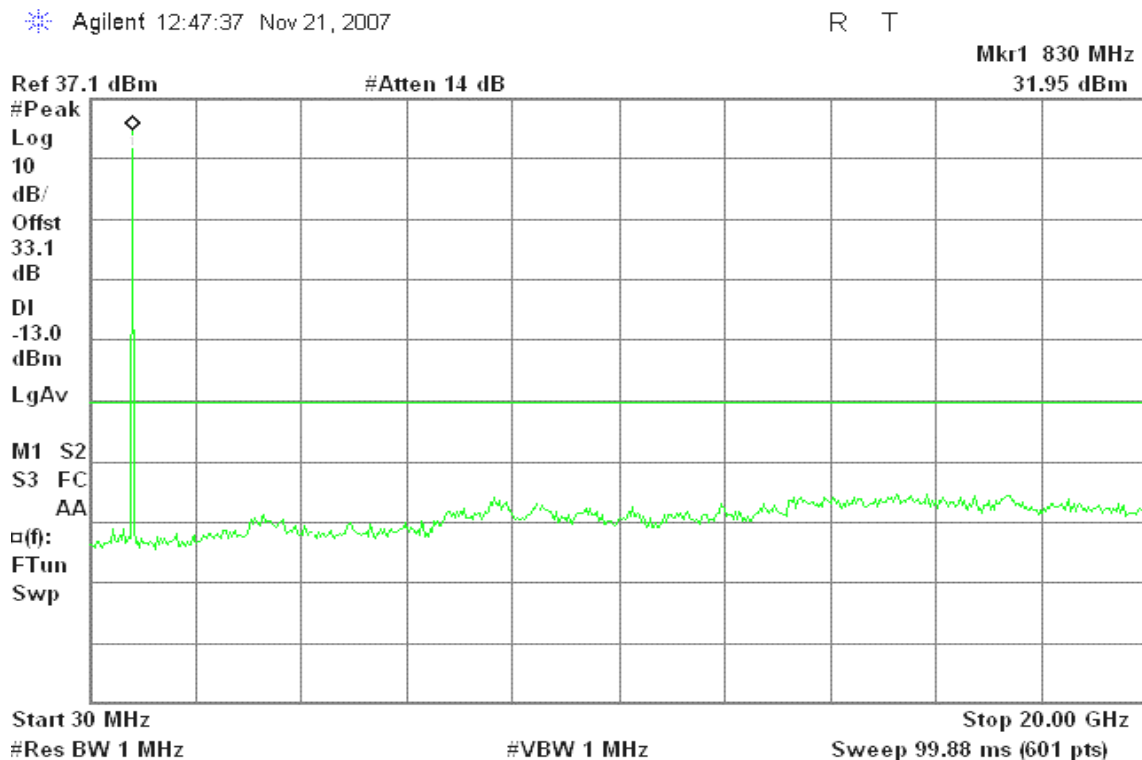


Figure 7-2: Out of Band emission at antenna terminals – GSM CH Mid

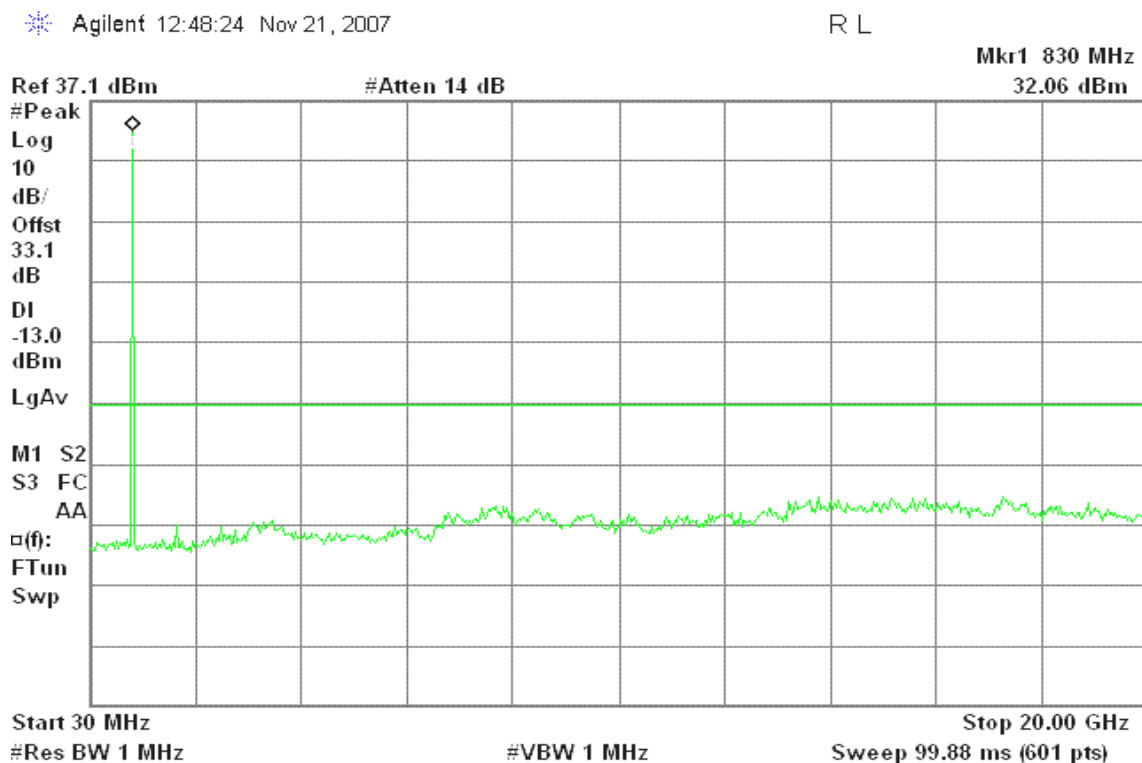
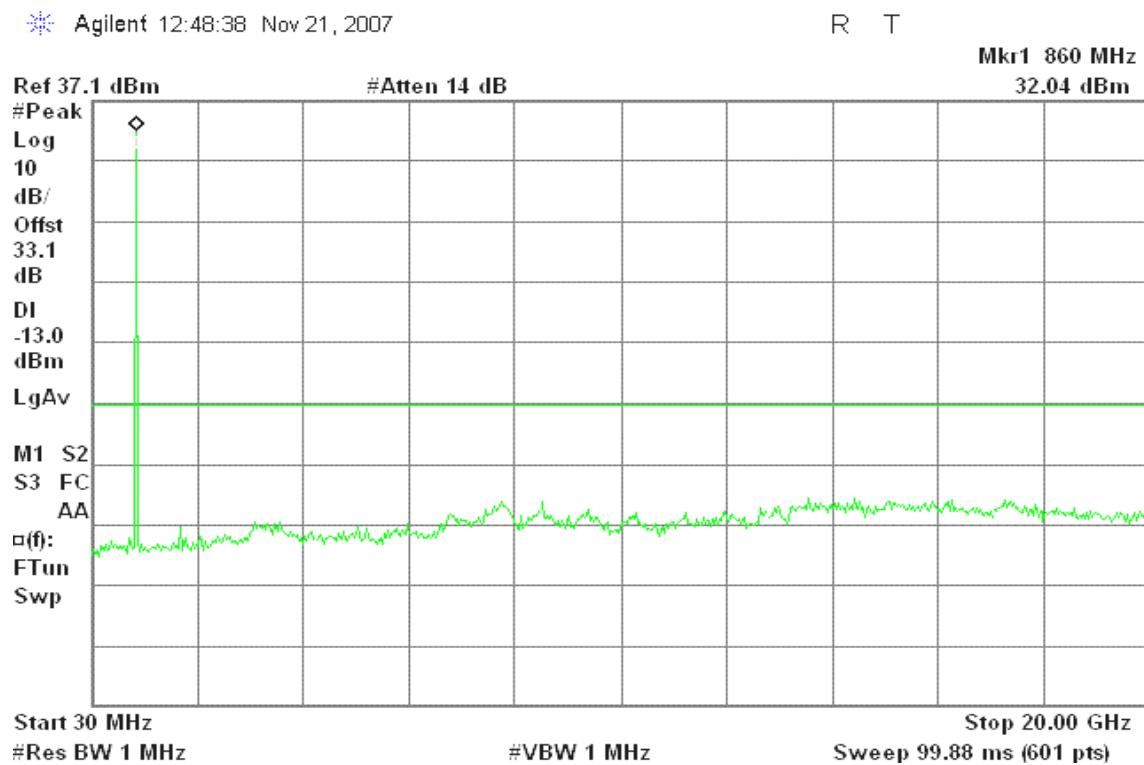






Figure 7-3: Out of Band emission at antenna terminals – GSM CH High



## GPRS 850

Figure 7-4: Out of Band emission at antenna terminals – GPRS CH Low

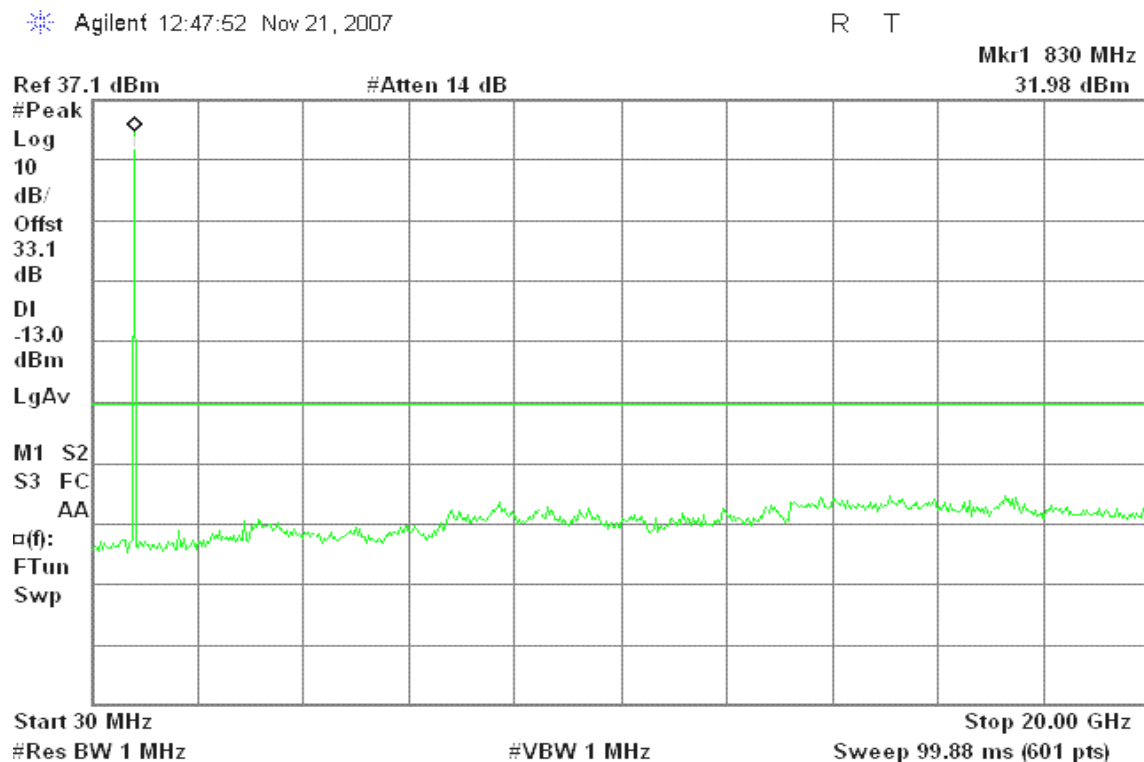




Figure 7-5: Out of Band emission at antenna terminals – GPRS CH Mid

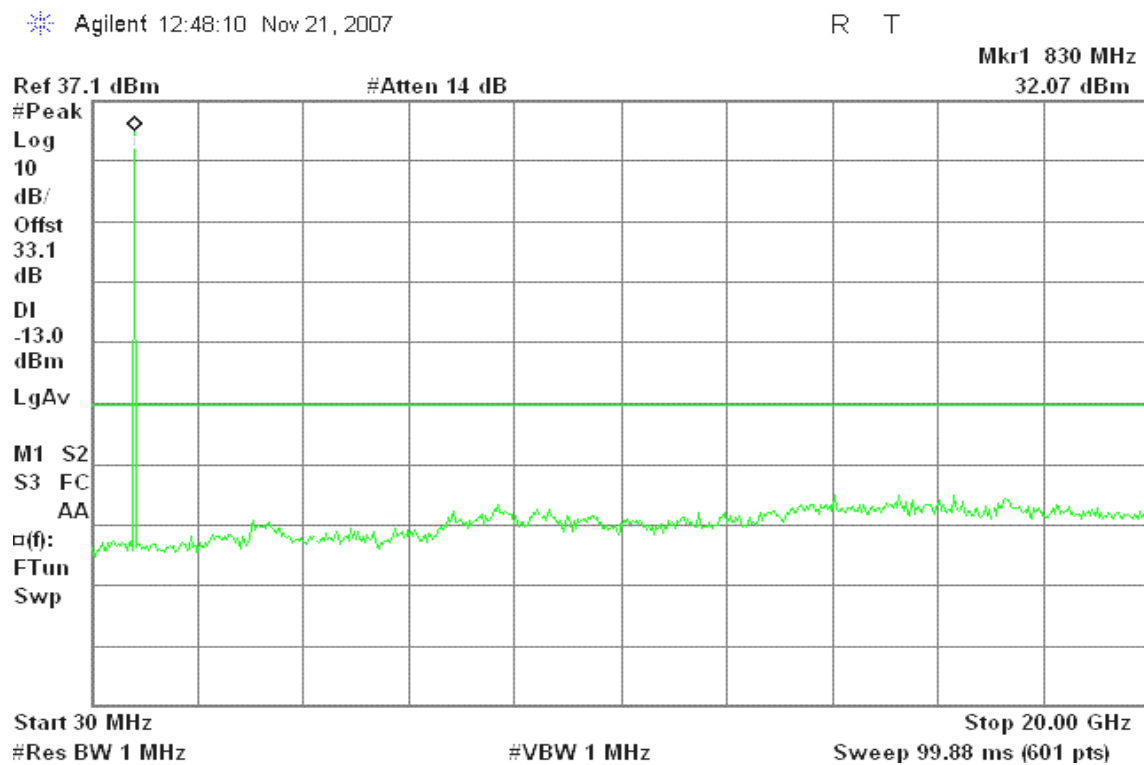
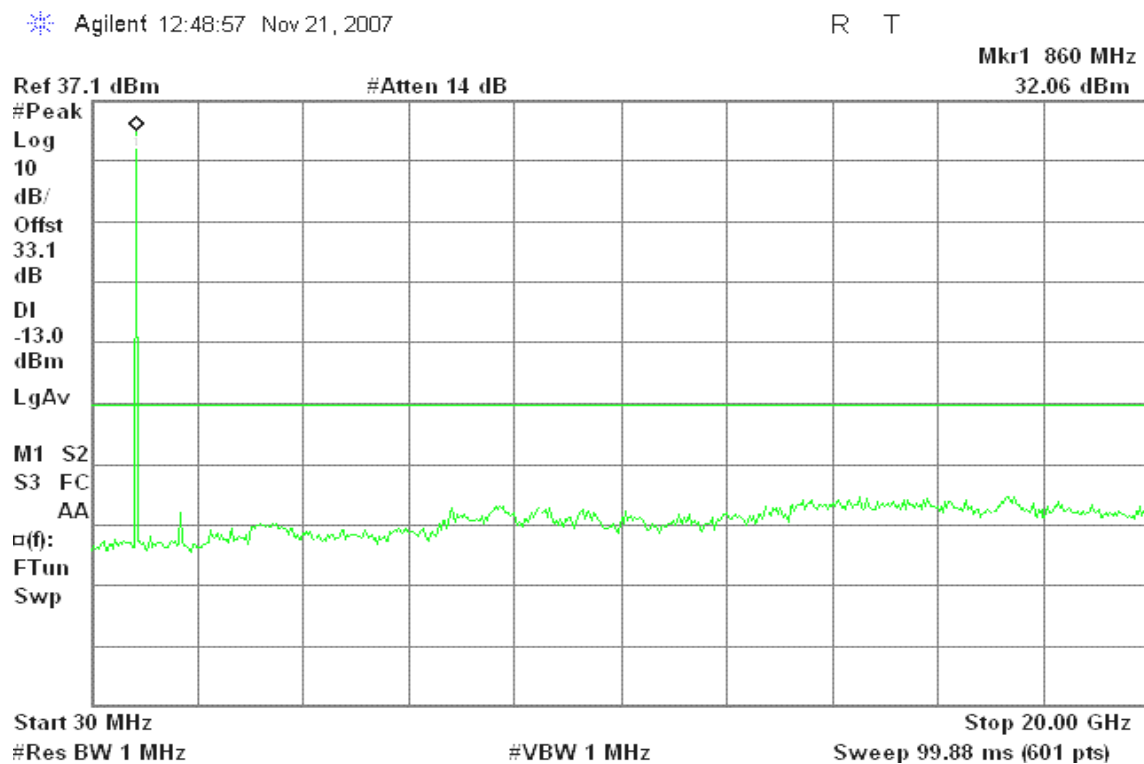


Figure 7-6: Out of Band emission at antenna terminals – GPRS CH High





## GSM 1900

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

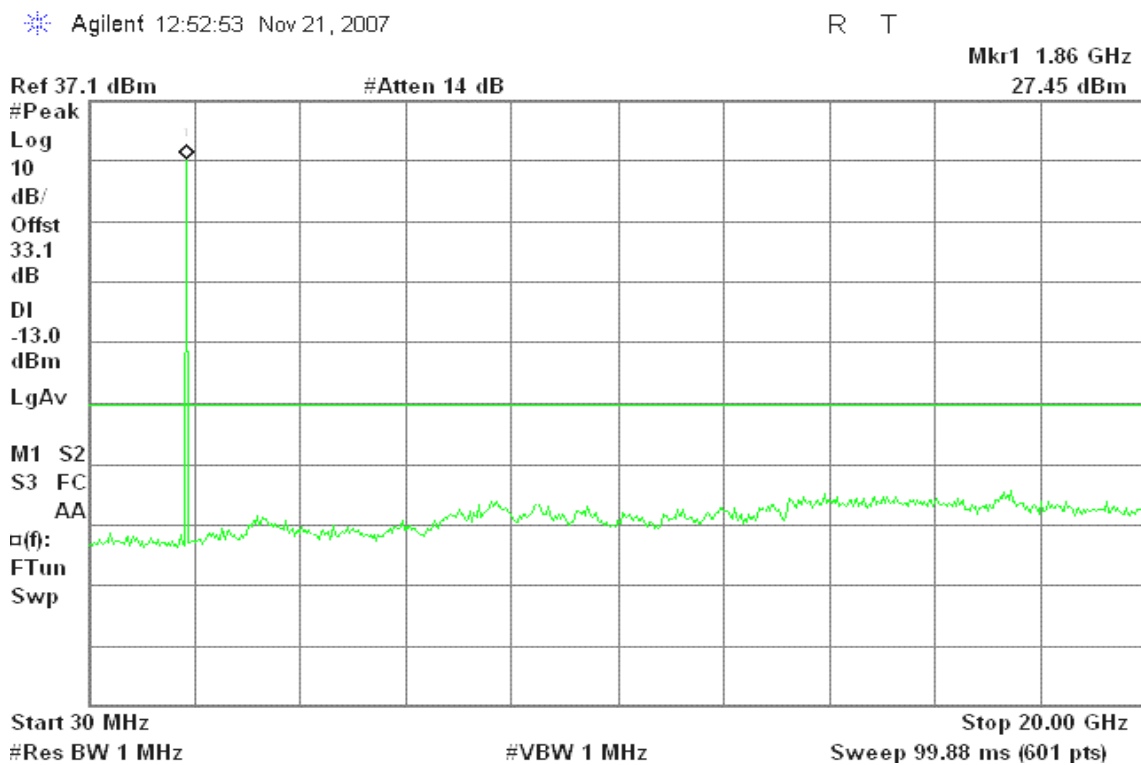


Figure 8-2: Out of Band emission at antenna terminals – GSM CH Mid

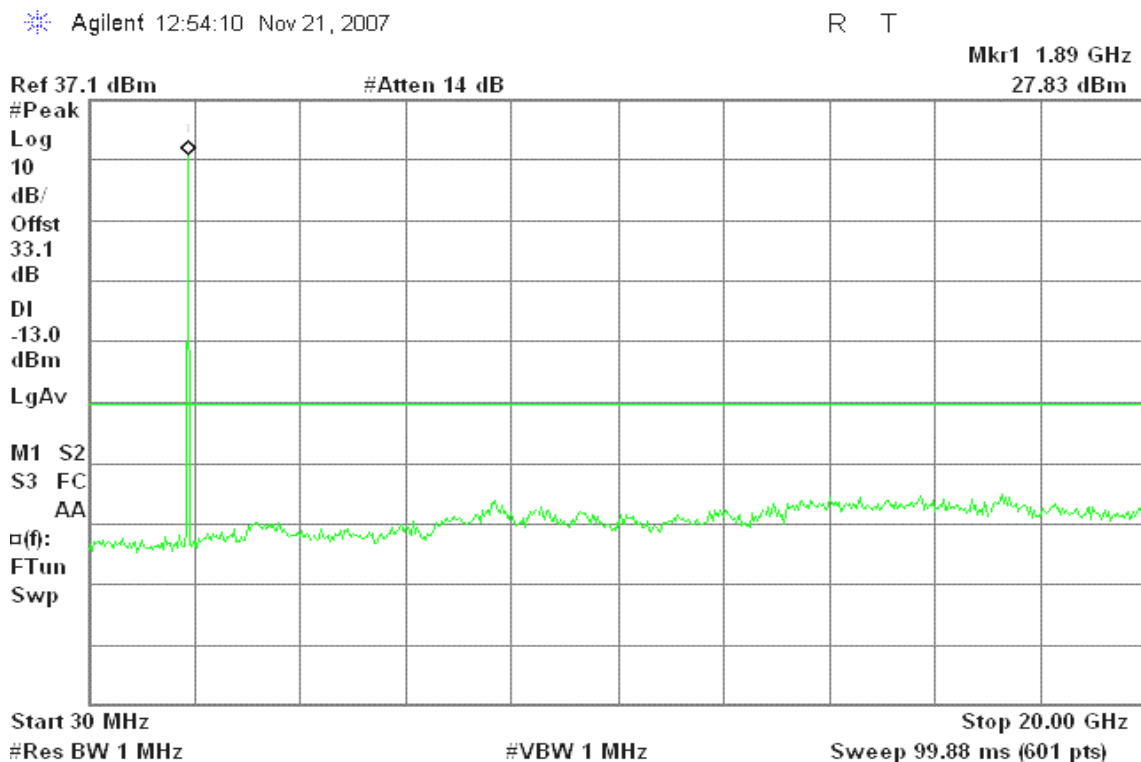
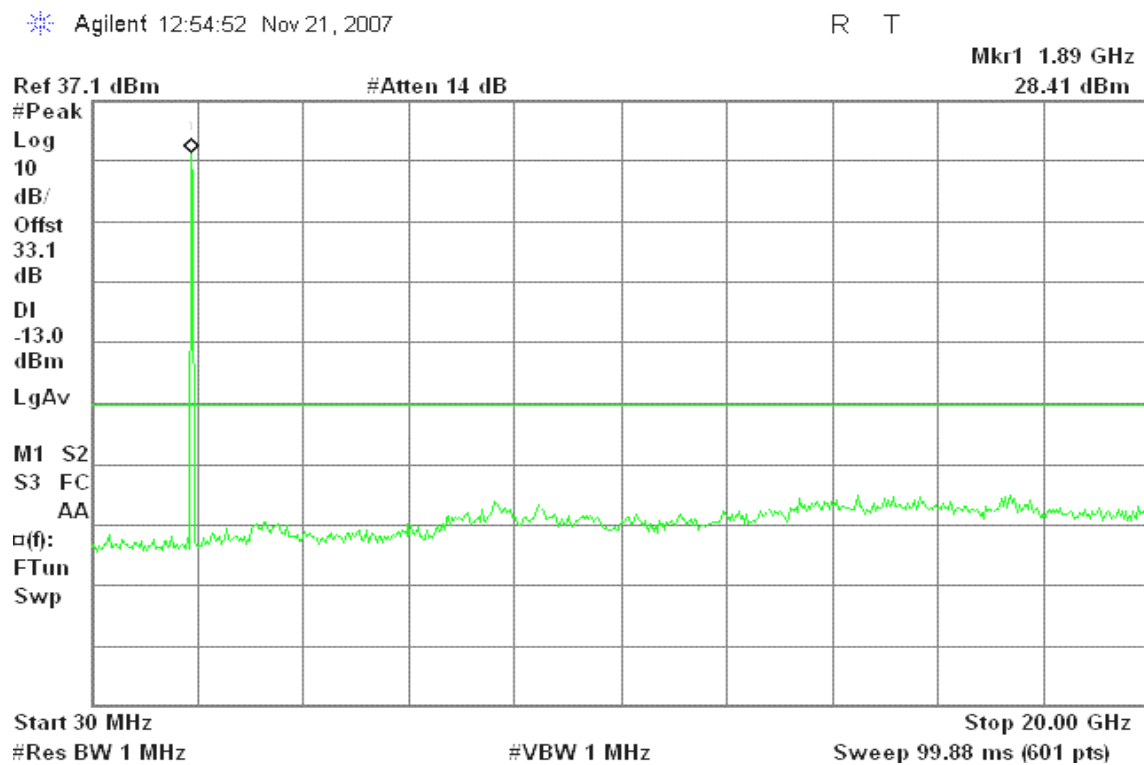




Figure 8-3: Out of Band emission at antenna terminals – GSM CH High



## GPRS 1900

Figure 8-4: Out of Band emission at antenna terminals – GPRS CH Low

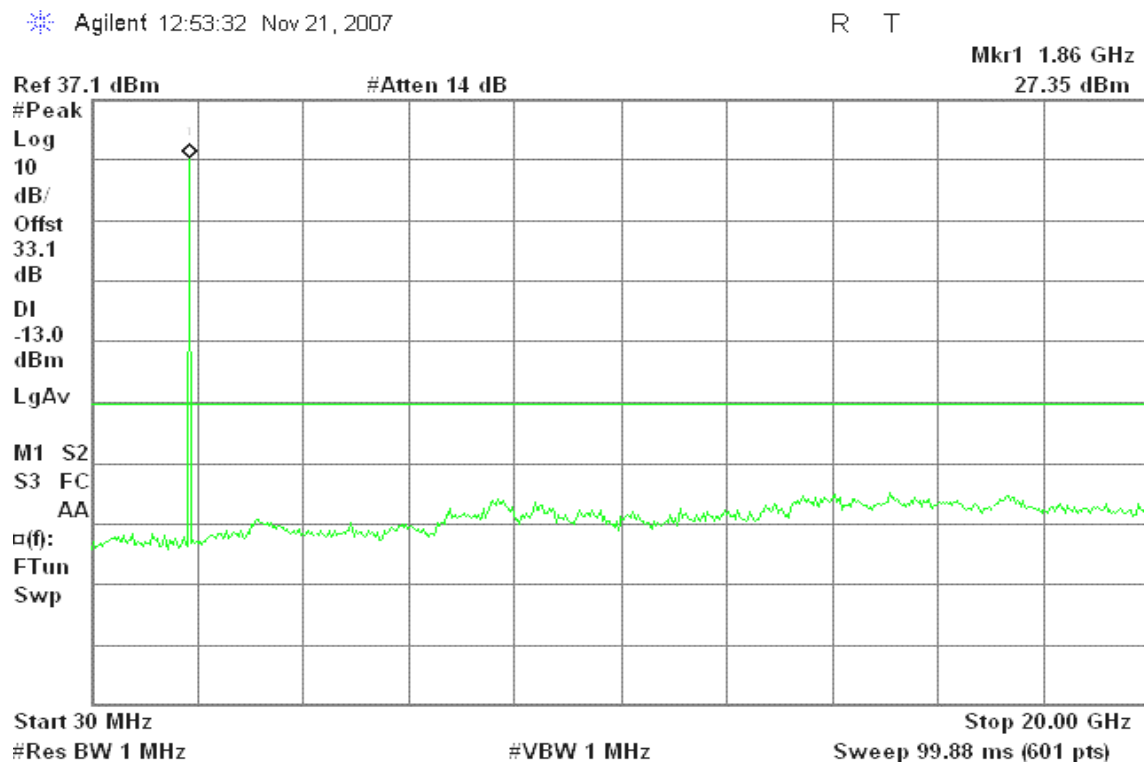




Figure 8-5: Out of Band emission at antenna terminals – GPRS CH Mid

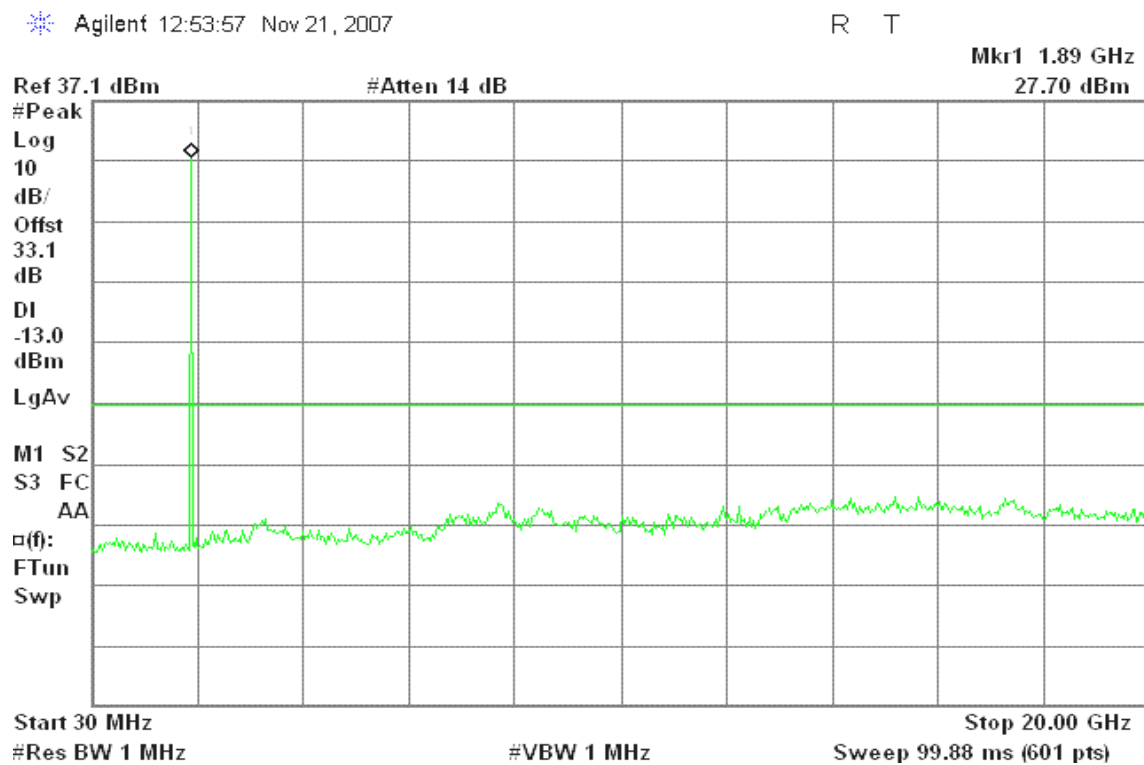
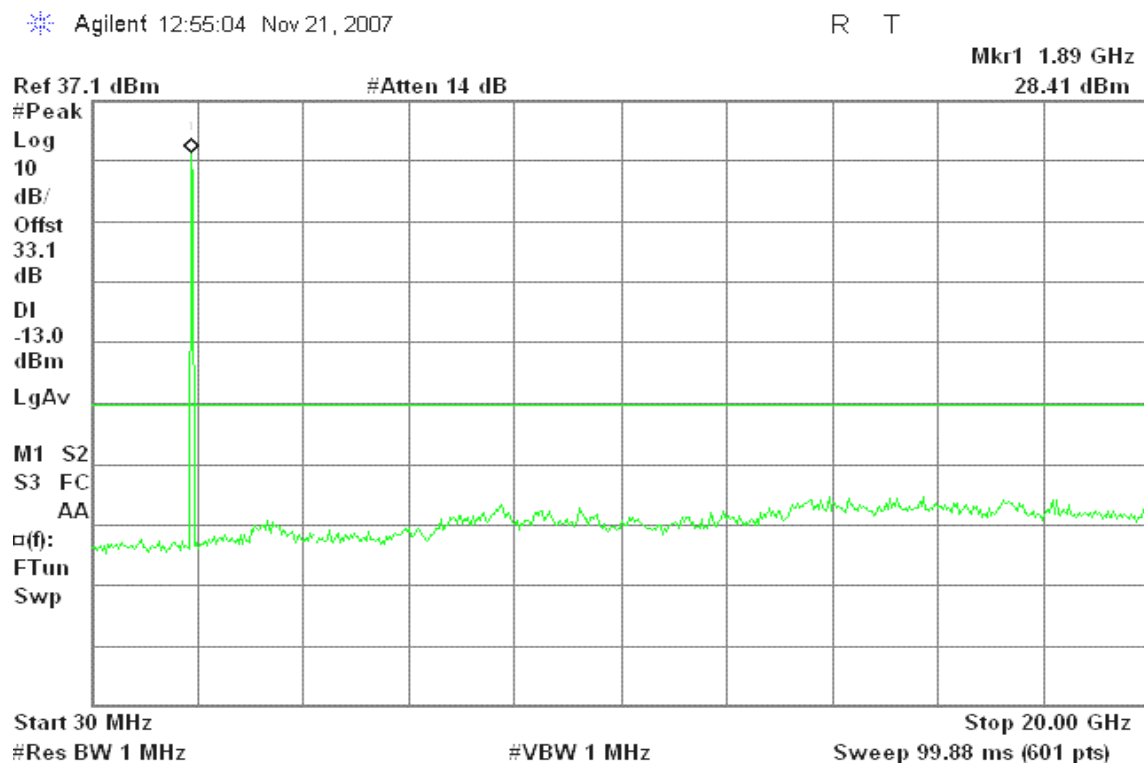


Figure 8-6: Out of Band emission at antenna terminals – GPRS CH High





## GSM 850

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

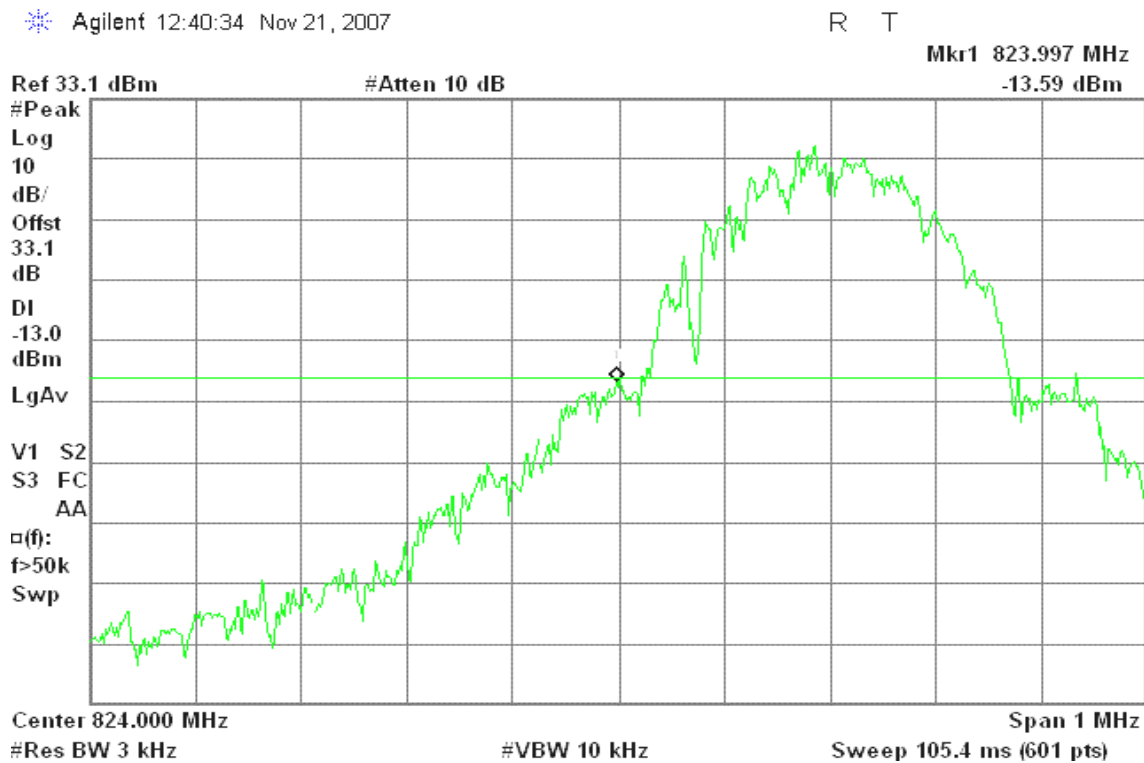
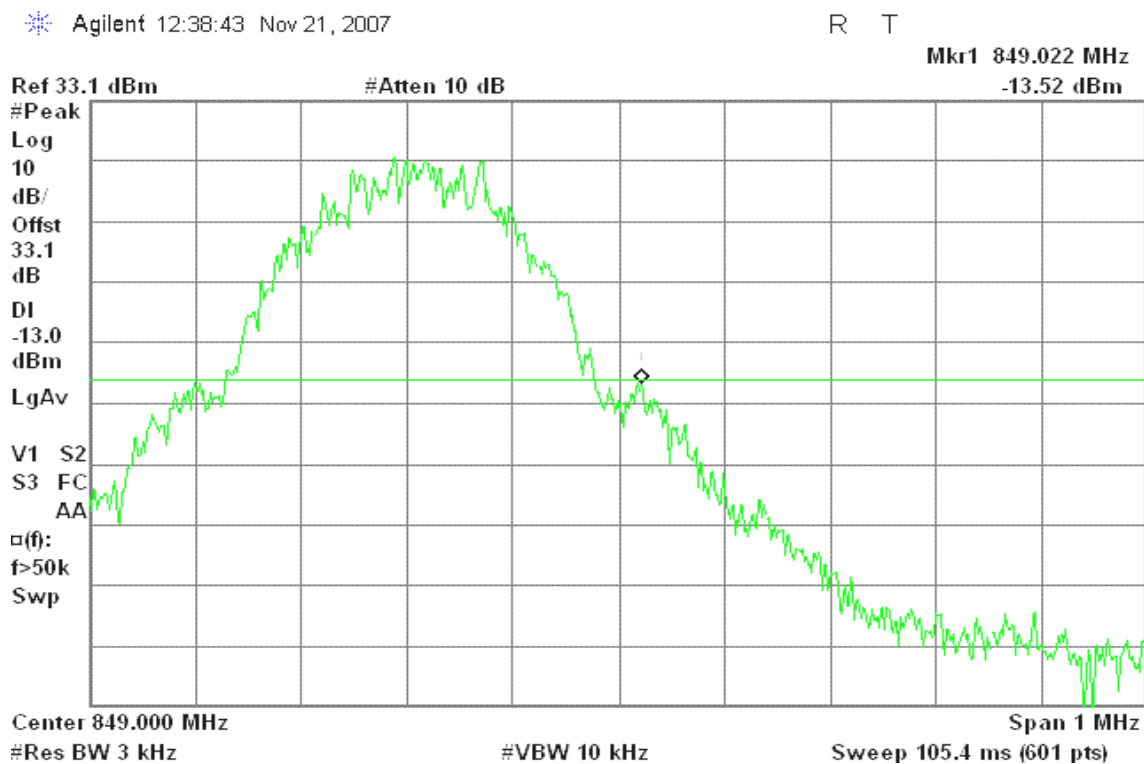


Figure 9-2: Band Edge emissions – GSM CH High





## GPRS 850

Figure 9-3: Band Edge emissions – GPRS CH Low

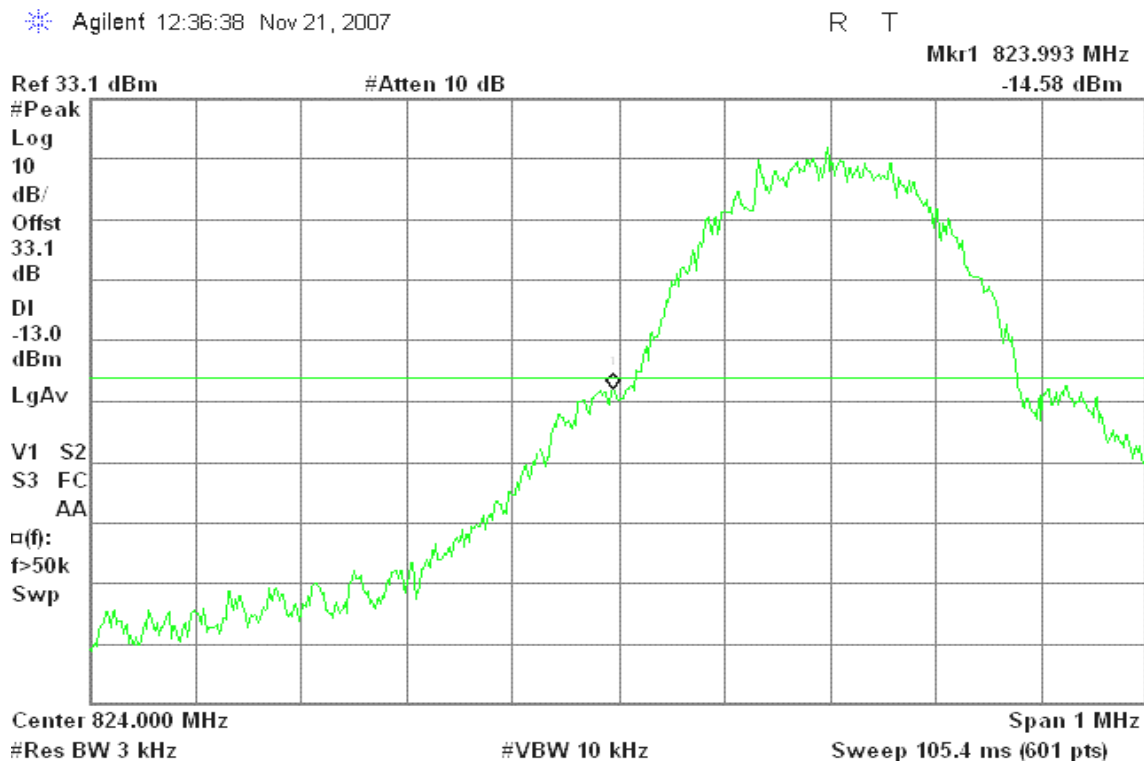
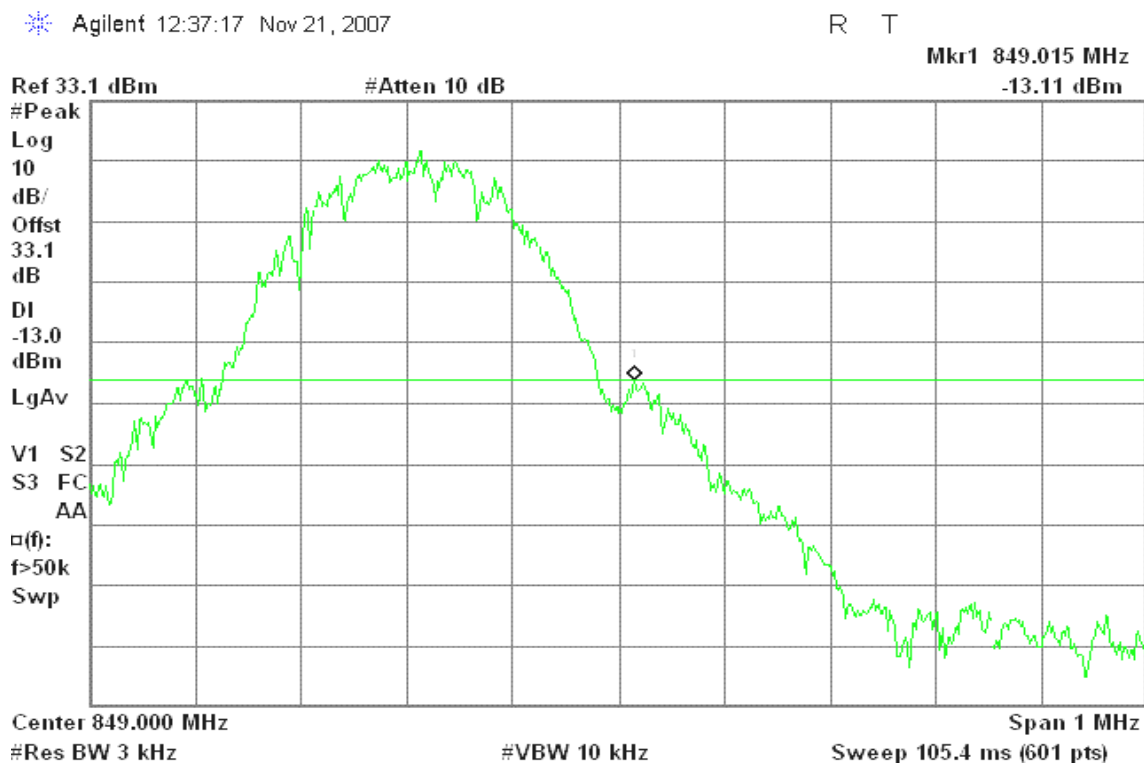


Figure 9-4: Band Edge emissions –GPRS CH High





## GSM 1900

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

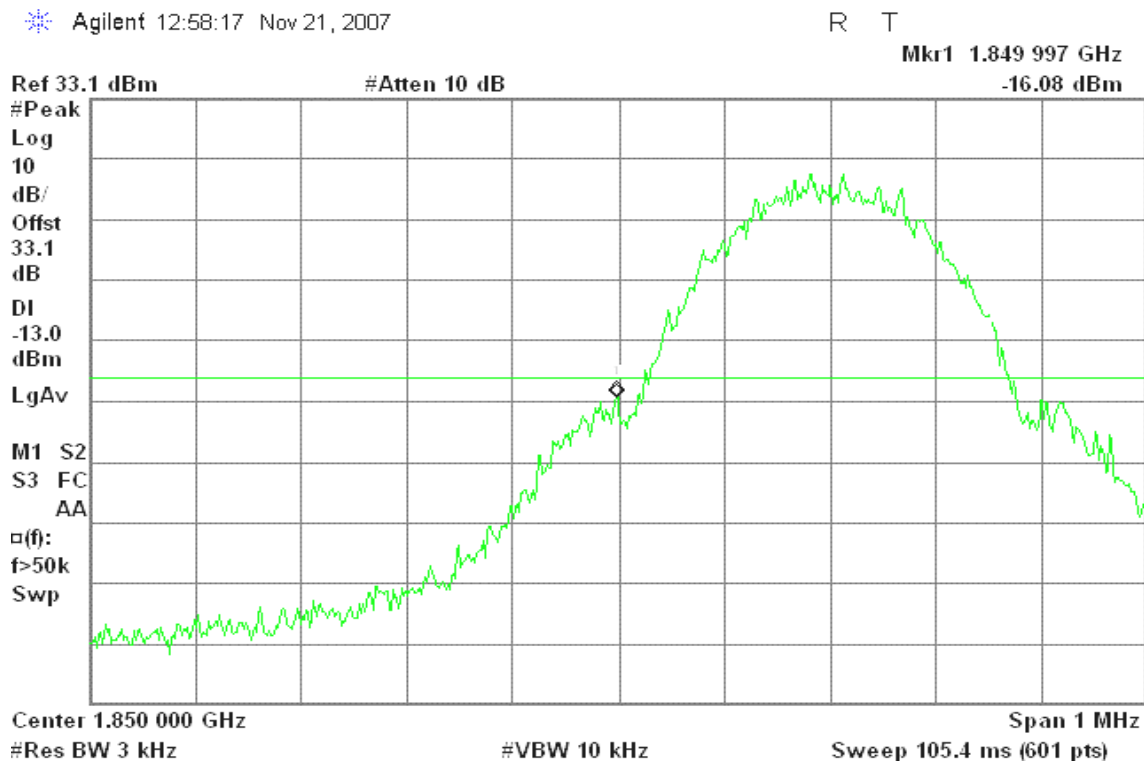
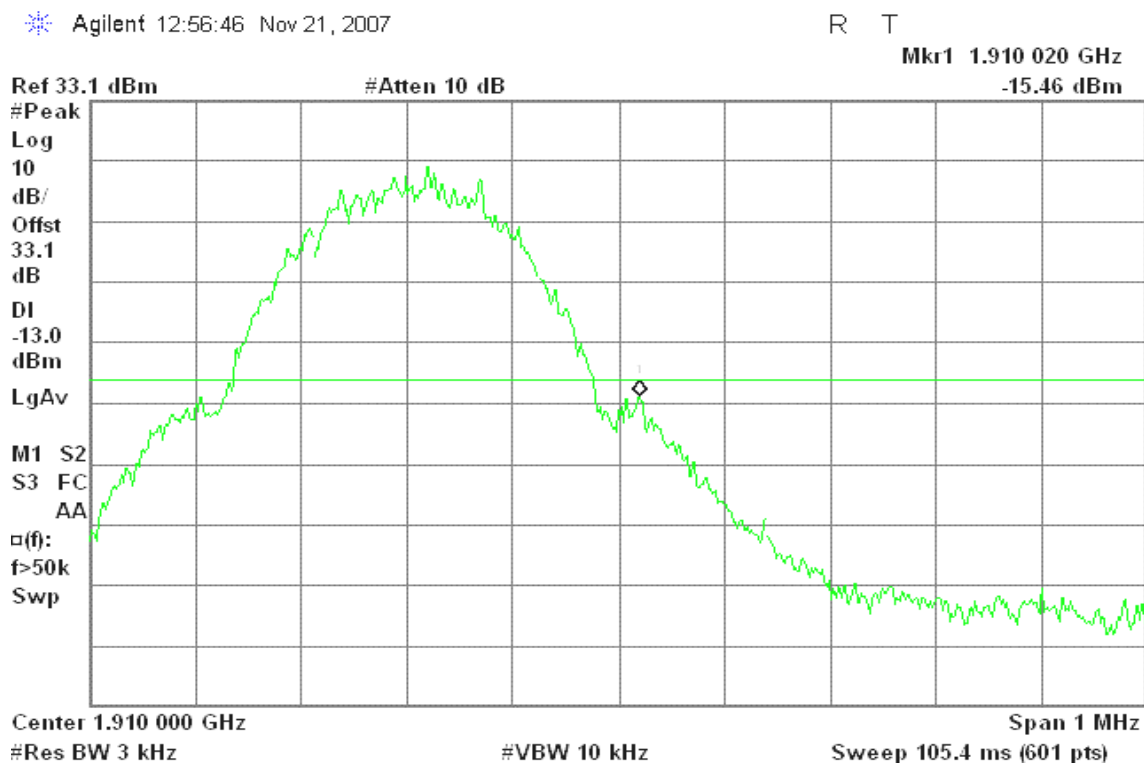


Figure 10-2: Band Edge emissions – GSM CH High







## GPRS 1900

Figure 10-3: Band Edge emissions – GPRS CH Low

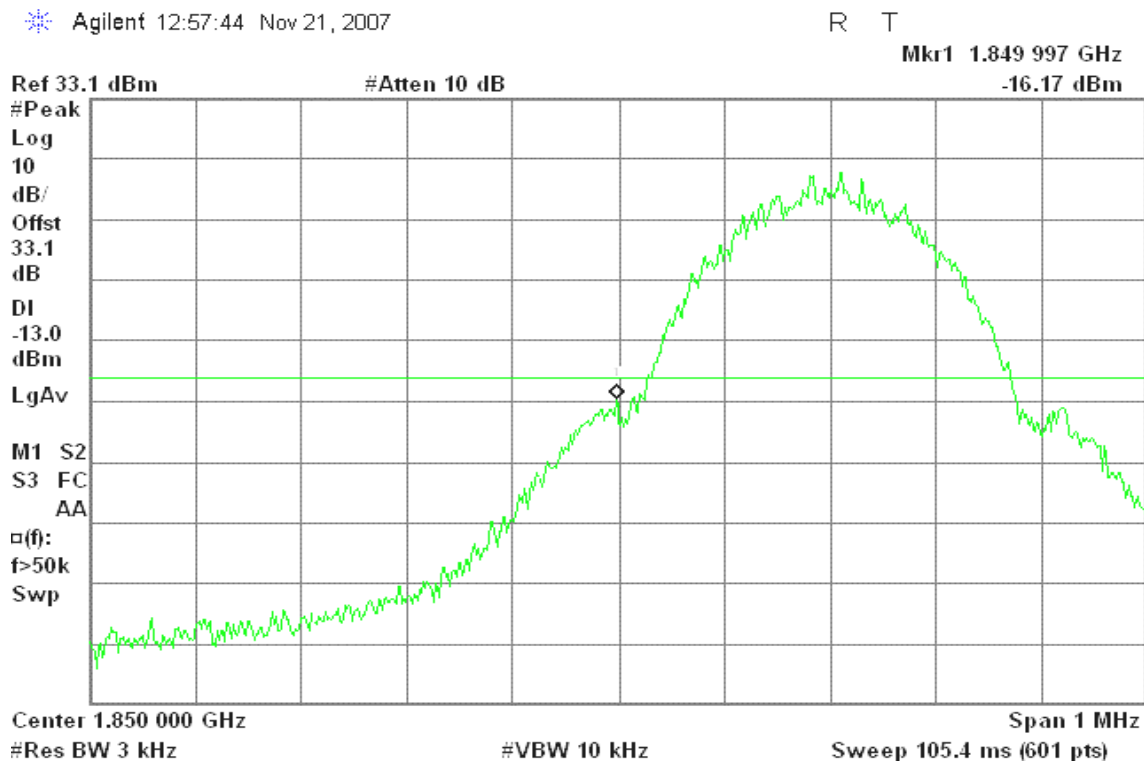
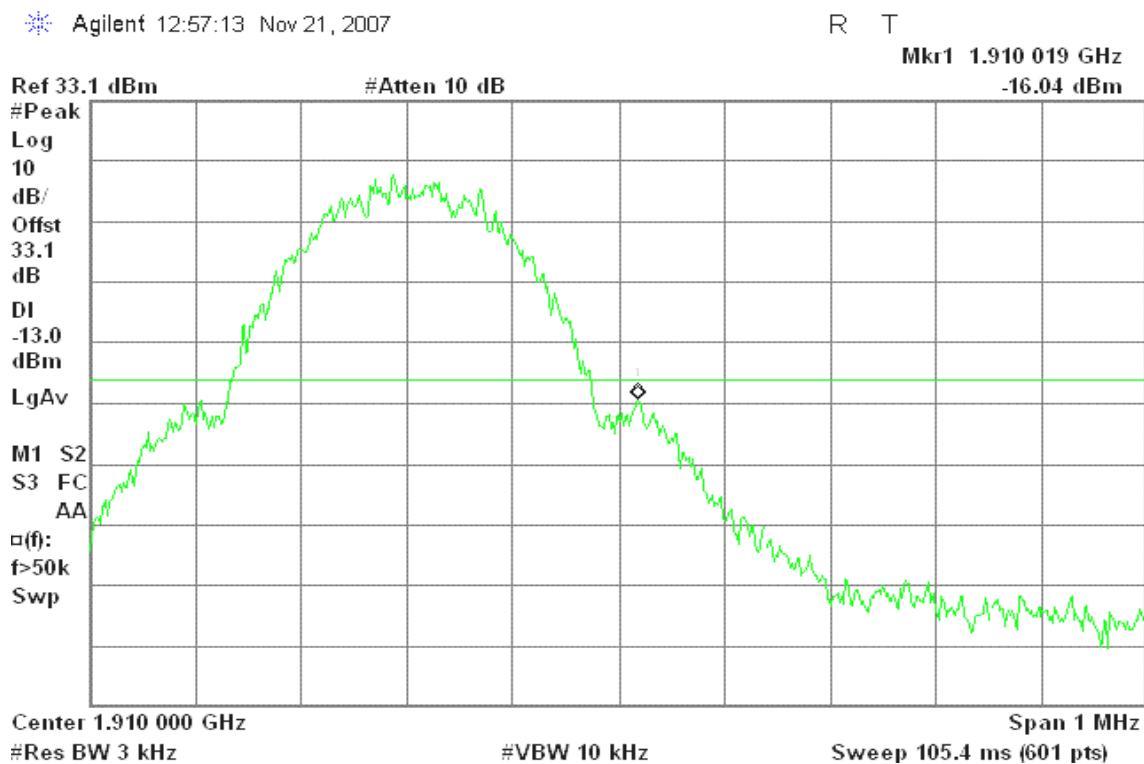


Figure 10-4: Band Edge emissions – GPRS CH High





## EDGE 850

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

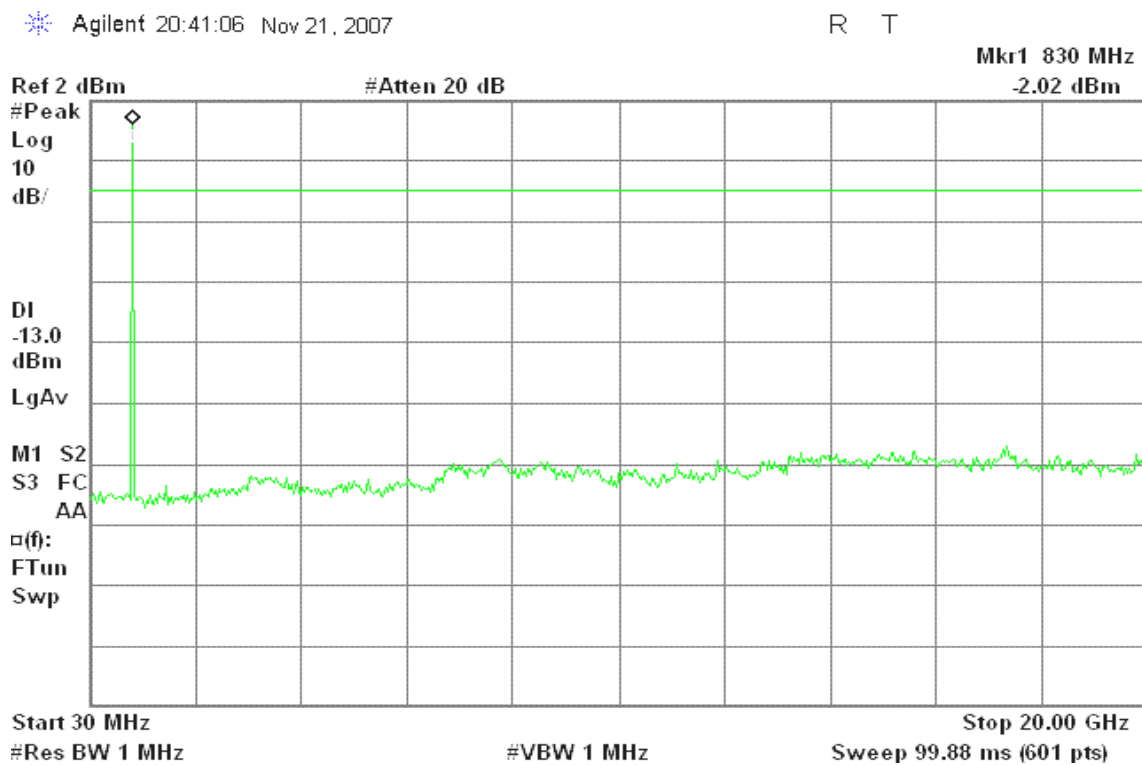


Figure 11-2: Out of Band emission at antenna terminals –EDGE CH Mid

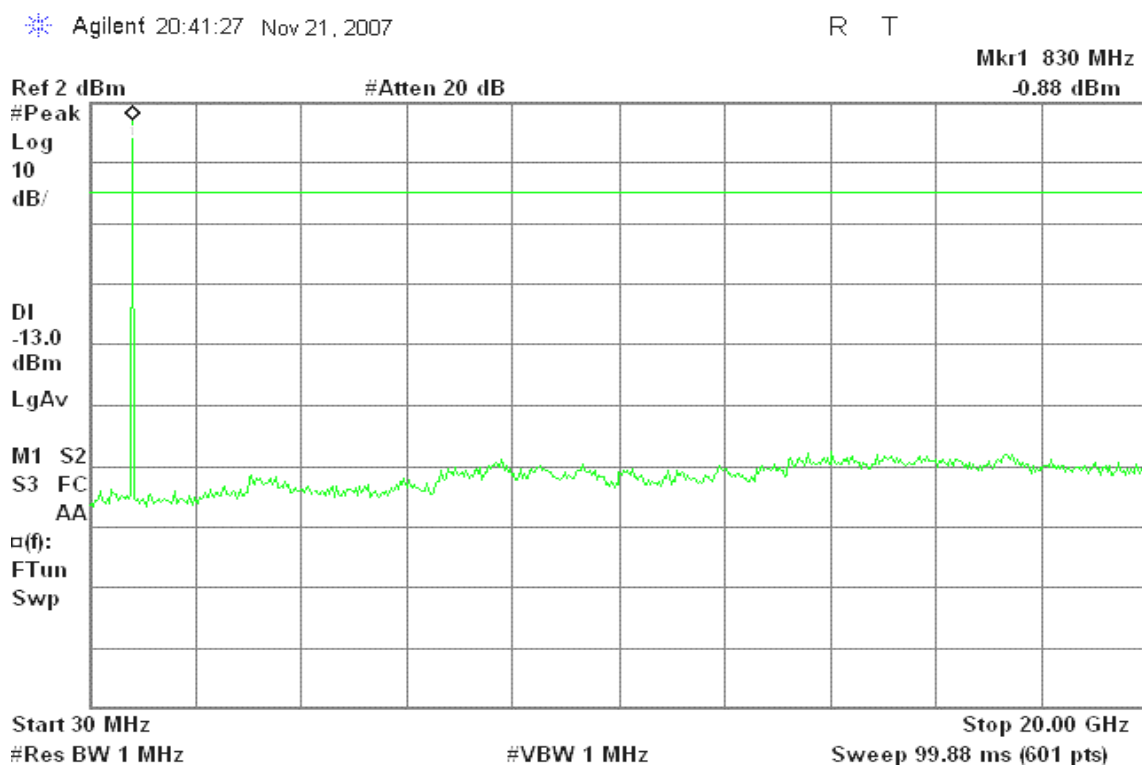
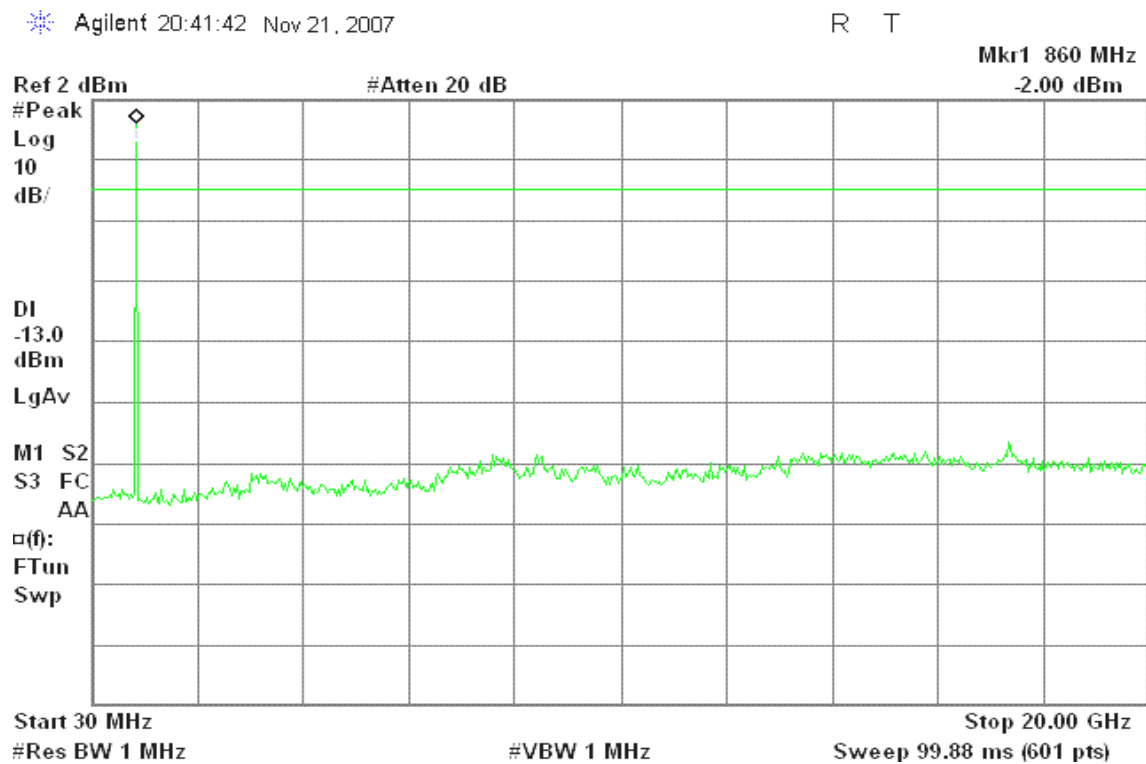




Figure 11-3: Out of Band emission at antenna terminals –EDGE CH High



## EDGE 1900

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

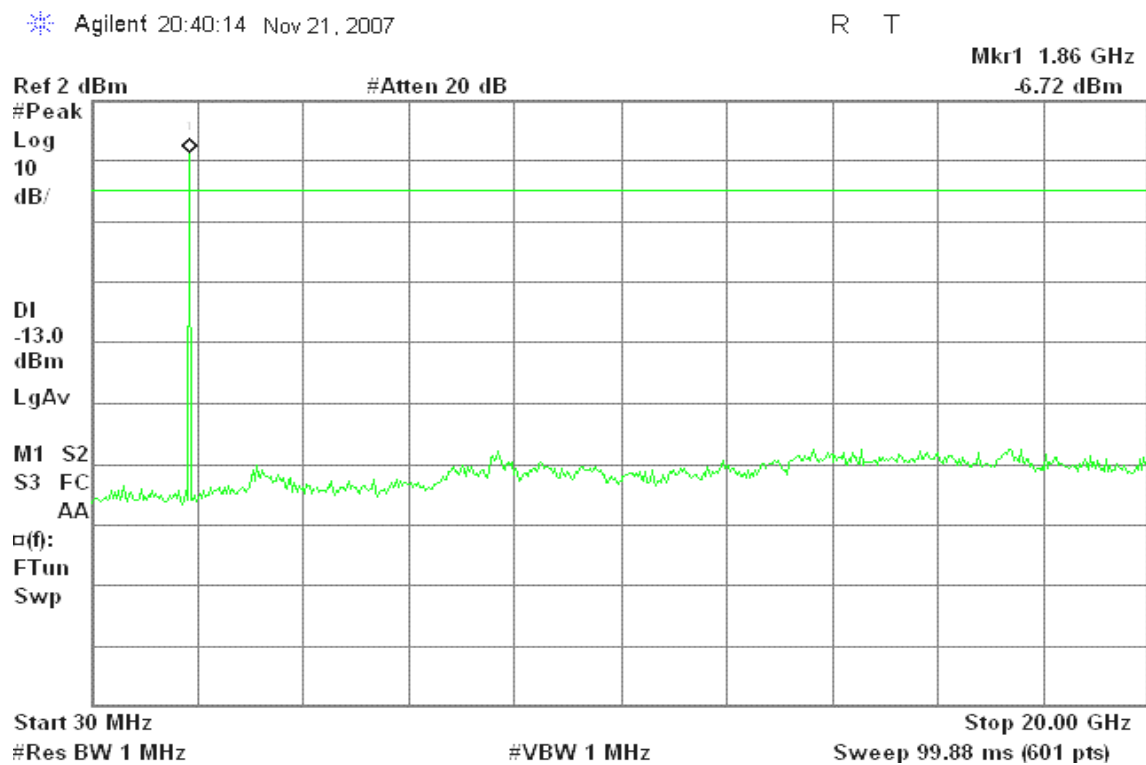




Figure 11-5: Out of Band emission at antenna terminals –EDGE CH Mid

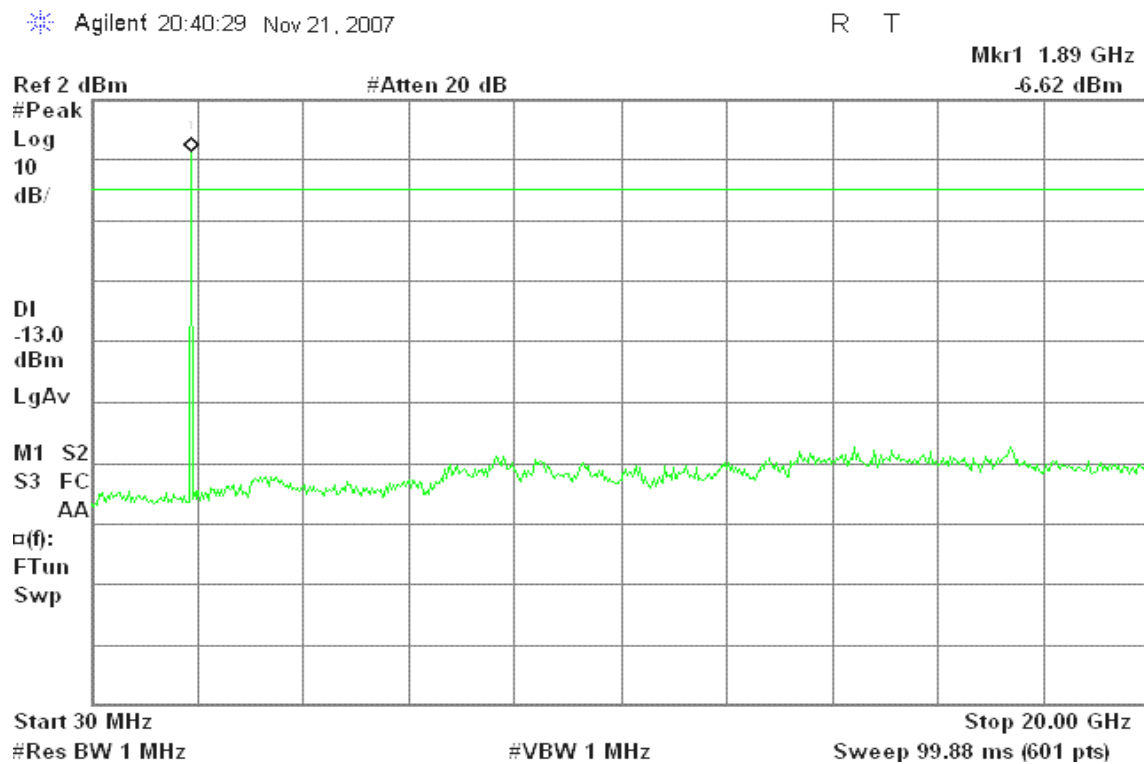
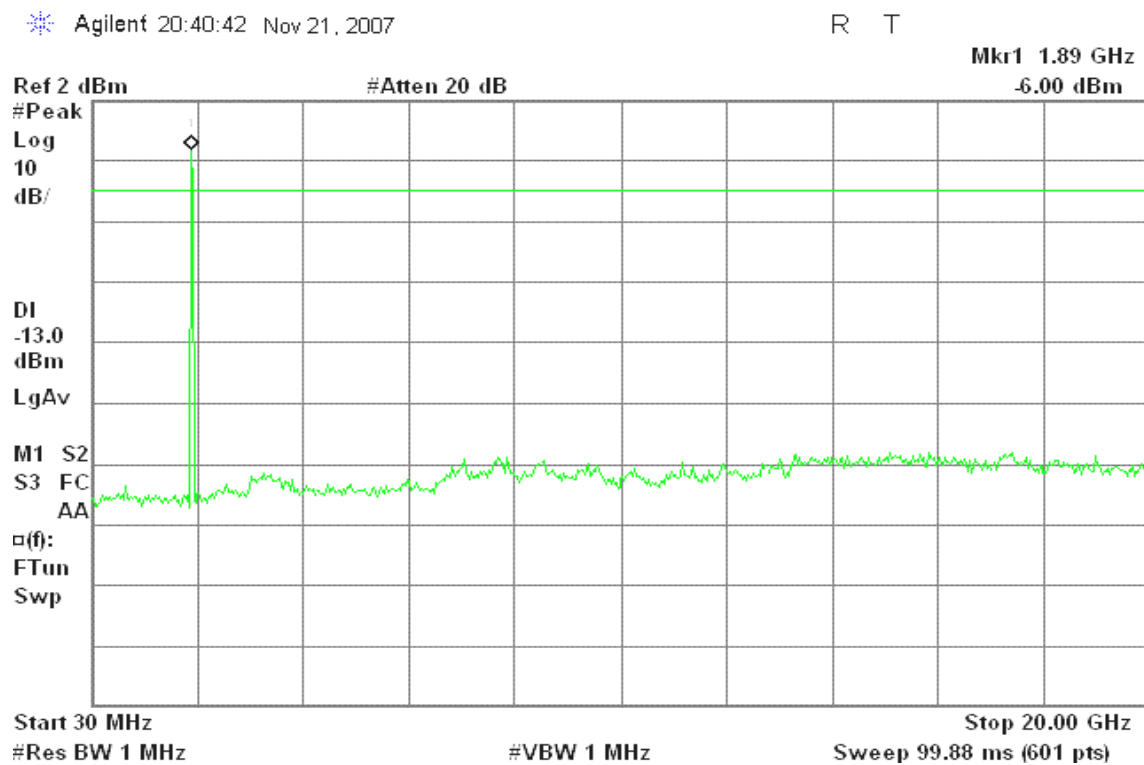


Figure 11-6: Out of Band emission at antenna terminals –EDGE CH High





## EDGE 850

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

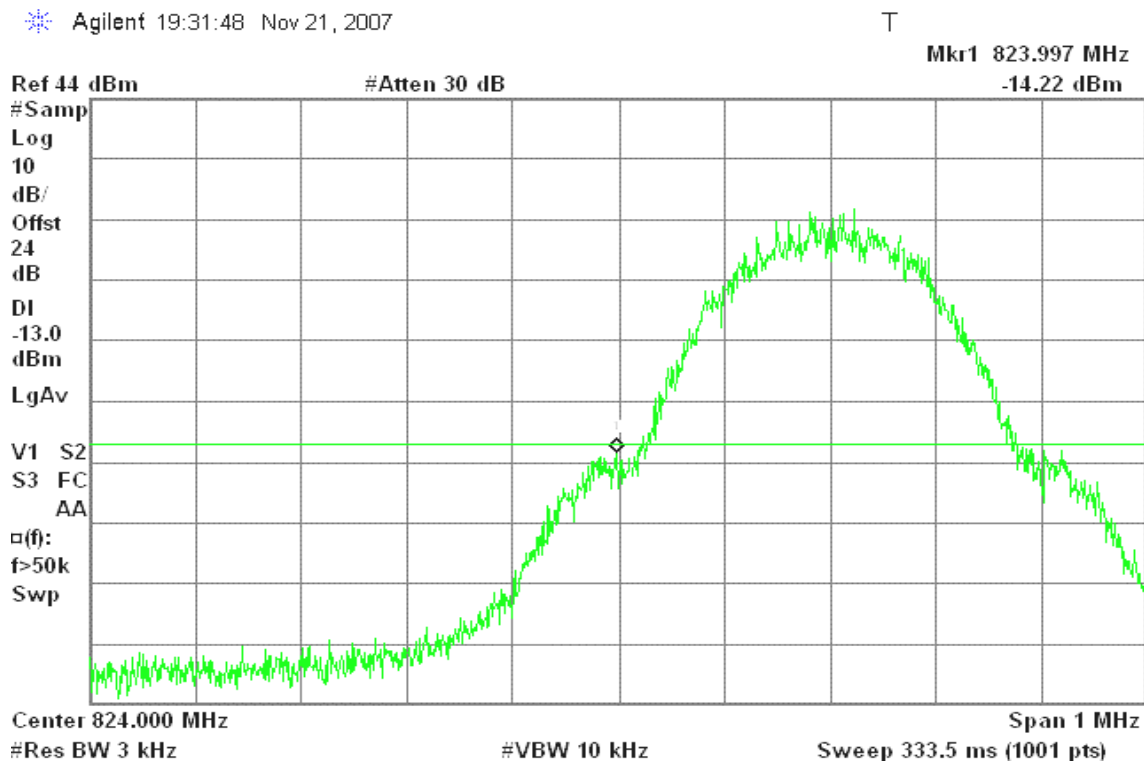
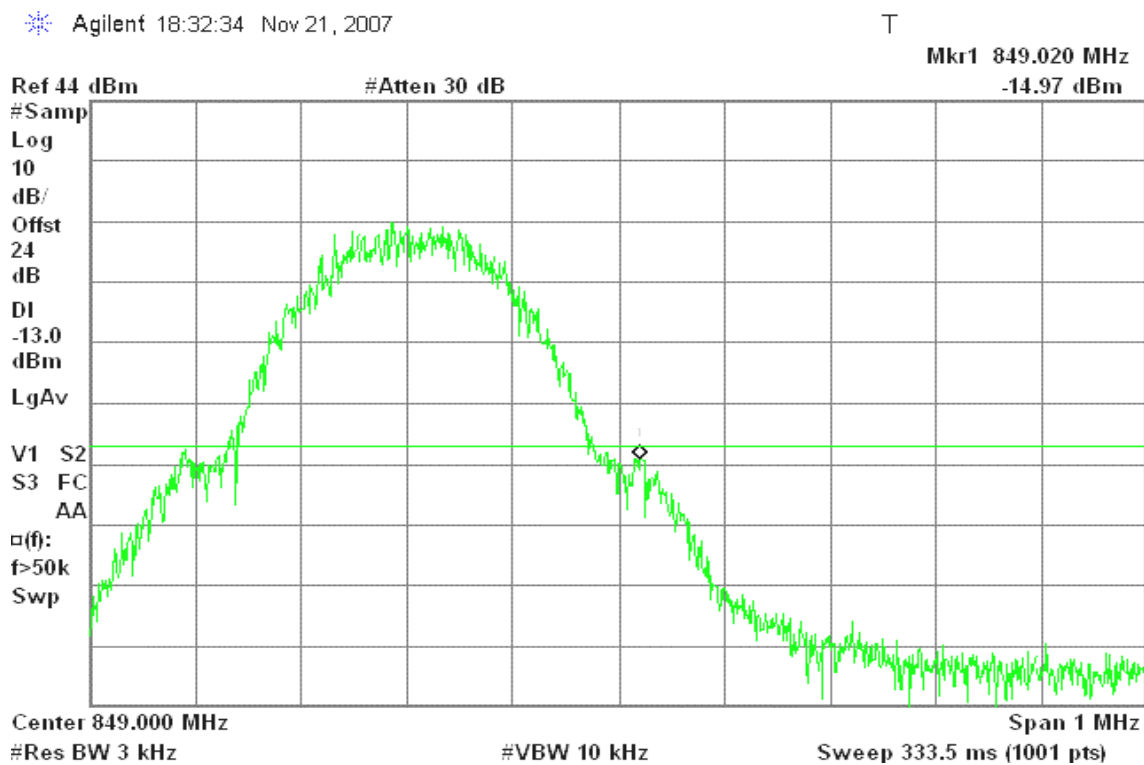


Figure 12-2: Band Edge emissions – EDGE CH High





## EDGE 1900

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

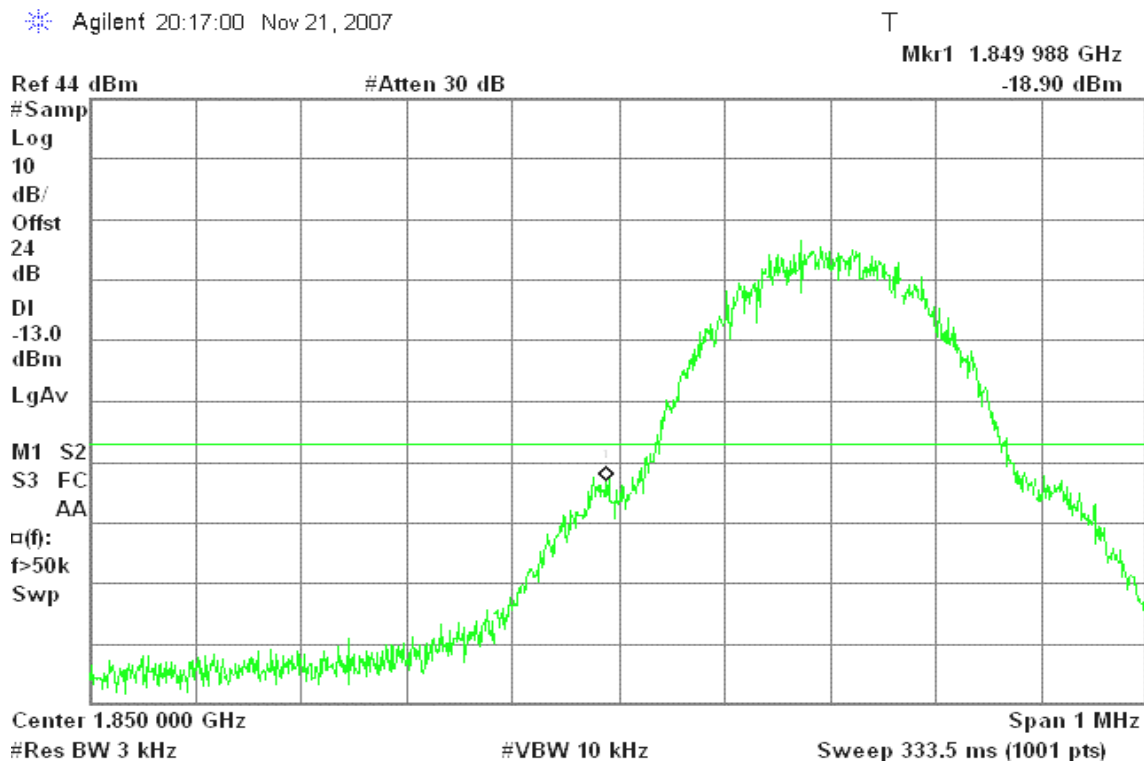
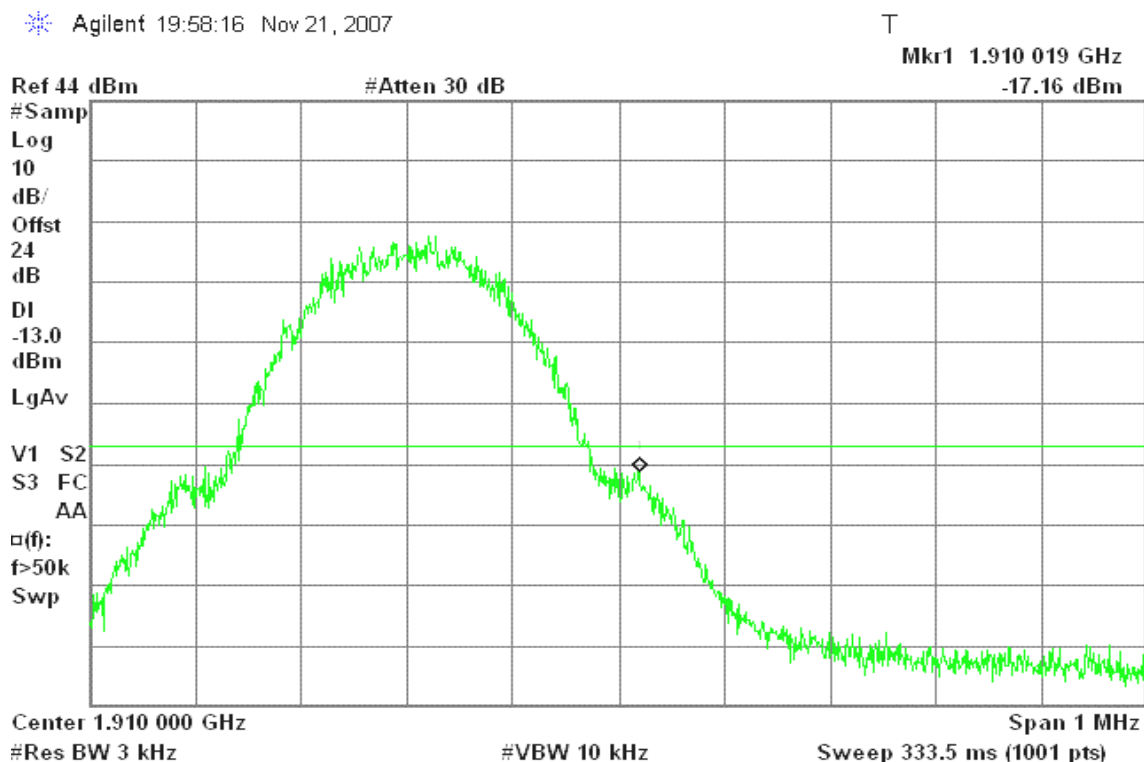


Figure 12-4: Band Edge emissions – EDGE CH High





## WCDMA Band II

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

Agilent 13:44:31 Dec 19, 2007

R T

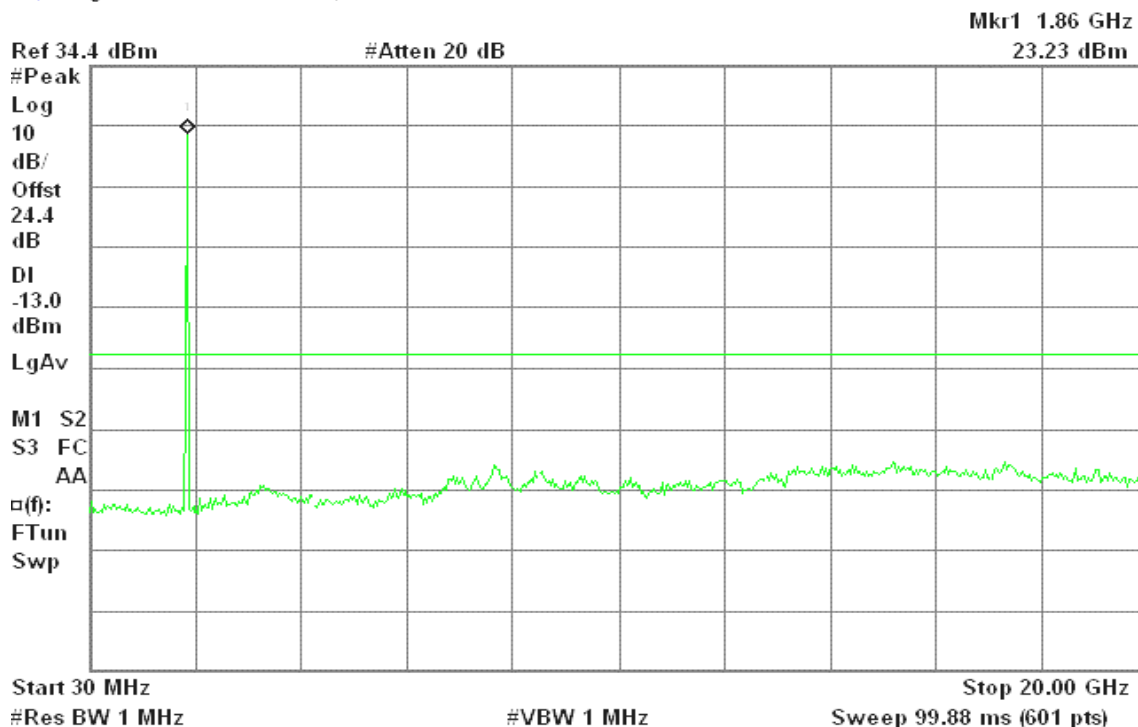


Figure 13-2: Out of Band emission at antenna terminals – WCDMA CH Mid

Agilent 13:58:46 Dec 19, 2007

R T

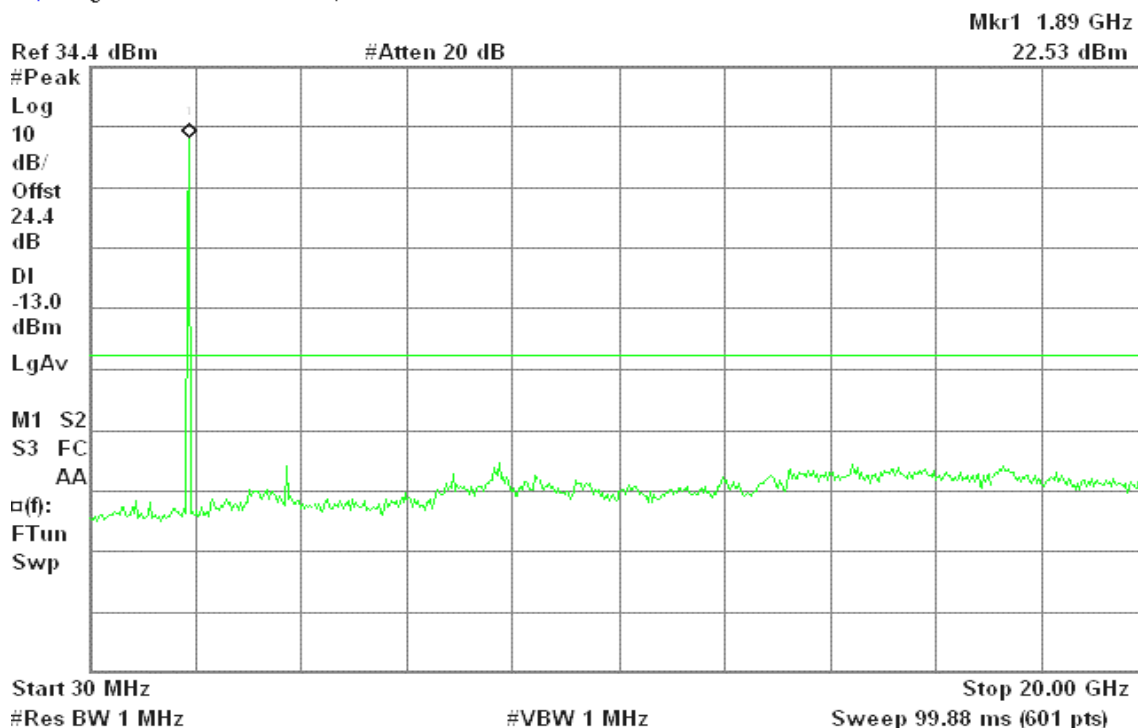
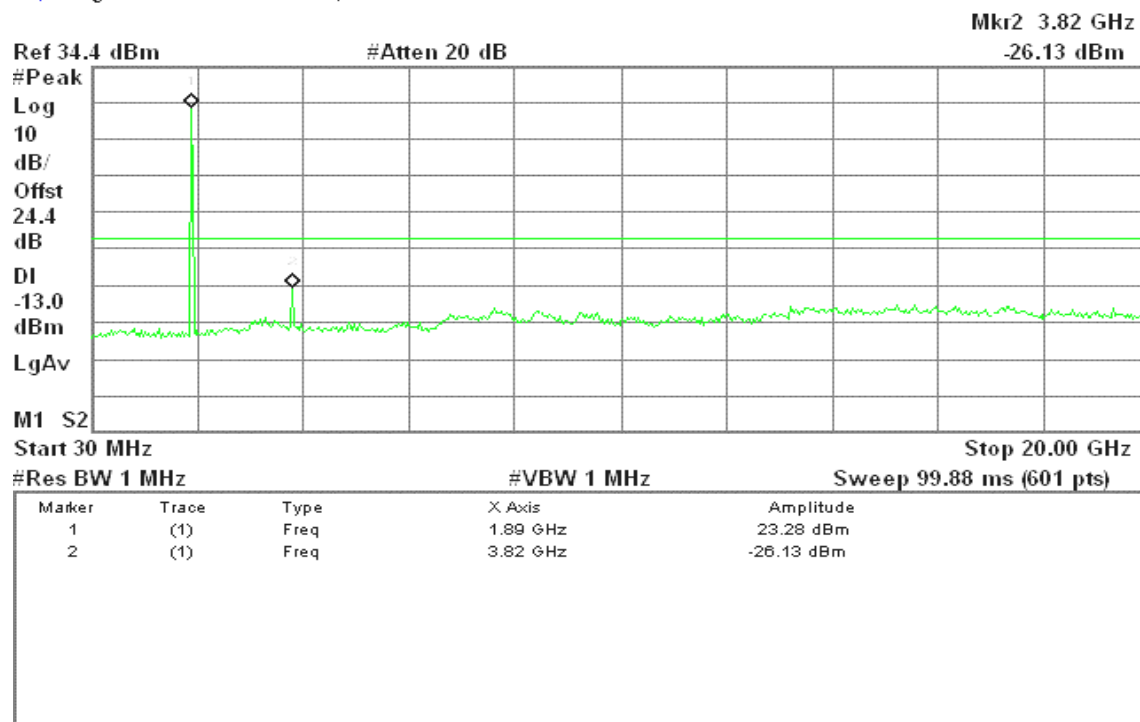




Figure 13-3: Out of Band emission at antenna terminals – WCDMA CH High

\* Agilent 13:59:20 Dec 19, 2007

R T



## WCDMA Band V

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

\* Agilent 14:05:26 Dec 19, 2007

R T

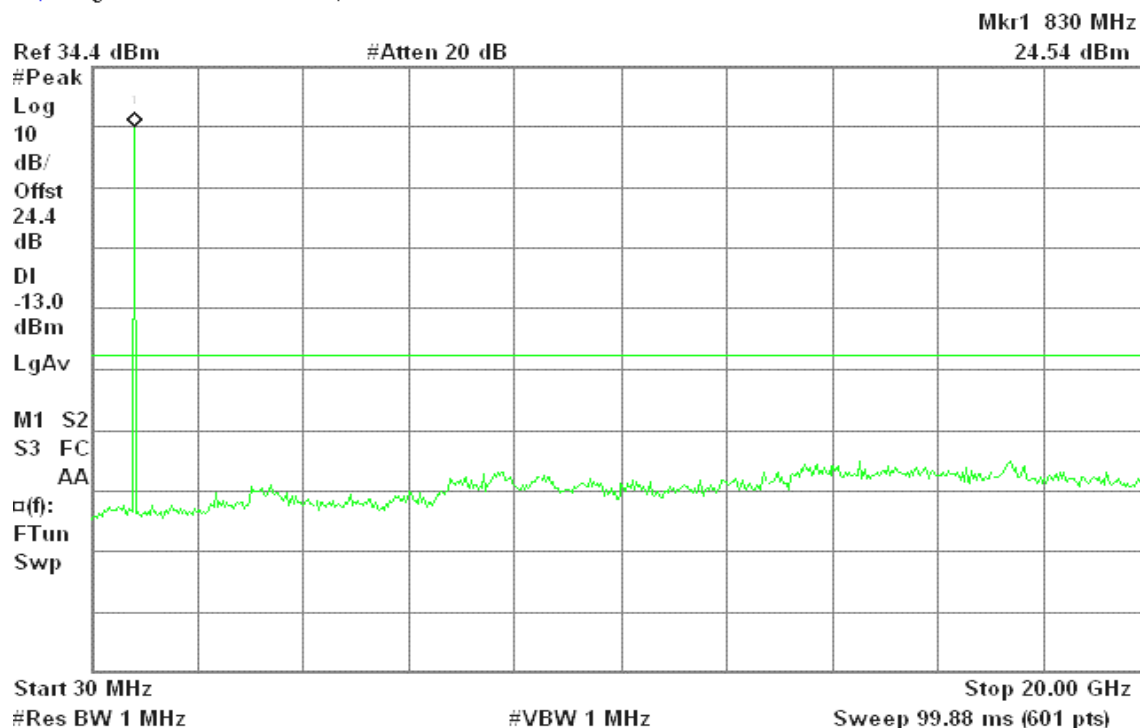






Figure 13-5: Out of Band emission at antenna terminals – WCDMA CH Mid

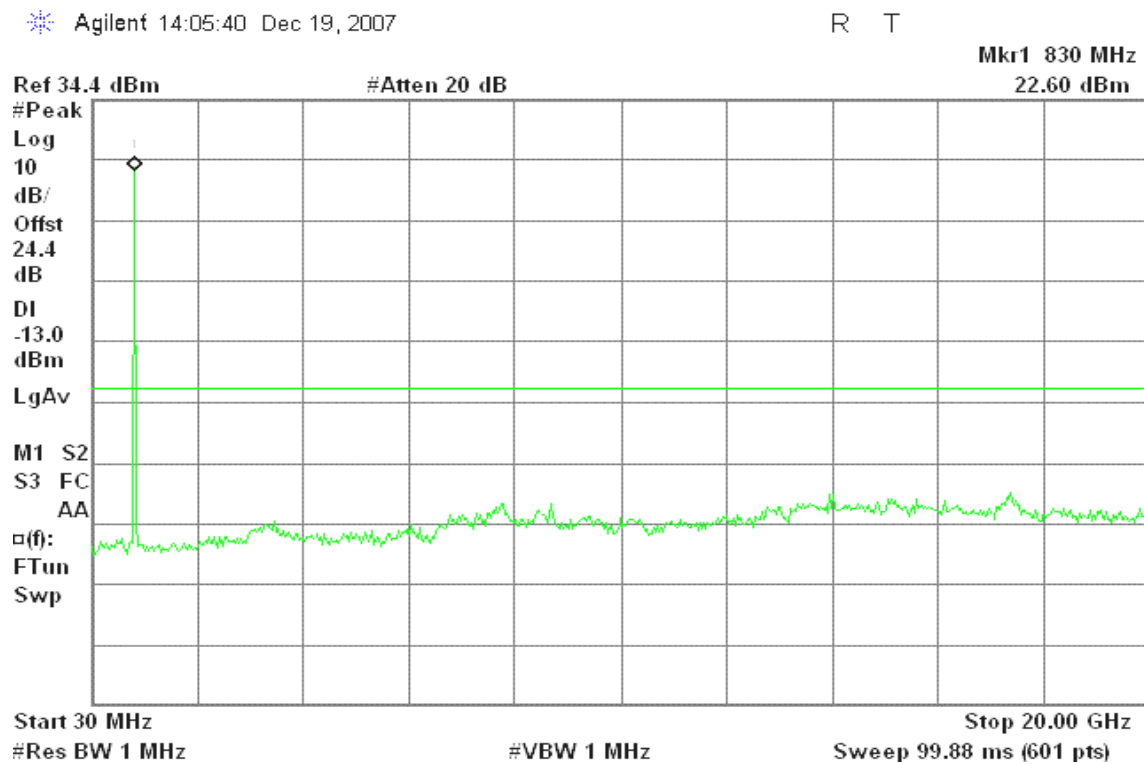
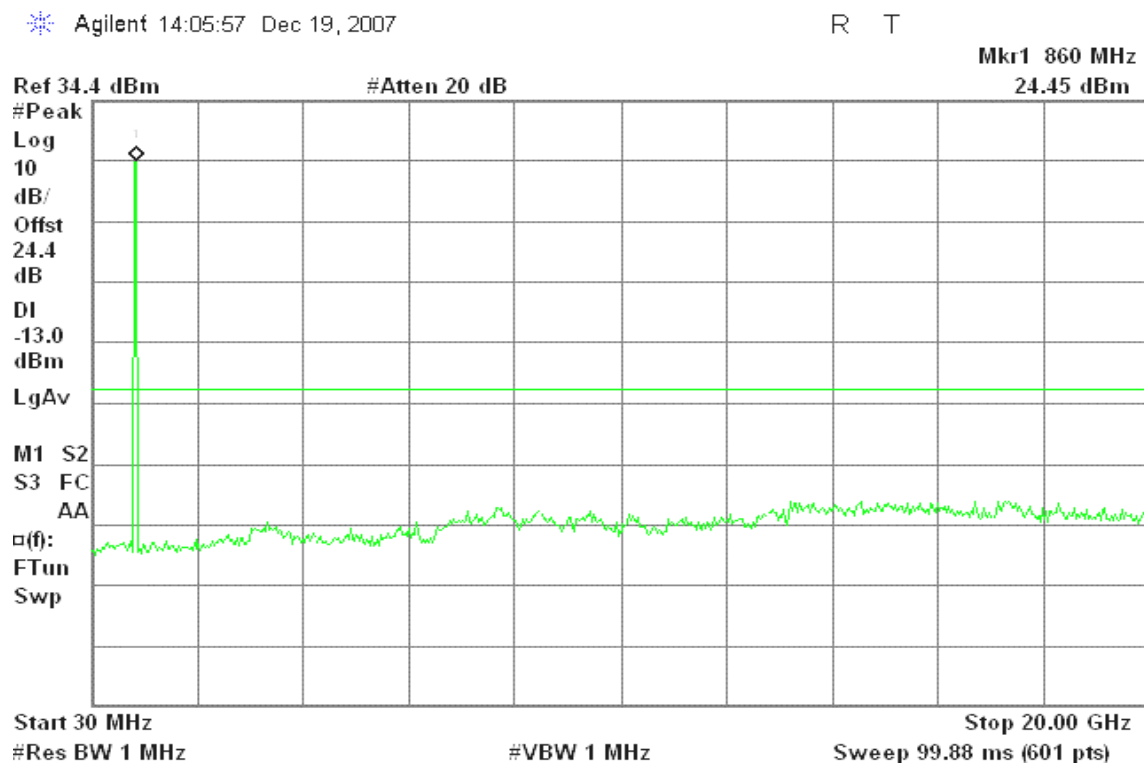


Figure 13-6: Out of Band emission at antenna terminals – WCDMA CH High





## WCDMA Band II

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

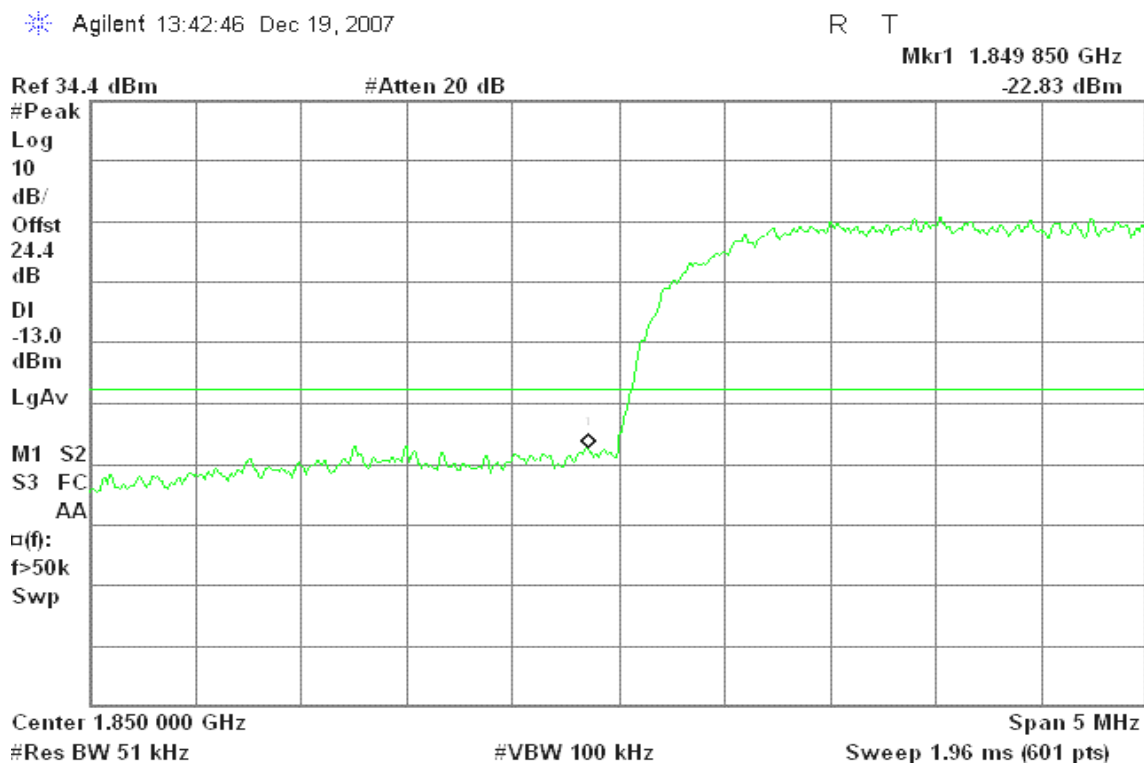
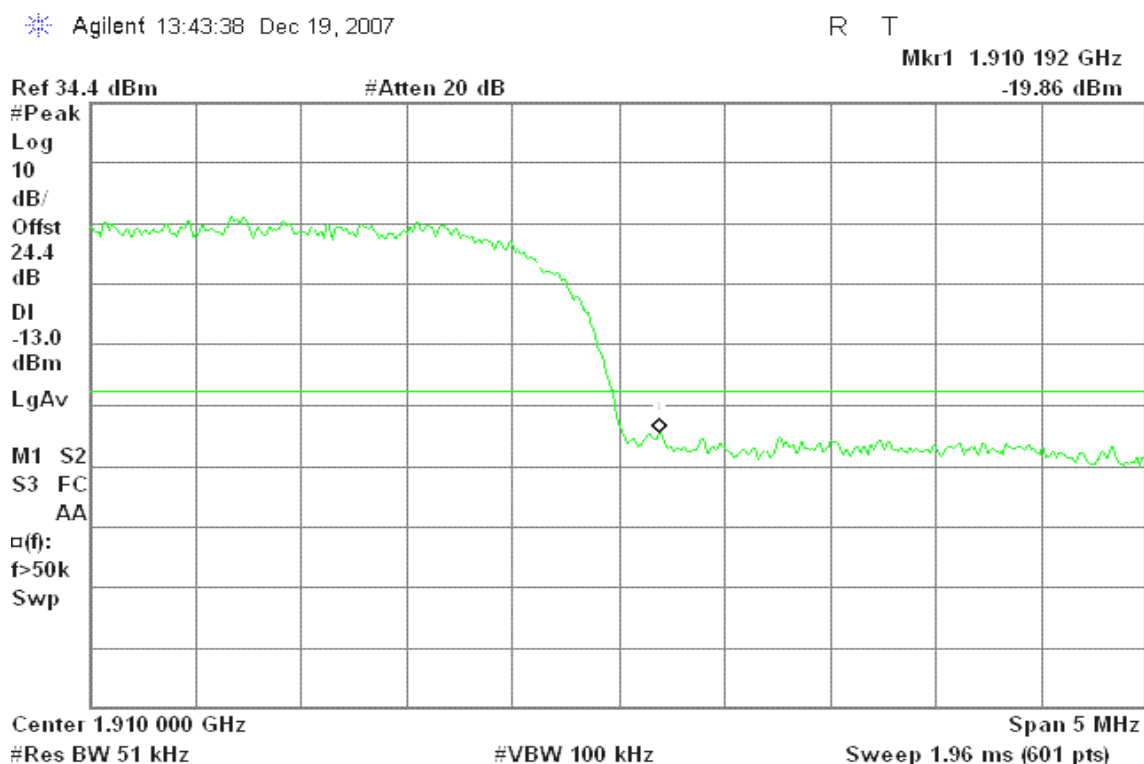


Figure 14-2: Band Edge emissions –WCDMA CH High





## WCDMA Band V

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

Agilent 13:42:08 Dec 19, 2007

R T

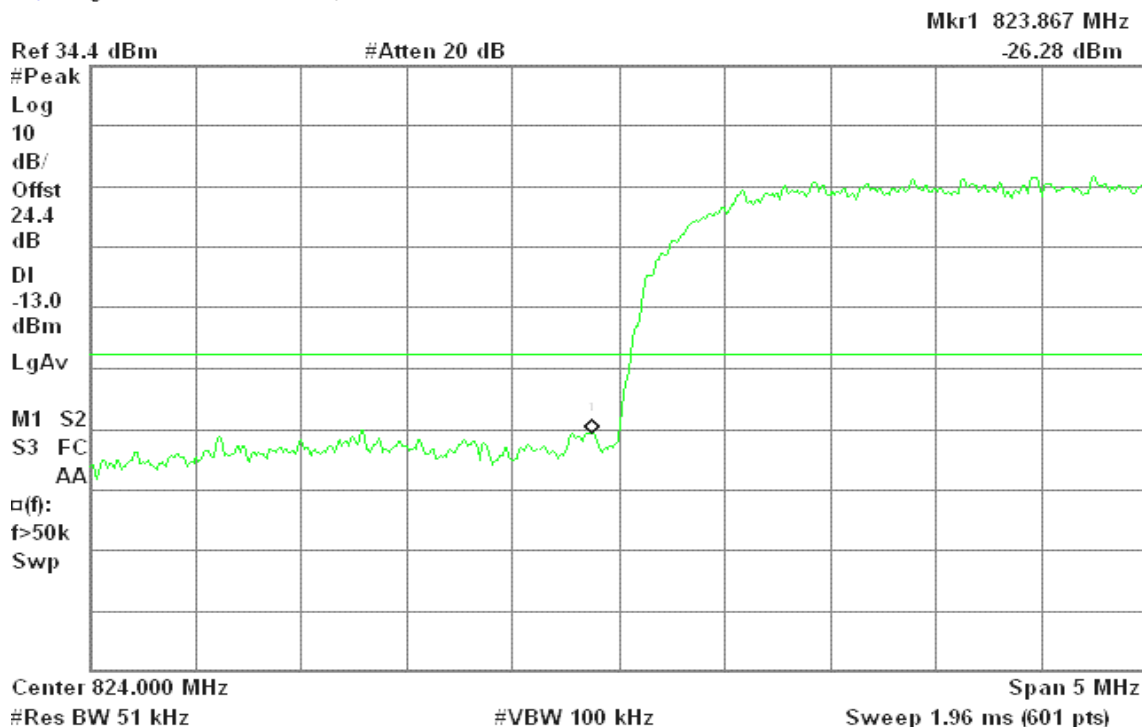
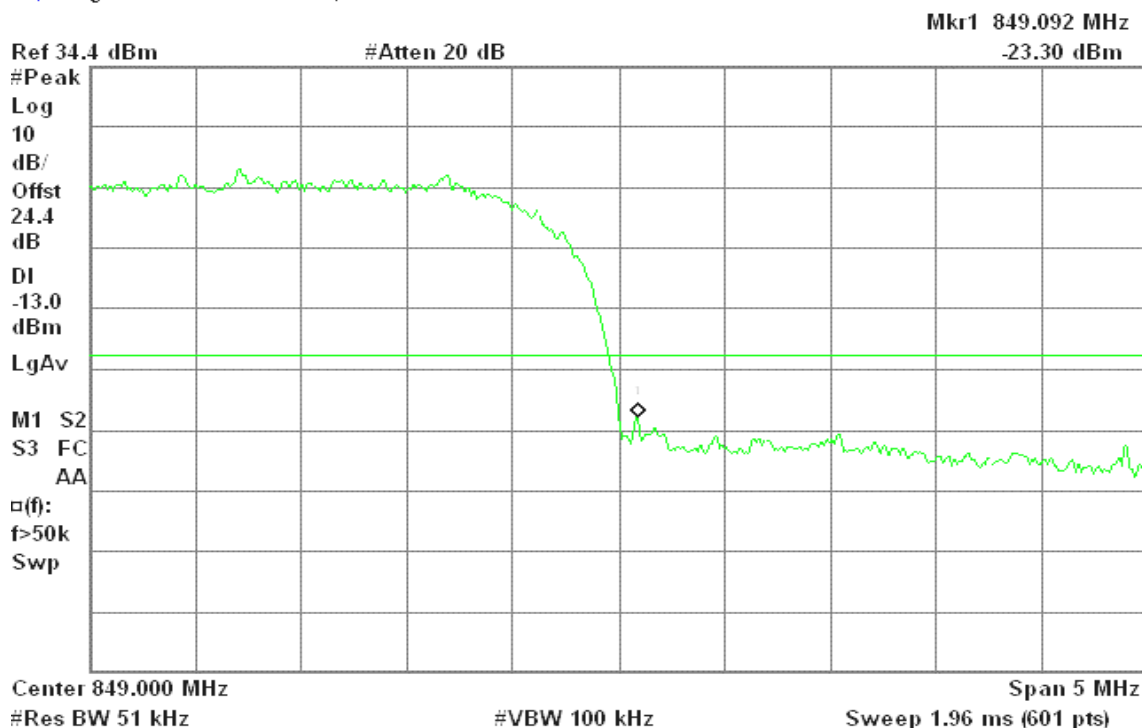


Figure 14-4: Band Edge emissions –WCDMA CH High

Agilent 13:40:57 Dec 19, 2007

R T





## WCDMA / HSDPA Band II

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

Agilent 15:04:28 Dec 27, 2007

R T

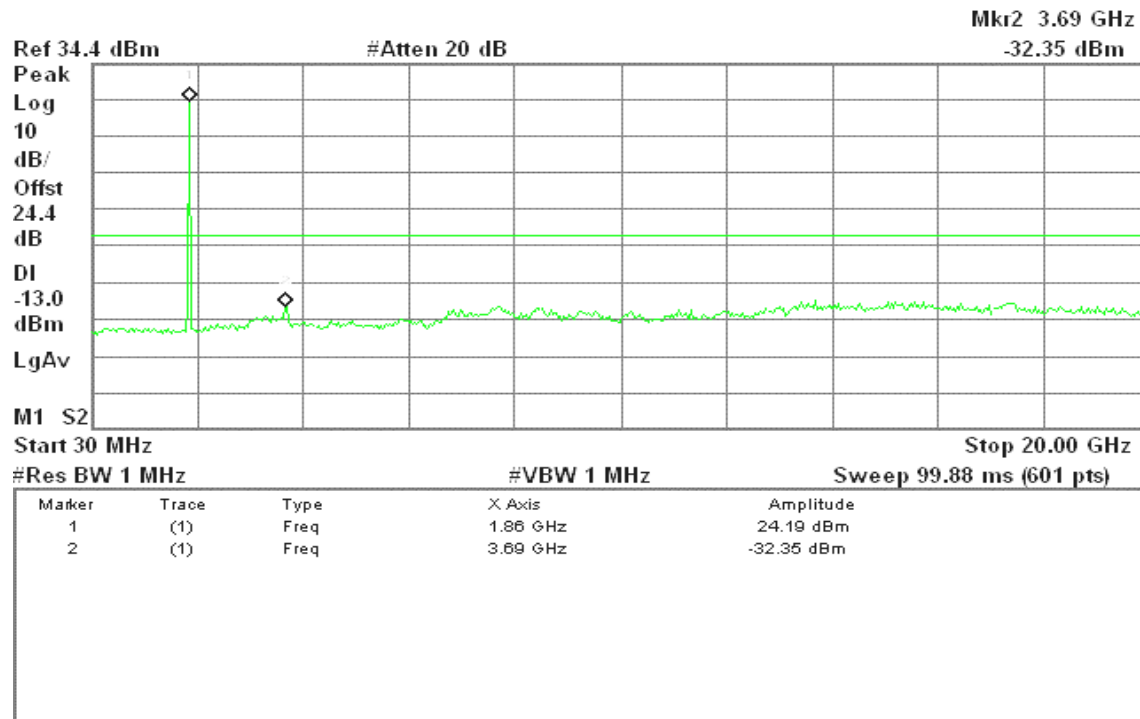


Figure 15-2: Out of Band emission at antenna terminals – HSDPA CH Mid

Agilent 15:03:48 Dec 27, 2007

R T

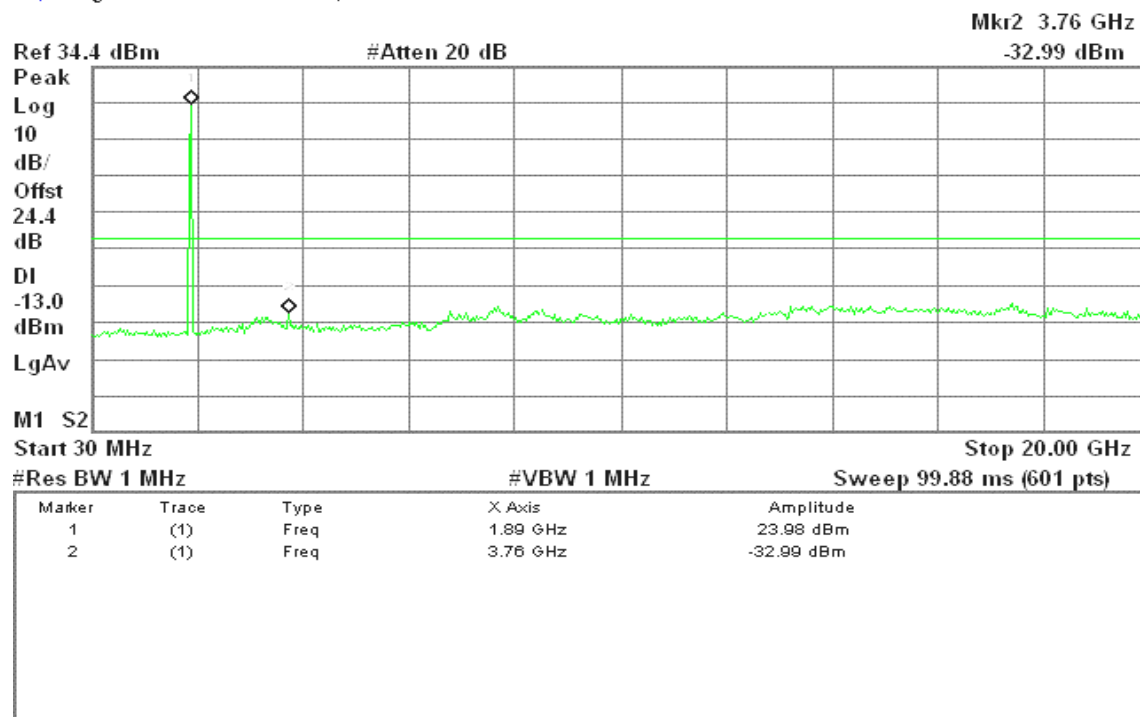
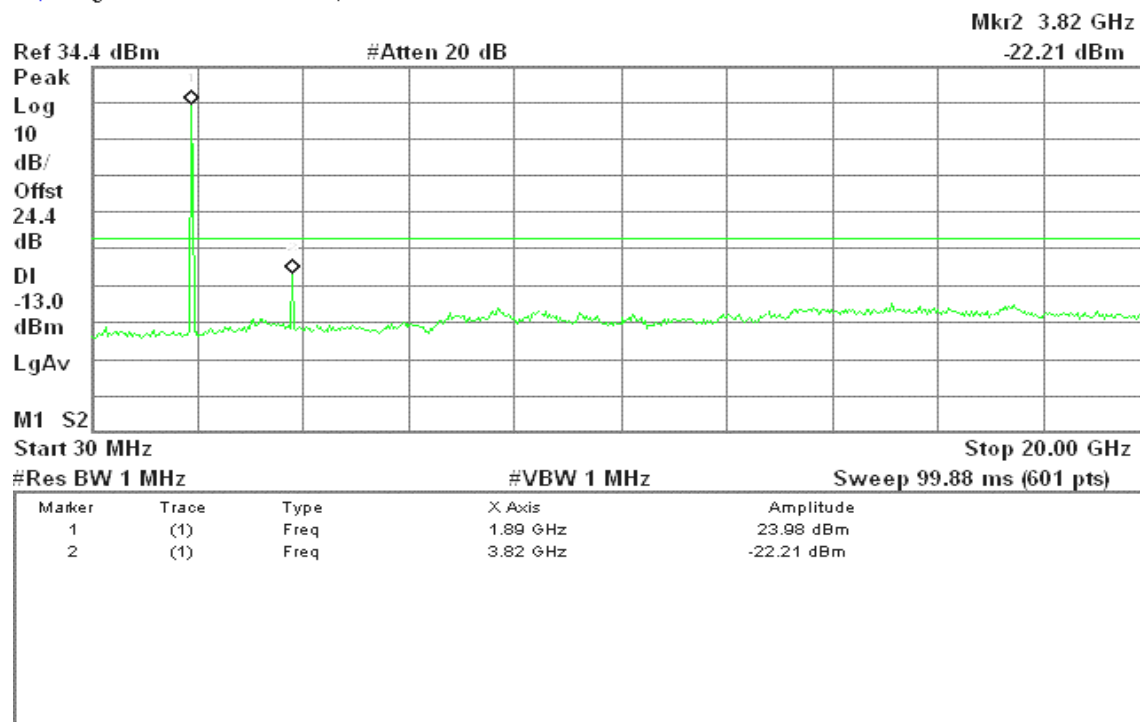




Figure 15-3: Out of Band emission at antenna terminals – HSDPA CH High

\* Agilent 15:03:12 Dec 27, 2007

R T



### WCDMA / HSDPA Band V

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

\* Agilent 15:02:27 Dec 27, 2007

R T

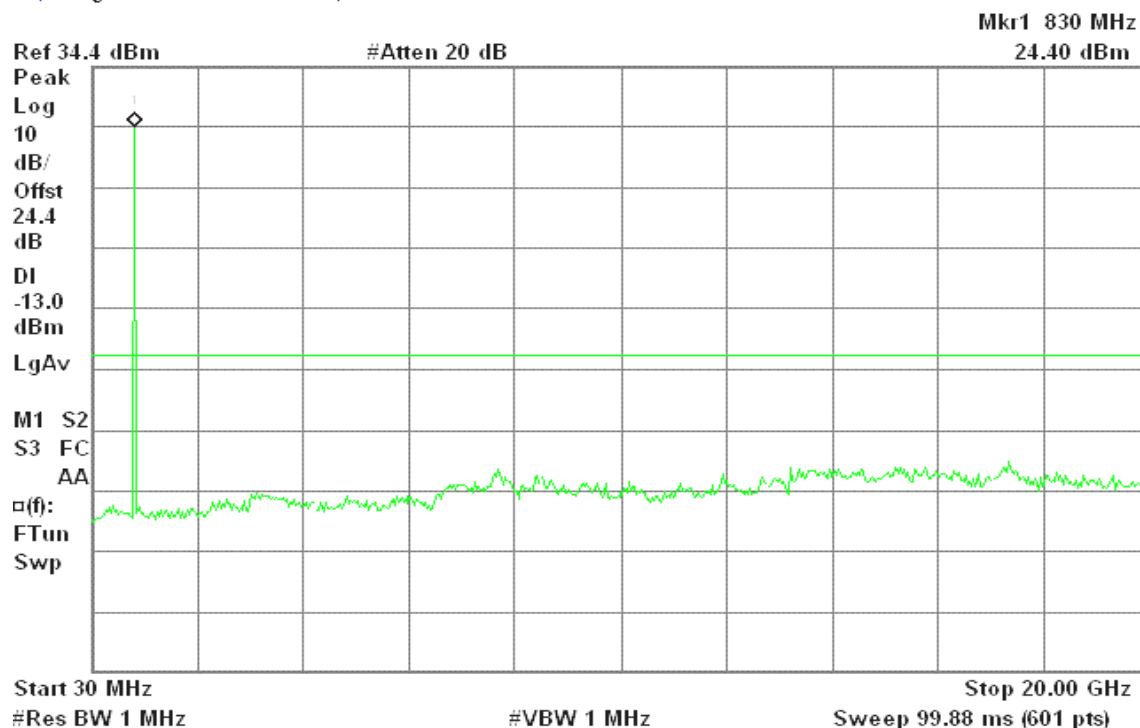




Figure 15-5: Out of Band emission at antenna terminals – HSDPA CH Mid

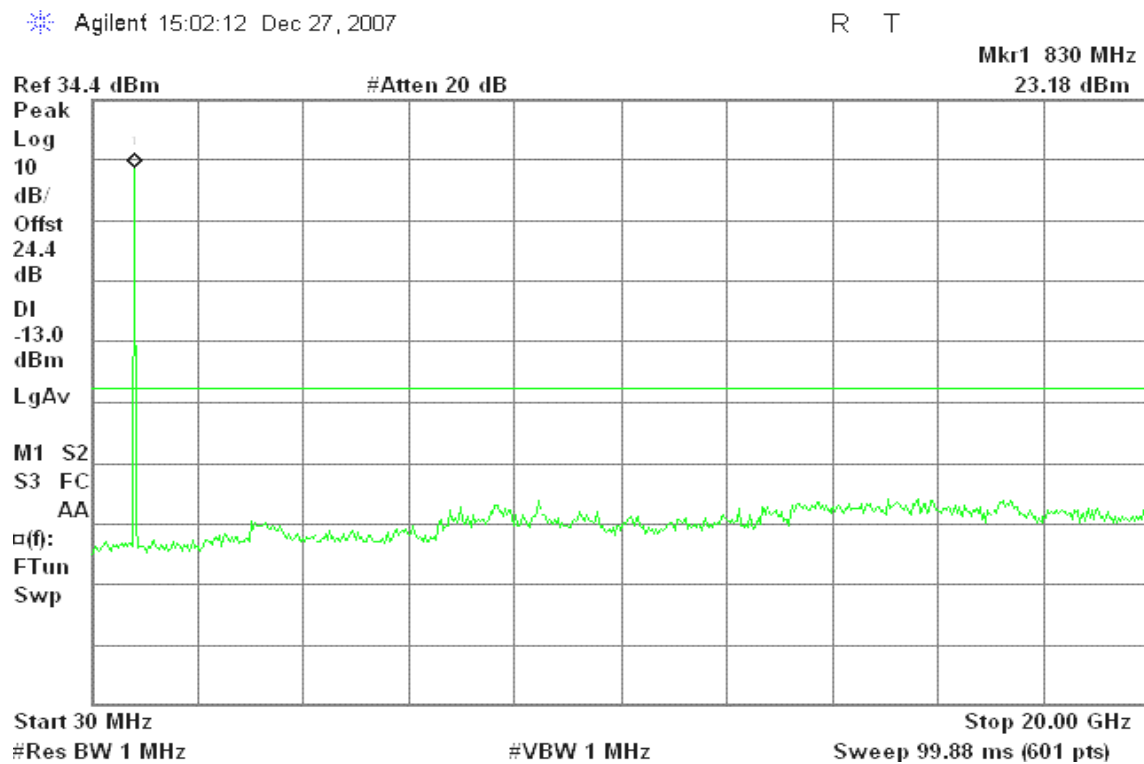
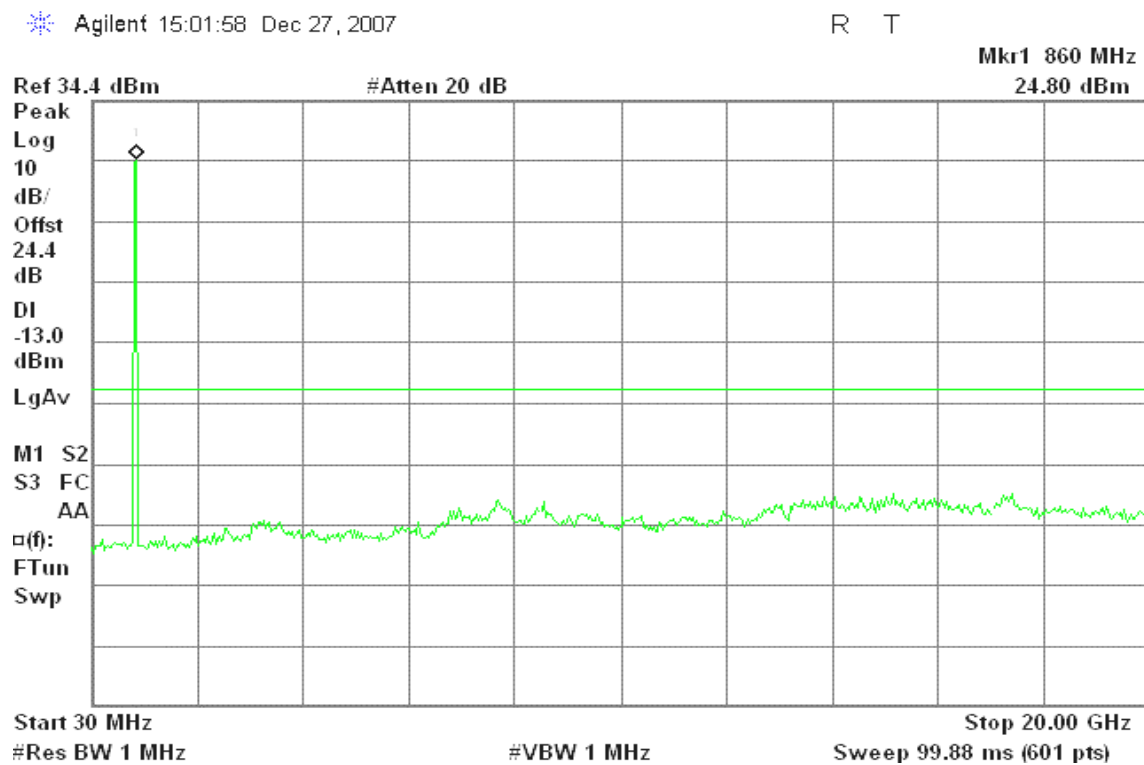


Figure 15-6: Out of Band emission at antenna terminals – HSDPA CH High





## WCDMA / HSDPA Band II

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

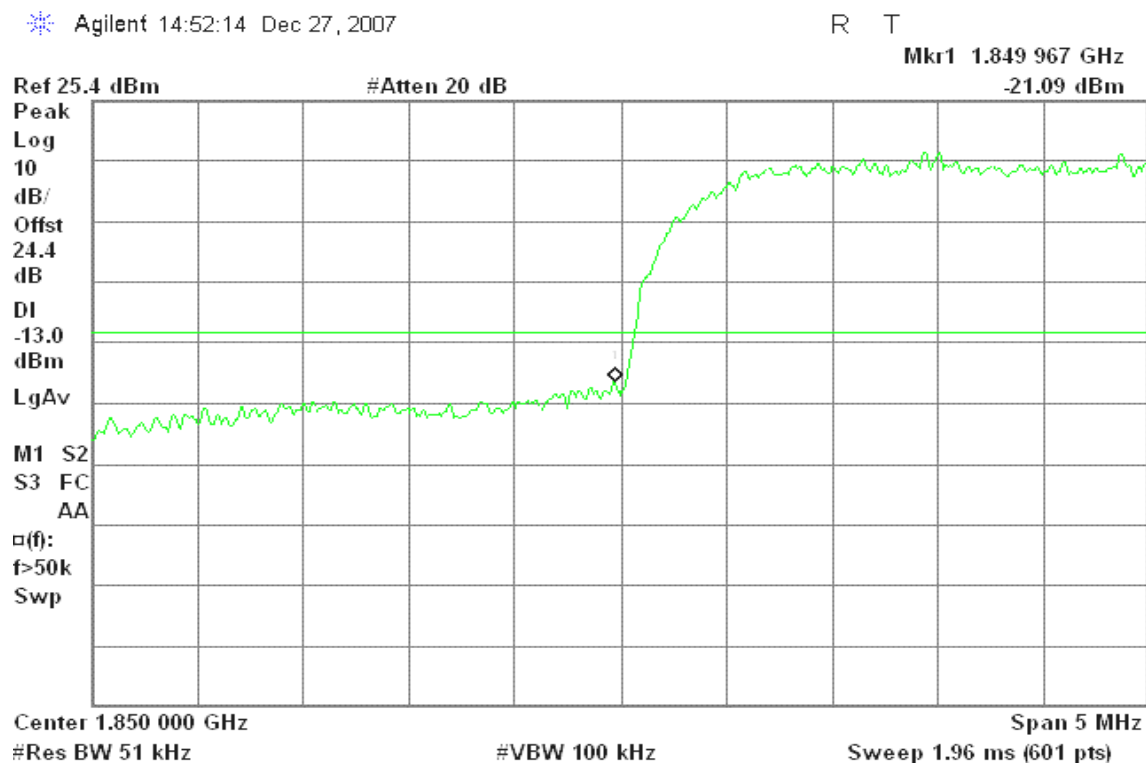
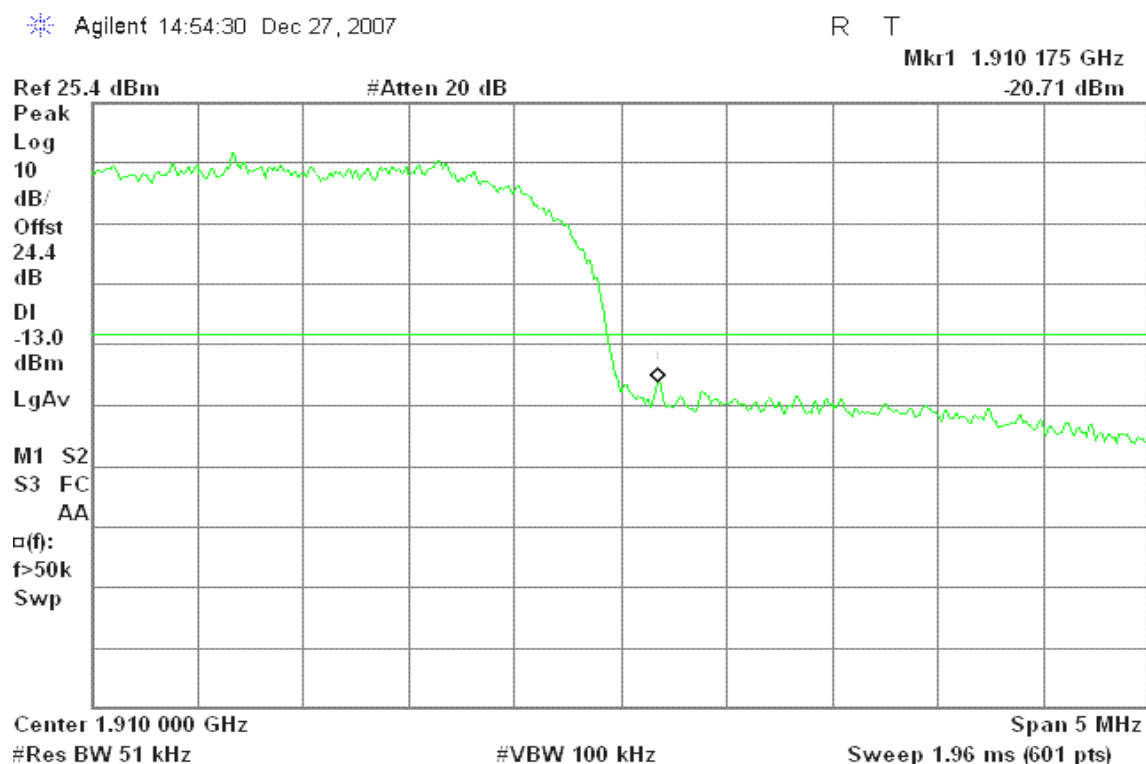


Figure 16-2: Band Edge emissions – HSDPA CH High





## WCDMA / HSDPA Band V

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

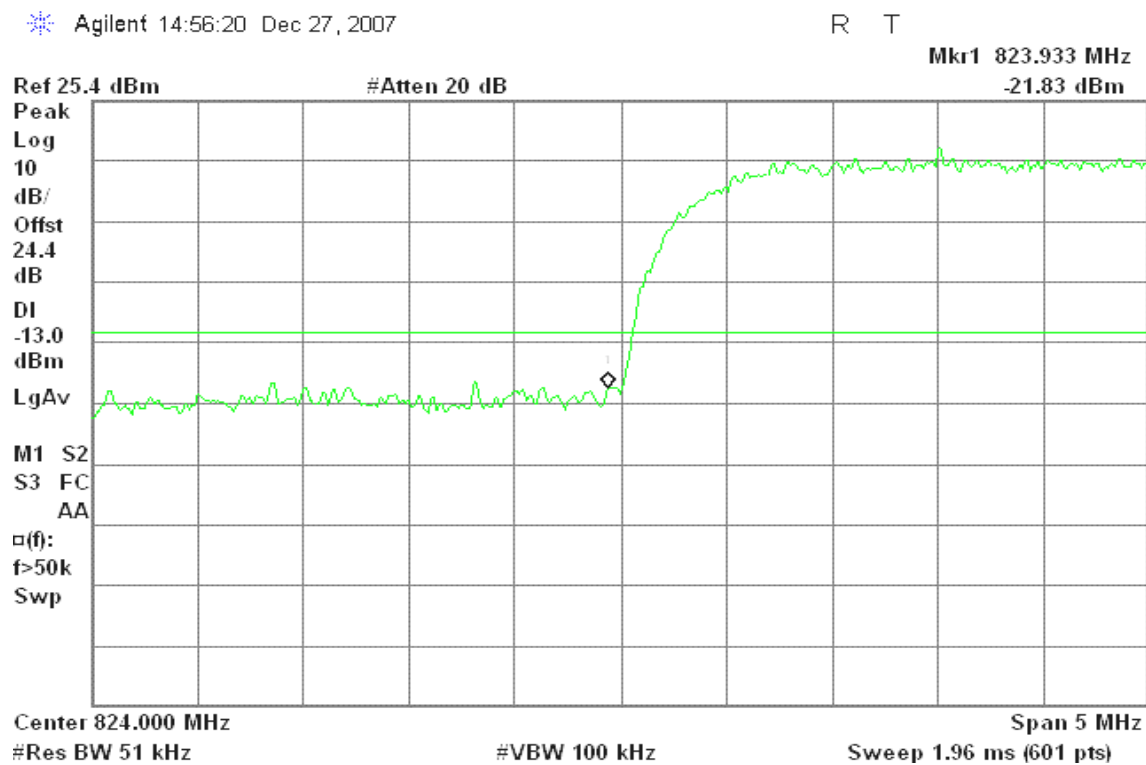
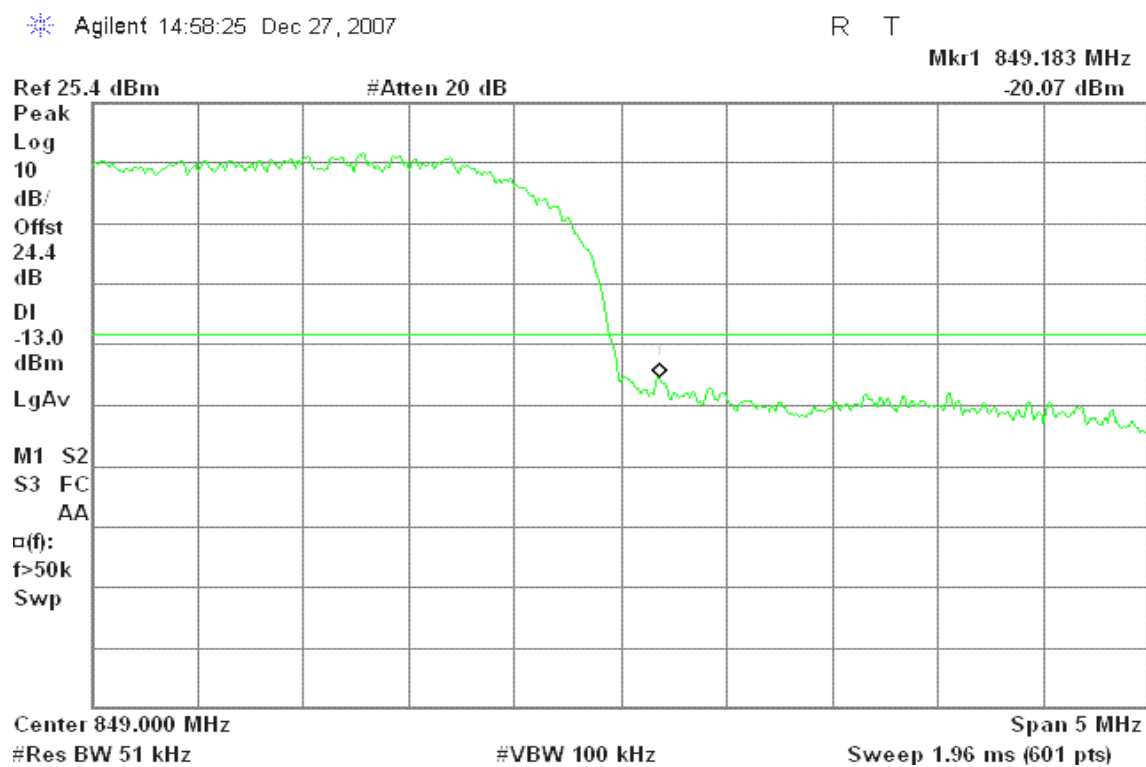


Figure 16-4: Band Edge emissions – HSDPA CH High







## WCDMA / HSUPA Band II

Figure 17-1: Out of Band emission at antenna terminals – HSUPA CH Low

Agilent 09:11:24 Jan 12, 2008

R T

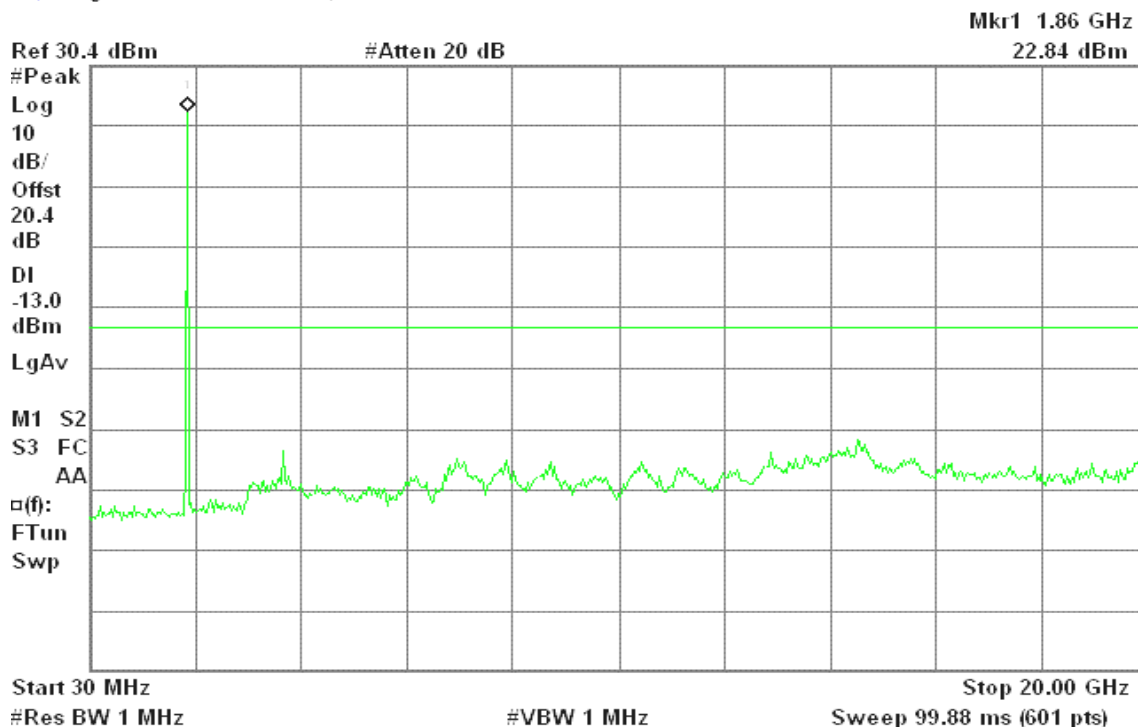


Figure 17-2: Out of Band emission at antenna terminals – HSUPA CH Mid

Agilent 09:10:09 Jan 12, 2008

R T

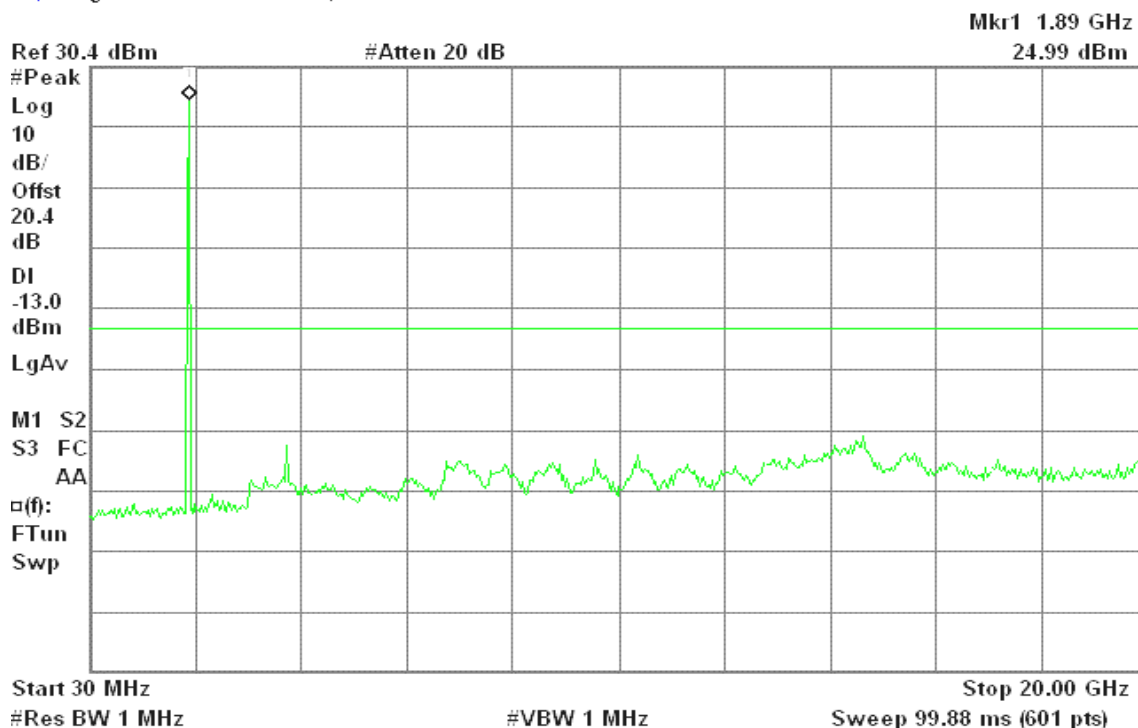
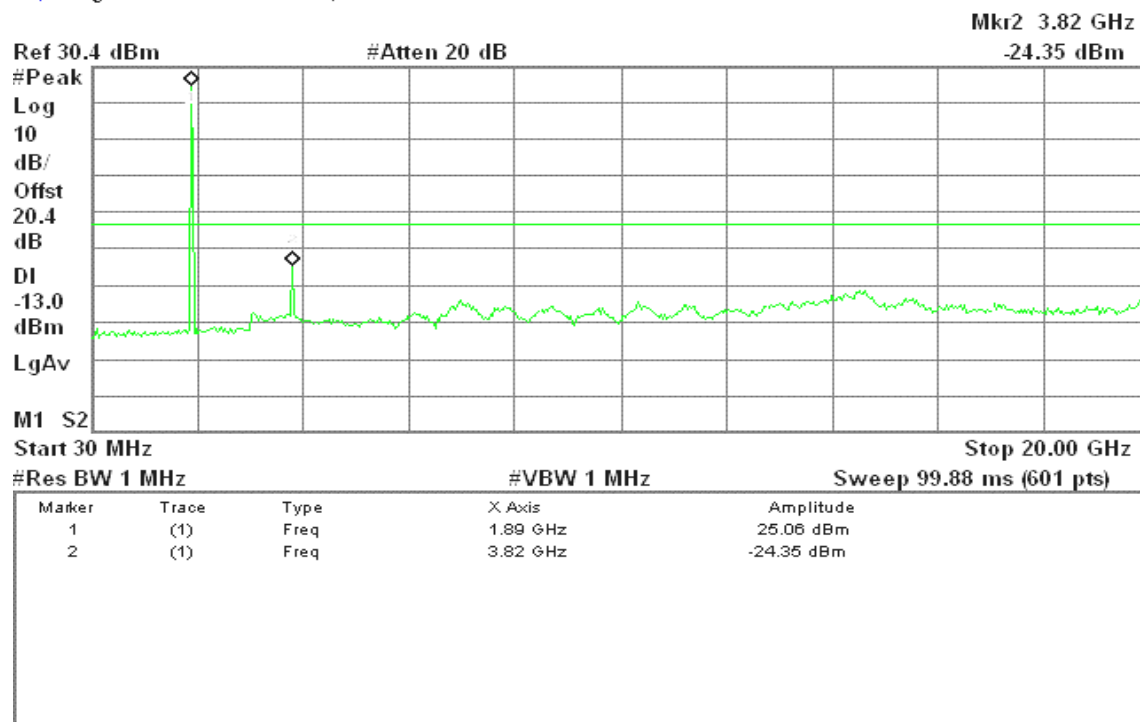




Figure 15-3: Out of Band emission at antenna terminals – HSUPA CH High

\* Agilent 09:16:39 Jan 12, 2008

R T



### HSUPA / WCDMA Band V

Figure 17-4: Out of Band emission at antenna terminals – HSUPA CH Low

\* Agilent 09:01:56 Jan 12, 2008

R T

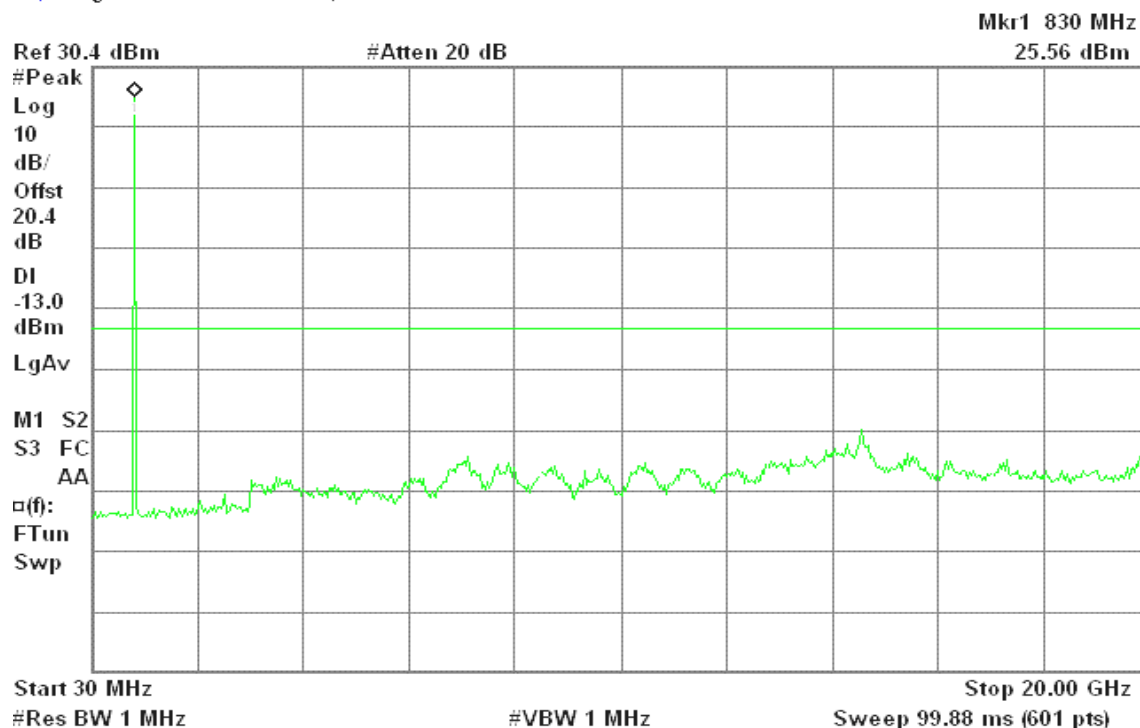




Figure 17-5: Out of Band emission at antenna terminals – HSUPA CH Mid

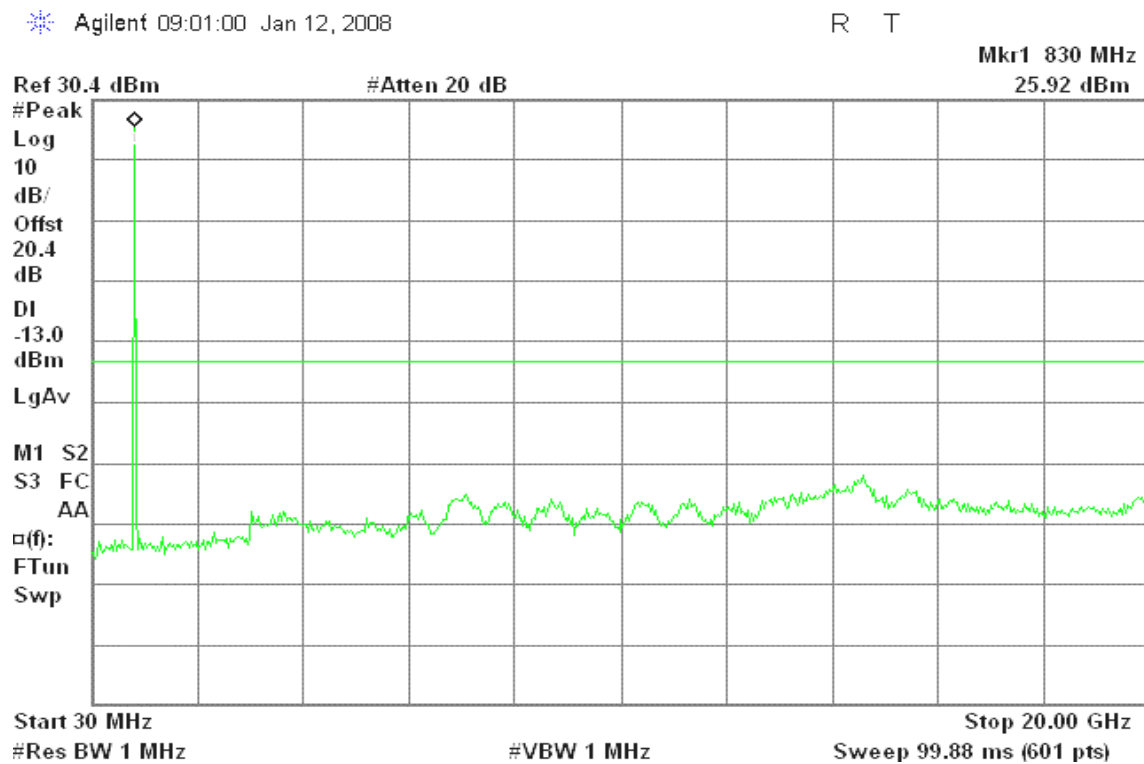
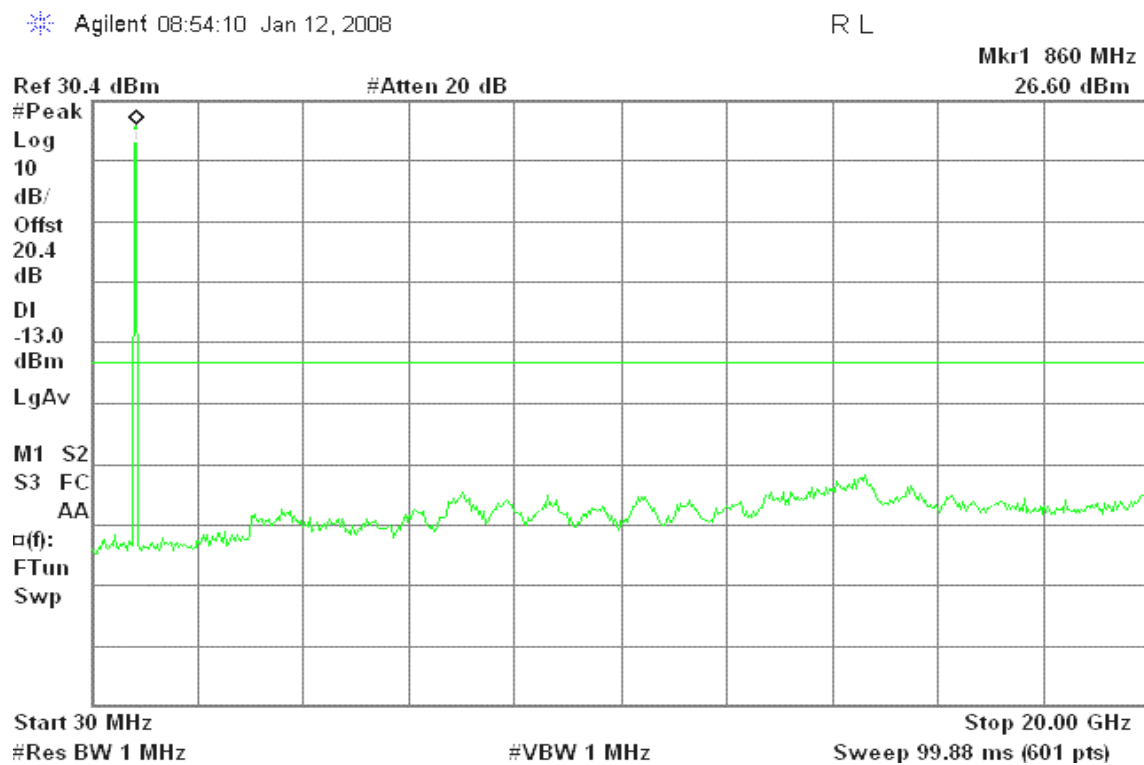


Figure 17-6: Out of Band emission at antenna terminals – HSUPA CH High





## WCDMA / HSUPA Band II

Figure 18-1: Band Edge emissions – HSUPA CH Low

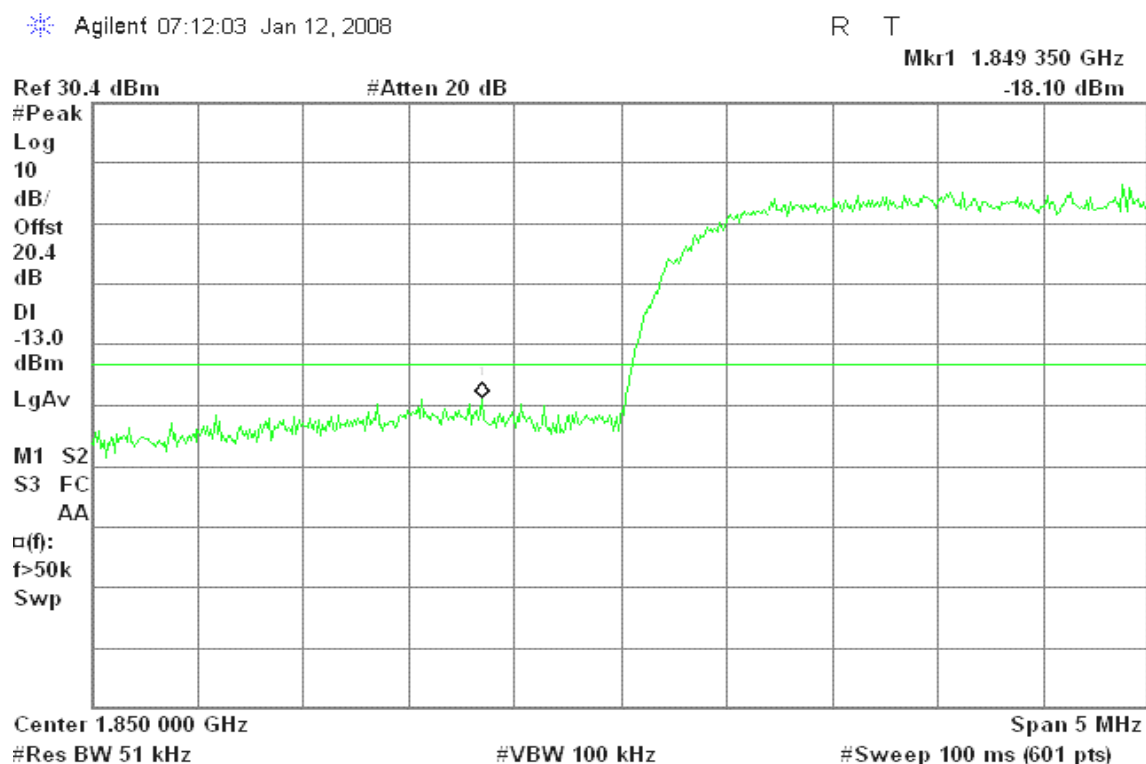
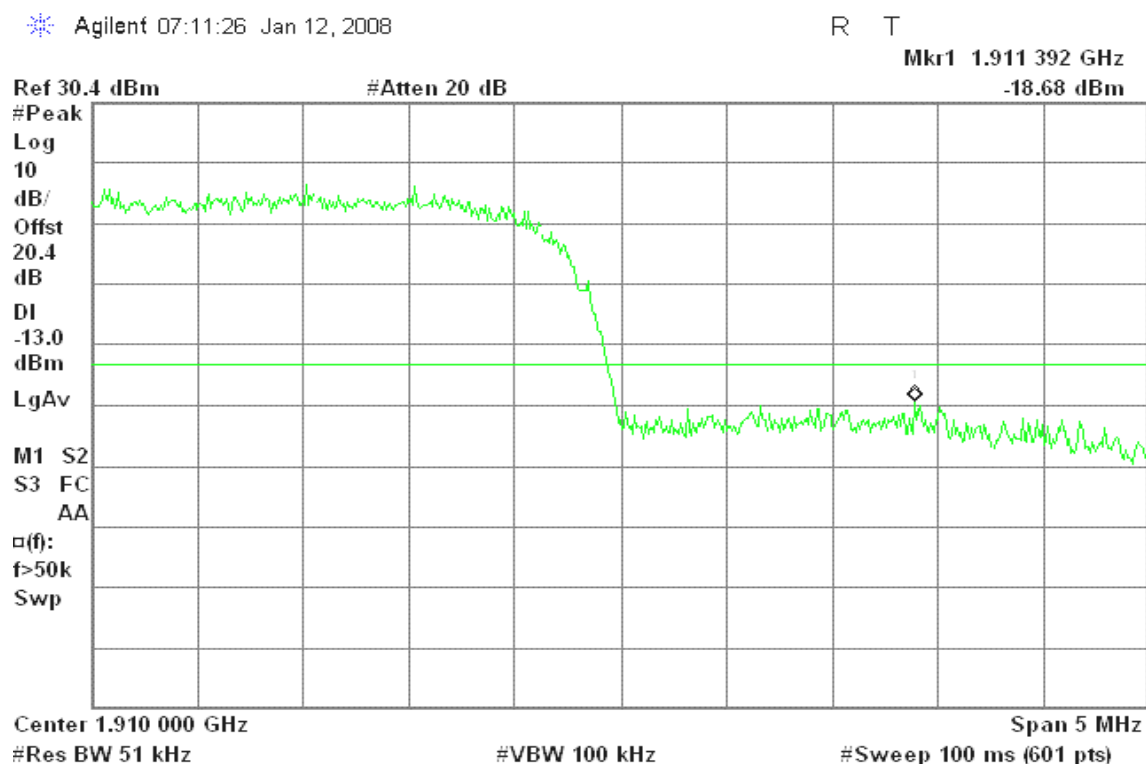


Figure 18-2: Band Edge emissions – HSUPA CH High





## WCDMA / HSUPA Band V

Figure 18-3: Band Edge emissions – HSUPA CH Low

Agilent 07:17:03 Jan 12, 2008

R T

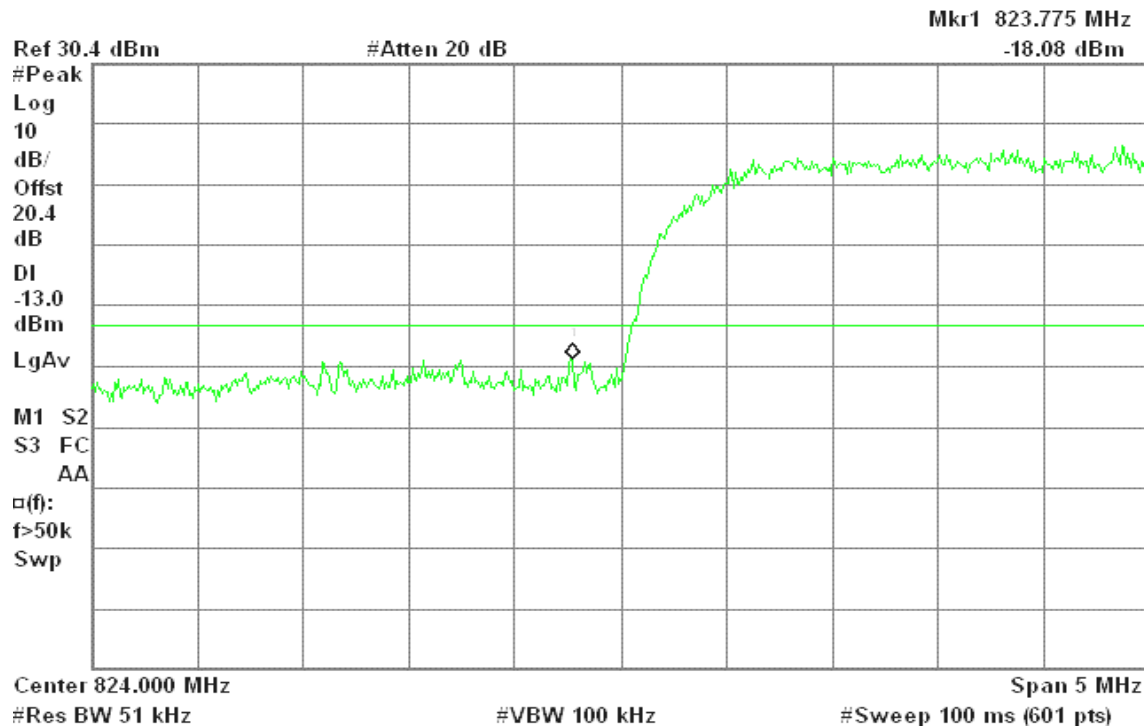
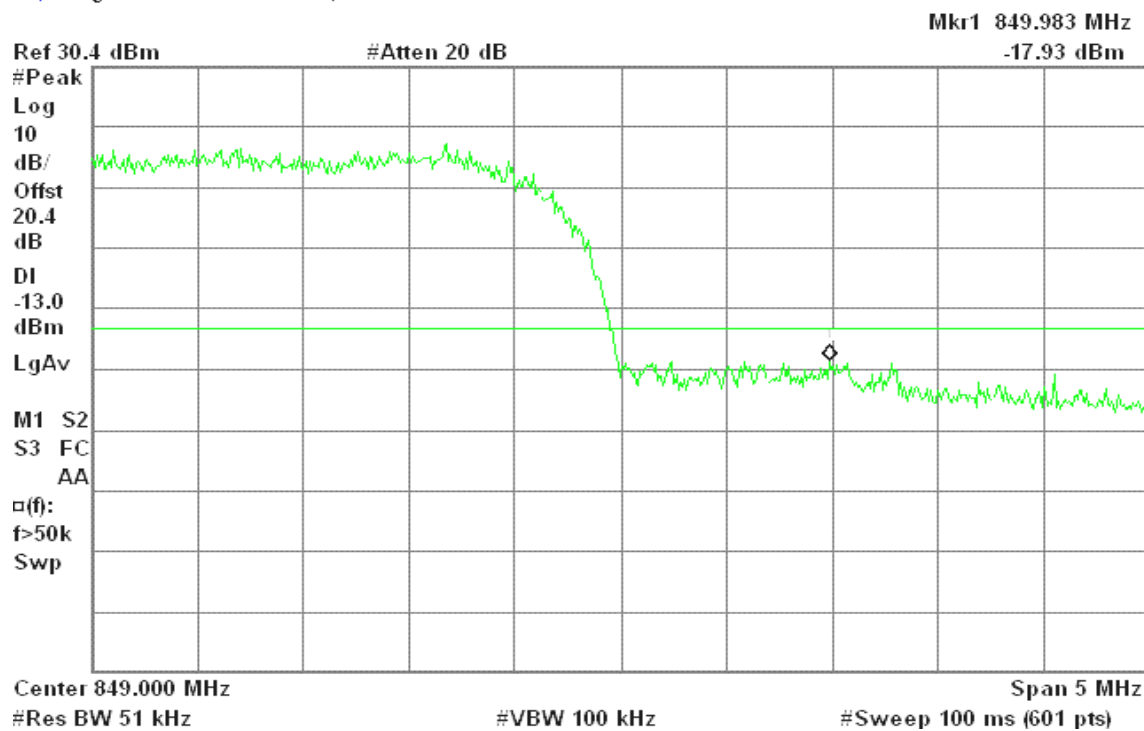


Figure 18-4: Band Edge emissions – HSUPA CH High

Agilent 08:44:00 Jan 12, 2008

R T



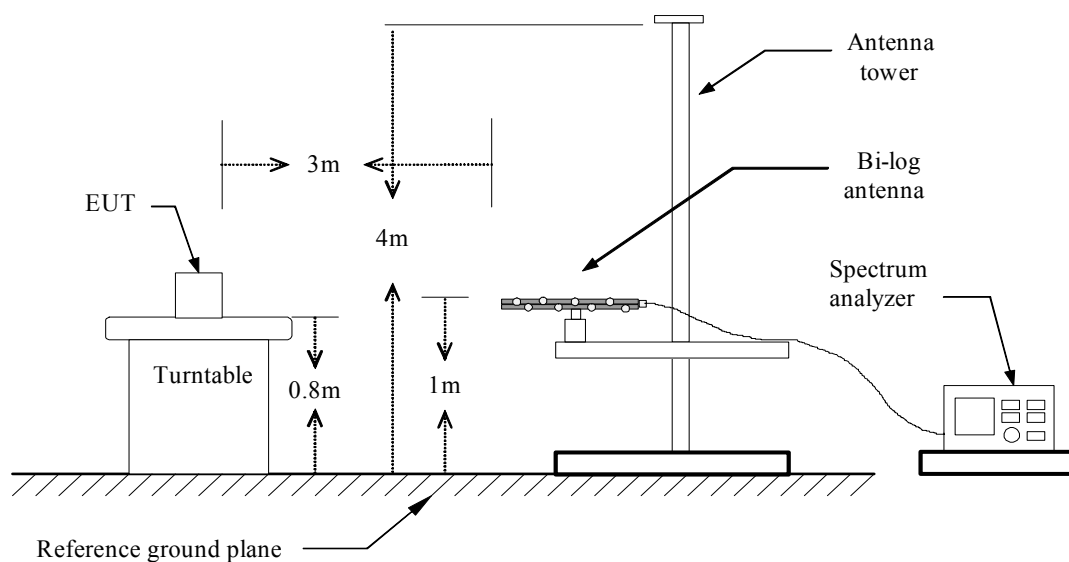
## 7.5 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

### LIMIT

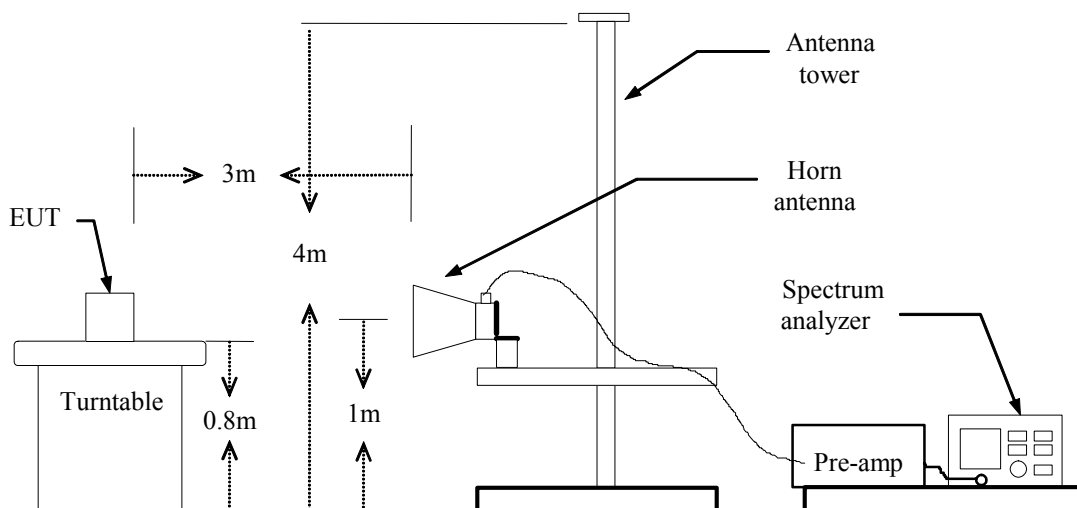
According to FCC §2.1053

### Test Configuration

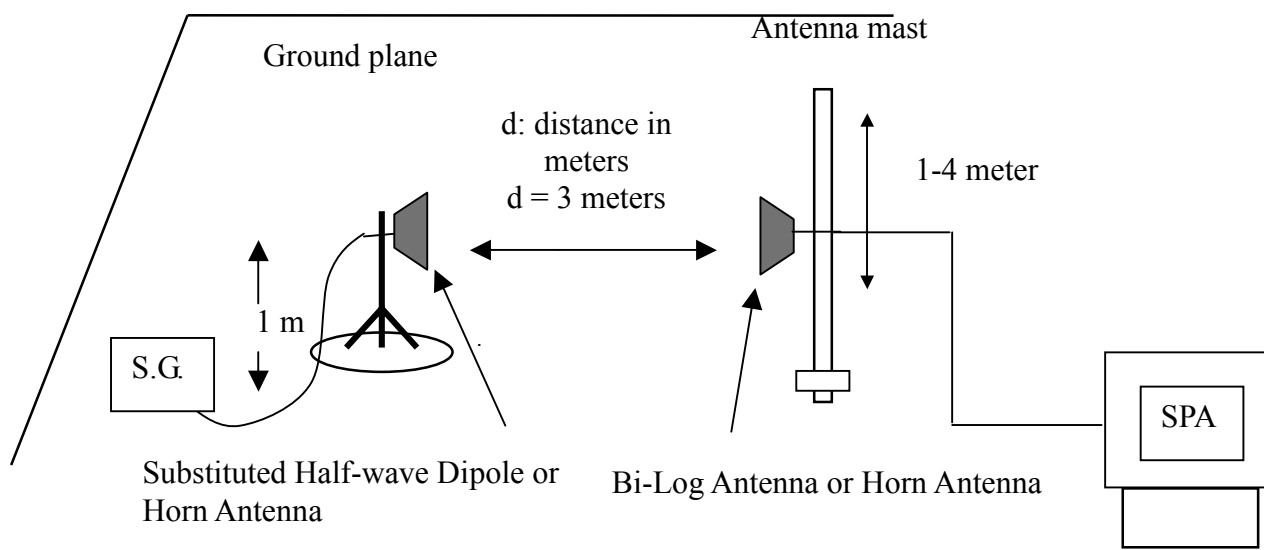
#### Below 1 GHz



#### 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.

$$\text{ERP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBd)} - \text{Cable (dB)}$$

$$\text{EIRP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable (dB)}$$

## TEST RESULTS

*Refer to the attached tabular data sheets.*

**Radiated Spurious Emission Measurement Result / Below 1GHz****Operation Mode:** GSM 850 / TX / CH 128**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % 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	-57.70	-8.80	-66.50	-13.00	-53.50
99.84	V	-47.52	-19.56	-67.08	-13.00	-54.08
150.28	V	-52.51	-17.50	-70.01	-13.00	-57.01
399.57	V	-59.16	-12.07	-71.24	-13.00	-58.24
512.09	V	-58.08	-8.44	-66.52	-13.00	-53.52
813.76	V	-43.67	-4.56	-48.23	-13.00	-35.23
39.70	H	-58.66	-3.96	-62.61	-13.00	-49.61
181.32	H	-49.26	-16.95	-66.21	-13.00	-53.21
407.33	H	-52.07	-10.33	-62.40	-13.00	-49.40
512.09	H	-60.06	-8.27	-68.33	-13.00	-55.33
682.81	H	-58.28	-5.95	-64.23	-13.00	-51.23
813.76	H	-42.91	-4.79	-47.69	-13.00	-34.69

**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:** GSM 850 / TX / CH 190**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
54.25	V	-60.34	-6.99	-67.33	-13.00	-54.33
140.58	V	-54.92	-17.36	-72.28	-13.00	-59.28
181.32	V	-52.89	-18.21	-71.10	-13.00	-58.10
548.95	V	-64.47	-7.99	-72.47	-13.00	-59.47
826.37	V	-47.37	-4.46	-51.83	-13.00	-38.83
967.99	V	-63.95	-3.01	-66.96	-13.00	-53.96
130.88	H	-44.96	-17.33	-62.29	-13.00	-49.29
181.32	H	-49.68	-16.95	-66.63	-13.00	-53.63
452.92	H	-55.97	-9.22	-65.19	-13.00	-52.19
522.76	H	-59.04	-8.03	-67.07	-13.00	-54.07
825.40	H	-42.96	-4.71	-47.66	-13.00	-34.66
967.02	H	-59.08	-2.76	-61.84	-13.00	-48.84

**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:** GSM 850 / TX / CH 251**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
41.64	V	-59.08	-8.66	-67.74	-13.00	-54.74
118.27	V	-53.37	-20.06	-73.43	-13.00	-60.43
140.58	V	-56.11	-17.36	-73.47	-13.00	-60.47
180.35	V	-51.53	-18.24	-69.77	-13.00	-56.77
260.86	V	-62.33	-15.46	-77.80	-13.00	-64.80
838.01	V	-59.81	-4.32	-64.14	-13.00	-51.14
40.67	H	-58.48	-3.89	-62.37	-13.00	-49.37
127.97	H	-51.10	-18.00	-69.10	-13.00	-56.10
180.35	H	-49.17	-16.93	-66.10	-13.00	-53.10
221.09	H	-60.95	-14.85	-75.80	-13.00	-62.80
242.43	H	-62.00	-14.70	-76.70	-13.00	-63.70
838.01	H	-48.79	-4.18	-52.97	-13.00	-39.97

**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 128**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
48.43	V	-61.16	-6.65	-67.81	-13.00	-54.81
99.84	V	-46.88	-19.56	-66.43	-13.00	-53.43
180.35	V	-51.49	-18.24	-69.73	-13.00	-56.73
408.30	V	-57.76	-11.71	-69.47	-13.00	-56.47
512.09	V	-57.41	-8.44	-65.85	-13.00	-52.85
813.76	V	-43.78	-4.56	-48.34	-13.00	-35.34
39.70	H	-58.83	-3.96	-62.78	-13.00	-49.78
99.84	H	-44.53	-18.98	-63.51	-13.00	-50.51
180.35	H	-48.03	-16.93	-64.96	-13.00	-51.96
407.33	H	-52.17	-10.33	-62.50	-13.00	-49.50
681.84	H	-58.53	-5.98	-64.51	-13.00	-51.51
813.76	H	-42.86	-4.79	-47.65	-13.00	-34.65

**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 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
39.70	V	-58.52	-9.13	-67.65	-13.00	-54.65
110.51	V	-51.76	-19.91	-71.67	-13.00	-58.67
140.58	V	-54.30	-17.36	-71.66	-13.00	-58.66
170.65	V	-50.30	-18.91	-69.21	-13.00	-56.21
825.40	V	-45.98	-4.47	-50.44	-13.00	-37.44
967.99	V	-63.66	-3.01	-66.68	-13.00	-53.68
39.70	H	-58.47	-3.96	-62.42	-13.00	-49.42
130.88	H	-44.89	-17.33	-62.22	-13.00	-49.22
180.35	H	-48.94	-16.93	-65.87	-13.00	-52.87
452.92	H	-56.85	-9.22	-66.07	-13.00	-53.07
825.40	H	-42.68	-4.71	-47.39	-13.00	-34.39
967.99	H	-58.75	-2.74	-61.49	-13.00	-48.49

**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 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
39.70	V	-57.03	-9.13	-66.16	-13.00	-53.16
129.91	V	-50.39	-19.91	-70.30	-13.00	-57.30
150.28	V	-53.91	-17.50	-71.41	-13.00	-58.41
180.35	V	-51.15	-18.24	-69.38	-13.00	-56.38
259.89	V	-62.12	-15.48	-77.61	-13.00	-64.61
838.01	V	-59.07	-4.32	-63.39	-13.00	-50.39
40.67	H	-58.84	-3.89	-62.73	-13.00	-49.73
110.51	H	-51.16	-19.30	-70.46	-13.00	-57.46
129.91	H	-47.88	-17.36	-65.24	-13.00	-52.24
180.35	H	-48.63	-16.93	-65.57	-13.00	-52.57
240.49	H	-60.81	-14.87	-75.69	-13.00	-62.69
838.01	H	-48.00	-4.18	-52.18	-13.00	-39.18

**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:** GSM 1900 / TX / CH 512**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
39.70	V	-41.44	-9.13	-50.57	-13.00	-37.57
55.22	V	-49.93	-7.23	-57.16	-13.00	-44.16
78.50	V	-48.58	-14.52	-63.10	-13.00	-50.10
117.30	V	-44.32	-20.04	-64.36	-13.00	-51.36
169.68	V	-47.24	-18.97	-66.21	-13.00	-53.21
222.06	V	-49.37	-16.49	-65.86	-13.00	-52.86
39.70	H	-43.15	-3.96	-47.10	-13.00	-34.10
56.19	H	-50.21	-6.21	-56.42	-13.00	-43.42
115.36	H	-42.21	-19.98	-62.19	-13.00	-49.19
132.82	H	-46.08	-17.31	-63.38	-13.00	-50.38
181.32	H	-45.67	-16.95	-62.62	-13.00	-49.62
245.34	H	-52.89	-14.44	-67.32	-13.00	-54.32

**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:** GSM 1900 / TX / CH 661**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
39.70	V	-41.49	-9.13	-50.62	-13.00	-37.62
56.19	V	-50.14	-7.47	-57.61	-13.00	-44.61
111.48	V	-43.22	-19.93	-63.15	-13.00	-50.15
135.73	V	-43.97	-18.44	-62.42	-13.00	-49.42
172.59	V	-46.71	-18.77	-65.48	-13.00	-52.48
197.81	V	-48.94	-17.60	-66.55	-13.00	-53.55
39.70	H	-42.69	-3.96	-46.65	-13.00	-33.65
55.22	H	-50.02	-6.31	-56.33	-13.00	-43.33
112.45	H	-43.07	-19.57	-62.64	-13.00	-49.64
133.79	H	-45.44	-17.30	-62.74	-13.00	-49.74
181.32	H	-44.90	-16.95	-61.85	-13.00	-48.85
244.37	H	-52.50	-14.52	-67.03	-13.00	-54.03

**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:** GSM 1900 / TX / CH 810**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % 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	-41.10	-10.63	-51.74	-13.00	-38.74
56.19	V	-50.51	-7.47	-57.97	-13.00	-44.97
115.36	V	-43.56	-20.00	-63.56	-13.00	-50.56
138.64	V	-47.61	-17.70	-65.31	-13.00	-52.31
177.44	V	-47.90	-18.43	-66.33	-13.00	-53.33
228.85	V	-51.88	-16.29	-68.17	-13.00	-55.17
40.67	H	-42.94	-3.89	-46.83	-13.00	-33.83
56.19	H	-50.59	-6.21	-56.80	-13.00	-43.80
115.36	H	-42.97	-19.98	-62.95	-13.00	-49.95
136.70	H	-45.73	-17.27	-63.01	-13.00	-50.01
181.32	H	-44.69	-16.95	-61.64	-13.00	-48.64
226.91	H	-50.05	-15.02	-65.07	-13.00	-52.07

**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 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
38.73	V	-41.20	-9.88	-51.09	-13.00	-38.09
58.13	V	-49.92	-7.94	-57.86	-13.00	-44.86
72.68	V	-49.94	-11.91	-61.86	-13.00	-48.86
110.51	V	-44.49	-19.91	-64.40	-13.00	-51.40
130.88	V	-45.90	-19.68	-65.58	-13.00	-52.58
181.32	V	-47.13	-18.21	-65.34	-13.00	-52.34
39.70	H	-42.00	-3.96	-45.96	-13.00	-32.96
110.51	H	-44.74	-19.30	-64.04	-13.00	-51.04
130.88	H	-44.00	-17.33	-61.32	-13.00	-48.32
150.28	H	-44.49	-18.70	-63.19	-13.00	-50.19
187.14	H	-44.59	-17.04	-61.63	-13.00	-48.63
251.16	H	-52.93	-14.10	-67.03	-13.00	-54.03

**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 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
47.46	V	-38.83	-7.08	-45.92	-13.00	-32.92
116.33	V	-44.45	-20.02	-64.47	-13.00	-51.47
141.55	V	-46.79	-17.37	-64.16	-13.00	-51.16
170.65	V	-44.25	-18.91	-63.16	-13.00	-50.16
191.02	V	-48.06	-17.90	-65.95	-13.00	-52.95
224.00	V	-51.66	-16.44	-68.10	-13.00	-55.10
39.70	H	-42.98	-3.96	-46.94	-13.00	-33.94
130.88	H	-43.84	-17.33	-61.17	-13.00	-48.17
141.55	H	-38.33	-17.47	-55.80	-13.00	-42.80
181.32	H	-44.64	-16.95	-61.59	-13.00	-48.59
251.16	H	-50.95	-14.10	-65.05	-13.00	-52.05
311.30	H	-53.92	-14.11	-68.03	-13.00	-55.03

**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 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % 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	-40.26	-8.38	-48.64	-13.00	-35.64
76.56	V	-48.33	-13.65	-61.98	-13.00	-48.98
110.51	V	-44.92	-19.91	-64.83	-13.00	-51.83
151.25	V	-48.00	-17.70	-65.70	-13.00	-52.70
171.62	V	-46.38	-18.84	-65.23	-13.00	-52.23
196.84	V	-50.19	-17.65	-67.83	-13.00	-54.83
40.67	H	-43.03	-3.89	-46.92	-13.00	-33.92
55.22	H	-50.01	-6.31	-56.32	-13.00	-43.32
113.42	H	-42.81	-19.71	-62.52	-13.00	-49.52
130.88	H	-44.10	-17.33	-61.42	-13.00	-48.42
181.32	H	-43.62	-16.95	-60.57	-13.00	-47.57
251.16	H	-51.44	-14.10	-65.54	-13.00	-52.54

**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:** December 27, 2007**Temperature:** 25°C**Tested by:** Mimic 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)
49.40	V	-57.18	-16.58	-73.76	-13.00	-60.76
202.66	V	-64.74	-14.20	-78.93	-13.00	-65.93
N/A						
130.88	H	-58.67	-15.16	-73.82	-13.00	-60.82
548.95	H	-65.97	-7.25	-73.22	-13.00	-60.22
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:** December 27, 2007**Temperature:** 25°C**Tested by:** Mimic 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)
49.40	V	-57.94	-16.58	-74.52	-13.00	-61.52
N/A						
130.88	H	-56.40	-15.16	-71.56	-13.00	-58.56
548.95	H	-64.03	-7.25	-71.28	-13.00	-58.28
967.02	H	-63.28	-2.90	-66.18	-13.00	-53.18
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:** December 27, 2007**Temperature:** 25°C**Tested by:** Mimic 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)
49.40	V	-57.77	-16.58	-74.35	-13.00	-61.35
N/A						
396.66	H	-66.75	-10.20	-76.94	-13.00	-63.94
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:** December 27, 2007**Temperature:** 25°C**Tested by:** Mimic 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)
61.04	V	-48.60	-15.96	-64.56	-13.00	-51.56
99.84	V	-52.99	-18.93	-71.93	-13.00	-58.93
128.94	V	-57.23	-13.61	-70.84	-13.00	-57.84
179.38	V	-50.54	-14.75	-65.30	-13.00	-52.30
258.92	V	-59.55	-14.25	-73.80	-13.00	-60.80
378.23	V	-62.23	-11.79	-74.02	-13.00	-61.02
60.07	H	-55.62	-16.68	-72.30	-13.00	-59.30
109.54	H	-54.63	-17.07	-71.70	-13.00	-58.70
179.38	H	-52.05	-14.53	-66.58	-13.00	-53.58
198.78	H	-52.85	-12.92	-65.77	-13.00	-52.77
258.92	H	-57.67	-14.40	-72.07	-13.00	-59.07
398.60	H	-61.81	-10.08	-71.89	-13.00	-58.89

**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:** December 27, 2007**Temperature:** 25°C**Tested by:** Mimic 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)
61.04	V	-48.45	-15.96	-64.41	-13.00	-51.41
128.94	V	-56.67	-13.61	-70.28	-13.00	-57.28
168.71	V	-56.06	-13.98	-70.04	-13.00	-57.04
179.38	V	-51.90	-14.75	-66.66	-13.00	-53.66
258.92	V	-60.42	-14.25	-74.66	-13.00	-61.66
298.69	V	-61.62	-13.19	-74.81	-13.00	-61.81
60.07	H	-55.41	-16.68	-72.09	-13.00	-59.09
111.48	H	-53.34	-16.66	-70.00	-13.00	-57.00
178.41	H	-51.65	-14.41	-66.06	-13.00	-53.06
198.78	H	-52.34	-12.92	-65.25	-13.00	-52.25
257.95	H	-55.95	-14.39	-70.34	-13.00	-57.34
397.63	H	-60.19	-10.14	-70.33	-13.00	-57.33

**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 1900 / TX / CH 810**Test Date:** December 27, 2007**Temperature:** 25°C**Tested by:** Mimic 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)
61.04	V	-47.84	-15.96	-63.80	-13.00	-50.80
101.78	V	-53.70	-18.50	-72.20	-13.00	-59.20
131.85	V	-56.74	-13.43	-70.17	-13.00	-57.17
178.41	V	-51.58	-14.67	-66.25	-13.00	-53.25
198.78	V	-58.48	-13.83	-72.31	-13.00	-59.31
257.95	V	-60.67	-14.29	-74.96	-13.00	-61.96
111.48	H	-50.91	-16.66	-67.57	-13.00	-54.57
152.22	H	-55.75	-13.85	-69.59	-13.00	-56.59
178.41	H	-51.38	-14.41	-65.79	-13.00	-52.79
198.78	H	-54.05	-12.92	-66.97	-13.00	-53.97
263.77	H	-57.58	-14.08	-71.65	-13.00	-58.65
397.63	H	-59.47	-10.14	-69.61	-13.00	-56.61

**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:** December 21, 2007**Temperature:** 25°C**Tested by:** Ryan Chen**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	-64.00	-0.74	-64.74	-13.00	-51.74
116.33	V	-61.35	-21.08	-82.43	-13.00	-69.43
155.13	V	-64.67	-18.01	-82.68	-13.00	-69.68
196.84	V	-63.99	-17.97	-81.95	-13.00	-68.95
221.09	V	-64.44	-16.55	-81.00	-13.00	-68.00
233.70	V	-65.11	-16.27	-81.38	-13.00	-68.38
35.82	H	-57.23	-4.05	-61.28	-13.00	-48.28
118.27	H	-60.10	-21.70	-81.80	-13.00	-68.80
142.52	H	-52.44	-19.05	-71.49	-13.00	-58.49
155.13	H	-61.05	-18.14	-79.19	-13.00	-66.19
329.73	H	-60.02	-14.25	-74.26	-13.00	-61.26
376.29	H	-64.28	-12.24	-76.52	-13.00	-63.52

**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:** December 21, 2007**Temperature:** 25°C**Tested by:** Ryan Chen**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	-63.50	-0.68	-64.19	-13.00	-51.19
116.33	V	-63.29	-21.08	-84.37	-13.00	-71.37
136.70	V	-62.30	-19.65	-81.95	-13.00	-68.95
166.77	V	-64.45	-19.32	-83.77	-13.00	-70.77
198.78	V	-64.57	-17.82	-82.39	-13.00	-69.39
231.76	V	-64.55	-16.39	-80.94	-13.00	-67.94
38.73	H	-63.62	-3.30	-66.92	-13.00	-53.92
90.14	H	-56.19	-22.27	-78.45	-13.00	-65.45
116.33	H	-63.48	-21.63	-85.12	-13.00	-72.12
136.70	H	-58.73	-20.62	-79.35	-13.00	-66.35
155.13	H	-62.29	-18.14	-80.43	-13.00	-67.43
198.78	H	-65.55	-16.41	-81.96	-13.00	-68.96

**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:** December 21, 2007**Temperature:** 25°C**Tested by:** Ryan Chen**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	-64.91	-0.68	-65.59	-13.00	-52.59
116.33	V	-60.87	-21.08	-81.94	-13.00	-68.94
150.28	V	-59.95	-16.09	-76.04	-13.00	-63.04
214.30	V	-63.69	-16.64	-80.33	-13.00	-67.33
322.94	V	-66.69	-13.35	-80.04	-13.00	-67.04
443.22	V	-63.54	-11.24	-74.78	-13.00	-61.78
37.76	H	-62.49	-3.55	-66.04	-13.00	-53.04
89.17	H	-57.44	-22.11	-79.54	-13.00	-66.54
136.70	H	-58.85	-20.62	-79.47	-13.00	-66.47
155.13	H	-61.85	-18.14	-79.99	-13.00	-66.99
206.54	H	-66.67	-15.41	-82.08	-13.00	-69.08
453.89	H	-67.24	-11.11	-78.35	-13.00	-65.35

**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:** December 21, 2007**Temperature:** 25°C**Tested by:** Ryan Chen**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	-65.82	-0.68	-66.50	-13.00	-53.50
130.88	V	-50.81	-20.49	-71.30	-13.00	-58.30
154.16	V	-58.68	-17.63	-76.31	-13.00	-63.31
198.78	V	-64.46	-17.82	-82.28	-13.00	-69.28
348.16	V	-67.28	-13.21	-80.48	-13.00	-67.48
447.10	V	-66.66	-11.08	-77.74	-13.00	-64.74
40.67	H	-65.42	-3.21	-68.63	-13.00	-55.63
102.75	H	-57.48	-22.12	-79.60	-13.00	-66.60
136.70	H	-59.16	-20.62	-79.78	-13.00	-66.78
155.13	H	-63.61	-18.14	-81.76	-13.00	-68.76
214.30	H	-67.92	-14.97	-82.90	-13.00	-69.90
385.02	H	-68.33	-12.02	-80.35	-13.00	-67.35

**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 4183**Test Date:** December 21, 2007**Temperature:** 25°C**Tested by:** Ryan Chen**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	-64.20	-0.71	-64.92	-13.00	-51.92
116.33	V	-60.53	-21.08	-81.61	-13.00	-68.61
155.13	V	-65.77	-18.01	-83.78	-13.00	-70.78
214.30	V	-64.17	-16.64	-80.81	-13.00	-67.81
237.58	V	-66.57	-16.02	-82.59	-13.00	-69.59
543.13	V	-68.97	-8.17	-77.13	-13.00	-64.13
34.85	H	-64.19	-4.45	-68.64	-13.00	-55.64
101.78	H	-52.40	-22.22	-74.62	-13.00	-61.62
136.70	H	-52.42	-20.62	-73.04	-13.00	-60.04
172.59	H	-62.69	-19.12	-81.81	-13.00	-68.81
189.08	H	-62.37	-17.39	-79.76	-13.00	-66.76
229.82	H	-66.02	-15.45	-81.47	-13.00	-68.47

**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:** December 21, 2007**Temperature:** 25°C**Tested by:** Ryan Chen**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
33.88	V	-62.40	-2.25	-64.65	-13.00	-51.65
79.47	V	-56.62	-17.92	-74.54	-13.00	-61.54
115.36	V	-54.56	-21.07	-75.63	-13.00	-62.63
224.97	V	-55.91	-16.53	-72.44	-13.00	-59.44
762.35	V	-66.67	-5.65	-72.31	-13.00	-59.31
821.52	V	-62.77	-4.83	-67.60	-13.00	-54.60
36.79	H	-63.98	-3.80	-67.77	-13.00	-54.77
90.14	H	-59.29	-22.27	-81.56	-13.00	-68.56
136.70	H	-60.20	-20.62	-80.82	-13.00	-67.82
155.13	H	-61.45	-18.14	-79.59	-13.00	-66.59
428.67	H	-67.42	-11.44	-78.86	-13.00	-65.86
614.91	H	-68.28	-7.56	-75.85	-13.00	-62.85

**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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** December 27, 2007**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
35.82	V	-62.11	-0.74	-62.85	-13.00	-49.85
100.81	V	-48.77	-21.63	-70.40	-13.00	-57.40
137.67	V	-54.53	-19.51	-74.04	-13.00	-61.04
181.32	V	-45.84	-18.78	-64.62	-13.00	-51.62
256.01	V	-60.70	-15.68	-76.38	-13.00	-63.38
302.57	V	-62.42	-14.30	-76.71	-13.00	-63.71
37.76	H	-61.99	-3.55	-65.54	-13.00	-52.54
100.81	H	-47.15	-22.31	-69.46	-13.00	-56.46
140.58	H	-51.05	-19.83	-70.88	-13.00	-57.88
181.32	H	-44.98	-18.11	-63.09	-13.00	-50.09
261.83	H	-56.44	-15.92	-72.37	-13.00	-59.37
402.48	H	-60.96	-12.02	-72.97	-13.00	-59.97

**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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** December 27, 2007**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
35.82	V	-61.16	-0.74	-61.90	-13.00	-48.90
60.07	V	-56.65	-8.38	-65.03	-13.00	-52.03
100.81	V	-48.37	-21.63	-70.00	-13.00	-57.00
181.32	V	-44.98	-18.78	-63.76	-13.00	-50.76
301.60	V	-61.62	-14.35	-75.96	-13.00	-62.96
387.93	V	-57.65	-12.74	-70.38	-13.00	-57.38
51.34	H	-60.59	-4.59	-65.17	-13.00	-52.17
100.81	H	-47.87	-22.31	-70.19	-13.00	-57.19
140.58	H	-51.10	-19.83	-70.93	-13.00	-57.93
181.32	H	-45.28	-18.11	-63.39	-13.00	-50.39
261.83	H	-57.30	-15.92	-73.22	-13.00	-60.22
402.48	H	-62.51	-12.02	-74.53	-13.00	-61.53

**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 / HSDPA Band II /  
TX / CH 9538**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** December 27, 2007**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
34.85	V	-61.08	-0.96	-62.04	-13.00	-49.04
60.07	V	-58.15	-8.38	-66.53	-13.00	-53.53
100.81	V	-48.70	-21.63	-70.33	-13.00	-57.33
140.58	V	-54.74	-18.99	-73.73	-13.00	-60.73
181.32	V	-46.00	-18.78	-64.78	-13.00	-51.78
261.83	V	-60.03	-15.71	-75.74	-13.00	-62.74
48.43	H	-61.48	-4.22	-65.69	-13.00	-52.69
100.81	H	-47.31	-22.31	-69.62	-13.00	-56.62
137.67	H	-49.64	-20.45	-70.09	-13.00	-57.09
181.32	H	-45.03	-18.11	-63.14	-13.00	-50.14
261.83	H	-57.41	-15.92	-73.34	-13.00	-60.34
402.48	H	-60.59	-12.02	-72.61	-13.00	-59.61

**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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** December 27, 2007**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
37.76	V	-61.80	-0.68	-62.49	-13.00	-49.49
100.81	V	-49.07	-21.63	-70.70	-13.00	-57.70
141.55	V	-54.82	-18.68	-73.50	-13.00	-60.50
182.29	V	-46.16	-18.75	-64.90	-13.00	-51.90
262.80	V	-61.87	-15.66	-77.53	-13.00	-64.53
303.54	V	-63.30	-14.25	-77.54	-13.00	-64.54
37.76	H	-63.65	-3.55	-67.20	-13.00	-54.20
100.81	H	-47.99	-22.31	-70.30	-13.00	-57.30
138.64	H	-52.30	-20.29	-72.59	-13.00	-59.59
181.32	H	-48.25	-18.11	-66.37	-13.00	-53.37
222.06	H	-60.03	-15.10	-75.12	-13.00	-62.12
262.80	H	-59.52	-15.87	-75.39	-13.00	-62.39

**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 4183**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** December 27, 2007**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
34.85	V	-61.76	-0.96	-62.72	-13.00	-49.72
59.10	V	-58.06	-8.07	-66.13	-13.00	-53.13
100.81	V	-47.96	-21.63	-69.59	-13.00	-56.59
141.55	V	-55.45	-18.68	-74.13	-13.00	-61.13
182.29	V	-45.39	-18.75	-64.13	-13.00	-51.13
297.72	V	-61.93	-14.48	-76.40	-13.00	-63.40
39.70	H	-63.03	-3.06	-66.09	-13.00	-53.09
100.81	H	-47.88	-22.31	-70.19	-13.00	-57.19
138.64	H	-51.11	-20.29	-71.40	-13.00	-58.40
182.29	H	-46.85	-18.02	-64.87	-13.00	-51.87
242.43	H	-58.42	-15.28	-73.70	-13.00	-60.70
385.02	H	-63.19	-12.02	-75.21	-13.00	-62.21

**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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** December 27, 2007**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
36.79	V	-62.45	-0.71	-63.16	-13.00	-50.16
60.07	V	-57.20	-8.38	-65.58	-13.00	-52.58
98.87	V	-48.41	-21.68	-70.09	-13.00	-57.09
139.61	V	-54.22	-19.23	-73.45	-13.00	-60.45
179.38	V	-45.87	-18.84	-64.71	-13.00	-51.71
298.69	V	-61.77	-14.46	-76.23	-13.00	-63.23
40.67	H	-63.18	-3.21	-66.39	-13.00	-53.39
101.78	H	-48.65	-22.22	-70.87	-13.00	-57.87
138.64	H	-52.04	-20.29	-72.33	-13.00	-59.33
178.41	H	-46.65	-18.42	-65.07	-13.00	-52.07
257.95	H	-57.81	-15.85	-73.66	-13.00	-60.66
416.06	H	-63.16	-11.70	-74.86	-13.00	-61.86

**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 / HSUPA Band II /  
TX / CH 9262**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** January 15, 2008**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-45.91	-16.19	-62.11	-13.00	-49.11
128.94	V	-54.49	-13.61	-68.09	-13.00	-55.09
179.38	V	-50.08	-14.75	-64.84	-13.00	-51.84
226.91	V	-55.15	-14.81	-69.96	-13.00	-56.96
402.48	V	-60.46	-10.63	-71.09	-13.00	-58.09
478.14	V	-60.63	-8.46	-69.09	-13.00	-56.09
57.16	H	-47.00	-16.32	-63.33	-13.00	-50.33
86.26	H	-43.85	-21.95	-65.80	-13.00	-52.80
179.38	H	-47.27	-14.53	-61.80	-13.00	-48.80
258.92	H	-57.56	-14.40	-71.96	-13.00	-58.96
319.06	H	-60.65	-13.06	-73.71	-13.00	-60.71
372.41	H	-60.39	-11.63	-72.01	-13.00	-59.01

**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 / HSUPA Band II /  
TX / CH 9400**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** January 15, 2008**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-45.85	-16.19	-62.04	-13.00	-49.04
128.94	V	-54.68	-13.61	-68.29	-13.00	-55.29
180.35	V	-49.61	-14.83	-64.44	-13.00	-51.44
226.91	V	-54.63	-14.81	-69.44	-13.00	-56.44
402.48	V	-59.41	-10.63	-70.04	-13.00	-57.04
478.14	V	-60.55	-8.46	-69.01	-13.00	-56.01
57.16	H	-46.51	-16.32	-62.83	-13.00	-49.83
86.26	H	-44.91	-21.95	-66.86	-13.00	-53.86
179.38	H	-47.28	-14.53	-61.81	-13.00	-48.81
258.92	H	-57.62	-14.40	-72.02	-13.00	-59.02
372.41	H	-61.11	-11.63	-72.74	-13.00	-59.74
452.92	H	-63.93	-9.51	-73.44	-13.00	-60.44

**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 / HSUPA Band II /  
TX / CH 9538**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** January 15, 2008**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-45.87	-16.19	-62.06	-13.00	-49.06
128.94	V	-54.56	-13.61	-68.17	-13.00	-55.17
179.38	V	-49.83	-14.75	-64.58	-13.00	-51.58
226.91	V	-54.76	-14.81	-69.57	-13.00	-56.57
402.48	V	-60.59	-10.63	-71.22	-13.00	-58.22
478.14	V	-61.06	-8.46	-69.51	-13.00	-56.51
57.16	H	-47.17	-16.32	-63.49	-13.00	-50.49
86.26	H	-43.92	-21.95	-65.87	-13.00	-52.87
139.61	H	-56.39	-14.32	-70.71	-13.00	-57.71
179.38	H	-47.19	-14.53	-61.72	-13.00	-48.72
258.92	H	-56.36	-14.40	-70.76	-13.00	-57.76
298.69	H	-59.09	-14.26	-73.35	-13.00	-60.35

**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 / HSUPA Band V /  
TX / CH 4132**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** January 15, 2008**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-46.23	-16.19	-62.42	-13.00	-49.42
128.94	V	-54.24	-13.61	-67.85	-13.00	-54.85
179.38	V	-49.53	-14.75	-64.29	-13.00	-51.29
226.91	V	-55.25	-14.81	-70.06	-13.00	-57.06
326.82	V	-60.37	-12.48	-72.85	-13.00	-59.85
478.14	V	-61.34	-8.46	-69.80	-13.00	-56.80
57.16	H	-48.29	-16.32	-64.61	-13.00	-51.61
86.26	H	-44.32	-21.95	-66.28	-13.00	-53.28
128.94	H	-56.93	-15.20	-72.14	-13.00	-59.14
179.38	H	-47.35	-14.53	-61.88	-13.00	-48.88
242.43	H	-59.31	-13.72	-73.03	-13.00	-60.03
298.69	H	-58.63	-14.26	-72.89	-13.00	-59.89

**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 / HSUPA Band V /  
TX / CH 4183**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** January 15, 2008**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-45.98	-16.19	-62.17	-13.00	-49.17
128.94	V	-53.97	-13.61	-67.58	-13.00	-54.58
179.38	V	-48.86	-14.75	-63.61	-13.00	-50.61
226.91	V	-55.48	-14.81	-70.29	-13.00	-57.29
402.48	V	-60.12	-10.63	-70.75	-13.00	-57.75
478.14	V	-60.82	-8.46	-69.27	-13.00	-56.27
57.16	H	-47.97	-16.32	-64.29	-13.00	-51.29
86.26	H	-43.86	-21.95	-65.81	-13.00	-52.81
139.61	H	-56.43	-14.32	-70.75	-13.00	-57.75
179.38	H	-48.03	-14.53	-62.56	-13.00	-49.56
242.43	H	-60.01	-13.72	-73.72	-13.00	-60.72
298.69	H	-58.96	-14.26	-73.23	-13.00	-60.23

**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 / HSUPA Band V /  
TX / CH 4233**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** January 15, 2008**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-45.51	-16.19	-61.70	-13.00	-48.70
100.81	V	-50.51	-18.71	-69.22	-13.00	-56.22
128.94	V	-54.36	-13.61	-67.97	-13.00	-54.97
180.35	V	-48.62	-14.83	-63.44	-13.00	-50.44
226.91	V	-55.44	-14.81	-70.25	-13.00	-57.25
478.14	V	-61.27	-8.46	-69.73	-13.00	-56.73
57.16	H	-47.40	-16.32	-63.72	-13.00	-50.72
86.26	H	-42.47	-21.95	-64.42	-13.00	-51.42
100.81	H	-49.18	-18.91	-68.10	-13.00	-55.10
180.35	H	-45.60	-14.61	-60.21	-13.00	-47.21
260.86	H	-57.45	-14.33	-71.78	-13.00	-58.78
402.48	H	-61.89	-9.96	-71.85	-13.00	-58.85

**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:** GSM 850 / TX / CH 128**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1651.00	V	-48.50	0.78	-47.72	-13.00	-34.72
2470.00	V	-45.19	3.39	-41.80	-13.00	-28.80
3296.00	V	-57.37	5.01	-52.36	-13.00	-39.36
N/A						
1651.00	H	-46.83	1.32	-45.51	-13.00	-32.51
2470.00	H	-44.47	3.94	-40.52	-13.00	-27.52
3296.00	H	-56.46	5.28	-51.18	-13.00	-38.18
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:** GSM 850 / TX / CH 190**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1672.00	V	-48.25	0.79	-47.46	-13.00	-34.46
2512.00	V	-48.26	3.57	-44.68	-13.00	-31.68
3345.00	V	-56.20	5.02	-51.18	-13.00	-38.18
N/A						
1672.00	H	-47.41	1.33	-46.08	-13.00	-33.08
2512.00	H	-45.02	4.12	-40.90	-13.00	-27.90
3345.00	H	-58.07	5.32	-52.75	-13.00	-39.75
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:** GSM 850 / TX / CH 251**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1700.00	V	-46.28	0.80	-45.48	-13.00	-32.48
2547.00	V	-48.31	3.67	-44.63	-13.00	-31.63
3394.00	V	-55.84	5.03	-50.82	-13.00	-37.82
6789.00	V	-57.75	10.61	-47.14	-13.00	-34.14
N/A						
1700.00	H	-48.07	1.34	-46.73	-13.00	-33.73
2547.00	H	-43.77	4.19	-39.59	-13.00	-26.59
3394.00	H	-57.36	5.37	-51.99	-13.00	-38.99
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 128**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1651.00	V	-48.32	0.78	-47.54	-13.00	-34.54
1742.00	V	-56.81	0.83	-55.99	-13.00	-42.99
2470.00	V	-44.50	3.39	-41.12	-13.00	-28.12
3296.00	V	-56.86	5.01	-51.85	-13.00	-38.85
N/A						
1651.00	H	-48.61	1.32	-47.29	-13.00	-34.29
2470.00	H	-43.42	3.94	-39.48	-13.00	-26.48
3296.00	H	-55.62	5.28	-50.34	-13.00	-37.34
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:** GPRS 850 / TX / CH 190**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1672.00	V	-47.35	0.79	-46.56	-13.00	-33.56
2512.00	V	-46.23	3.57	-42.66	-13.00	-29.66
3345.00	V	-57.20	5.02	-52.18	-13.00	-39.18
N/A						
1672.00	H	-47.70	1.33	-46.37	-13.00	-33.37
2512.00	H	-46.09	4.12	-41.97	-13.00	-28.97
3345.00	H	-54.65	5.32	-49.33	-13.00	-36.33
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 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1700.00	V	-45.74	0.80	-44.94	-13.00	-31.94
2547.00	V	-46.10	3.67	-42.43	-13.00	-29.43
3394.00	V	-55.20	5.03	-50.17	-13.00	-37.17
6789.00	V	-58.76	10.61	-48.15	-13.00	-35.15
N/A						
1700.00	H	-46.25	1.34	-44.90	-13.00	-31.90
2547.00	H	-42.41	4.19	-38.23	-13.00	-25.23
3394.00	H	-56.87	5.37	-51.50	-13.00	-38.50
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:** GSM 1900 / TX / CH 512**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3702.00	V	-46.71	5.44	-41.27	-13.00	-28.27
5550.00	V	-53.93	6.89	-47.04	-13.00	-34.04
N/A						
3702.00	H	-47.22	5.83	-41.39	-13.00	-28.39
5550.00	H	-57.66	7.17	-50.50	-13.00	-37.50
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:** GSM 1900 / TX / CH 661**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3758.00	V	-48.83	5.55	-43.28	-13.00	-30.28
5641.00	V	-56.80	6.97	-49.83	-13.00	-36.83
7517.00	V	-60.35	13.19	-47.16	-13.00	-34.16
N/A						
3758.00	H	-47.40	5.93	-41.46	-13.00	-28.46
5641.00	H	-54.42	7.25	-47.17	-13.00	-34.17
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:** GSM 1900 / TX / CH 810**Test Date:** November 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3821.00	V	-51.04	5.67	-45.37	-13.00	-32.37
5732.00	V	-58.52	7.06	-51.46	-13.00	-38.46
N/A						
3821.00	H	-48.86	6.05	-42.81	-13.00	-29.81
5732.00	H	-57.73	7.33	-50.39	-13.00	-37.39
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 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3702.00	V	-46.78	5.44	-41.35	-13.00	-28.35
5550.00	V	-57.24	6.89	-50.35	-13.00	-37.35
N/A						
3702.00	H	-47.96	5.83	-42.13	-13.00	-29.13
5550.00	H	-57.83	7.17	-50.66	-13.00	-37.66
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 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3758.00	V	-48.36	5.55	-42.81	-13.00	-29.81
5641.00	V	-57.28	6.97	-50.30	-13.00	-37.30
7790.00	V	-60.62	13.91	-46.70	-13.00	-33.70
N/A						
3758.00	H	-47.67	5.93	-41.74	-13.00	-28.74
5641.00	H	-56.12	7.25	-48.87	-13.00	-35.87
7678.00	H	-59.98	13.92	-46.06	-13.00	-33.06
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 14, 2007**Temperature:** 25°C**Tested by:** Ming Chen**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3821.00	V	-49.93	5.67	-44.26	-13.00	-31.26
5732.00	V	-57.88	7.06	-50.82	-13.00	-37.82
7643.00	V	-59.95	13.52	-46.43	-13.00	-33.43
N/A						
3821.00	H	-48.40	6.05	-42.35	-13.00	-29.35
5732.00	H	-57.59	7.33	-50.26	-13.00	-37.26
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:** December 27, 2007**Temperature:** 25°C**Tested by:** Mimic 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)
2414.00	V	-59.13	3.95	-55.17	-13.00	-42.17
N/A						
2470.00	H	-57.58	4.53	-53.05	-13.00	-40.05
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:** December 27, 2007**Temperature:** 25°C**Tested by:** Mimic 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)
2414.00	V	-59.16	3.95	-55.21	-13.00	-42.21
N/A						
1672.00	H	-57.23	1.78	-55.46	-13.00	-42.46
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:** December 27, 2007**Temperature:** 25°C**Tested by:** Mimic 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)
2547.00	V	-59.24	4.54	-54.69	-13.00	-41.69
N/A						
1700.00	H	-55.13	1.79	-53.34	-13.00	-40.34
2547.00	H	-50.30	4.81	-45.49	-13.00	-32.49
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:** December 27, 2007**Temperature:** 25°C**Tested by:** Mimic 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)
1854.00	V	-39.41	1.78	-37.63	-13.00	-24.63
3702.00	V	-40.87	6.11	-34.77	-13.00	-21.77
5550.00	V	-57.34	7.27	-50.08	-13.00	-37.08
N/A						
1854.00	H	-46.30	1.83	-44.47	-13.00	-31.47
3702.00	H	-42.12	6.11	-36.01	-13.00	-23.01
5550.00	H	-57.68	7.42	-50.26	-13.00	-37.26
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:** December 27, 2007**Temperature:** 25°C**Tested by:** Mimic 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)
1882.00	V	-42.24	1.77	-40.47	-13.00	-27.47
3758.00	V	-41.06	6.20	-34.87	-13.00	-21.87
N/A						
1882.00	H	-40.48	1.84	-38.65	-13.00	-25.65
3758.00	H	-43.26	6.21	-37.05	-13.00	-24.05
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:** December 27, 2007**Temperature:** 25°C**Tested by:** Mimic 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)
1910.00	V	-45.59	1.77	-43.82	-13.00	-30.82
3821.00	V	-42.80	6.30	-36.50	-13.00	-23.50
N/A						
1910.00	H	-41.40	1.84	-39.55	-13.00	-26.55
3821.00	H	-44.21	6.32	-37.89	-13.00	-24.89
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 Band II / TX / CH 9262**Test Date:** December 21, 2007**Temperature:** 25°C**Tested by:** Ryan Chen**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
5774.00	V	-61.32	10.26	-51.06	-13.00	-38.06
N/A						
1854.00	H	-58.50	5.57	-52.93	-13.00	-39.93
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:** December 21, 2007**Temperature:** 25°C**Tested by:** Ryan Chen**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1882.00	V	-58.64	5.54	-53.10	-13.00	-40.10
N/A						
1882.00	H	-60.73	5.75	-54.98	-13.00	-41.98
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:** December 21, 2007**Temperature:** 25°C**Tested by:** Ryan Chen**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3814.00	V	-58.61	9.48	-49.14	-13.00	-36.14
N/A						
1910.00	H	-59.51	5.94	-53.56	-13.00	-40.56
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:** December 21, 2007**Temperature:** 25°C**Tested by:** Ryan Chen**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
2484.00	V	-59.22	8.96	-50.26	-13.00	-37.26
N/A						
2484.00	H	-57.79	8.69	-49.10	-13.00	-36.10
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 4183**Test Date:** December 21, 2007**Temperature:** 25°C**Tested by:** Ryan Chen**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
2512.00	V	-58.67	9.06	-49.61	-13.00	-36.61
N/A						
2512.00	H	-59.90	8.78	-51.12	-13.00	-38.12
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:** December 21, 2007**Temperature:** 25°C**Tested by:** Ryan Chen**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
2540.00	V	-55.61	9.09	-46.52	-13.00	-33.52
N/A						
2540.00	H	-57.13	8.82	-48.31	-13.00	-35.31
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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** December 27, 2007**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
N/A						
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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** December 27, 2007**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
N/A						
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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** December 27, 2007**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
N/A						
3821.00	H	-58.92	9.42	-49.50	-13.00	-36.50
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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** December 27, 2007**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
N/A						
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 4183**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** December 27, 2007**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
N/A						
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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** December 27, 2007**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
N/A						
1693.00	H	-57.16	4.48	-52.68	-13.00	-39.68
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:** WCDMA / HSUPA Band II /  
TX / CH 9262**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** January 15, 2008**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
2323.00	V	-58.32	3.47	-54.85	-13.00	-41.85
N/A						
1854.00	H	-52.98	1.83	-51.15	-13.00	-38.15
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 / HSUPA Band II /  
TX / CH 9400**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** January 15, 2008**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4108.00	V	-58.52	6.71	-51.81	-13.00	-38.81
N/A						
1882.00	H	-53.08	1.84	-51.24	-13.00	-38.24
3758.00	H	-58.52	6.21	-52.31	-13.00	-39.31
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 / HSUPA Band II /  
TX / CH 9538**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** January 15, 2008**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3821.00	V	-57.93	6.30	-51.63	-13.00	-38.63
N/A						
1910.00	H	-57.62	1.84	-55.78	-13.00	-42.78
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:** WCDMA / HSUPA Band V /  
TX / CH 4132**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** January 15, 2008**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1658.00	V	-56.45	1.81	-54.64	-13.00	-41.64
N/A						
1658.00	H	-54.92	1.77	-53.15	-13.00	-40.15
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 / HSUPA Band V /  
TX / CH 4183**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** January 15, 2008**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1609.00	V	-57.80	1.82	-55.98	-13.00	-42.98
N/A						
1763.00	H	-55.99	1.80	-54.18	-13.00	-41.18
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 / HSUPA Band V /  
TX / CH 4233**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** January 15, 2008**Tested by:** Ryan Chen**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1854.00	V	-57.52	1.78	-55.75	-13.00	-42.75
N/A						
1763.00	H	-56.38	1.80	-54.57	-13.00	-41.57
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.

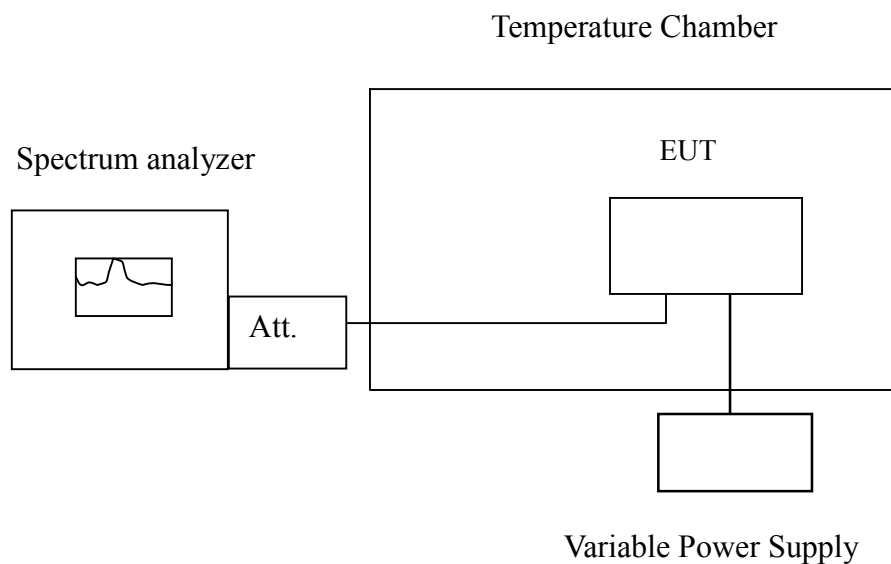
## 7.6 FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

### LIMIT

According to FCC §2.1055, 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.*

<b>Reference Frequency: GSM Mid Channel 836.6 MHz @ 20°C</b>				
Limit: +/- 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	83599998	-3	2090
	40	83599994	-7	
	30	83599997	-4	
	20	83600001	0	
	10	83600001	0	
	0	83600005	4	
	-10	83599999	-2	
	-20	83599997	-4	
	-30	83600000	-1	

<b>Reference Frequency: GSM Mid Channel 1880 MHz @ 20°C</b>				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	1879999971	-70	4700
	40	1879999979	-62	
	30	1879999969	-72	
	20	1880000041	0	
	10	1879999959	-82	
	0	1879999957	-84	
	-10	1879999963	-78	
	-20	1879999958	-83	
	-30	1879999962	-79	



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	83599988	-10	2090
	40	83599989	-9	
	30	83599992	-6	
	20	83599998	0	
	10	83599988	-10	
	0	83599979	-19	
	-10	83599983	-15	
	-20	83599984	-14	
	-30	83599987	-11	

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	1879999987	-25	4700
	40	1879999984	-28	
	30	1879999985	-27	
	20	1880000012	0	
	10	1879999988	-24	
	0	1879999991	-21	
	-10	1879999992	-20	
	-20	1879999990	-22	
	-30	1879999987	-25	



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	83600018	33	2090
	40	83600016	31	
	30	83600018	33	
	20	83599985	0	
	10	83600008	23	
	0	83600010	25	
	-10	83600012	27	
	-20	83600015	30	
	-30	83600016	31	

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	1880000016	27	4700
	40	1880000018	29	
	30	1880000020	31	
	20	1879999989	0	
	10	1880000011	22	
	0	1880000008	19	
	-10	1880000006	17	
	-20	1880000010	21	
	-30	1880000008	19	



Reference Frequency: WCDMA Band II Mid Channel 1880 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	1880000002	10	4700
	40	1880000008	16	
	30	1880000005	13	
	20	1879999992	0	
	10	1880000011	19	
	0	1880000005	13	
	-10	1880000006	14	
	-20	1880000001	9	
	-30	1880000002	10	

Reference Frequency: WCDMA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	83599999	-8	2090
	40	83599995	-12	
	30	83599994	-13	
	20	83600007	0	
	10	83599997	-10	
	0	83599992	-15	
	-10	83599995	-12	
	-20	83599994	-13	
	-30	83599995	-12	



Reference Frequency: WCDMA / HSDPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	1879999996	-8	4700
	40	1879999995	-9	
	30	1879999997	-7	
	20	1880000004	0	
	10	1879999998	-6	
	0	1879999999	-5	
	-10	1880000000	-4	
	-20	1879999997	-7	
	-30	1879999999	-5	

Reference Frequency: WCDMA / HSDPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	83599987	-24	2090
	40	83599990	-21	
	30	83599995	-16	
	20	83600011	0	
	10	83599996	-15	
	0	83599994	-17	
	-10	83599985	-26	
	-20	83599983	-28	
	-30	83599984	-27	



Reference Frequency: WCDMA / HSUPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	1879999977	-36	4700
	40	1879999980	-33	
	30	1879999975	-38	
	20	1880000013	0	
	10	1879999990	-23	
	0	1879999992	-21	
	-10	1879999987	-26	
	-20	1879999977	-36	
	-30	1879999988	-25	

Reference Frequency: WCDMA / HSUPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	83599995	-46	2090
	40	83600005	-36	
	30	83600002	-39	
	20	83600041	0	
	10	83599987	-54	
	0	83599957	-84	
	-10	83599972	-69	
	-20	83599994	-47	
	-30	83599977	-64	

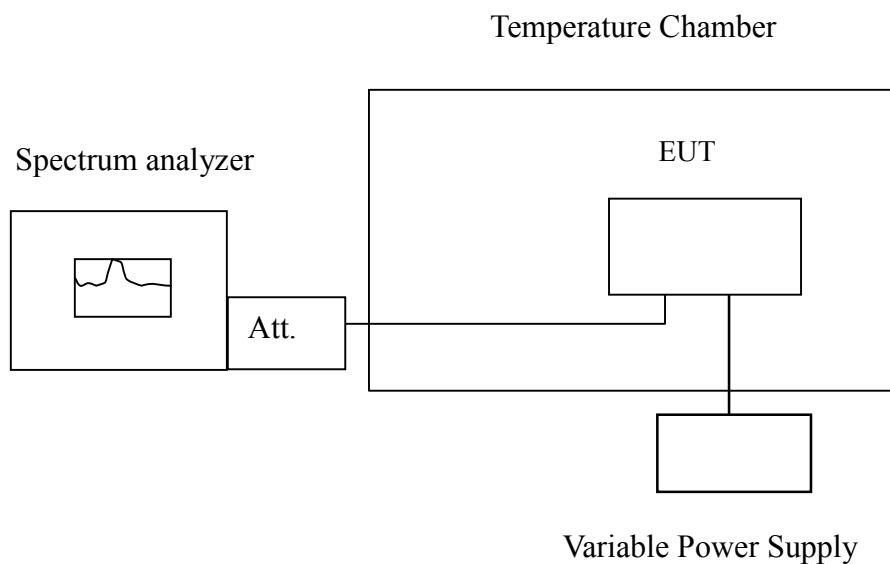
## 7.7 FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

### LIMIT

According to FCC §2.1055, FCC §24.235,

Frequency Tolerance: 2.5 ppm.

### 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 ( $\pm 15\%$ ) and endpoint, record the maximum frequency change.

## **TEST RESULTS**

*No non-compliance noted.*

<b>Reference Frequency: GSM Mid Channel 836.6 MHz @ 20°C</b>				
Limit: $\pm 2.5$ ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.07	20	83599995	-6	2090
3.7		83600001	0	
3.33		83599996	-5	
3.1END		83599902	-94	

<b>Reference Frequency: GSM Mid Channel 1880 MHz @ 20°C</b>				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.07	20	1880000037	-4	4700
3.7		1880000041	0	
3.33		1880000038	-3	
2.9		1880000146	105	





Reference Frequency: GPRS Mid Channel 836.6 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.07	20	83599979	-19	2090
3.7		83599998	0	
3.33		83599995	-3	
3.1END		83599874	-121	

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.07	20	1880000026	14	4700
3.7		1880000012	0	
3.33		1880000025	13	
2.9		1880000152	140	



Reference Frequency: EDGE Mid Channel 836.6 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.07	20	83599982	-3	2090
3.7		83599985	0	
3.33		83599980	-5	
3		83599757	-223	

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.07	20	1879999984	-5	4700
3.7		1879999989	0	
3.33		1879999982	-7	
3.1		1879999817	-172	



Reference Frequency: WCDMA Band II Mid Channel 1880 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4	20	1879999989	-3	4700
3.7		1879999992	0	
3.3		1879999997	5	
3.1		1880000068	76	

Reference Frequency: WCDMA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4	20	83600002	-5	2090
3.7		83600007	0	
3.3		83600002	-5	
3.1		83600076	74	



Reference Frequency: WCDMA HSDPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4	20	1880000001	-3	4700
3.7		1880000004	0	
3.3		1880000000	-4	
3		1880000081	77	

Reference Frequency: WCDMA HSDPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4	20	83600012	1	2090
3.7		83600011	0	
3.3		83600005	-6	
3.1		83600116	111	



Reference Frequency: WCDMA HSUPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4	20	1880000021	8	4700
3.7		1880000013	0	
3.3		1880000012	-1	
3		1880000116	103	

Reference Frequency: WCDMA HSUPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4	20	836000026	-15	2090
3.7		836000041	0	
3.3		836000008	-33	
3		836000098	90	



## 7.8 POWERLINE 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 (dB $\mu$ V)	
	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 mode      **Test Date:** November 26, 2007  
**Temperature:** 26°C      **Tested by:** Ming Chen  
**Humidity:** 45% 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
0.4050	42.87	30.47	0.03	42.90	30.50	57.75	47.75	-14.85	-17.25	L1
0.4400	39.68	30.38	0.02	39.70	30.40	57.06	47.06	-17.36	-16.66	L1
0.4800	39.09	27.59	0.01	39.10	27.60	56.34	46.34	-17.24	-18.74	L1
0.5300	38.40	25.90	0.00	38.40	25.90	56.00	46.00	-17.60	-20.10	L1
0.7800	33.90	20.50	0.00	33.90	20.50	56.00	46.00	-22.10	-25.50	L1
1.2200	32.00	21.90	0.00	32.00	21.90	56.00	46.00	-24.00	-24.10	L1
0.4050	38.37	24.67	0.03	38.40	24.70	57.75	47.75	-19.35	-23.05	L2
0.4450	36.98	25.18	0.02	37.00	25.20	56.97	46.97	-19.97	-21.77	L2
0.4800	34.09	21.09	0.01	34.10	21.10	56.34	46.34	-22.24	-25.24	L2
0.5250	34.10	20.10	0.00	34.10	20.10	56.00	46.00	-21.90	-25.90	L2
0.7850	29.30	14.40	0.00	29.30	14.40	56.00	46.00	-26.70	-31.60	L2
1.2200	27.80	15.50	0.00	27.80	15.50	56.00	46.00	-28.20	-30.50	L2

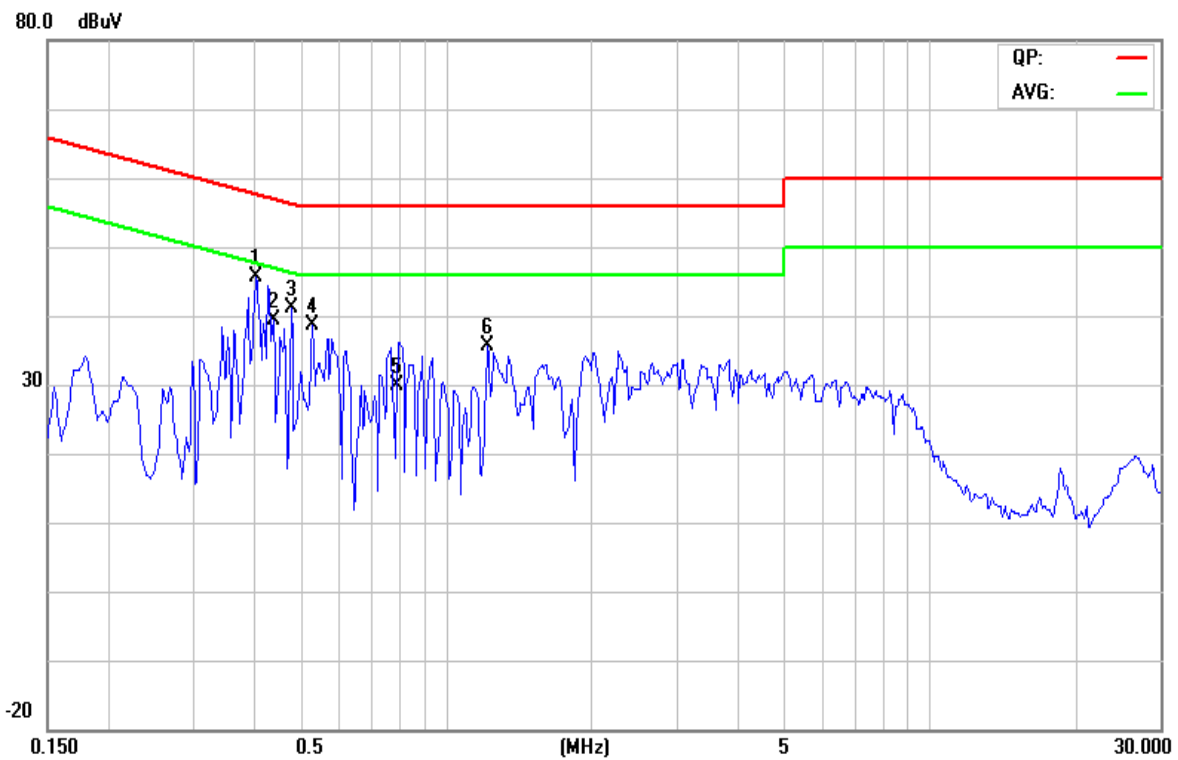
**Remark:**

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)



## Test Plots

### Conducted emissions (Line 1)



### Conducted emissions (Line 2)

