



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

**TEST REPORT**

**For**

**Smart Handheld**

**Model: E310**

**Trade Name: acer**

*Issued to*

**Acer Incorporated**

**8F., No.88, Sec. 1, Hsin Tai Wu Rd., Hsichih Town,  
Taipei Hsien, Taiwan, R.O.C.**

*Issued by*

**Compliance Certification Services Inc.**

**No. 11, Wu-Gong 6<sup>th</sup> Rd., Wugu Industrial Park,  
Taipei Hsien 248, Taiwan (R.O.C.)**

**<http://www.ccsrf.com>**

**[service@ccsrf.com](mailto:service@ccsrf.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 .....	9
4.3 MEASUREMENT UNCERTAINTY .....	10
<b>5. FACILITIES AND ACCREDITATIONS .....</b>	<b>11</b>
5.1 FACILITIES .....	11
5.2 EQUIPMENT .....	11
5.3 TABLE OF ACCREDITATIONS AND LISTINGS .....	12
<b>6. SETUP OF EQUIPMENT UNDER TEST .....</b>	<b>13</b>
6.1 SETUP CONFIGURATION OF EUT .....	13
6.2 SUPPORT EQUIPMENT .....	13
<b>7. FCC PART 22 &amp; 24 REQUIREMENTS .....</b>	<b>14</b>
7.1 PEAK POWER.....	14
7.2 AVERAGE POWER.....	17
7.3 ERP & EIRP MEASUREMENT .....	20
7.4 OCCUPIED BANDWIDTH MEASUREMENT .....	28
7.5 OUT OF BAND EMISSION AT ANTENNA TERMINALS .....	49
7.6 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT .....	84
7.7 FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT .....	158
7.8 FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT .....	165
7.9 POWERLINE CONDUCTED EMISSIONS .....	172
<b>APPENDIX I RADIO FREQUENCY EXPOSURE .....</b>	<b>175</b>
<b>APPENDIX II PHOTOGRAPHS OF TEST SETUP .....</b>	<b>177</b>
<b>APPENDIX 1 - PHOTOGRAPHS OF EUT</b>	



# 1. TEST RESULT CERTIFICATION

**Applicant:** Acer Incorporated  
 8F., No.88, Sec. 1, Hsin Tai Wu Rd., Hsichih Town,  
 Taipei Hsien, Taiwan, R.O.C.

**Equipment Under Test:** Smart Handheld

**Trade Name:** acer

**Model Number:** E310

**Date of Test:** November 30 ~ December 2, 2010

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

## We hereby certify that:

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

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

Approved by:

Reviewed by:

---

Rex Lai  
 Section Manager  
 Compliance Certification Services Inc.

---

Gina Lo  
 Section Manager  
 Compliance Certification Services Inc.



## 2. EUT DESCRIPTION

<b>Product</b>	Smart Handheld
<b>Trade Name</b>	acer
<b>Model Number</b>	E310
<b>Model Discrepancy</b>	N/A
<b>Power Supply</b>	1. Power Adapter: Trade Name: PHIHONG / Model: PSAI05R-050Q Input: 100-240V, 0.3A, 50-60Hz Output: 5V, 1.0A 2. Battery: Trade Name: acer Model: BAT-310(1ICP5/42/61) Rating: 3.7V, 1300mAh, 4.81Wh
<b>Frequency Range</b>	GSM / GPRS / EDGE: 850: 824.2 ~ 848.8 MHz GSM / GPRS / EDGE: 1900: 1850.2 ~ 1909.8 MHz WCDMA / HSDPA / HSUPA Band II: 1852.4 ~ 1907.6 MHz WCDMA / HSDPA / HSUPA Band V: 826.4 ~ 846.6MHz
<b>Transmit Power (ERP &amp; EIRP Power)</b>	GSM 850: 27.01 dBm GSM 1900: 29.44 dBm GPRS 850: 22.96 dBm GPRS 1900: 24.34 dBm EDGE 850: 22.94 dBm EDGE 1900: 23.90 dBm WCDMA Band II: 24.37 dBm WCDMA Band V: 18.63 dBm HSDPA Band II: 26.76 dBm HSDPA Band V: 18.91 dBm HSUPA Band II: 26.27 dBm HSUPA Band V: 18.76 dBm
<b>Cellular Phone Protocol</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>Type of Emission</b>	GSM 850: 253KGXW--- GSM 1900: 250KGXW--- GPRS 850: 245KGXW--- GPRS 1900: 248KGXW--- EDGE 850: 248KG7W--- EDGE 1900: 246KG7W--- WCDMA Band II: 4M15F9W--- WCDMA Band V: 4M17F9W--- WCDMA HSDPA Band II: 4M16F9W--- WCDMA HSDPA Band V: 4M17F9W--- WCDMA HSUPA Band II: 4M17F9W--- WCDMA HSUPA Band V: 4M18F9W---
<b>Antenna Gain</b>	GSM / GPRS / EDGE 850: -1.65 dBi GSM / GPRS / EDGE 1900: 0.14 dBi WCDMA band II: -0.52dBi WCDMA band V: -1.83 dBi
<b>Antenna Type</b>	PIFA Antenna

**Remark:**

1. *The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.*
2. *This submittal(s) (test report) is intended for FCC ID: HLZDME310SC filing to comply with Part 22 and Part 24 of the FCC 47 CFR Rules.*



### **3. TEST METHODOLOGY**

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

#### **3.1 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: 2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

##### **Radiated Emissions**

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



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

The EUT (model: E310) had been tested under operating condition.

EUT staying in continuous transmitting mode was programmed.

**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 (CH4182) and Channel High (CH4233) were chosen for full testing.

**WCDMA / HSDPA Band II:**

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

**WCDMA / HSDPA Band V:**

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

**WCDMA / 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 (CH4182) and Channel High (CH4233) were chosen for full testing.

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

The worst emission was found:

in lie-down (X axis) for GPRS 1900 / EDGE 1900 / WCDMA Band II.

and

in lie-down (Y axis) for GSM 1900 / HSDPA II / HSUPA II.

and

in stand-up (Z axis) for GSM 850 / GPRS 850 / EDGE 850 / WCDMA Band V / HSDPA Band V / HSUPA Band V.



## **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 and Loop Antenna is scheduled for calibration once three years.*

Conducted Emissions Test Site				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360131	03/03/2011
Power Meter	Anritsu	ML2495A	1012009	03/28/2011
Power Sensor	Anritsu	MA2411B	0917072	03/09/2011
Temp. / Humidity Chamber	Terchy	MHG-150LF	930619	09/14/2011
DC Power Source	Agilent	E3640A	MY40001774	01/08/2011

3M Semi Anechoic Chamber				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	US42510252	10/25/2011
EMI Test Receiver	R&S	ESCI	100064	02/04/2011
Pre-Amplifier	Mini-Circuits	ZFL-1000LN	SF350700823	01/13/2011
Pre-Amplifier	MITEQ	AFS44-00102650-42-10P-44	1415367	11/19/2011
Bilog Antenna	Sunol Sciences	JB3	A030105	09/10/2011
Horn Antenna	EMCO	3117	00055165	12/06/2011
Loop Antenna	EMCO	6502	8905/2356	06/10/2013
Turn Table	CCS	CC-T-1F	N/A	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R
Site NSA	CCS	N/A	N/A	12/31/2010
Test S/W	EZ-EMC (CCS-3A1RE)			

Powerline Conducted Emissions Test Site				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESHS10	843743/015	03/25/2011
LISN	SCHWARZBECK	NSLK 8127	8127-541	03/14/2011
LISN	SCHAFFNER	NNB 41	03/10013	12/02/2011
Test S/W	CCS-3A1-CE-wugu			



### 4.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
Powerline Conducted Emission	+/- 1.6202
3M Semi Anechoic Chamber / 30M~200M	+/- 4.0606
3M Semi Anechoic Chamber / 200M~1000M	+/- 3.9979
3M Semi Anechoic Chamber / 1G~8G	+/- 2.5790
3M Semi Anechoic Chamber / 8G~18G	+/- 2.5928
3M Semi Anechoic Chamber / 18G~26G	+/- 2.7212
3M Semi Anechoic Chamber / 26G~40G	+/- 2.9520

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



## **5. FACILITIES AND ACCREDITATIONS**

### **5.1 FACILITIES**

No.199, Chunghsen Road, Hsintien City, Taipei Hsien, Taiwan, R.O.C.

Tel: 886-2-2217-0894 / Fax: 886-2-2217-1029

No.11, Wugong 6th Rd., Wugu Industrial Park, Taipei Hsien 248, Taiwan

Tel: 886-2-2299-9720 / Fax: 886-2-2298-4045

No.139, Wugong Rd., Wugu Industrial Park, Taipei Hsien 248, Taiwan

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
Canada	Industry Canada	3M Semi Anechoic Chamber (IC 2324G-1 / IC 2324G-2) to perform	

*\* 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 I for the actual connections between EUT and support equipment.

### 6.2 SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	FCC ID	Series No.	Data Cable	Power Cord
1.	SD Card	SANDISK	N/A	N/A	N/A	N/A	N/A
2.	SIM Card	N/A	N/A	N/A	N/A	N/A	N/A
3.	Bluetooth Tester (Remote)	Anritsu	MT8852B	750013	N/A	N/A	Unshielded, 1.8m
4.	Notebook PC (Remote)	HP	dv6-1332TX	CNF9491GM9	PD9112BNHU	N/A	AC I/P: Unshielded, 1.8m DC O/P: Unshielded, 1.8m with a core
5.	Wireless Router (Remote)	ASUS	WL-500g	471GA12838	MSQWL500G	LAN Cable: Unshielded, 10m	Unshielded, 1.8m
6.	Universal Radio Communication Tester (Remote)	R&S	CMU200	101245	N/A	N/A	Unshielded, 1.8m
7.	GPS Simulator (Remote)	HWAJEAT	GPS-101	EN001	N/A	N/A	N/A

**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.



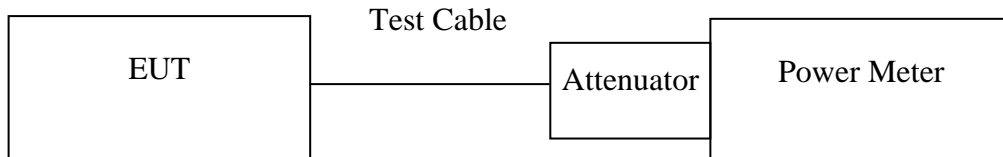
## 7. FCC PART 22 & 24 REQUIREMENTS

### 7.1 PEAK POWER

#### LIMIT

According to FCC §2.1046.

#### Test Configuration



*Remark: Measurement setup for testing on Antenna connector*

#### TEST PROCEDURE

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

#### TEST RESULTS

*No non-compliance noted.*



**Test Data**

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
GSM 850	128	824.20	32.40	1.73780
	190	836.60	32.40	1.73780
	251	848.80	32.60	1.81970
GPRS 850	128	824.20	28.30	0.67608
	190	836.60	28.30	0.67608
	251	848.80	28.50	0.70795
EDGE 850	128	824.20	26.90	0.48978
	190	836.60	26.90	0.48978
	251	848.80	27.10	0.51286

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
GSM 1900	512	1850.20	29.40	0.87096
	661	1880.00	29.50	0.89125
	810	1909.80	29.40	0.87096
GPRS 1900	512	1850.20	25.50	0.35481
	661	1880.00	25.50	0.35481
	810	1909.80	25.40	0.34674
EDGE 1900	512	1850.20	25.40	0.34674
	661	1880.00	25.40	0.34674
	810	1909.80	25.20	0.33113

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



Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
WCDMA (BAND II)	9262	1852.40	26.47	0.44361
	9400	1880.00	26.32	0.42855
	9538	1907.60	25.95	0.39355
WCDMA (BAND V)	4132	826.40	26.44	0.44055
	4182	836.40	26.78	0.47643
	4233	846.60	26.51	0.44771

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
WCDMA / HSDPA (BAND II)	9262	1852.40	26.91	0.49091
	9400	1880.00	26.57	0.45394
	9538	1907.60	26.19	0.41591
WCDMA / HSDPA (BAND V)	4132	826.40	26.85	0.48417
	4182	836.40	27.21	0.52602
	4233	846.60	26.91	0.49091

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
WCDMA / HSUPA (BAND II)	9262	1852.40	26.91	0.49091
	9400	1880.00	26.78	0.47643
	9538	1907.60	26.31	0.42756
WCDMA / HSUPA (BAND V)	4132	826.40	26.85	0.48417
	4182	836.40	27.14	0.51761
	4233	846.60	26.89	0.48865

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



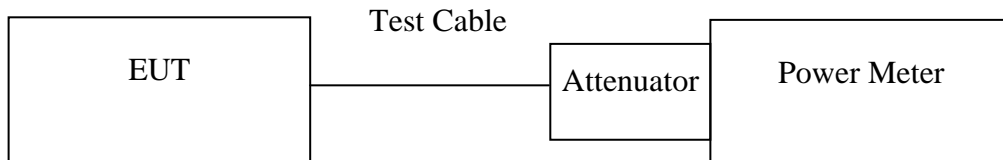


## 7.2 AVERAGE POWER

### LIMIT

For reporting purposes only.

### Test Configuration



*Remark: Measurement setup for testing on Antenna connector*

### TEST PROCEDURE

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

### TEST RESULTS

*No non-compliance noted.*



## TEST RESULTS

*No non-compliance noted.*

### Test Data

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
GSM 850	128	824.20	32.30	1.69824
	190	836.60	32.30	1.69824
	251	848.80	32.50	1.77828
GPRS 850	128	824.20	25.29	0.33804
	190	836.60	25.29	0.33804
	251	848.80	25.49	0.35397
EDGE 850	128	824.20	23.89	0.24489
	190	836.60	23.89	0.24489
	251	848.80	24.09	0.25643

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
GSM 1900	512	1850.20	29.30	0.85114
	661	1880.00	29.40	0.87096
	810	1909.80	29.20	0.83176
GPRS 1900	512	1850.20	22.49	0.17741
	661	1880.00	22.49	0.17741
	810	1909.80	22.39	0.17337
EDGE 1900	512	1850.20	22.39	0.17337
	661	1880.00	22.39	0.17337
	810	1909.80	22.19	0.16557

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



Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
WCDMA (BAND II)	9262	1852.40	23.51	0.22439
	9400	1880.00	23.10	0.20417
	9538	1907.60	22.87	0.19364
WCDMA (BAND V)	4132	826.40	23.31	0.21429
	4182	836.40	23.58	0.22803
	4233	846.60	23.26	0.21184

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
WCDMA / HSDPA (BAND II)	9262	1852.40	23.20	0.20893
	9400	1880.00	22.67	0.18493
	9538	1907.60	22.62	0.18281
WCDMA / HSDPA (BAND V)	4132	826.40	23.17	0.20749
	4182	836.40	23.43	0.22029
	4233	846.60	23.08	0.20324

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
WCDMA / HSUPA (BAND II)	9262	1852.40	23.17	0.20749
	9400	1880.00	22.92	0.19588
	9538	1907.60	22.69	0.18578
WCDMA / HSUPA (BAND V)	4132	826.40	23.17	0.20749
	4182	836.40	23.31	0.21429
	4233	846.60	23.01	0.19999

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



## 7.3 ERP & EIRP MEASUREMENT

### LIMIT

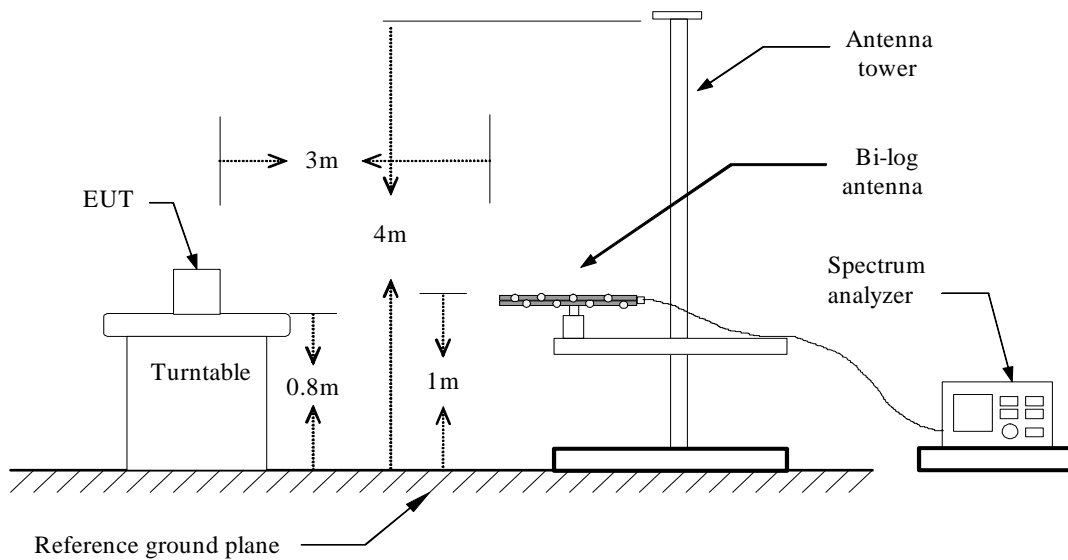
According to FCC §2.1046

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

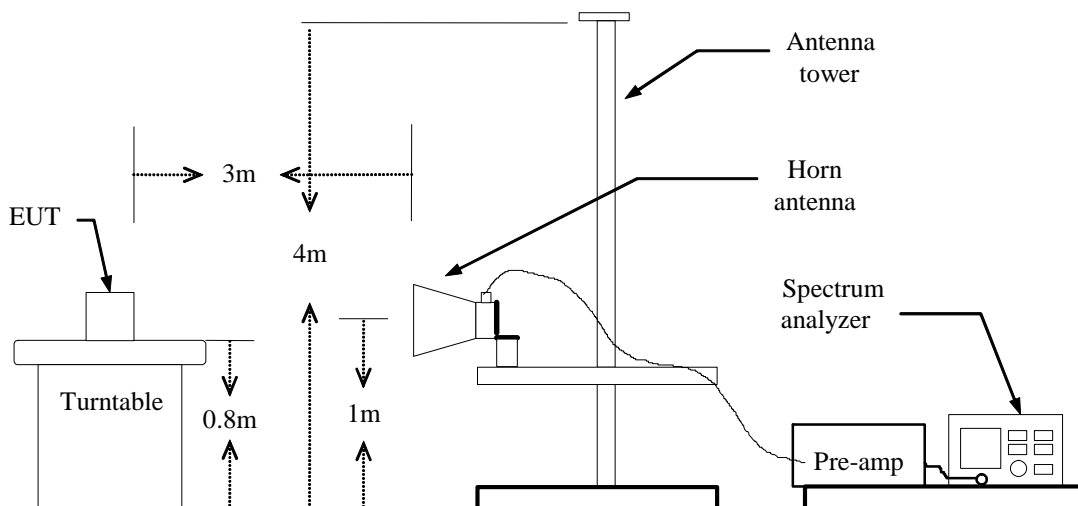
FCC 24.232(b): The equivalent Isotropic Radiated Power (EIRP) must not exceed 2 Watts.

### Test Configuration

#### Below 1 GHz

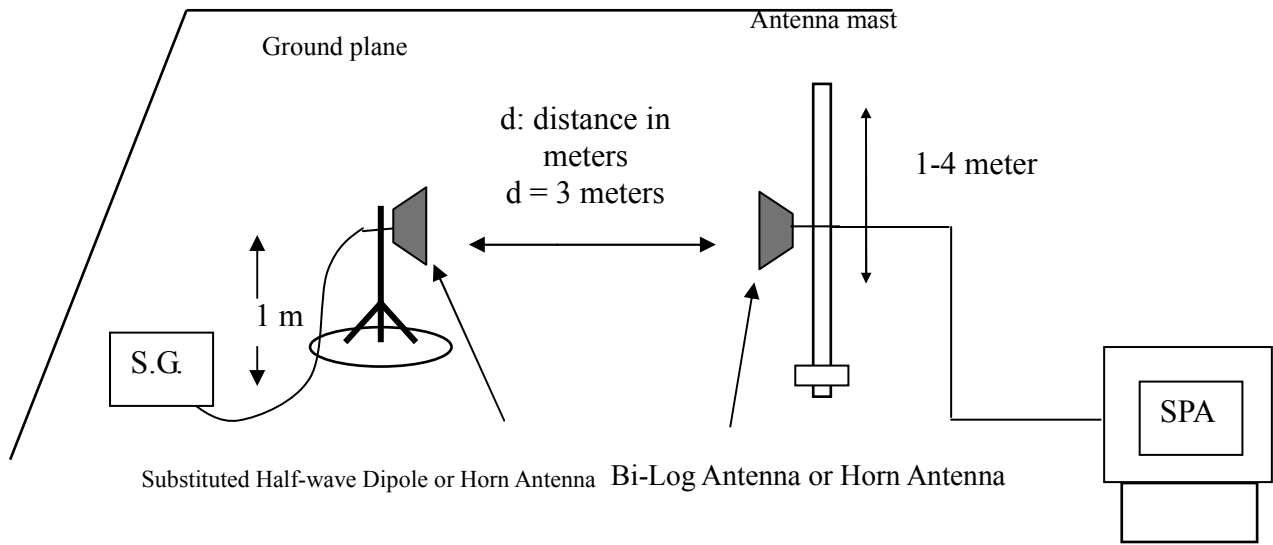


#### Above 1 GHz





### For Substituted Method Test Set-UP



### TEST PROCEDURE

1. Setup the configuration per test set-up for frequencies measured below and above 1 GHz respectively, adjusting the input voltage to produce the maximum power as measured in this test report.
2. Adjust the analyzer for each frequency measured with 1 MHz frequency span and 100 kHz resolution bandwidth.
3. The search antenna is to be raised and lowered over a range from 1 to 4 meters in horizontally polarized orientation. Position the highest when the highest value is indicated on spectrum analyzer, then change the orientation of EUT on test table over a range from 0 ° to 360 °, and record the highest value indicated on spectrum analyzer as reference value.
4. Repeat step 3 until complete all frequencies need to be measured. Record the level for each frequency.
5. Repeat step 4 with search antenna in vertical polarized orientations.
6. Replace the EUT with a tuned dipole antenna (horn antenna for above 1 GHz) relative to each frequency in horizontally polarized orientation and as the same polarized orientation with search antenna. Connect the tuned dipole antenna to a standard signal generator (SG) via a low loss cable. Power on the SG and tune the right frequency in measuring as well as set SG at a appreciated output level. Rise and lower the search antenna to get the highest value on spectrum analyzer, and then hold this position. Adjust the SG output to get a identical value derived from step 3 on spectrum analyzer. Record this value for result calculated.
7. Repeat step 6 until complete all frequencies need to be measured.
8. Repeat step 7 with both transmitting antenna (horn antenna for above 1 GHz) and searching antenna in vertical polarized orientations.
9. Derive the ERP/EIRP with the following equation:  
ERP = SG output(dBm) +Antenna Gain(dBd, if broad band antenna is used) – Cable (dB)  
EIRP = SG output(dBm) +Antenna Gain(dBi) – Cable (dB)

### TEST RESULTS

*No non-compliance noted.*

**GSM 850 TEST DATA**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	128	824.20	V	-20.02	34.62	14.59	38.50	-23.91
		824.20	H	-7.86	34.65	26.78	38.50	-11.72
	190	836.60	V	-8.98	34.53	25.55	38.50	-12.95
		836.60	H	-15.80	34.63	18.83	38.50	-19.67
	251	848.80	V	-21.85	34.64	12.79	38.50	-25.71
		848.80	H	-8.85	34.75	25.90	38.50	-12.60
Y	128	824.20	V	-19.22	34.62	15.39	38.50	-23.11
		824.20	H	-7.74	34.65	26.90	38.50	-11.60
	190	836.60	V	-22.02	34.53	12.50	38.50	-26.00
		836.60	H	-8.80	34.63	25.83	38.50	-12.67
	251	848.80	V	-21.60	34.64	13.04	38.50	-25.46
		848.80	H	-8.17	34.75	26.58	38.50	-11.92
Z	128	824.20	V	-7.60	34.62	<b>*27.01</b>	38.50	-11.49
		824.20	H	-12.57	34.65	22.08	38.50	-16.42
	190	836.60	V	-8.77	34.53	25.75	38.50	-12.75
		836.60	H	-22.97	34.63	11.67	38.50	-26.83
	251	848.80	V	-8.12	34.64	26.52	38.50	-11.98
		848.80	H	-20.69	34.75	14.06	38.50	-24.44

**GPRS 850 TEST DATA**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	128	824.20	V	-24.15	34.62	10.46	38.50	-28.04
		824.20	H	-12.67	34.65	21.98	38.50	-16.52
	190	836.60	V	-23.80	34.53	10.72	38.50	-27.78
		836.60	H	-12.78	34.63	21.86	38.50	-16.64
	251	848.80	V	-23.66	34.64	10.98	38.50	-27.52
		848.80	H	-12.38	34.75	22.37	38.50	-16.13
Y	128	824.20	V	-23.59	34.62	11.03	38.50	-27.47
		824.20	H	-12.95	34.65	21.70	38.50	-16.80
	190	836.60	V	-22.65	34.53	11.87	38.50	-26.63
		836.60	H	-12.51	34.63	22.13	38.50	-16.37
	251	848.80	V	-24.07	34.63	10.56	38.50	-27.94
		848.80	H	-12.03	34.75	22.73	38.50	-15.77
Z	128	824.20	V	-12.20	34.62	22.42	38.50	-16.08
		824.20	H	-17.55	34.65	17.10	38.50	-21.40
	190	836.60	V	-12.41	34.53	22.12	38.50	-16.38
		836.60	H	-18.48	34.63	16.16	38.50	-22.34
	251	848.80	V	-11.67	34.64	<b>*22.96</b>	38.50	-15.54
		848.80	H	-18.67	34.75	16.08	38.50	-22.42



**GSM 1900 TEST DATA**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	512	1850.20	V	-13.17	41.17	28.00	33.00	-5.00
		1850.20	H	-12.81	40.79	27.99	33.00	-5.01
	661	1880.00	V	-12.38	41.23	28.85	33.00	-4.15
		1880.00	H	-13.21	41.15	27.94	33.00	-5.06
	810	1909.80	V	-13.15	41.30	28.15	33.00	-4.85
		1909.80	H	-13.39	41.38	27.99	33.00	-5.01
Y	512	1850.20	V	-11.73	41.17	<b>*29.44</b>	33.00	-3.56
		1850.20	H	-13.81	40.79	26.99	33.00	-6.01
	661	1880.00	V	-14.81	41.23	26.42	33.00	-6.58
		1880.00	H	-12.04	41.15	29.10	33.00	-3.90
	810	1909.80	V	-14.27	41.30	27.03	33.00	-5.97
		1909.80	H	-14.59	41.38	26.79	33.00	-6.21
Z	512	1850.20	V	-14.82	41.17	26.35	33.00	-6.65
		1850.20	H	-14.78	40.79	26.02	33.00	-6.98
	661	1880.00	V	-12.77	41.23	28.46	33.00	-4.54
		1880.00	H	-13.29	41.15	27.86	33.00	-5.14
	810	1909.80	V	-13.20	41.30	28.10	33.00	-4.90
		1909.80	H	-14.29	41.37	27.09	33.00	-5.91

**GPRS 1900 TEST DATA**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	512	1850.20	V	-23.77	41.17	17.41	33.00	-15.59
		1850.20	H	-17.58	40.79	23.21	33.00	-9.79
	661	1880.00	V	-24.30	41.23	16.93	33.00	-16.07
		1880.00	H	-18.30	41.14	22.84	33.00	-10.16
	810	1909.80	V	-25.02	41.30	16.28	33.00	-16.72
		1909.80	H	-18.08	41.38	23.30	33.00	-9.70
Y	512	1850.20	V	-23.77	41.17	17.41	33.00	-15.59
		1850.20	H	-17.58	40.79	23.21	33.00	-9.79
	661	1880.00	V	-24.30	41.23	16.93	33.00	-16.07
		1880.00	H	-18.30	41.14	22.84	33.00	-10.16
	810	1909.80	V	-25.02	41.30	16.28	33.00	-16.72
		1909.80	H	-18.08	41.38	23.30	33.00	-9.70
Z	512	1850.20	V	-20.07	41.17	21.10	33.00	-11.90
		1850.20	H	-21.85	40.79	18.95	33.00	-14.05
	661	1880.00	V	-22.75	41.23	18.48	33.00	-14.52
		1880.00	H	-17.49	41.14	23.65	33.00	-9.35
	810	1909.80	V	-22.58	41.30	18.72	33.00	-14.28
		1909.80	H	-17.03	41.37	<b>*24.34</b>	33.00	-8.66

**EDGE 850 Test Data**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	128	824.20	V	-23.79	34.62	10.83	38.50	-27.67
		824.20	H	-12.78	34.65	21.86	38.50	-16.64
	190	836.60	V	-23.69	34.53	10.84	38.50	-27.66
		836.60	H	-12.97	34.63	21.67	38.50	-16.83
	251	848.80	V	-23.58	34.64	11.06	38.50	-27.44
		848.80	H	-12.36	34.75	22.39	38.50	-16.11
Y	128	824.20	V	-21.81	34.62	12.81	38.50	-25.69
		824.20	H	-13.04	34.65	21.61	38.50	-16.89
	190	836.60	V	-22.28	34.53	12.25	38.50	-26.25
		836.60	H	-12.54	34.63	22.09	38.50	-16.41
	251	848.80	V	-25.19	34.64	9.44	38.50	-29.06
		848.80	H	-11.84	34.75	22.91	38.50	-15.59
Z	128	824.20	V	-12.24	34.62	22.38	38.50	-16.12
		824.20	H	-18.69	34.65	15.96	38.50	-22.54
	190	836.60	V	-12.31	34.53	22.22	38.50	-16.28
		836.60	H	-19.67	34.63	14.96	38.50	-23.54
	251	848.80	V	-11.69	34.64	<b>*22.94</b>	38.50	-15.56
		848.80	H	-18.67	34.75	16.08	38.50	-22.42

**EDGE 1900 Test Data**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	512	1850.20	V	-23.48	41.17	17.69	33.00	-15.31
		1850.20	H	-17.56	40.79	23.24	33.00	-9.76
	661	1880.00	V	-24.27	41.23	16.95	33.00	-16.05
		1880.00	H	-18.31	41.14	22.83	33.00	-10.17
	810	1909.80	V	-25.00	41.30	16.30	33.00	-16.70
		1909.80	H	-17.59	41.37	23.78	33.00	-9.22
Y	512	1850.20	V	-20.10	41.17	21.07	33.00	-11.93
		1850.20	H	-18.28	40.79	22.52	33.00	-10.48
	661	1880.00	V	-23.02	41.23	18.21	33.00	-14.79
		1880.00	H	-17.25	41.14	<b>*23.90</b>	33.00	-9.10
	810	1909.80	V	-22.61	41.30	18.69	33.00	-14.31
		1909.80	H	-17.57	41.37	23.80	33.00	-9.20
Z	512	1850.20	V	-20.37	41.17	20.80	33.00	-12.20
		1850.20	H	-20.90	40.79	19.89	33.00	-13.11
	661	1880.00	V	-19.17	41.23	22.06	33.00	-10.94
		1880.00	H	-23.07	41.14	18.07	33.00	-14.93
	810	1909.80	V	-18.86	41.30	22.45	33.00	-10.55
		1909.80	H	-23.69	41.37	17.68	33.00	-15.32



**WCDMA Test Data (BAND II)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	9262	1852.40	V	-16.87	41.18	24.30	33.00	-8.70
		1852.40	H	-16.67	40.83	24.17	33.00	-8.83
	9400	1880.00	V	-18.11	41.23	23.12	33.00	-9.88
		1880.00	H	-17.30	41.15	23.84	33.00	-9.16
	9538	1907.60	V	-19.87	41.29	21.42	33.00	-11.58
		1907.60	H	-19.04	41.38	22.34	33.00	-10.66
Y	9262	1852.40	V	-17.39	41.18	23.78	33.00	-9.22
		1852.40	H	-19.35	40.83	21.47	33.00	-11.53
	9400	1880.00	V	-18.70	41.23	22.53	33.00	-10.47
		1880.00	H	-18.69	41.15	22.46	33.00	-10.54
	9538	1907.60	V	-19.04	41.29	22.26	33.00	-10.74
		1907.60	H	-19.18	41.38	22.19	33.00	-10.81
Z	9262	1852.40	V	-17.66	41.18	23.52	33.00	-9.48
		1852.40	H	-20.58	40.82	20.24	33.00	-12.76
	9400	1880.00	V	-16.86	41.23	<b>*24.37</b>	33.00	-8.63
		1880.00	H	-19.52	41.15	21.63	33.00	-11.37
	9538	1907.60	V	-17.38	41.29	23.91	33.00	-9.09
		1907.60	H	-20.43	41.38	20.95	33.00	-12.05

**WCDMA Test Data (BAND V)**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	4132	826.40	V	-20.39	34.61	14.22	38.50	-24.28
		826.40	H	-17.51	34.64	17.13	38.50	-21.37
	4182	836.40	V	-23.82	34.52	10.70	38.50	-27.80
		836.40	H	-19.80	34.63	14.84	38.50	-23.66
	4233	846.60	V	-22.25	34.59	12.34	38.50	-26.16
		846.60	H	-17.38	34.70	17.32	38.50	-21.18
Y	4132	826.40	V	-23.45	34.61	11.15	38.50	-27.35
		826.40	H	-18.20	34.64	16.45	38.50	-22.05
	4182	836.40	V	-24.32	34.52	10.20	38.50	-28.30
		836.40	H	-19.04	34.63	15.59	38.50	-22.91
	4233	846.60	V	-21.48	34.58	13.10	38.50	-25.40
		846.60	H	-17.00	34.70	17.70	38.50	-20.80
Z	4132	826.40	V	-16.45	34.61	18.16	38.50	-20.34
		826.40	H	-20.10	34.64	14.54	38.50	-23.96
	4182	836.40	V	-18.59	34.52	15.93	38.50	-22.57
		836.40	H	-21.86	34.63	12.77	38.50	-25.73
	4233	846.60	V	-15.98	34.62	<b>*18.63</b>	38.50	-19.87
		846.60	H	-18.82	34.73	15.91	38.50	-22.59



**WCDMA / HSDPA BAND II Test Data**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	9262	1852.40	V	-17.79	41.18	23.39	33.00	-9.61
		1852.40	H	-16.83	40.83	24.00	33.00	-9.00
	9400	1880.00	V	-16.00	41.23	25.23	33.00	-7.77
		1880.00	H	-18.34	41.13	22.79	33.00	-10.21
	9538	1907.60	V	-16.43	41.29	24.86	33.00	-8.14
		1907.60	H	-18.29	41.38	23.09	33.00	-9.91
Y	9262	1852.40	V	-19.47	41.18	21.71	33.00	-11.29
		1852.40	H	-15.45	40.83	25.38	33.00	-7.62
	9400	1880.00	V	-14.47	41.23	<b>*26.76</b>	33.00	-6.24
		1880.00	H	-18.62	41.13	22.51	33.00	-10.49
	9538	1907.60	V	-20.71	41.29	20.59	33.00	-12.41
		1907.60	H	-16.16	41.38	25.22	33.00	-7.78
Z	9262	1852.40	V	-16.61	41.18	24.57	33.00	-8.43
		1852.40	H	-17.32	40.83	23.51	33.00	-9.49
	9400	1880.00	V	-16.39	41.23	24.83	33.00	-8.17
		1880.00	H	-17.31	41.13	23.82	33.00	-9.18
	9538	1907.60	V	-18.36	41.29	22.93	33.00	-10.07
		1907.60	H	-18.96	41.38	22.42	33.00	-10.58

**WCDMA / HSDPA BAND V Test Data**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	4132	826.40	V	-22.91	34.61	11.70	38.50	-26.80
		826.40	H	-18.56	34.64	16.09	38.50	-22.41
	4182	836.40	V	-22.21	34.54	12.33	38.50	-26.17
		836.40	H	-21.04	34.63	13.59	38.50	-24.91
	4233	846.60	V	-18.95	34.58	15.63	38.50	-22.87
		846.60	H	-16.27	34.70	18.44	38.50	-20.06
Y	4132	826.40	V	-23.66	34.61	10.95	38.50	-27.55
		826.40	H	-19.36	34.64	15.28	38.50	-23.22
	4182	836.40	V	-22.79	34.52	11.73	38.50	-26.77
		836.40	H	-18.95	34.63	15.68	38.50	-22.82
	4233	846.60	V	-23.14	34.59	11.45	38.50	-27.05
		846.60	H	-16.65	34.71	18.05	38.50	-20.45
Z	4132	826.40	V	-16.21	34.61	18.40	38.50	-20.10
		826.40	H	-18.75	34.64	15.90	38.50	-22.60
	4182	836.40	V	-18.50	34.52	16.02	38.50	-22.48
		836.40	H	-21.65	34.63	12.98	38.50	-25.52
	4233	846.60	V	-15.67	34.59	<b>*18.91</b>	38.50	-19.59
		846.60	H	-17.90	34.71	16.81	38.50	-21.69

**WCDMA / HSUPA BAND II Test Data**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	9262	1852.40	V	-17.84	41.18	23.34	33.00	-9.66
		1852.40	H	-16.60	40.83	24.23	33.00	-8.77
	9400	1880.00	V	-15.99	41.23	25.24	33.00	-7.76
		1880.00	H	-17.52	41.16	23.64	33.00	-9.36
	9538	1907.60	V	-16.59	41.29	24.70	33.00	-8.30
		1907.60	H	-18.25	41.38	23.13	33.00	-9.87
Y	9262	1852.40	V	-19.69	41.17	21.48	33.00	-11.52
		1852.40	H	-15.27	40.83	25.56	33.00	-7.44
	9400	1880.00	V	-14.96	41.23	<b>*26.27</b>	33.00	-6.73
		1880.00	H	-18.31	41.13	22.83	33.00	-10.17
	9538	1907.60	V	-22.53	41.29	18.76	33.00	-14.24
		1907.60	H	-17.50	41.38	23.88	33.00	-9.12
Z	9262	1852.40	V	-16.20	41.18	24.97	33.00	-8.03
		1852.40	H	-17.28	40.83	23.55	33.00	-9.45
	9400	1880.00	V	-16.62	41.23	24.61	33.00	-8.39
		1880.00	H	-17.68	41.13	23.45	33.00	-9.55
	9538	1907.60	V	-18.18	41.29	23.11	33.00	-9.89
		1907.60	H	-18.83	41.38	22.55	33.00	-10.45

**WCDMA / HSUPA BAND V Test Data**

EUT Pol.	Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
X	4132	826.40	V	-23.32	34.61	11.29	38.50	-27.21
		826.40	H	-18.44	34.64	16.21	38.50	-22.29
	4182	836.40	V	-21.93	34.52	12.59	38.50	-25.91
		836.40	H	-21.36	34.63	13.27	38.50	-25.23
	4233	846.60	V	-19.37	34.58	15.21	38.50	-23.29
		846.60	H	-16.52	34.71	18.18	38.50	-20.32
Y	4132	826.40	V	-23.95	34.61	10.66	38.50	-27.84
		826.40	H	-19.44	34.64	15.20	38.50	-23.30
	4182	836.40	V	-22.48	34.52	12.03	38.50	-26.47
		836.40	H	-19.07	34.63	15.56	38.50	-22.94
	4233	846.60	V	-22.95	34.59	11.64	38.50	-26.86
		846.60	H	-16.71	34.71	18.00	38.50	-20.50
Z	4132	826.40	V	-16.15	34.61	18.45	38.50	-20.05
		826.40	H	-18.83	34.64	15.81	38.50	-22.69
	4182	836.40	V	-18.42	34.52	16.10	38.50	-22.40
		836.40	H	-21.33	34.63	13.30	38.50	-25.20
	4233	846.60	V	-15.82	34.58	<b>*18.76</b>	38.50	-19.74
		846.60	H	-18.09	34.71	16.62	38.50	-21.88

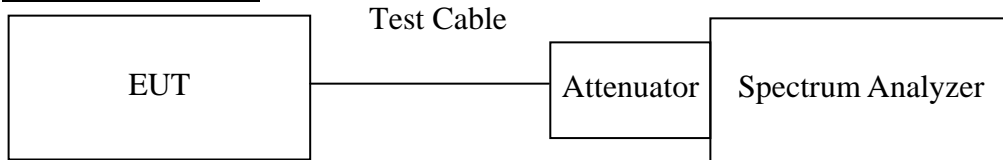


## 7.4 OCCUPIED BANDWIDTH MEASUREMENT

### 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**

<b>Test Mode</b>	<b>CH</b>	<b>Frequency (MHz)</b>	<b>99% Bandwidth (kHz)</b>
GSM 850	128	824.20	240.8113
	190	836.60	253.4723
	251	848.80	251.1342
GPRS 850	128	824.20	239.1329
	190	836.60	243.1660
	251	848.80	245.0327
EDGE 850	128	824.20	244.9357
	190	836.60	248.6845
	251	848.80	246.4936

<b>Test Mode</b>	<b>CH</b>	<b>Frequency (MHz)</b>	<b>99% Bandwidth (kHz)</b>
GSM 1900	512	1850.20	243.3146
	661	1880.00	249.8606
	810	1909.80	250.1903
GPRS 1900	512	1850.20	242.5111
	661	1880.00	248.8923
	810	1909.80	244.3906
EDGE 1900	512	1850.20	242.3516
	661	1880.00	239.9478
	810	1909.80	246.5342



Test Mode	CH	Frequency (MHz)	99% Bandwidth (MHz)
WCDMA (Band II)	9262	1852.40	4.1528
	9400	1880.00	4.1508
	9538	1907.60	4.1591
WCDMA (Band V)	4132	826.40	4.1761
	4182	836.40	4.1719
	4233	846.60	4.1728
WCDMA / HSDPA (BAND II)	9262	1852.40	4.1660
	9400	1880.00	4.1516
	9538	1907.60	4.1674
WCDMA / HSDPA (BAND V)	4132	826.40	4.1797
	4182	836.40	4.1629
	4233	846.60	4.1760
WCDMA / HSUPA (BAND II)	9262	1852.40	4.1425
	9400	1880.00	4.1798
	9538	1907.60	4.1698
WCDMA / HSUPA (BAND V)	4132	826.40	4.1803
	4182	836.40	4.1627
	4233	846.60	4.1731

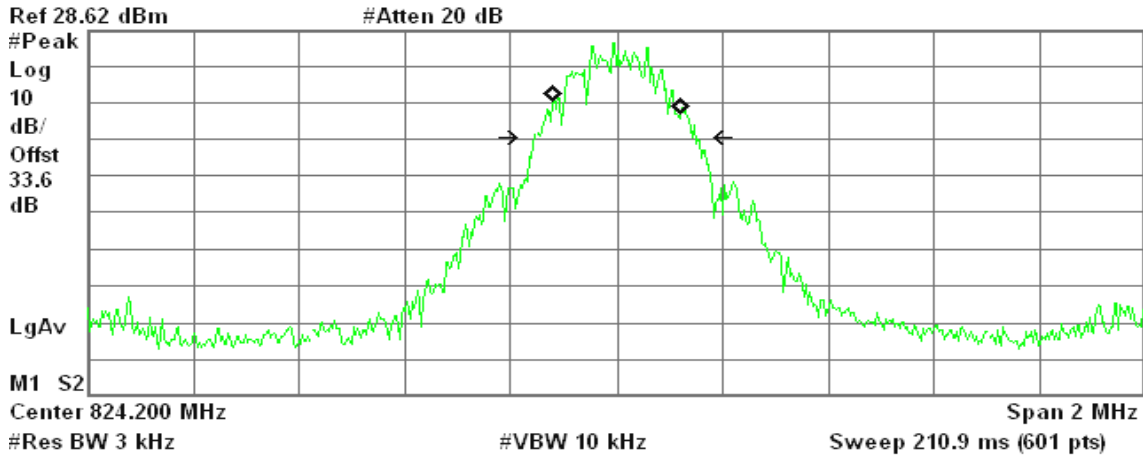


**Test Plot**

**GSM 850 (CH Low)**

Agilent 11:16:10 Nov 30, 2010

R T



Occupied Bandwidth  
240.8113 kHz

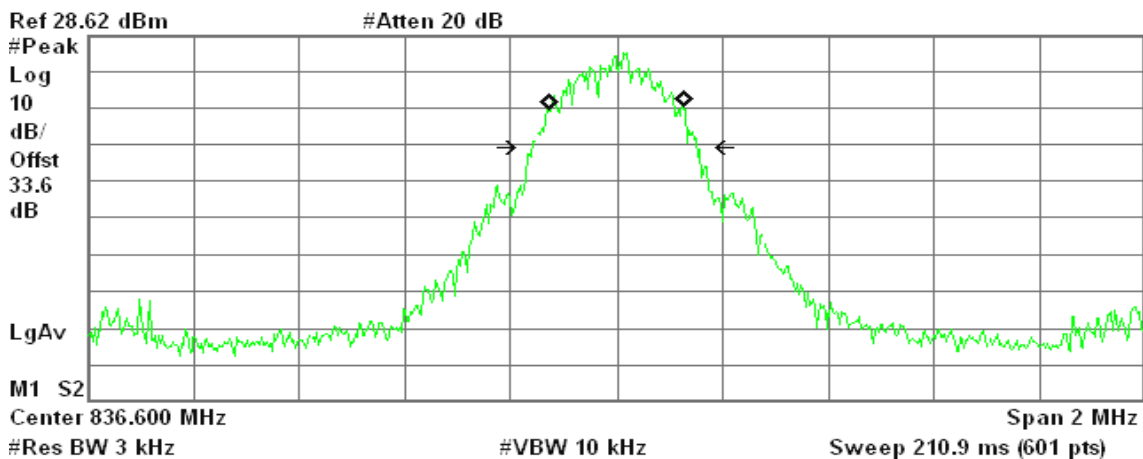
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error 794.709 Hz  
x dB Bandwidth 303.817 kHz

**GSM 850 (CH Mid)**

Agilent 11:15:47 Nov 30, 2010

R T



Occupied Bandwidth  
253.4723 kHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

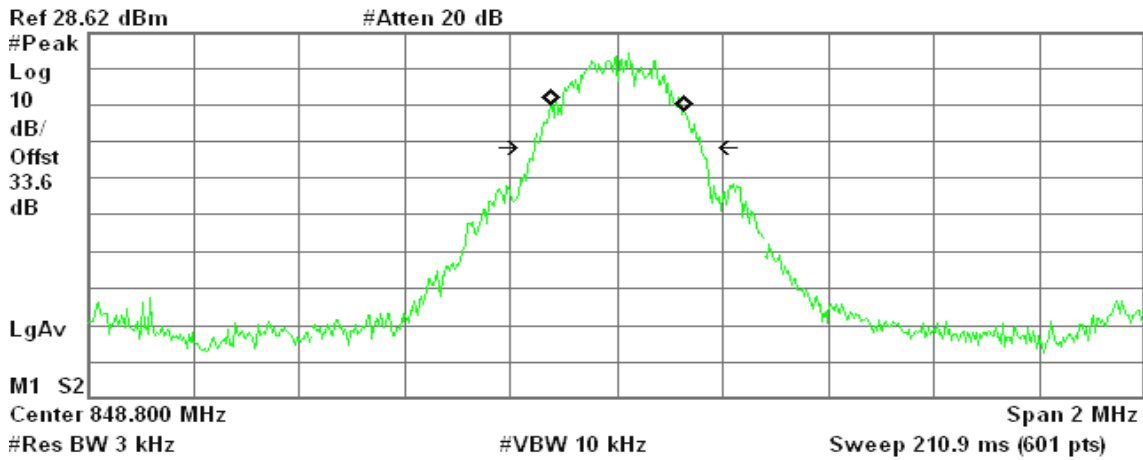
Transmit Freq Error -1.407 kHz  
x dB Bandwidth 310.469 kHz



### GSM 850 (CH High)

Agilent 11:15:24 Nov 30, 2010

R T



Occupied Bandwidth  
251.1342 kHz

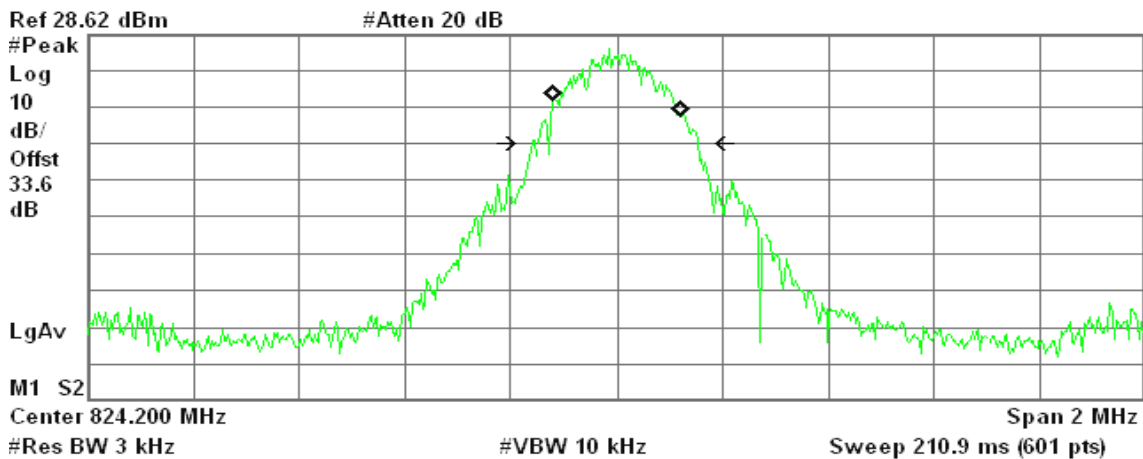
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error 2.016 kHz  
x dB Bandwidth 314.154 kHz

### GPRS 850 (CH Low)

Agilent 11:16:58 Nov 30, 2010

R T



Occupied Bandwidth  
239.1329 kHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error 443.353 Hz  
x dB Bandwidth 312.336 kHz

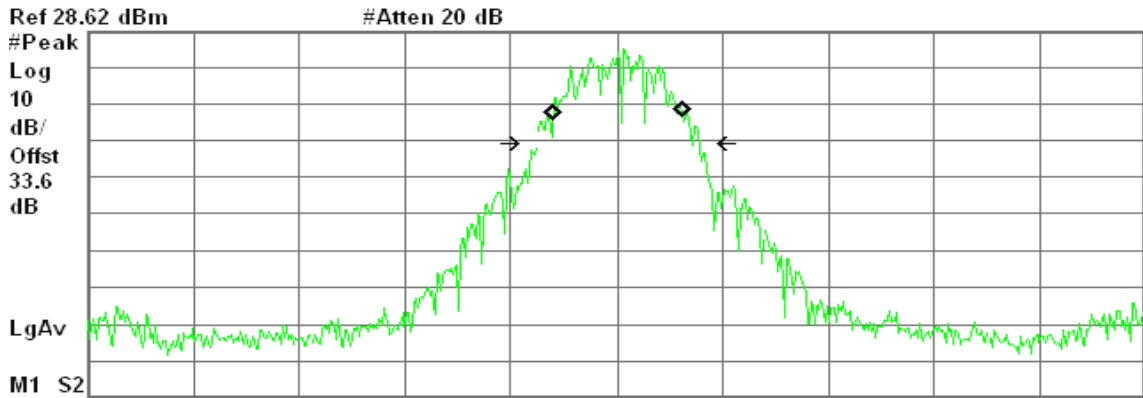




### GPRS 850 (CH Mid)

Agilent 11:17:51 Nov 30, 2010

R T



Center 836.600 MHz Span 2 MHz  
 #Res BW 3 kHz #VBW 10 kHz Sweep 210.9 ms (601 pts)

Occupied Bandwidth

243.1660 kHz

Occ BW % Pwr 99.00 %  
 x dB -26.00 dB

Transmit Freq Error 3.125 kHz  
 x dB Bandwidth 305.756 kHz

### GPRS 850(CH High)

Agilent 11:18:43 Nov 30, 2010

R T



Center 848.800 MHz Span 2 MHz  
 #Res BW 3 kHz #VBW 10 kHz Sweep 210.9 ms (601 pts)

Occupied Bandwidth

245.0327 kHz

Occ BW % Pwr 99.00 %  
 x dB -26.00 dB

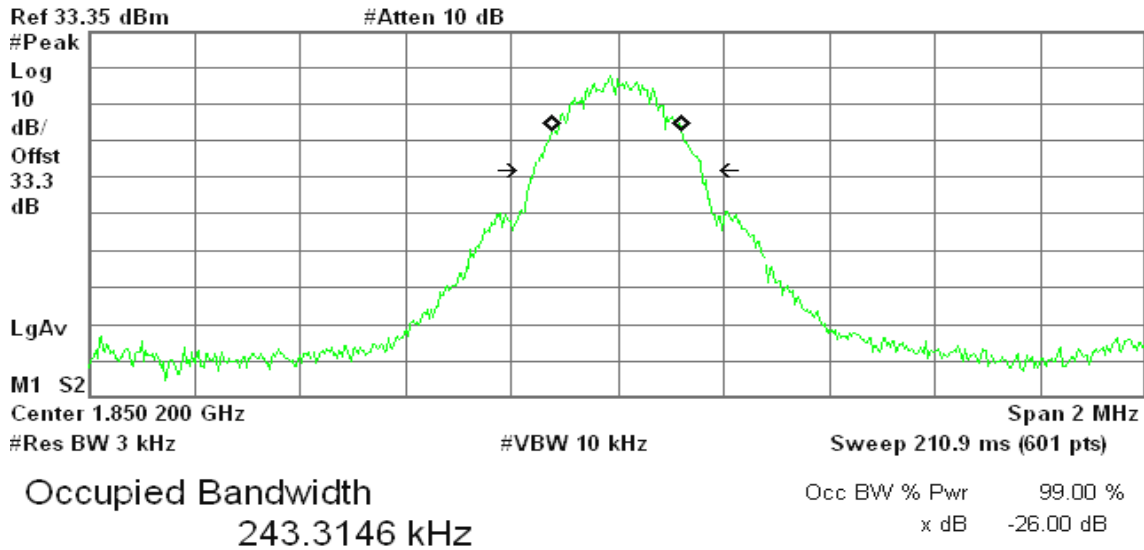
Transmit Freq Error -827.365 Hz  
 x dB Bandwidth 315.652 kHz



### GSM 1900 (CH Low)

Agilent 13:41:10 Nov 30, 2010

R T

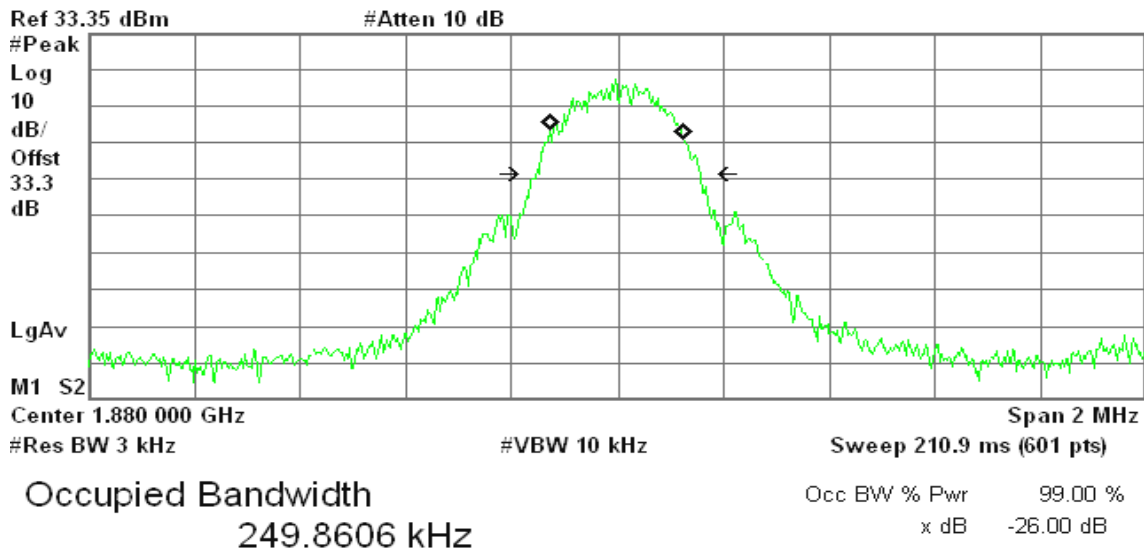


Transmit Freq Error -328.792 Hz  
x dB Bandwidth 314.730 kHz

### GSM 1900 (CH Mid)

Agilent 13:42:33 Nov 30, 2010

R T



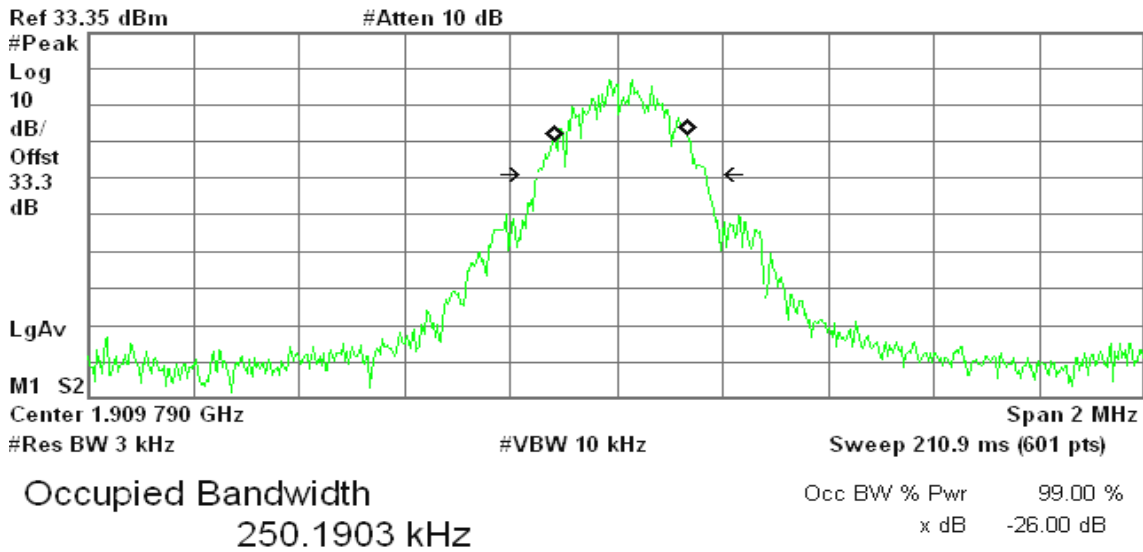
Transmit Freq Error -1.974 kHz  
x dB Bandwidth 309.236 kHz



### GSM 1900 (CH High)

Agilent 13:43:03 Nov 30, 2010

R T

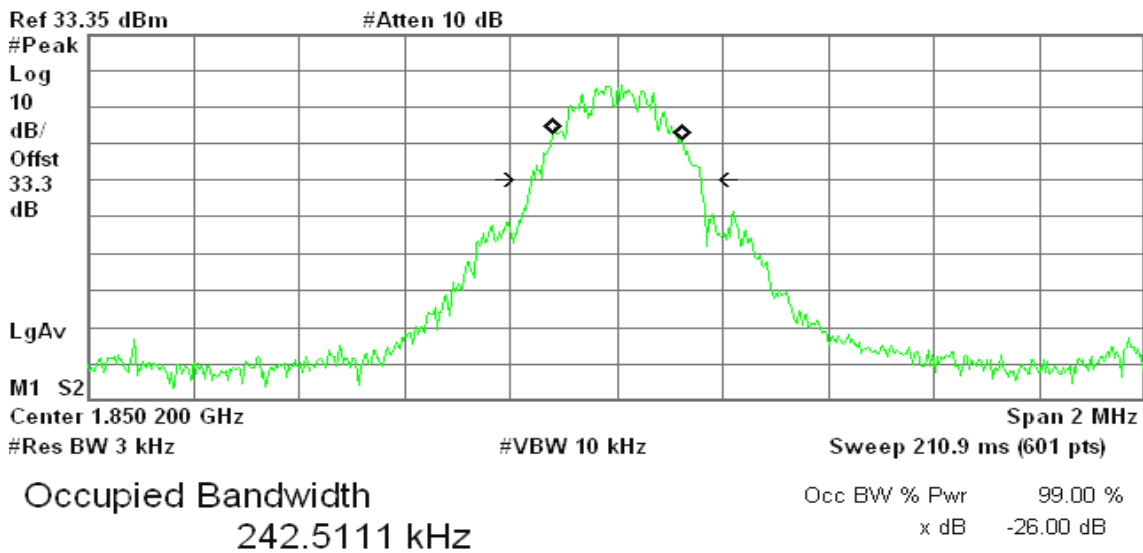


Transmit Freq Error 9.116 kHz  
x dB Bandwidth 317.185 kHz

### GPRS 1900 (CH Low)

Agilent 13:41:24 Nov 30, 2010

R T



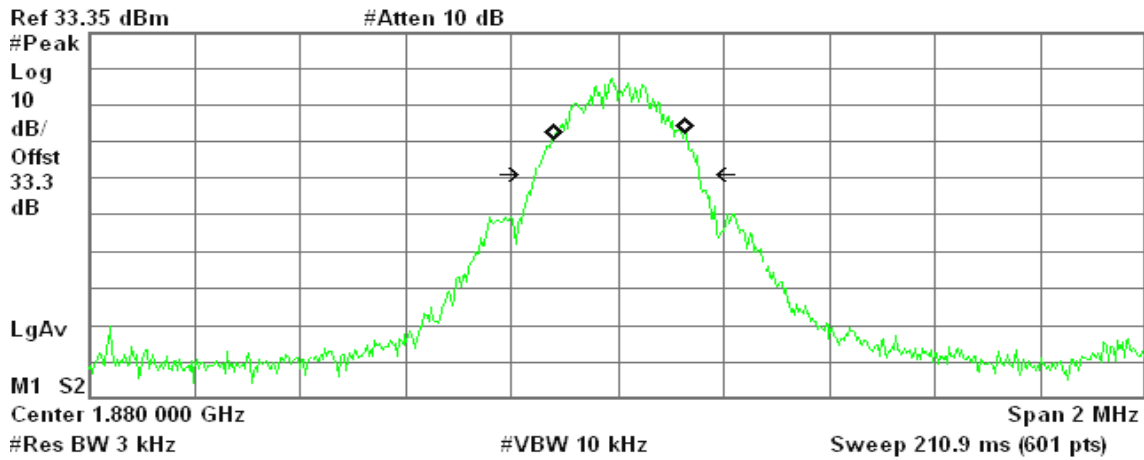
Transmit Freq Error 1.078 kHz  
x dB Bandwidth 318.340 kHz



### GPRS 1900 (CH Mid)

Agilent 13:42:11 Nov 30, 2010

R T



Occupied Bandwidth  
248.8923 kHz

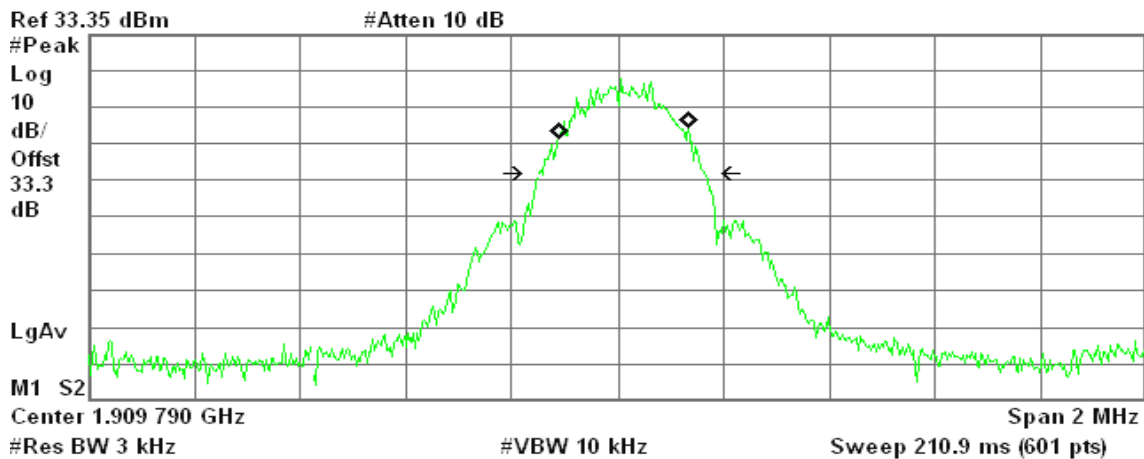
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error 2.957 kHz  
x dB Bandwidth 308.148 kHz

### GPRS 1900 (CH High)

Agilent 13:43:19 Nov 30, 2010

R T



Occupied Bandwidth  
244.3906 kHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

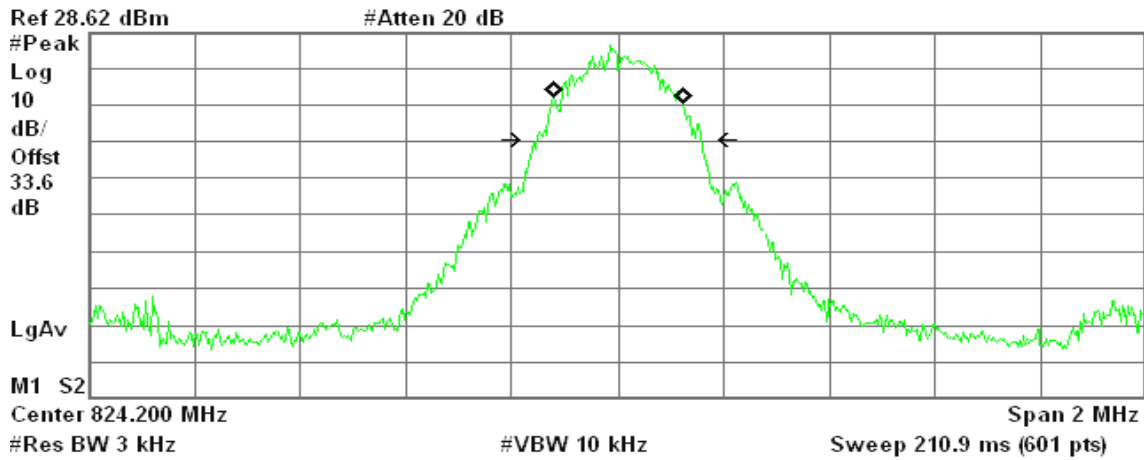
Transmit Freq Error 11.971 kHz  
x dB Bandwidth 310.966 kHz



### EDGE 850 (CH Low)

Agilent 11:17:18 Nov 30, 2010

R T



Occupied Bandwidth  
244.9357 kHz

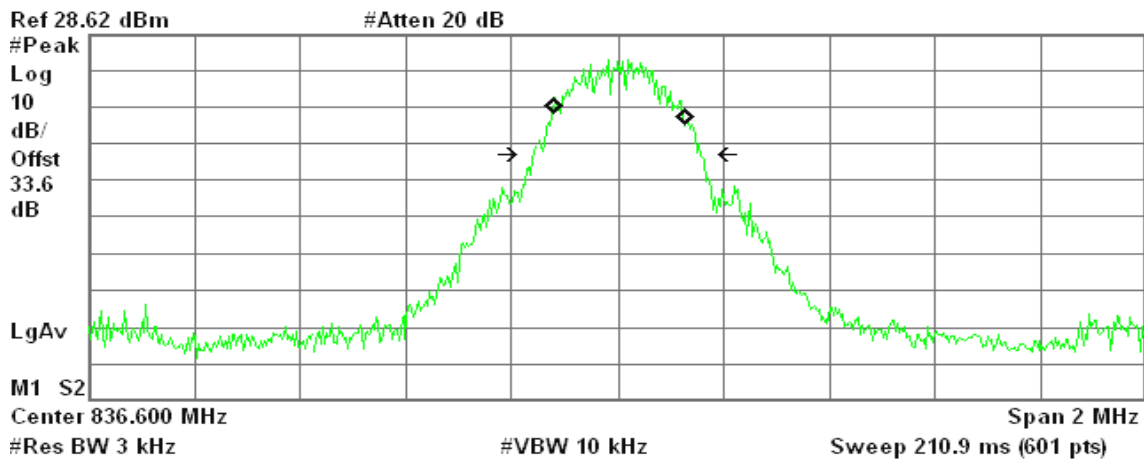
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error 1.511 kHz  
x dB Bandwidth 309.777 kHz

### EDGE 850 (CH Mid)

Agilent 11:17:38 Nov 30, 2010

R T



Occupied Bandwidth  
248.6845 kHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

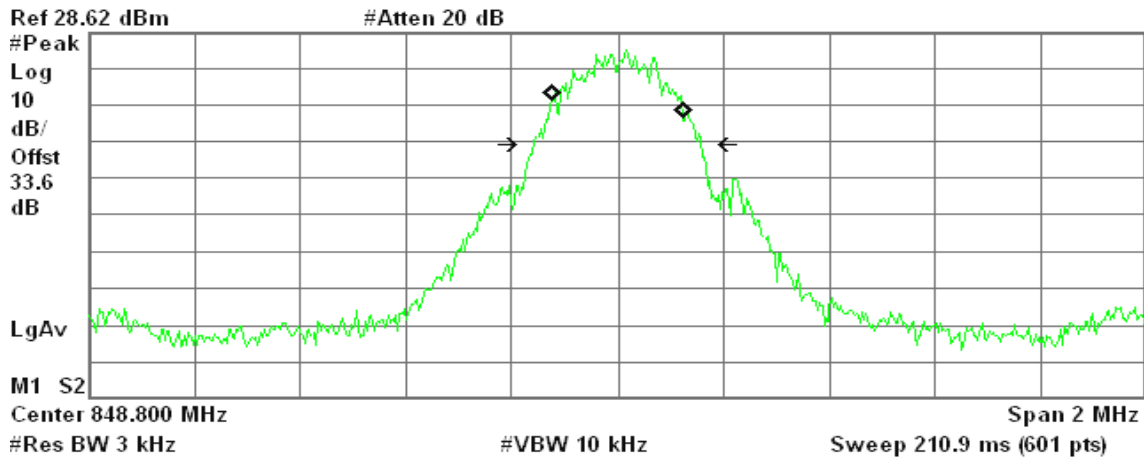
Transmit Freq Error 3.042 kHz  
x dB Bandwidth 312.113 kHz



### EDGE 850 (CH High)

Agilent 11:19:00 Nov 30, 2010

R T



Occupied Bandwidth  
246.4936 kHz

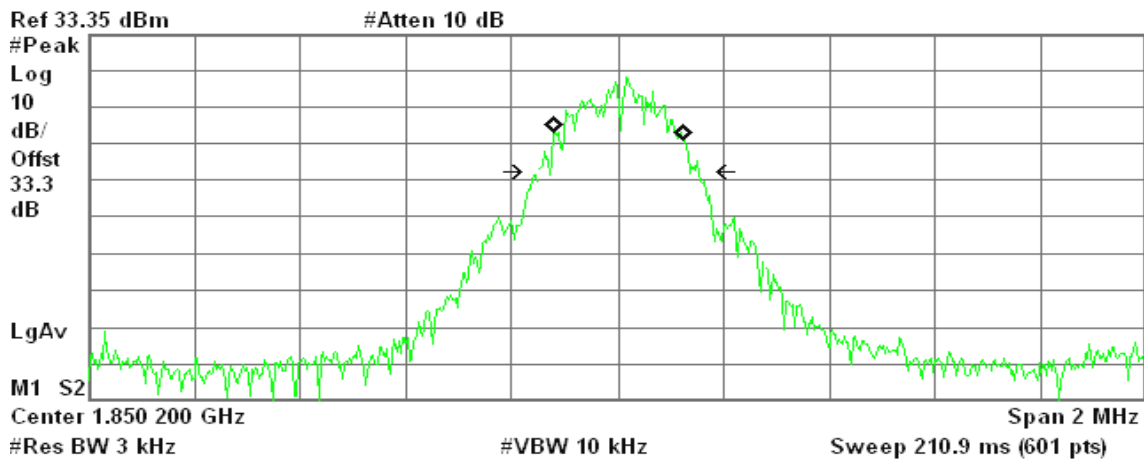
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -266.537 Hz  
x dB Bandwidth 316.277 kHz

### EDGE 1900 (CH Low)

Agilent 13:41:38 Nov 30, 2010

R T



Occupied Bandwidth  
242.3516 kHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

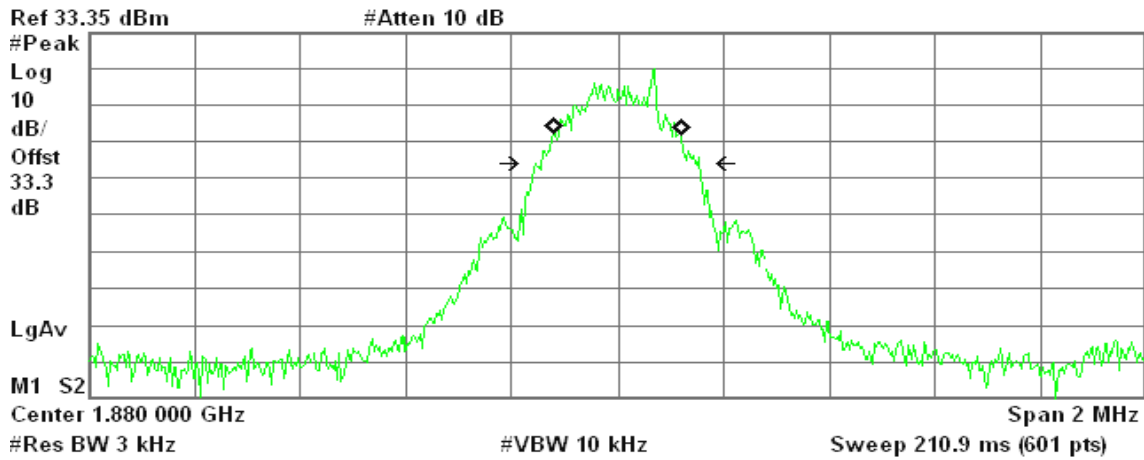
Transmit Freq Error 2.324 kHz  
x dB Bandwidth 300.916 kHz



### EDGE 1900 (CH Mid)

Agilent 13:41:57 Nov 30, 2010

R T



Occupied Bandwidth  
239.9478 kHz

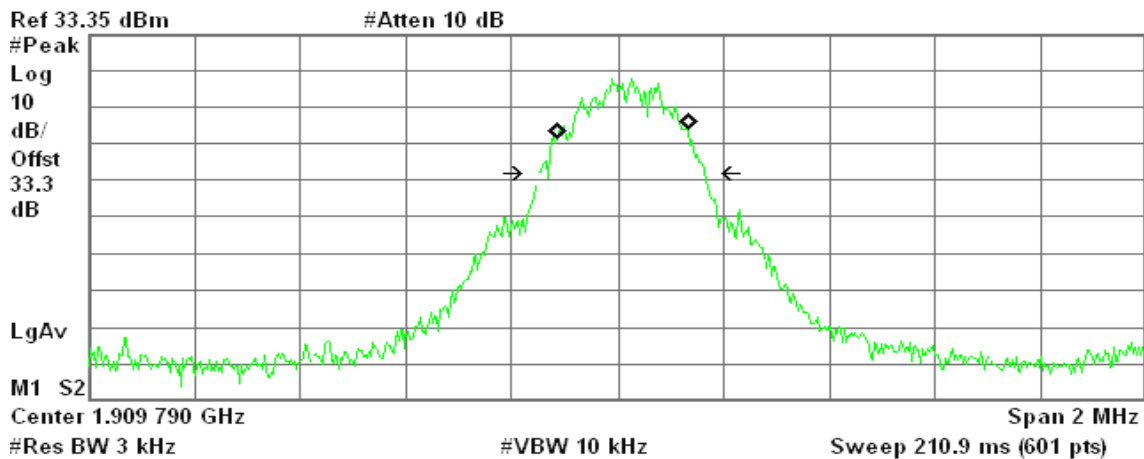
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -773.808 Hz  
x dB Bandwidth 308.996 kHz

### EDGE 1900 (CH High)

Agilent 13:43:36 Nov 30, 2010

R T



Occupied Bandwidth  
246.5342 kHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

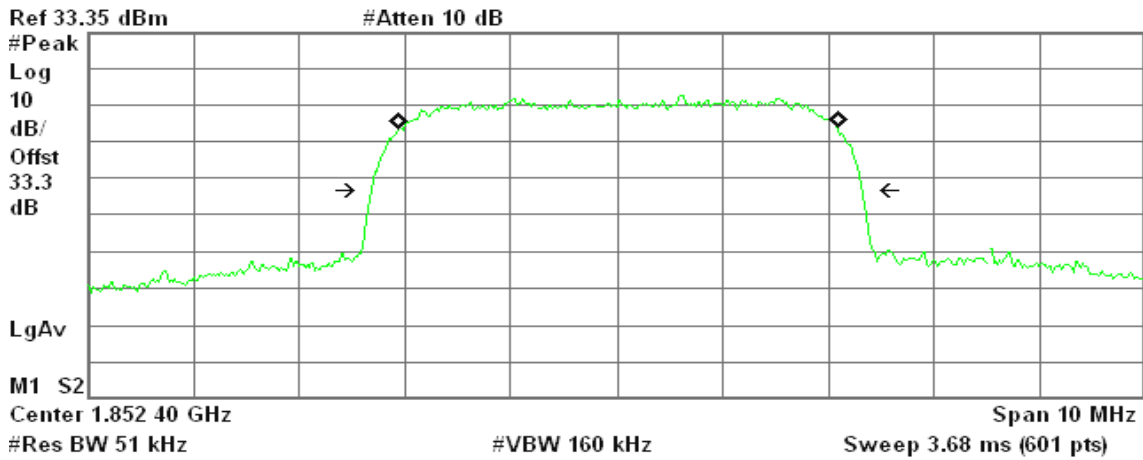
Transmit Freq Error 9.713 kHz  
x dB Bandwidth 312.198 kHz



### WCDMA Band II (CH Low)

Agilent 16:52:52 Nov 30, 2010

R L



Occupied Bandwidth  
4.1528 MHz

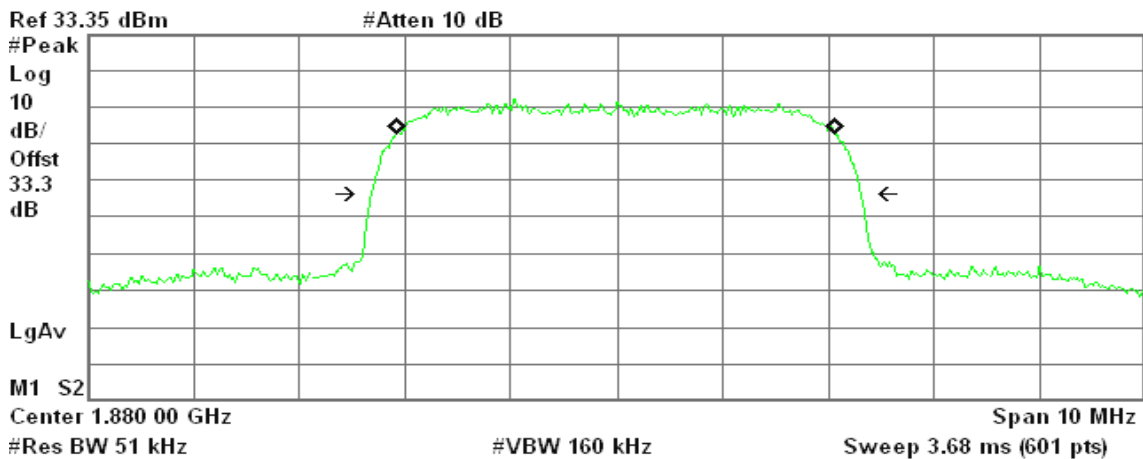
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error 15.775 kHz  
x dB Bandwidth 4.643 MHz

### WCDMA Band II (CH Mid)

Agilent 16:54:02 Nov 30, 2010

R T



Occupied Bandwidth  
4.1508 MHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -1.401 kHz  
x dB Bandwidth 4.637 MHz

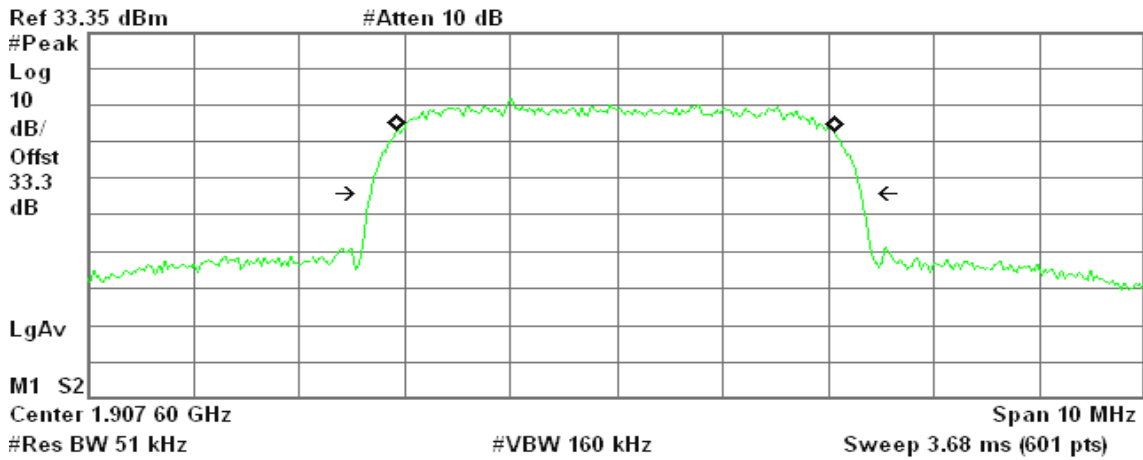




### WCDMA Band II (CH High)

Agilent 16:54:19 Nov 30, 2010

R T



Occupied Bandwidth  
4.1591 MHz

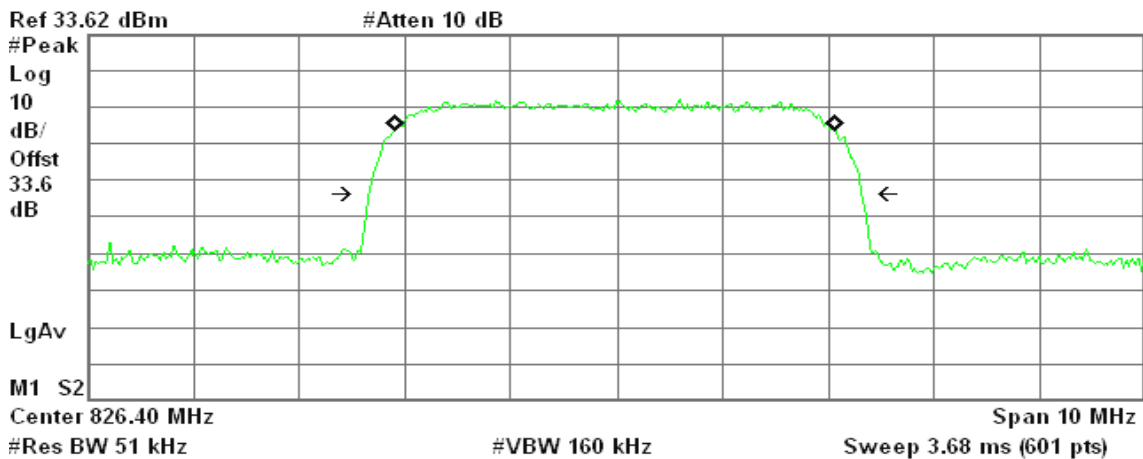
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -8.267 kHz  
x dB Bandwidth 4.645 MHz

### WCDMA Band V (CH Low)

Agilent 17:28:55 Nov 30, 2010

R T



Occupied Bandwidth  
4.1761 MHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

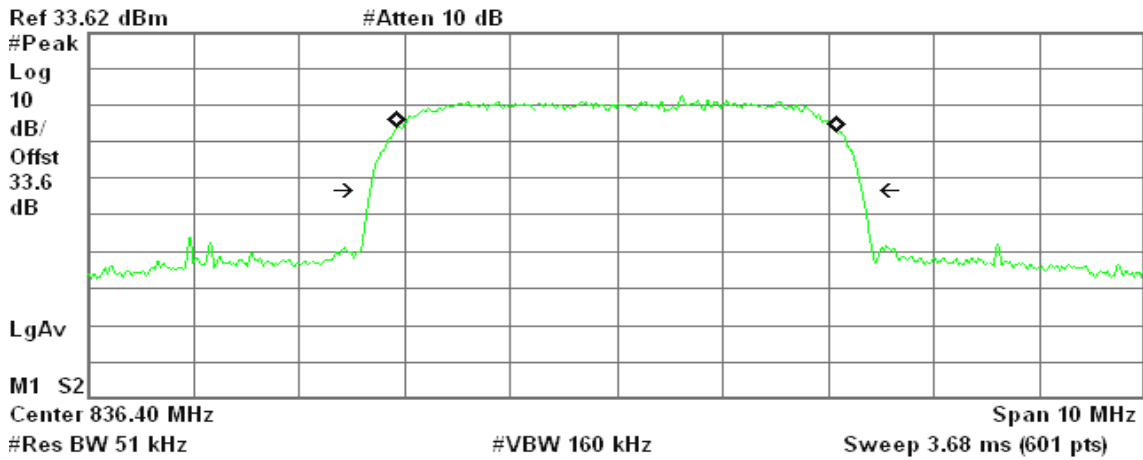
Transmit Freq Error -13.789 kHz  
x dB Bandwidth 4.664 MHz



### WCDMA Band V (CH Mid)

Agilent 17:29:49 Nov 30, 2010

R T



Occupied Bandwidth  
4.1719 MHz

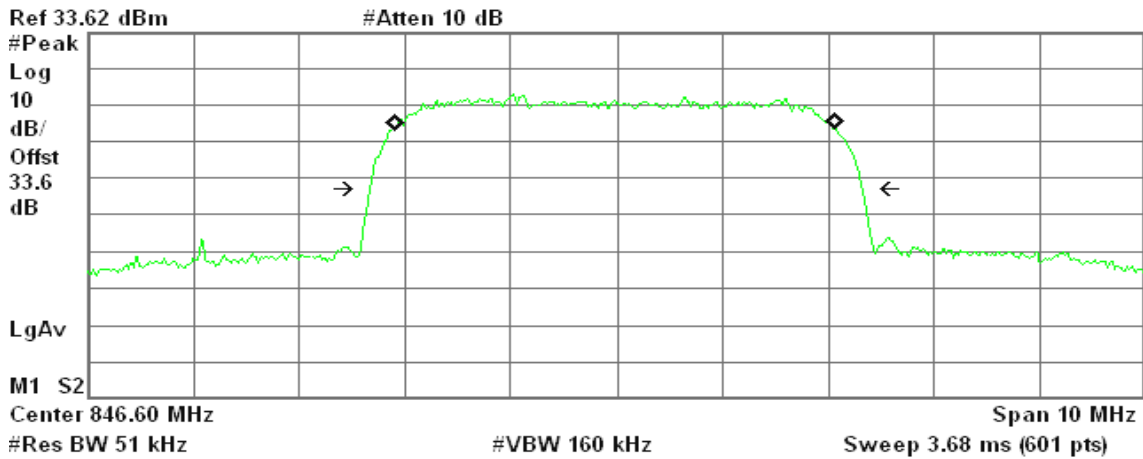
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error 5.176 kHz  
x dB Bandwidth 4.658 MHz

### WCDMA Band V (CH High)

Agilent 17:31:01 Nov 30, 2010

R T



Occupied Bandwidth  
4.1728 MHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

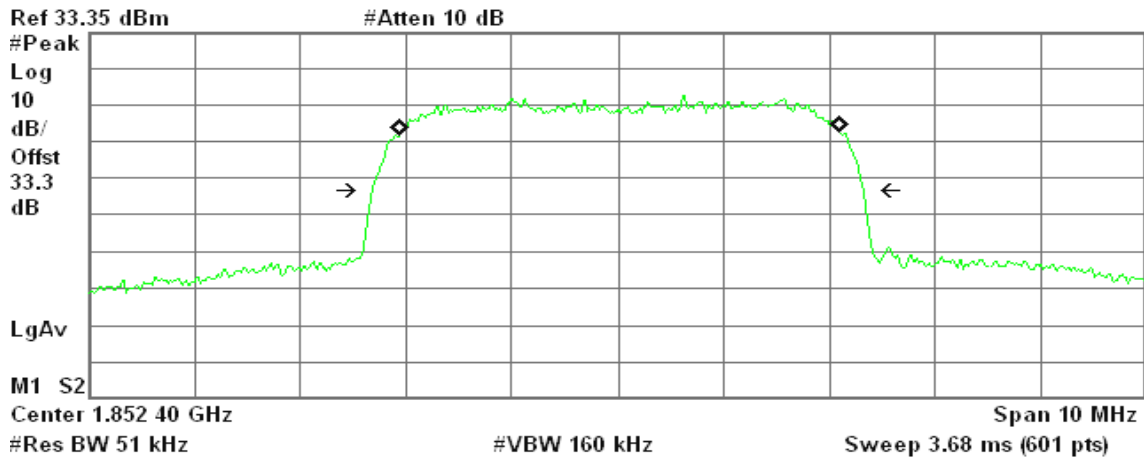
Transmit Freq Error -12.236 kHz  
x dB Bandwidth 4.662 MHz



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

Agilent 16:53:17 Nov 30, 2010

R T



Occupied Bandwidth  
4.1660 MHz

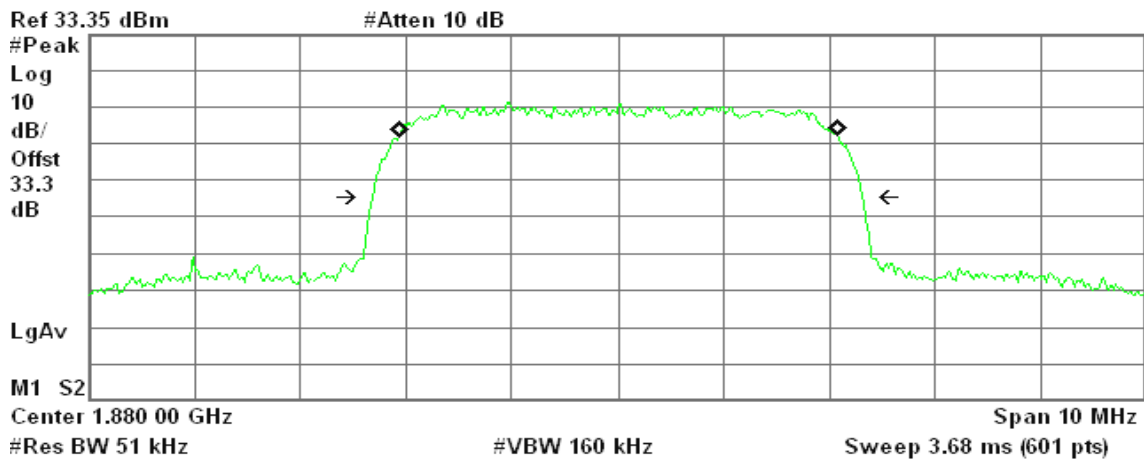
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error 21.354 kHz  
x dB Bandwidth 4.657 MHz

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

Agilent 16:53:39 Nov 30, 2010

R T



Occupied Bandwidth  
4.1516 MHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

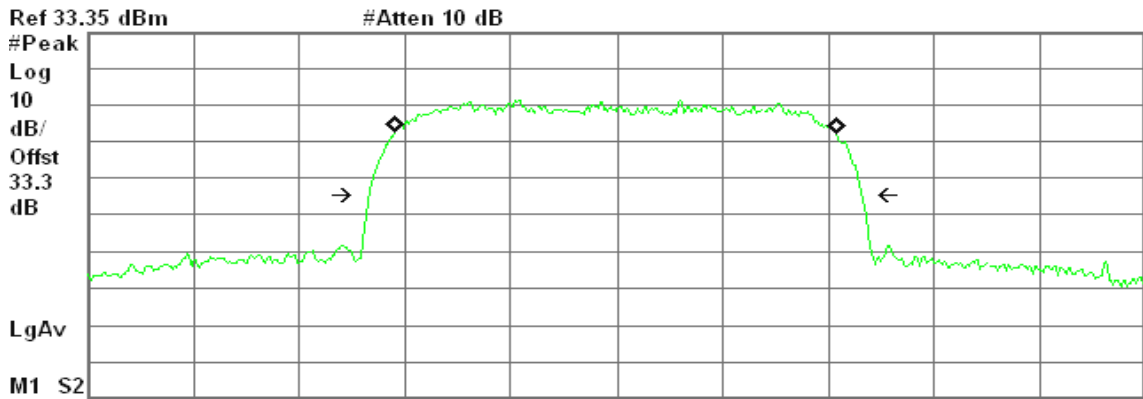
Transmit Freq Error 1.928 kHz  
x dB Bandwidth 4.636 MHz



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

Agilent 16:54:47 Nov 30, 2010

R T



Center 1.907 60 GHz Span 10 MHz  
#Res BW 51 kHz #VBW 160 kHz Sweep 3.68 ms (601 pts)

Occupied Bandwidth  
4.1674 MHz

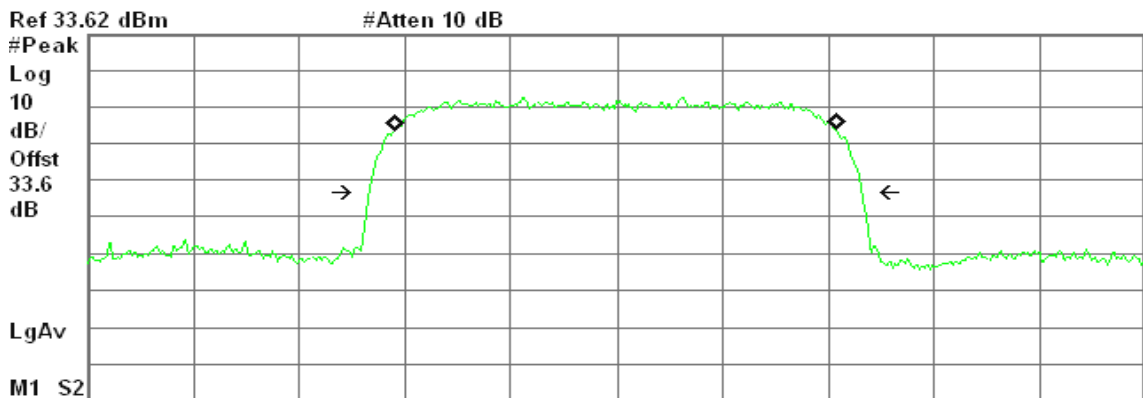
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -8.019 kHz  
x dB Bandwidth 4.666 MHz

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

Agilent 17:29:09 Nov 30, 2010

R T



Center 826.40 MHz Span 10 MHz  
#Res BW 51 kHz #VBW 160 kHz Sweep 3.68 ms (601 pts)

Occupied Bandwidth  
4.1797 MHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

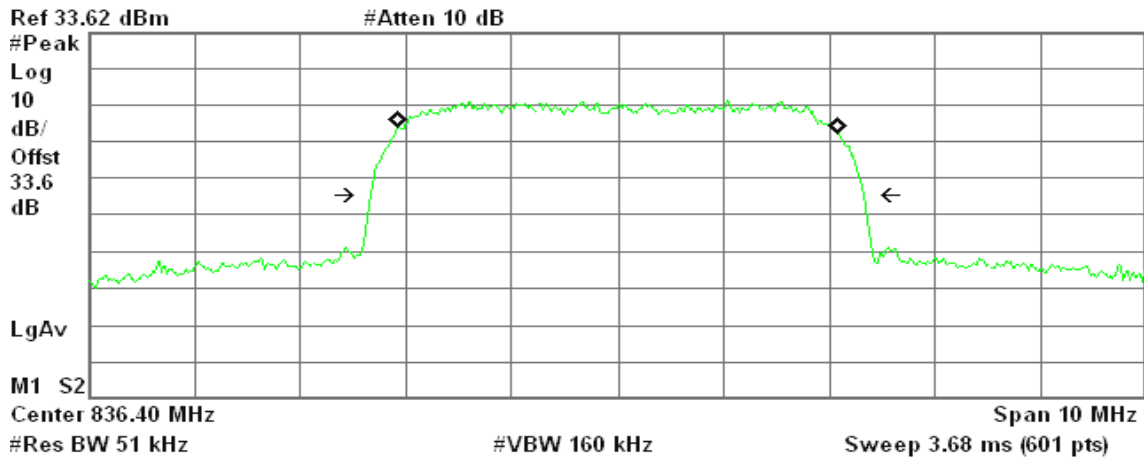
Transmit Freq Error -12.619 kHz  
x dB Bandwidth 4.669 MHz



### WCDMA / HSDPA Band V (CH Mid)

Agilent 17:29:33 Nov 30, 2010

R T



Occupied Bandwidth  
4.1629 MHz

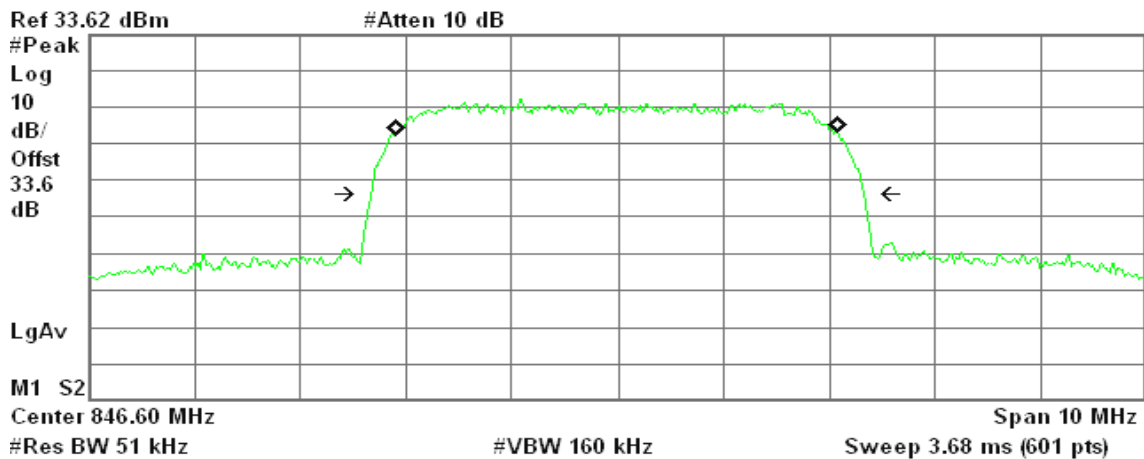
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -3.623 kHz  
x dB Bandwidth 4.673 MHz

### WCDMA / HSDPA Band V (CH High)

Agilent 17:30:40 Nov 30, 2010

R T



Occupied Bandwidth  
4.1760 MHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

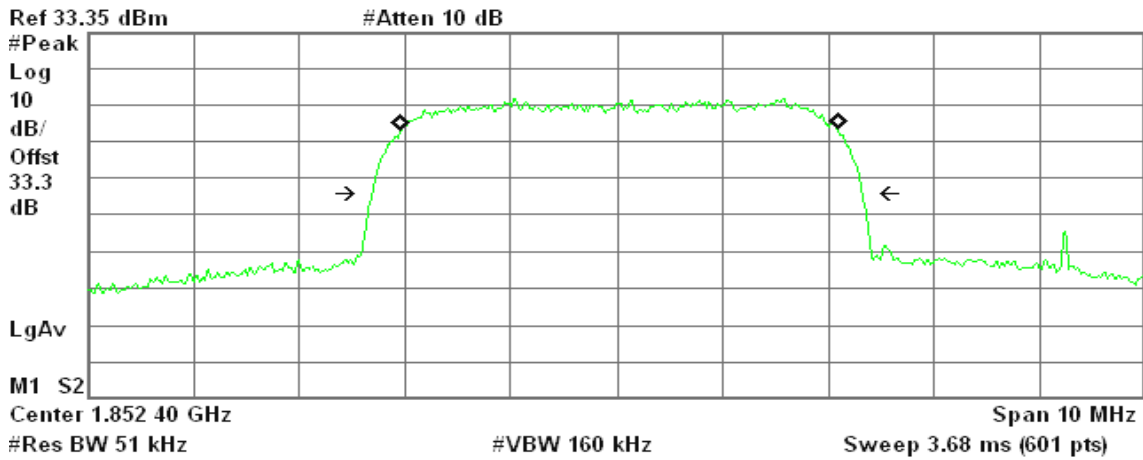
Transmit Freq Error -9.923 kHz  
x dB Bandwidth 4.664 MHz



### WCDMA / HSUPA Band II (CH Low)

Agilent 16:53:05 Nov 30, 2010

R T



Occupied Bandwidth  
4.1425 MHz

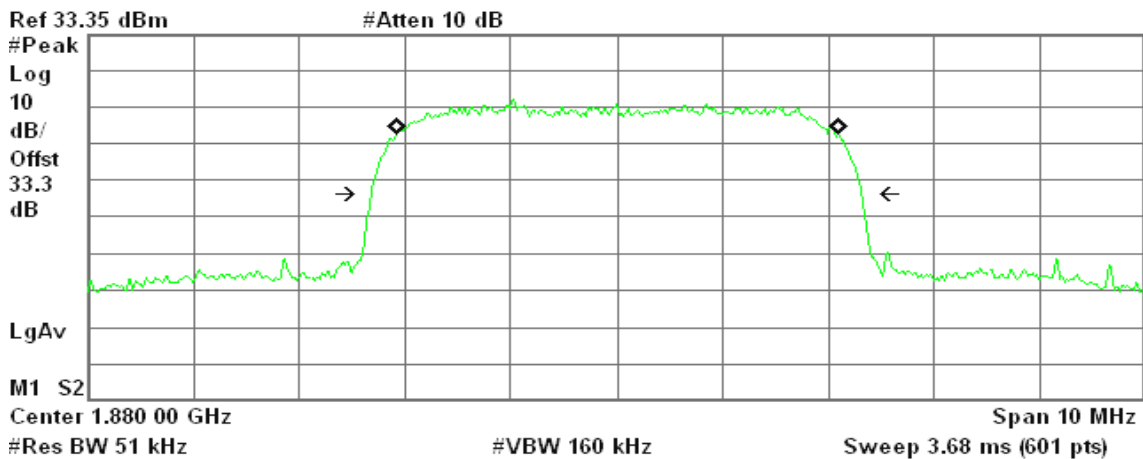
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error 20.698 kHz  
x dB Bandwidth 4.637 MHz

### WCDMA / HSUPA Band II (CH Mid)

Agilent 16:53:49 Nov 30, 2010

R T



Occupied Bandwidth  
4.1798 MHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

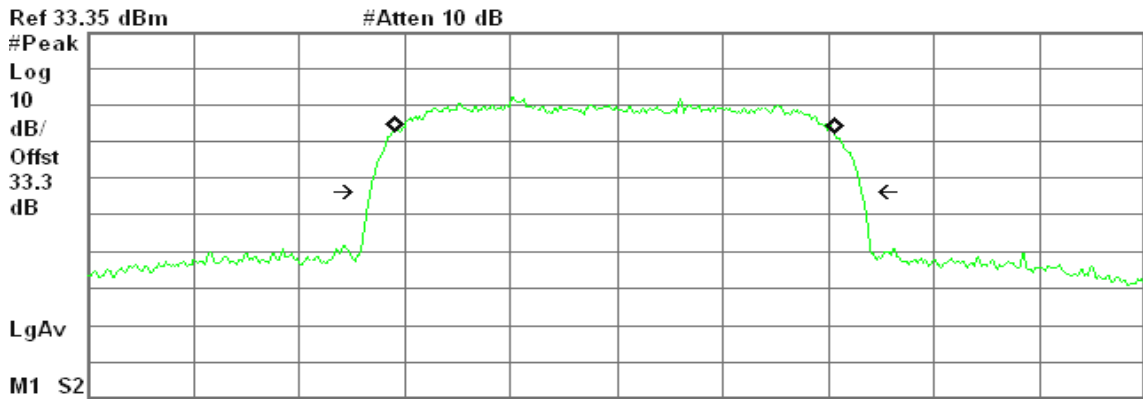
Transmit Freq Error 4.335 kHz  
x dB Bandwidth 4.649 MHz



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

Agilent 16:54:34 Nov 30, 2010

R T



Center 1.907 60 GHz Span 10 MHz  
#Res BW 51 kHz #VBW 160 kHz Sweep 3.68 ms (601 pts)

Occupied Bandwidth  
4.1698 MHz

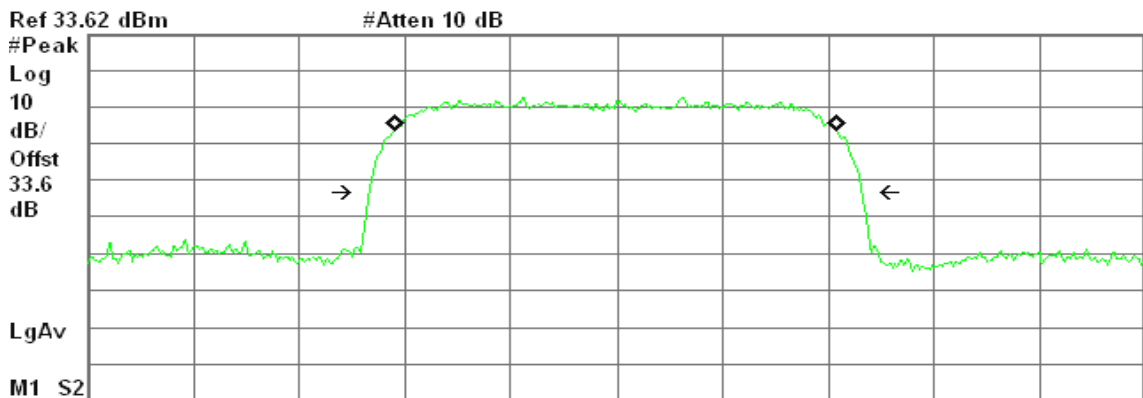
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -19.055 kHz  
x dB Bandwidth 4.649 MHz

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

Agilent 17:29:02 Nov 30, 2010

R T



Center 826.40 MHz Span 10 MHz  
#Res BW 51 kHz #VBW 160 kHz Sweep 3.68 ms (601 pts)

Occupied Bandwidth  
4.1803 MHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

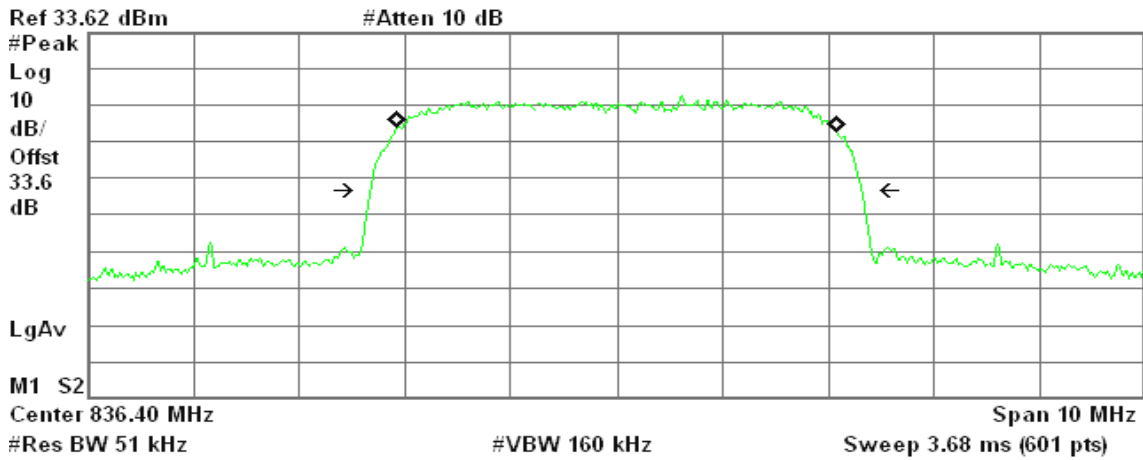
Transmit Freq Error -10.544 kHz  
x dB Bandwidth 4.669 MHz



### WCDMA / HSUPA Band V (CH Mid)

Agilent 17:29:41 Nov 30, 2010

R T



Occupied Bandwidth  
4.1627 MHz

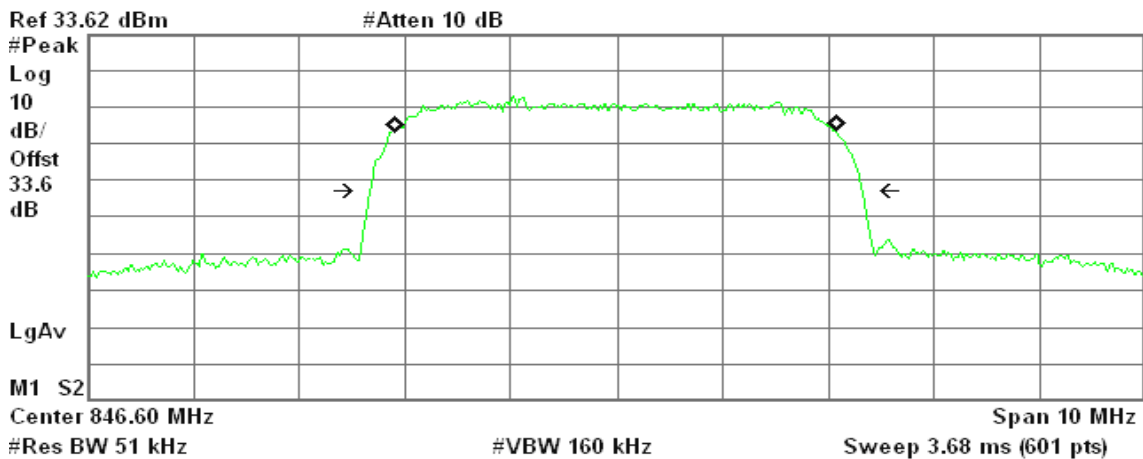
Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error 2.100 kHz  
x dB Bandwidth 4.654 MHz

### WCDMA / HSUPA Band V (CH High)

Agilent 17:30:52 Nov 30, 2010

R T



Occupied Bandwidth  
4.1731 MHz

Occ BW % Pwr 99.00 %  
x dB -26.00 dB

Transmit Freq Error -10.485 kHz  
x dB Bandwidth 4.662 MHz





## 7.5 OUT OF BAND EMISSION AT ANTENNA TERMINALS

### LIMIT

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

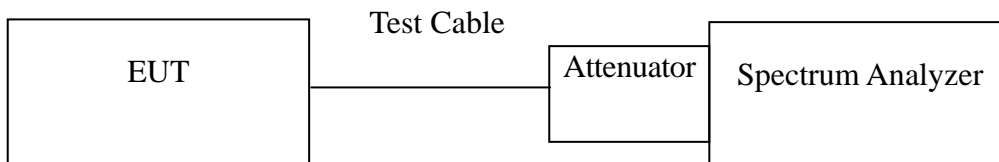
**Out of Band Emissions:** The mean power of emission must be attenuated below the mean power of the non-modulated carrier (P) on any frequency twice or more than twice the fundamental frequency by at least  $43 + 10 \log P$  dB.

**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 =  $-13$ dBm

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,  $-13$ dBm.

### TEST RESULTS

*No non-compliance noted.*



**Test Data**

Mode	CH	Location	Description
GSM 850	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	128	Figure 8-1	Conducted spurious emissions, 30MHz - 20GHz
	190	Figure 8-2	Conducted spurious emissions, 30MHz - 20GHz
	251	Figure 8-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
GSM 1900	512	Figure 9-1	Conducted spurious emissions, 30MHz - 20GHz
	661	Figure 9-2	Conducted spurious emissions, 30MHz - 20GHz
	810	Figure 9-3	Conducted spurious emissions, 30MHz - 20GHz
GPRS 1900	512	Figure 10-1	Conducted spurious emissions, 30MHz - 20GHz
	661	Figure 10-2	Conducted spurious emissions, 30MHz - 20GHz
	810	Figure 10-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
GSM 850	128	Figure 11-1	Band Edge emissions
	251	Figure 11-2	Band Edge emissions
GPRS 850	128	Figure 12-1	Band Edge emissions
	251	Figure 12-2	Band Edge emissions

Mode	CH	Location	Description
GSM 1900	512	Figure 13-1	Band Edge emissions
	810	Figure 13-2	Band Edge emissions
GPRS 1900	512	Figure 14-1	Band Edge emissions
	810	Figure 14-2	Band Edge emissions



<b>Mode</b>	<b>CH</b>	<b>Location</b>	<b>Description</b>
EDGE 850	128	Figure 15-1	Conducted spurious emissions, 30MHz - 20GHz
	190	Figure 15-2	Conducted spurious emissions, 30MHz - 20GHz
	251	Figure 15-3	Conducted spurious emissions, 30MHz - 20GHz
EDGE 1900	512	Figure 16-1	Conducted spurious emissions, 30MHz - 20GHz
	661	Figure 16-2	Conducted spurious emissions, 30MHz - 20GHz
	810	Figure 16-3	Conducted spurious emissions, 30MHz - 20GHz

<b>Mode</b>	<b>CH</b>	<b>Location</b>	<b>Description</b>
EDGE 850	128	Figure 17-1	Band Edge emissions
	251	Figure 17-2	Band Edge emissions
EDGE 1900	512	Figure 18-1	Band Edge emissions
	810	Figure 18-2	Band Edge emissions



Mode	CH	Location	Description
WCDMA (Band II)	9262	Figure 19-1	Conducted spurious emissions, 30MHz - 20GHz
	9400	Figure 19-2	Conducted spurious emissions, 30MHz - 20GHz
	9538	Figure 19-3	Conducted spurious emissions, 30MHz - 20GHz
WCDMA (Band V)	4132	Figure 20-1	Conducted spurious emissions, 30MHz - 20GHz
	4182	Figure 20-2	Conducted spurious emissions, 30MHz - 20GHz
	4233	Figure 20-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
WCDMA (Band II)	9262	Figure 21-1	Band Edge emissions
	9538	Figure 21-2	Band Edge emissions
WCDMA (Band V)	4132	Figure 22-1	Band Edge emissions
	4233	Figure 22-2	Band Edge emissions

Mode	CH	Location	Description
HSDPA WCDMA (Band II)	9262	Figure 23-1	Conducted spurious emissions, 30MHz - 20GHz
	9400	Figure 23-2	Conducted spurious emissions, 30MHz - 20GHz
	9538	Figure 23-3	Conducted spurious emissions, 30MHz - 20GHz
HSDPA WCDMA (Band V)	4132	Figure 24-1	Conducted spurious emissions, 30MHz - 20GHz
	4182	Figure 24-2	Conducted spurious emissions, 30MHz - 20GHz
	4233	Figure 24-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
HSDPA WCDMA (Band II)	9262	Figure 25-1	Band Edge emissions
	9538	Figure 25-2	Band Edge emissions
HSDPA WCDMA (Band V)	4132	Figure 26-1	Band Edge emissions
	4233	Figure 26-2	Band Edge emissions



<b>Mode</b>	<b>CH</b>	<b>Location</b>	<b>Description</b>
HSUPA WCDMA (Band II)	9262	Figure 27-1	Conducted spurious emissions, 30MHz - 20GHz
	9400	Figure 27-2	Conducted spurious emissions, 30MHz - 20GHz
	9538	Figure 27-3	Conducted spurious emissions, 30MHz - 20GHz
HSUPA WCDMA (Band V)	4132	Figure 28-1	Conducted spurious emissions, 30MHz - 20GHz
	4182	Figure 28-2	Conducted spurious emissions, 30MHz - 20GHz
	4233	Figure 28-3	Conducted spurious emissions, 30MHz - 20GHz

<b>Mode</b>	<b>CH</b>	<b>Location</b>	<b>Description</b>
HSUPA WCDMA (Band II)	9262	Figure 29-1	Band Edge emissions
	9538	Figure 29-2	Band Edge emissions
HSUPA WCDMA (Band V)	4132	Figure 30-1	Band Edge emissions
	4233	Figure 30-2	Band Edge emissions



**Test Plot**

**GSM 850**

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

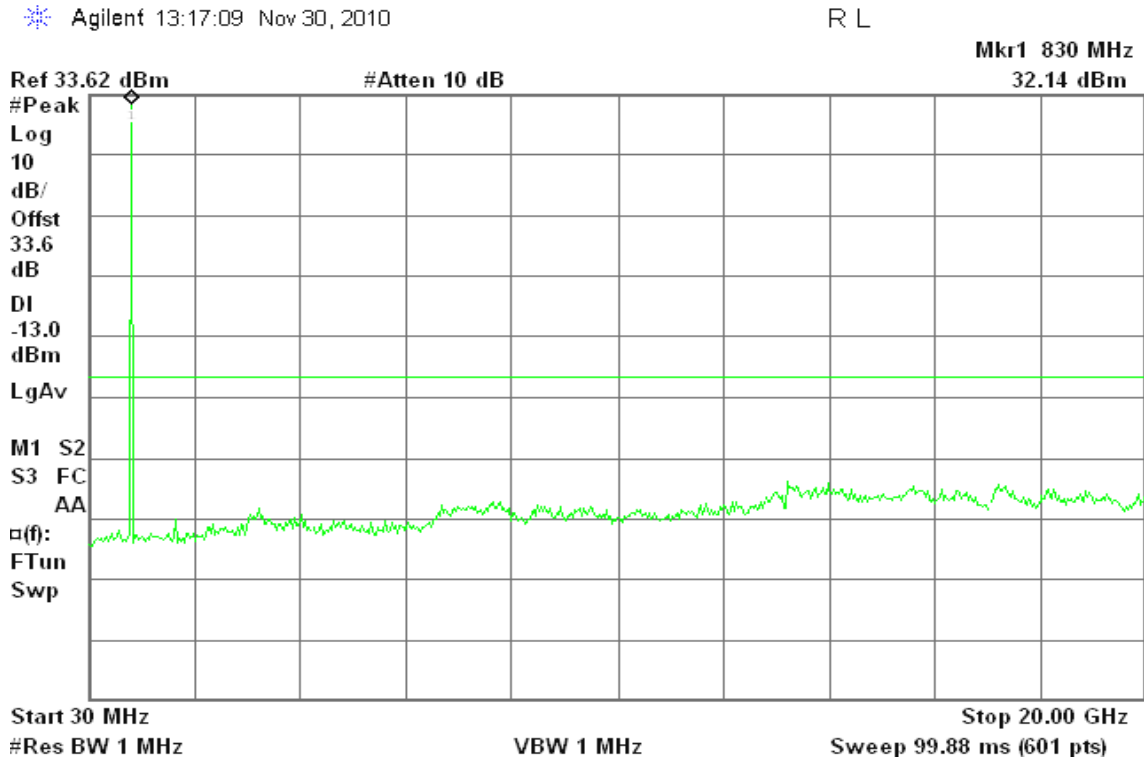


Figure 7-2: Out of Band emission at antenna terminals – GSM CH Mid

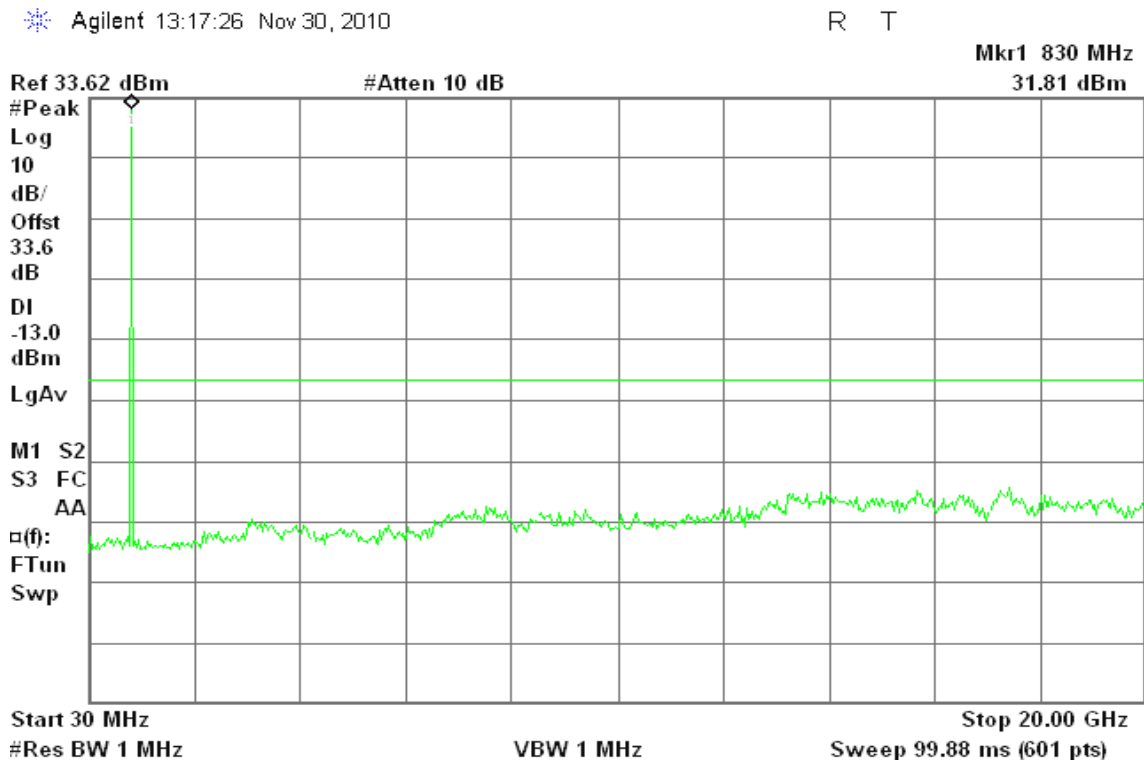
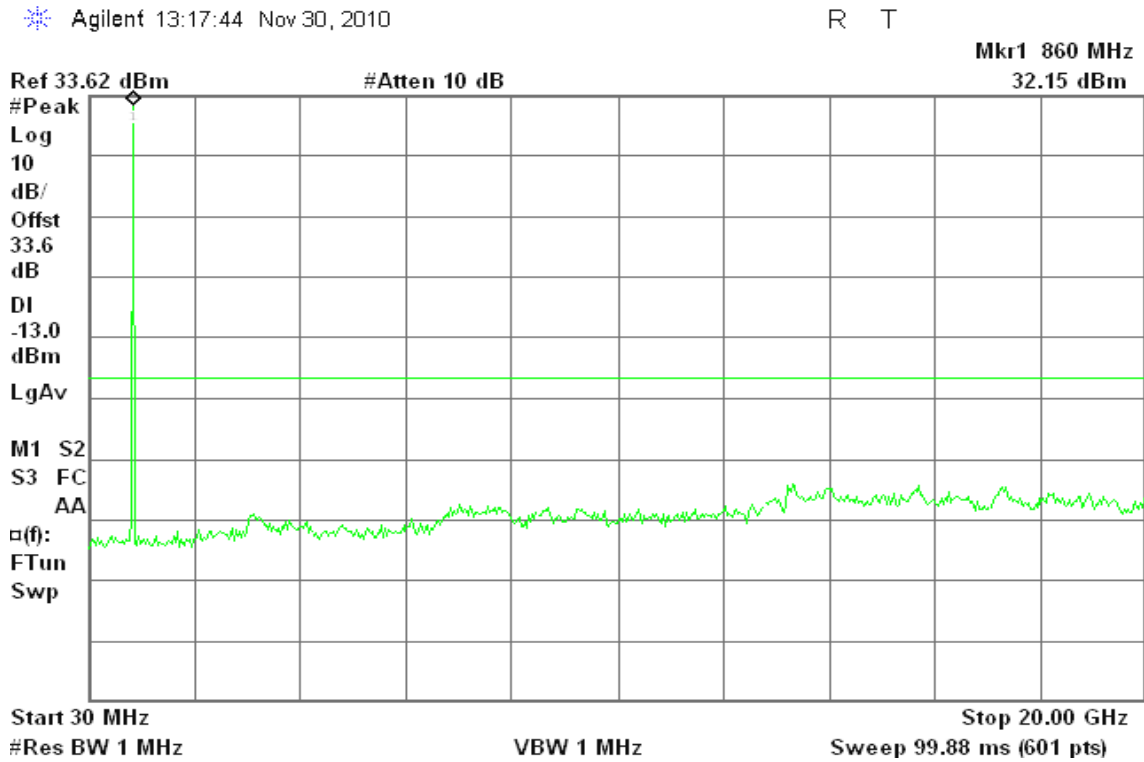




Figure 7-3: Out of Band emission at antenna terminals – GSM CH High



### GPRS 850

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

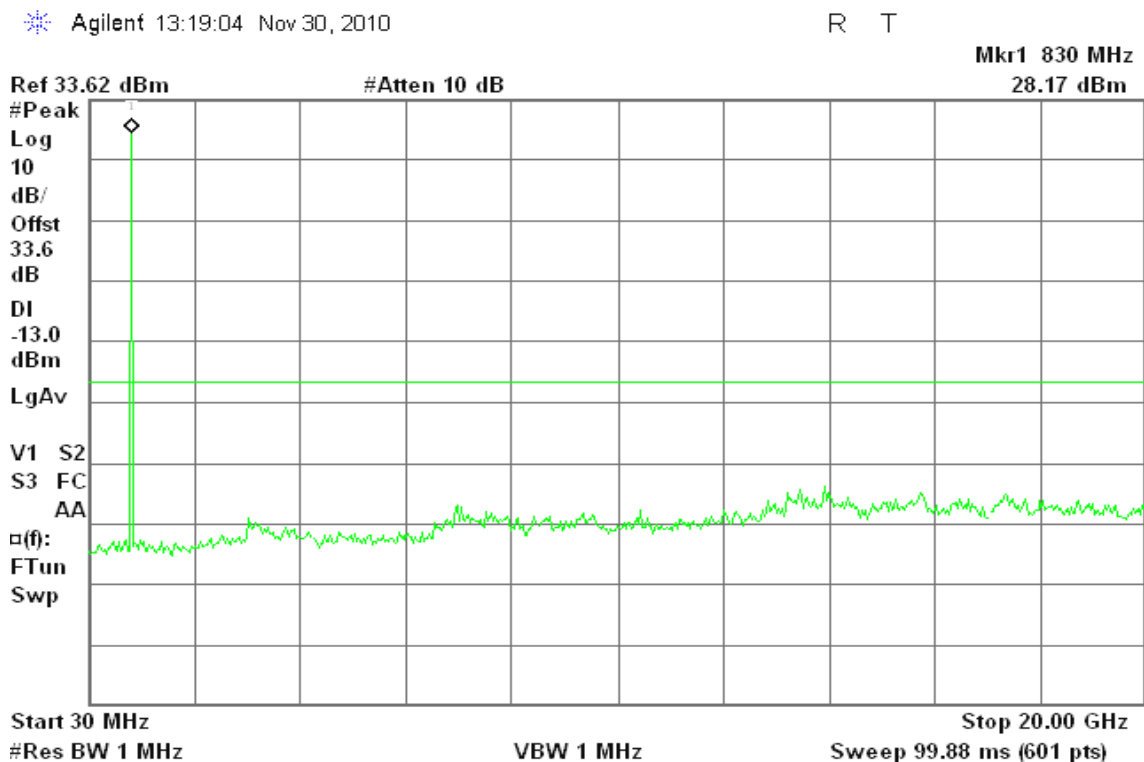




Figure 8-2: Out of Band emission at antenna terminals –GPRS CH Mid

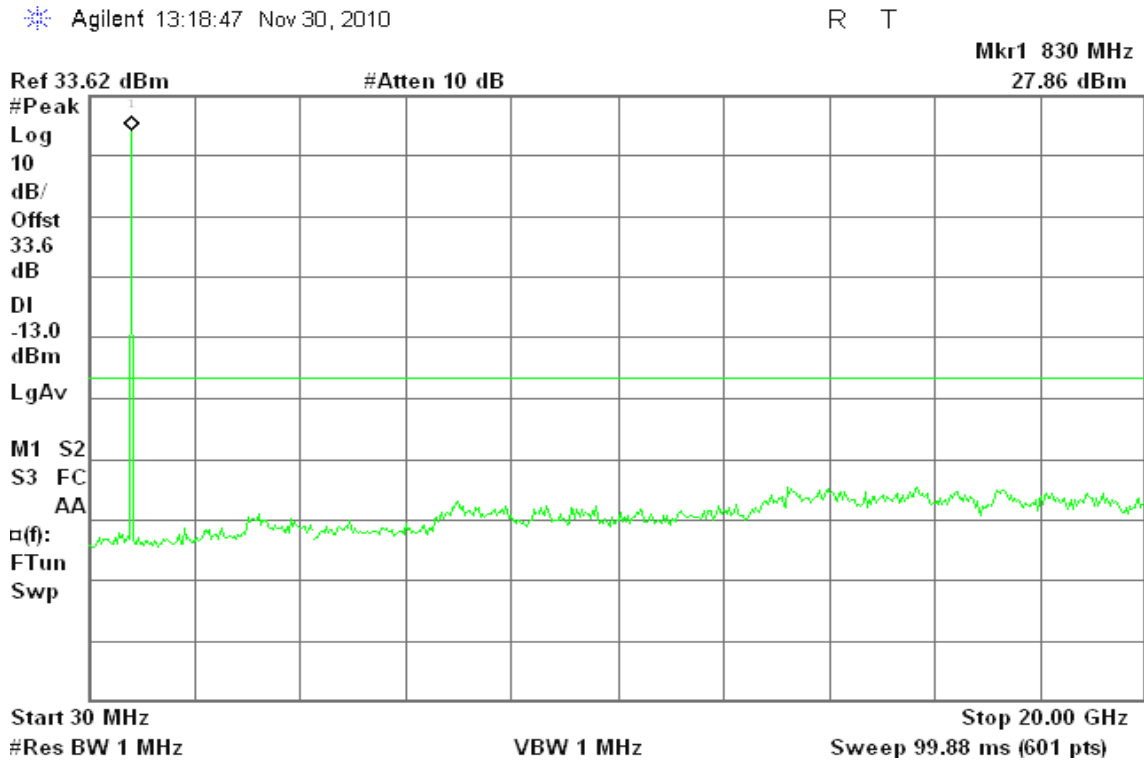


Figure 8-3: Out of Band emission at antenna terminals –GPRS CH High

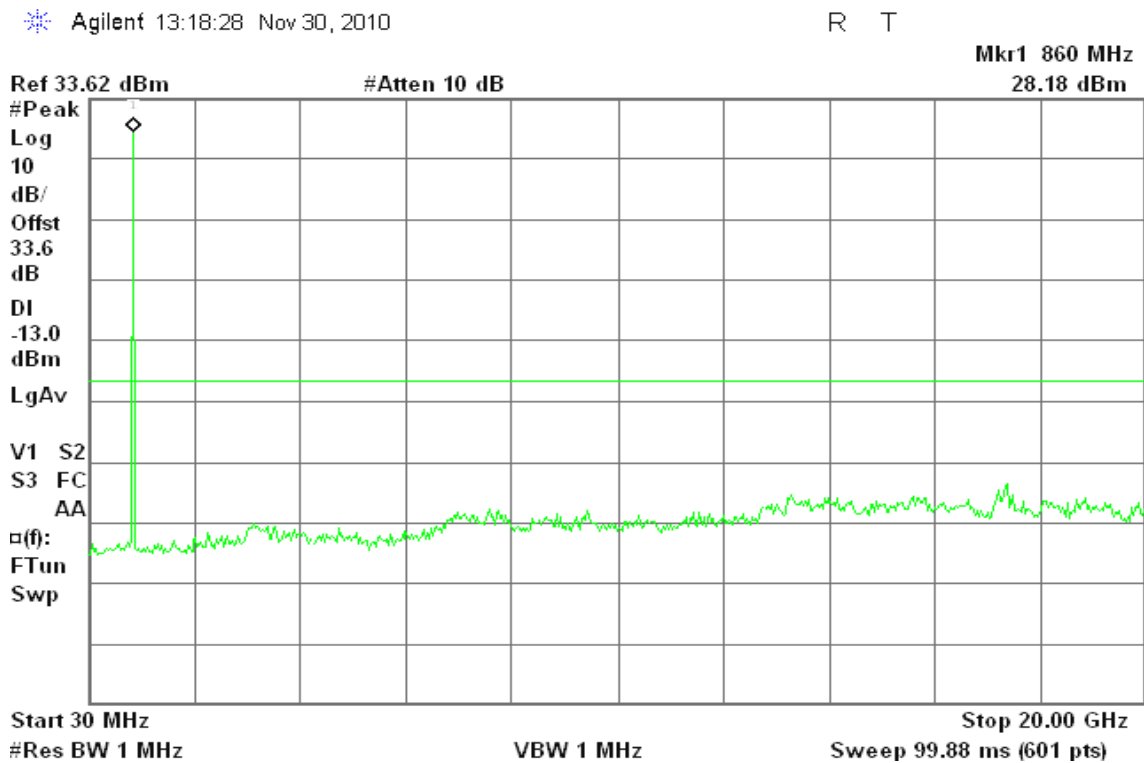
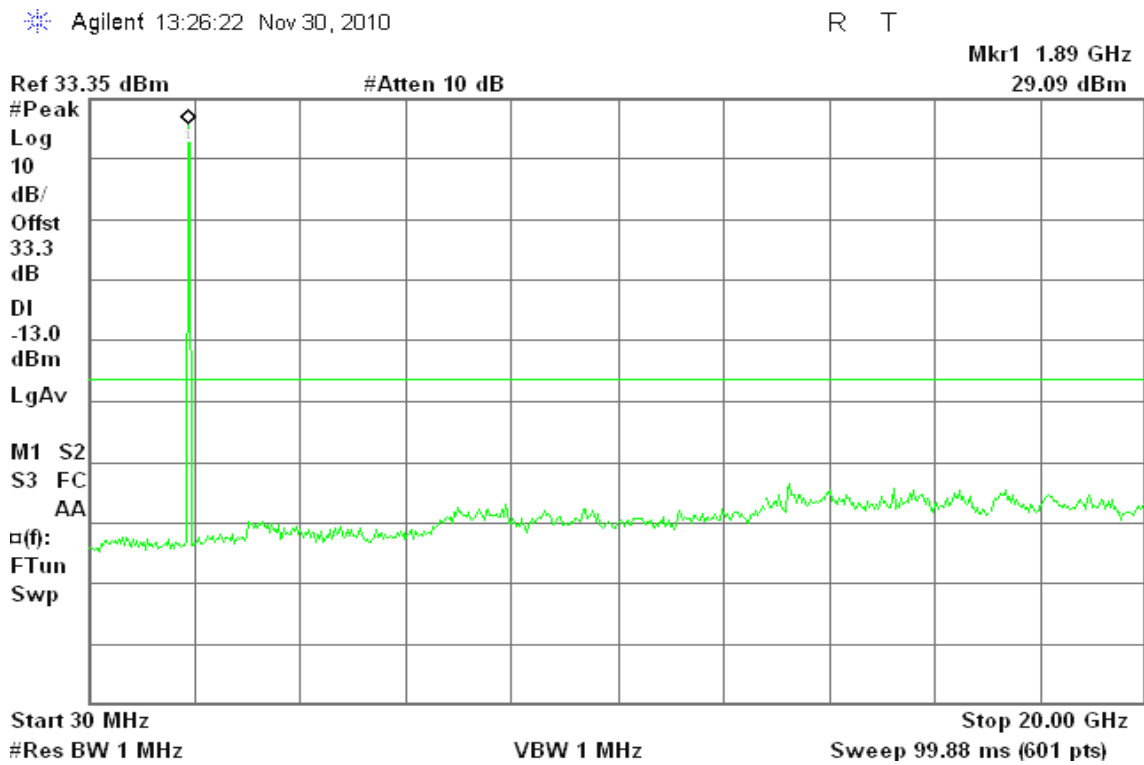








Figure 9-3: Out of Band emission at antenna terminals – GSM CH High



### GPRS 1900

Figure 10-1: Out of Band emission at antenna terminals –GPRS CH Low

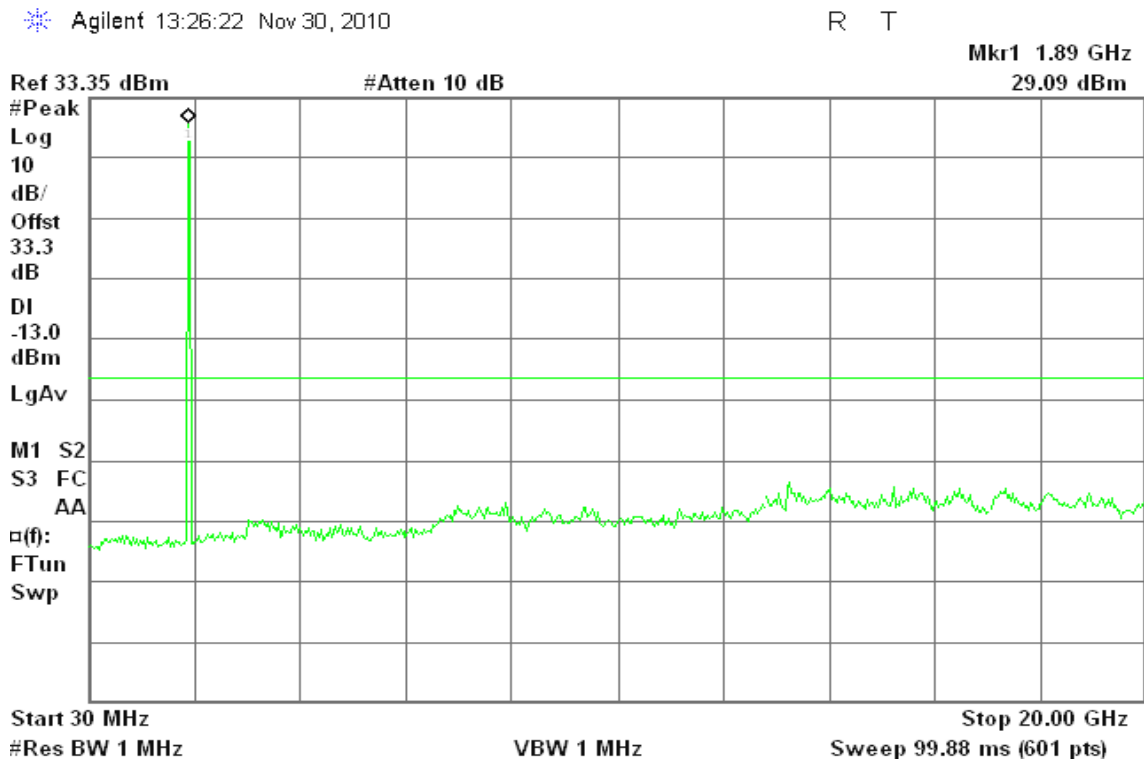




Figure 10-2: Out of Band emission at antenna terminals –GPRS CH Mid

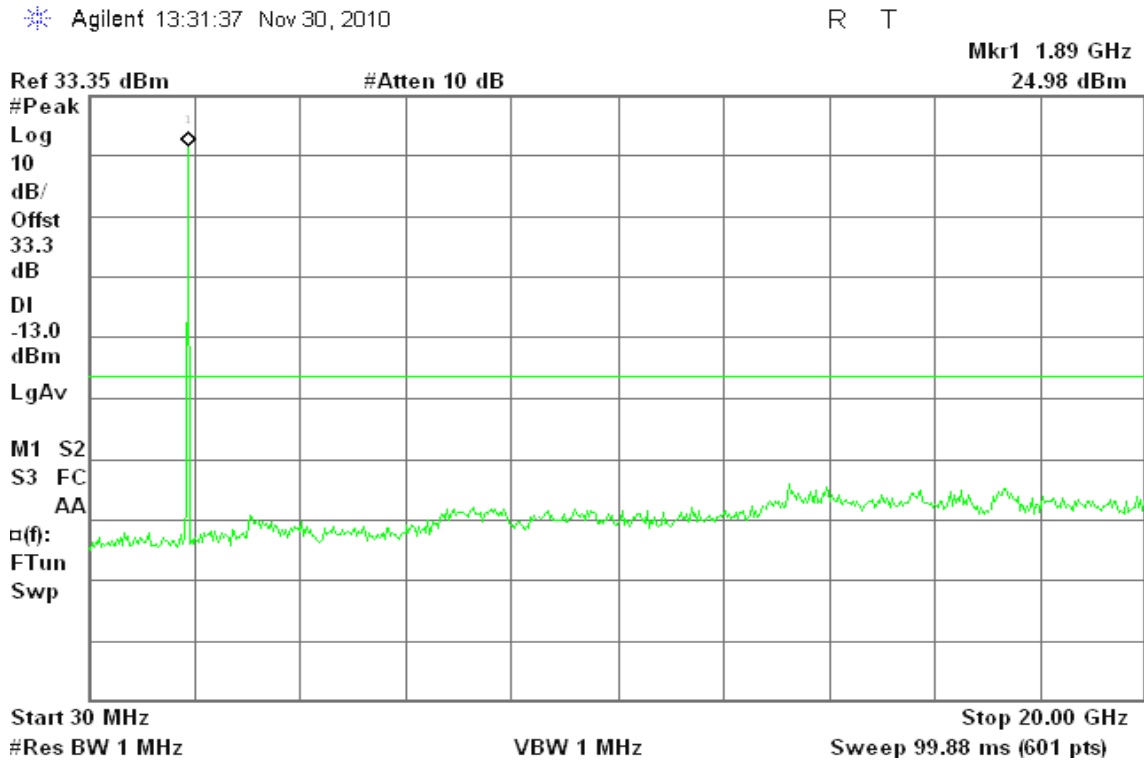
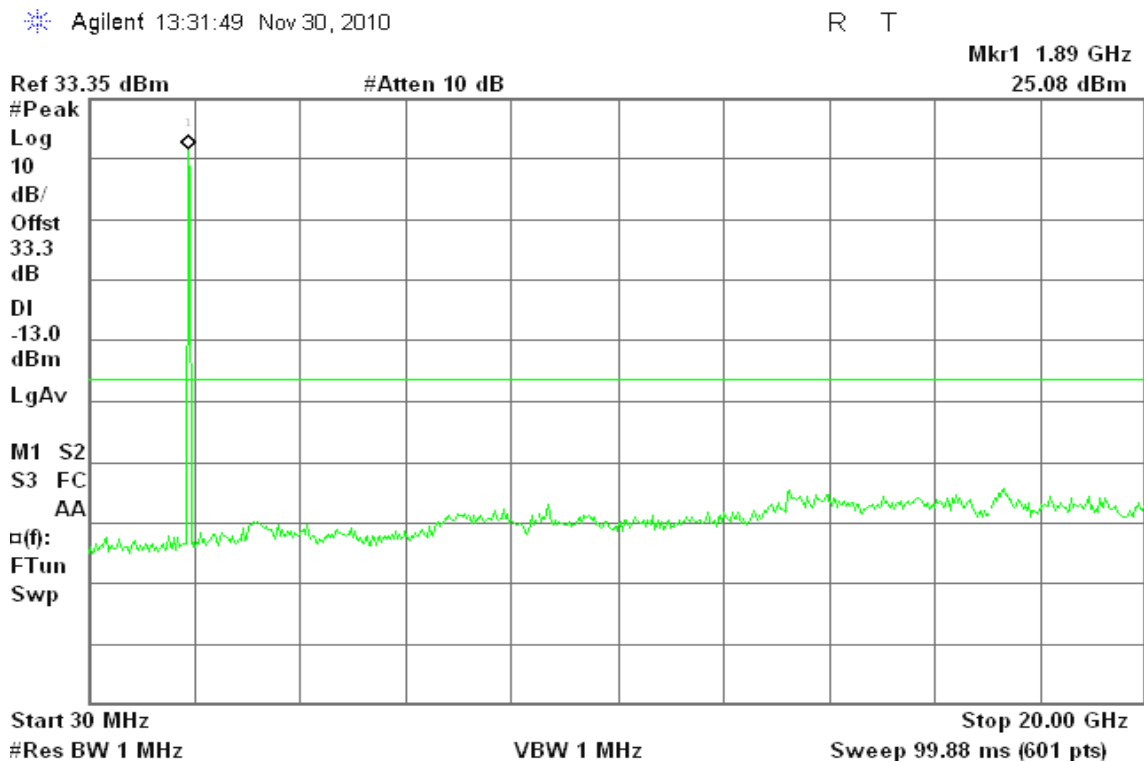


Figure 10-3: Out of Band emission at antenna terminals –GPRS CH High





### GSM 850

Figure 11-1: Band Edge emissions – GSM CH Low

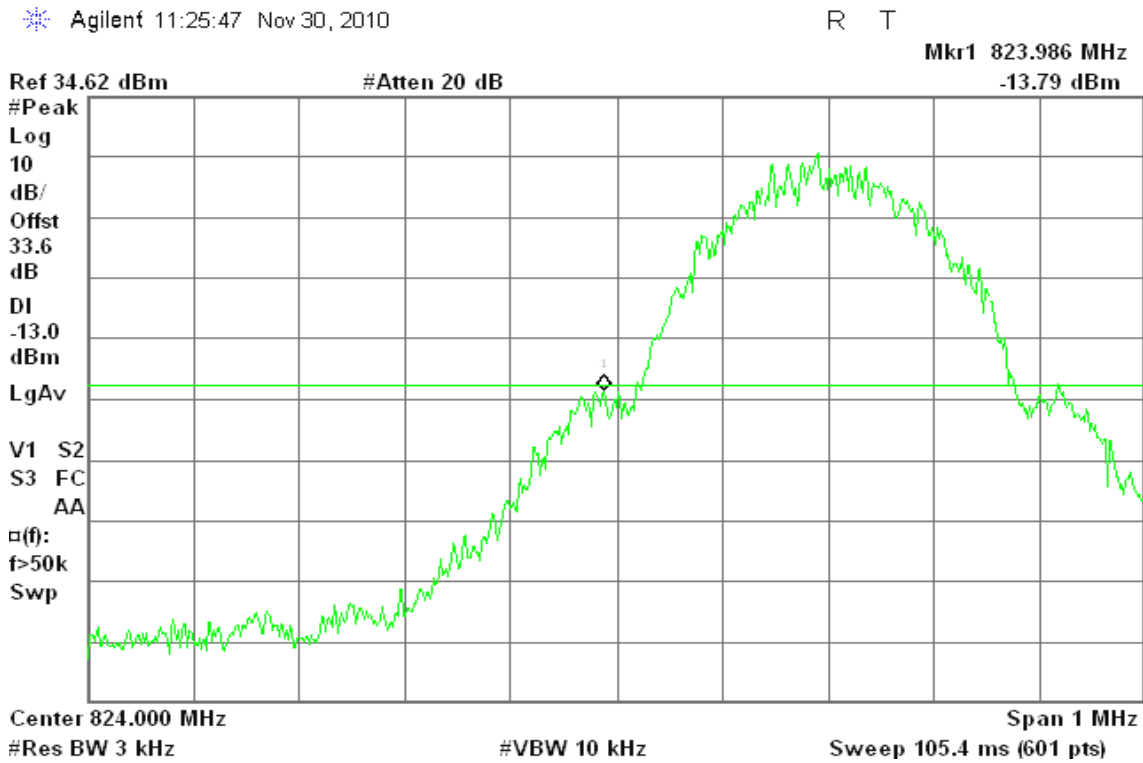
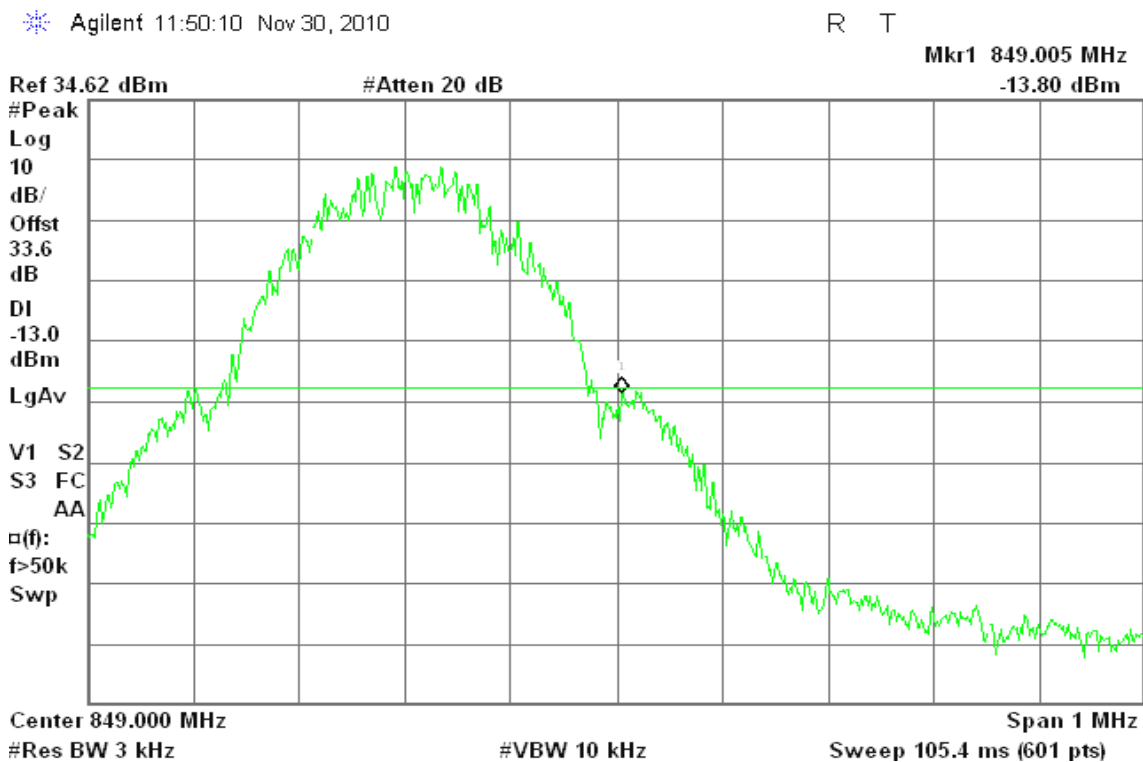


Figure 11-2: Band Edge emissions – GSM CH High





### GPRS 850

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

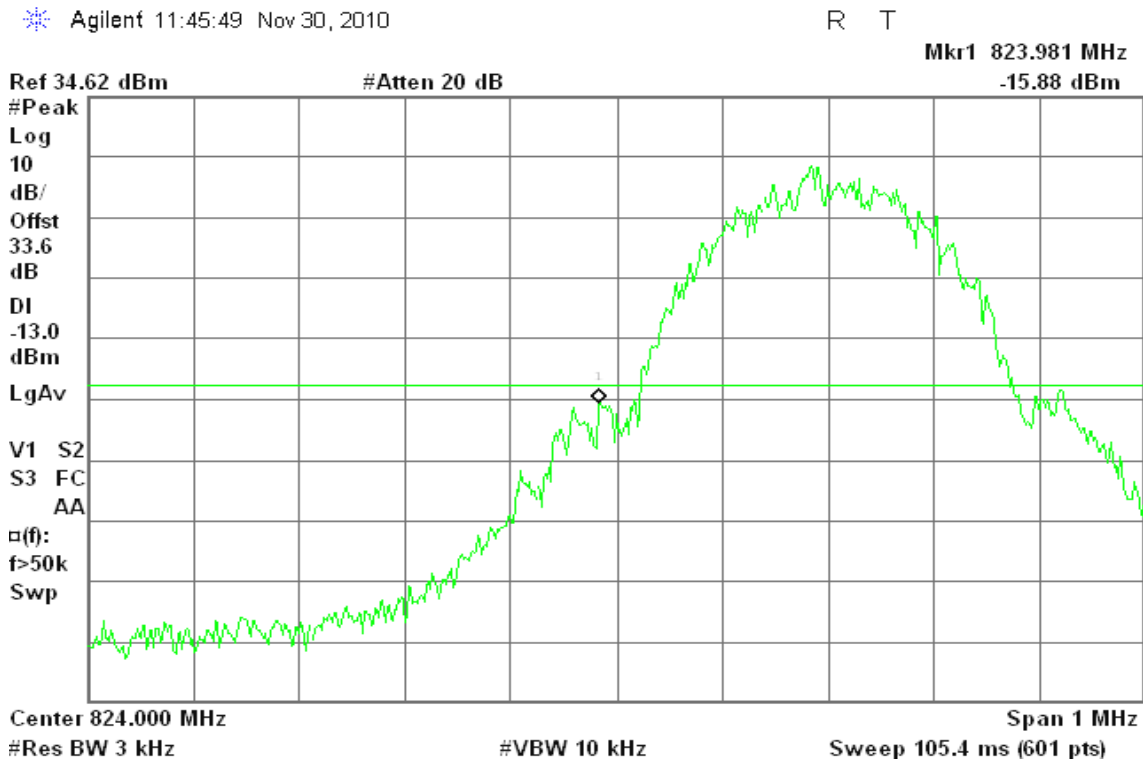
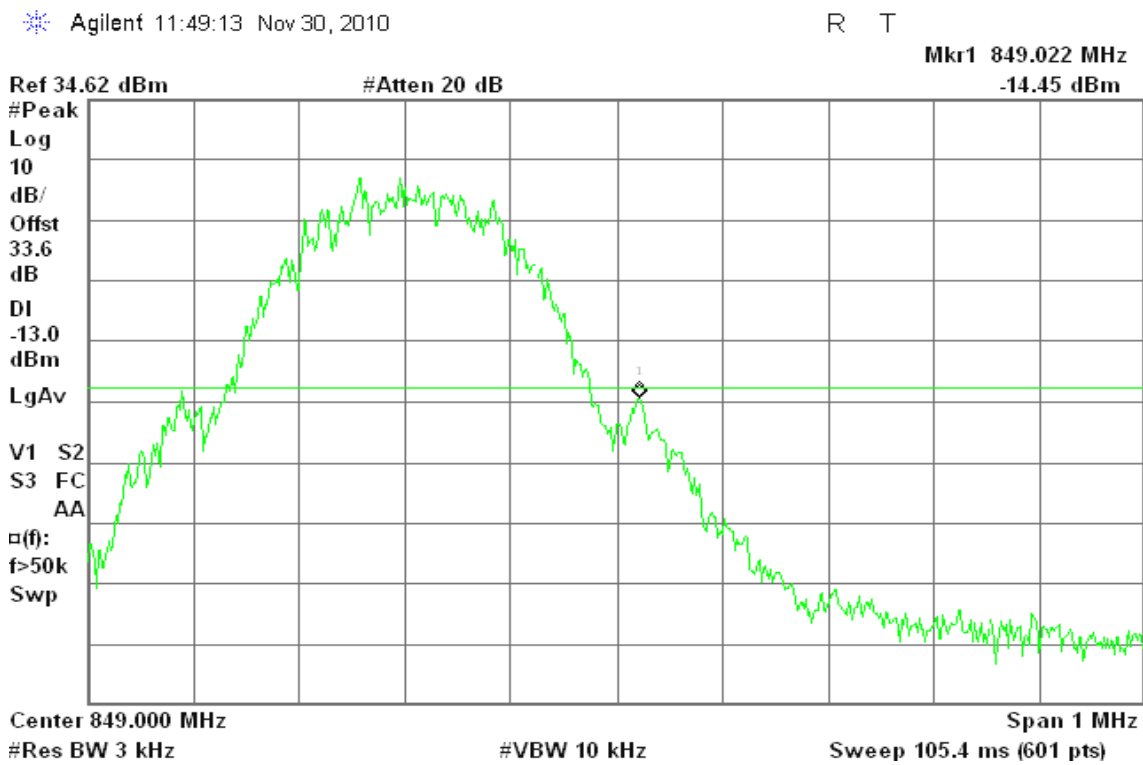


Figure 12-2: Band Edge emissions –GPRS CH High





## GSM 1900

Figure 13-1: Band Edge emissions – GSM CH Low

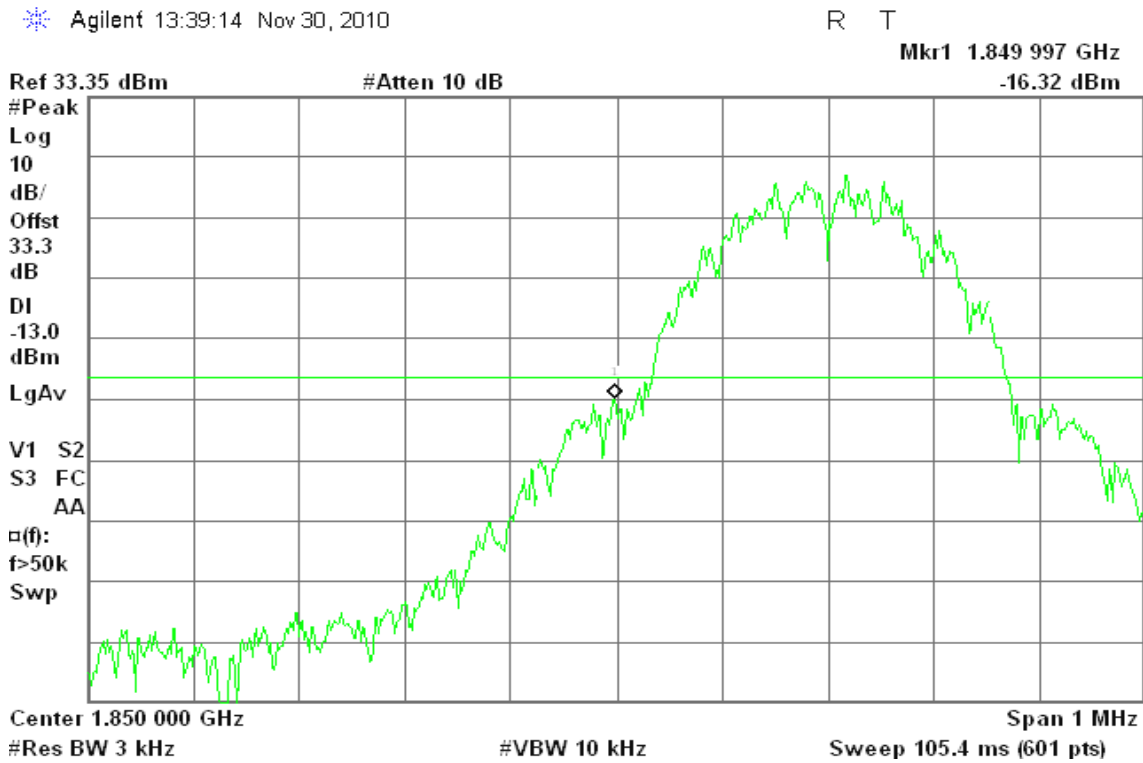
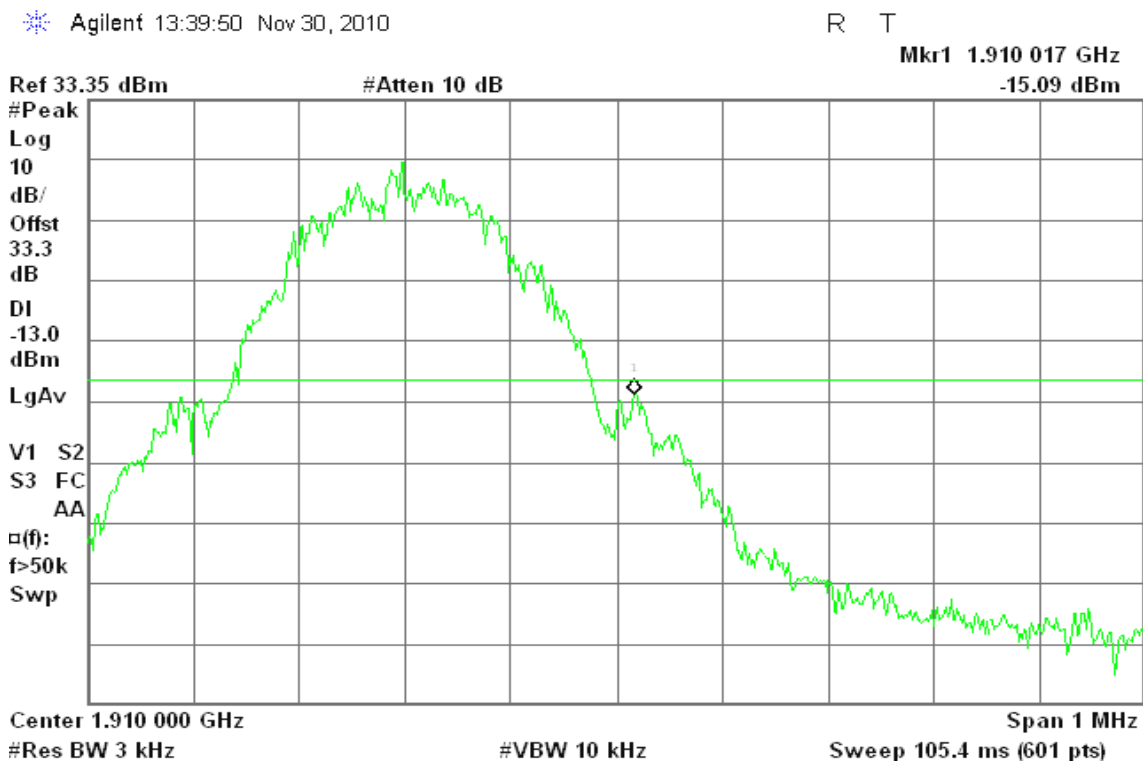


Figure 13-2: Band Edge emissions – GSM CH High





## GPRS 1900

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

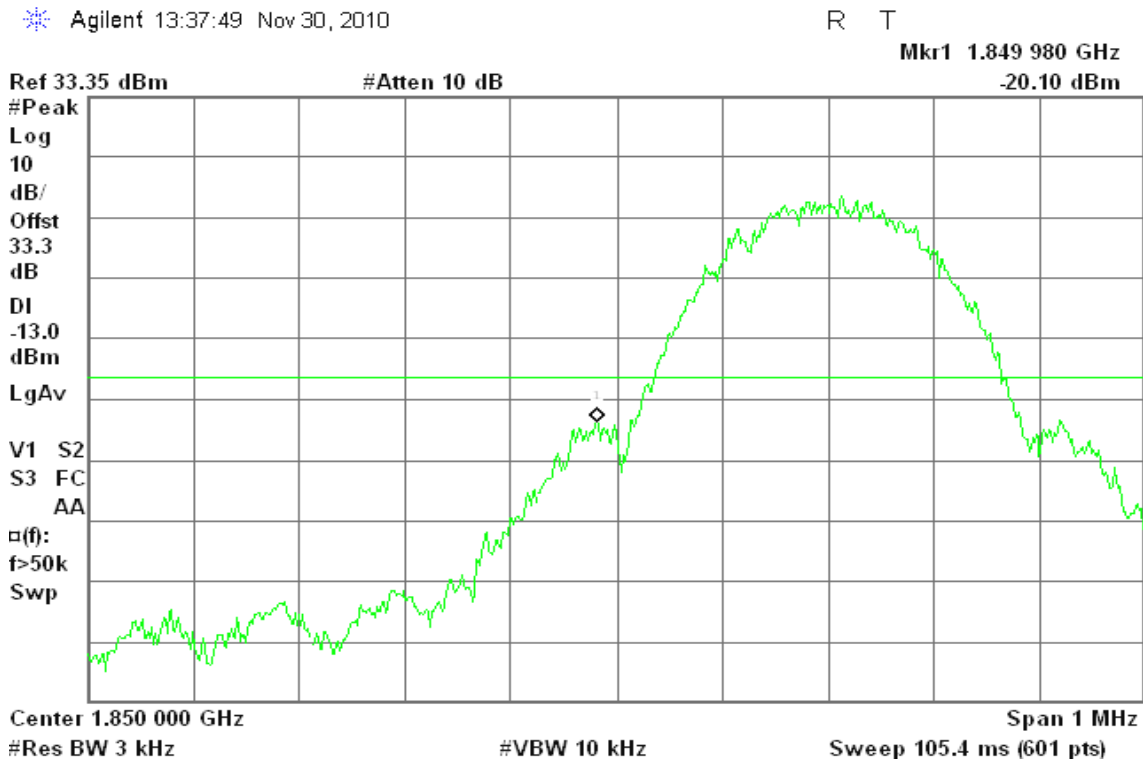
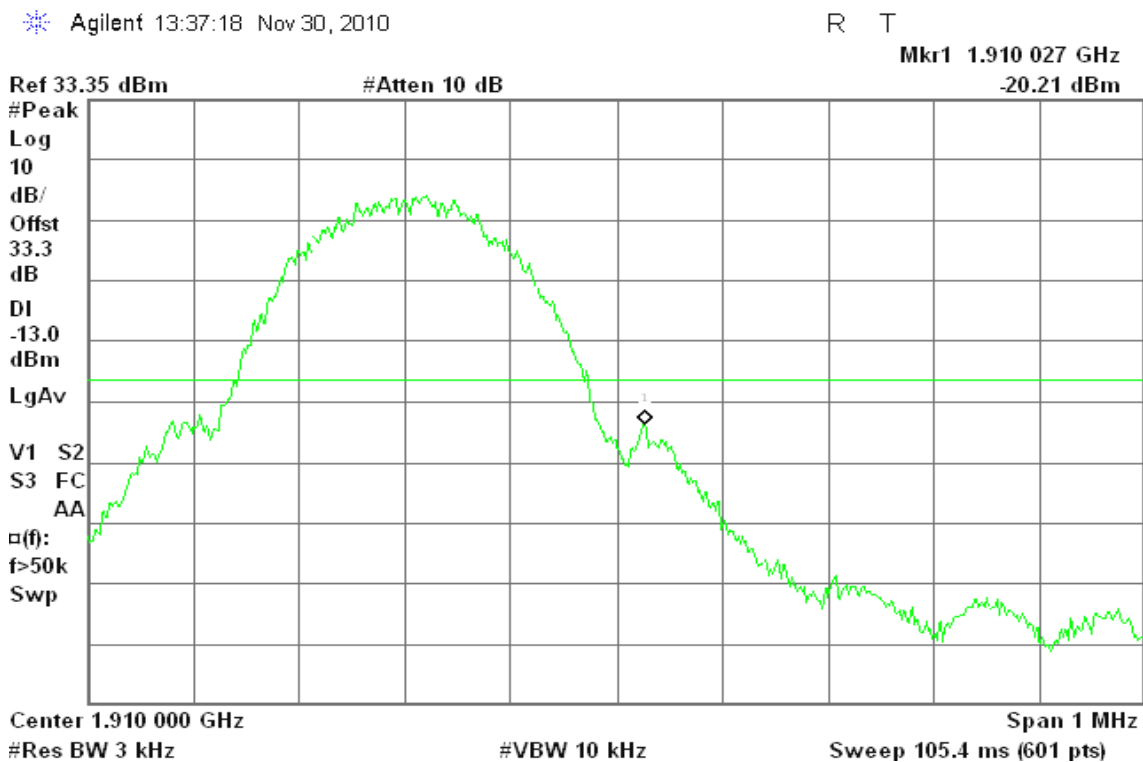


Figure 14-2: Band Edge emissions – GPRS CH High





### EDGE 850

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

Agilent 13:20:37 Nov 30, 2010

R T

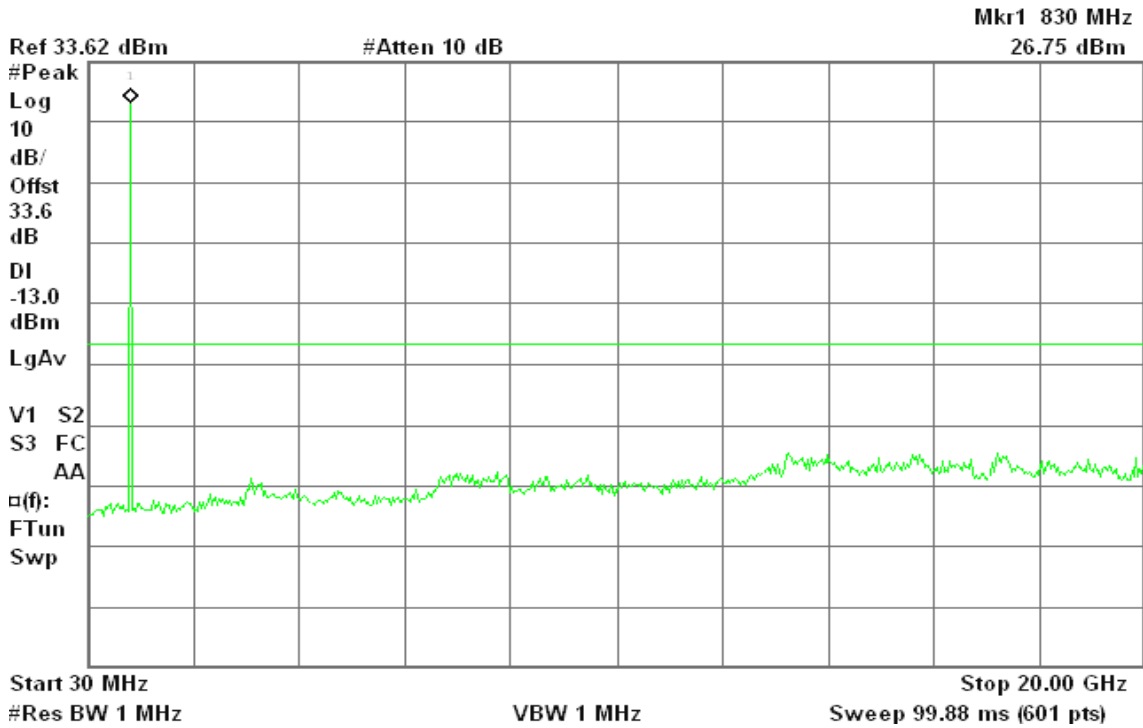


Figure 15-2: Out of Band emission at antenna terminals –EDGE CH Mid

Agilent 13:20:51 Nov 30, 2010

R T

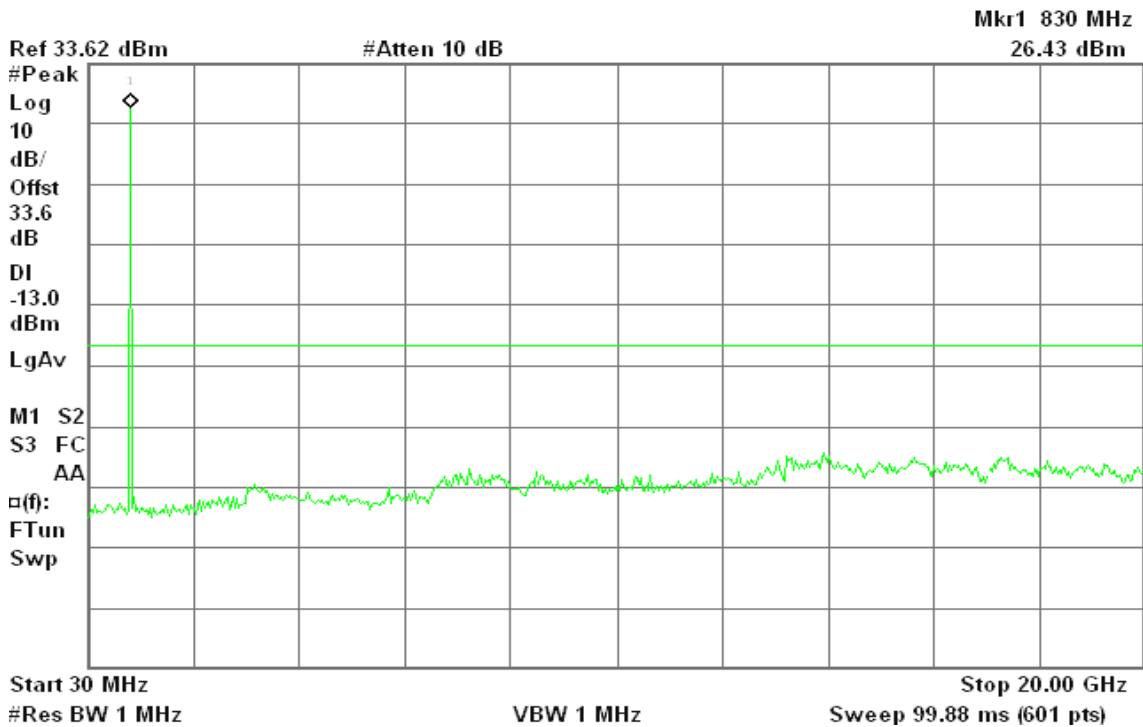


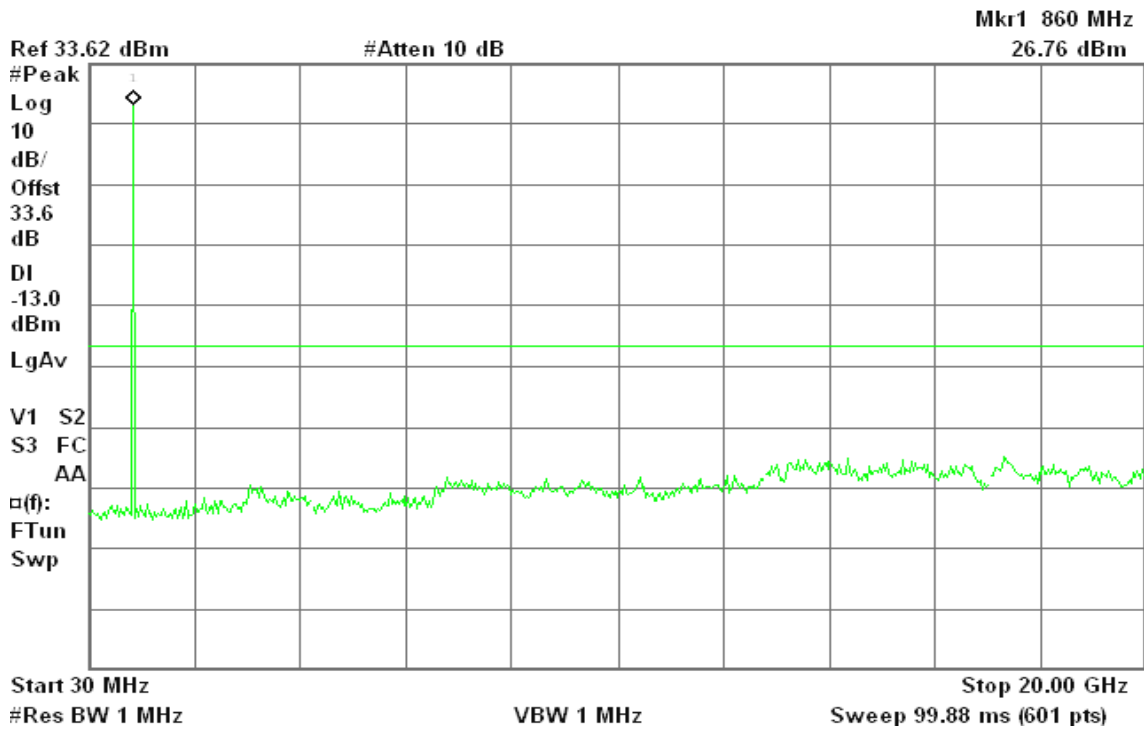




Figure 15-3: Out of Band emission at antenna terminals –EDGE CH High

Agilent 13:21:05 Nov 30, 2010

R T



### EDGE 1900

Figure 16-1: Out of Band emission at antenna terminals –EDGE CH Low

Agilent 13:33:04 Nov 30, 2010

R T

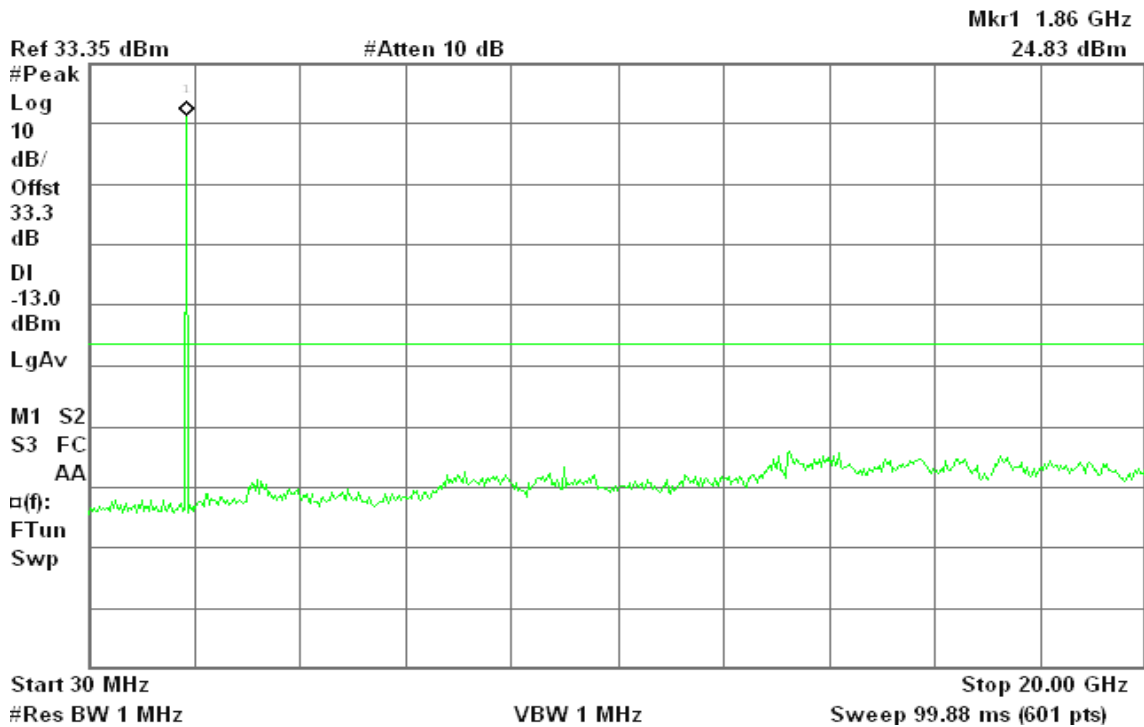




Figure 16-2: Out of Band emission at antenna terminals –EDGE CH Mid

Agilent 13:32:44 Nov 30, 2010

R T

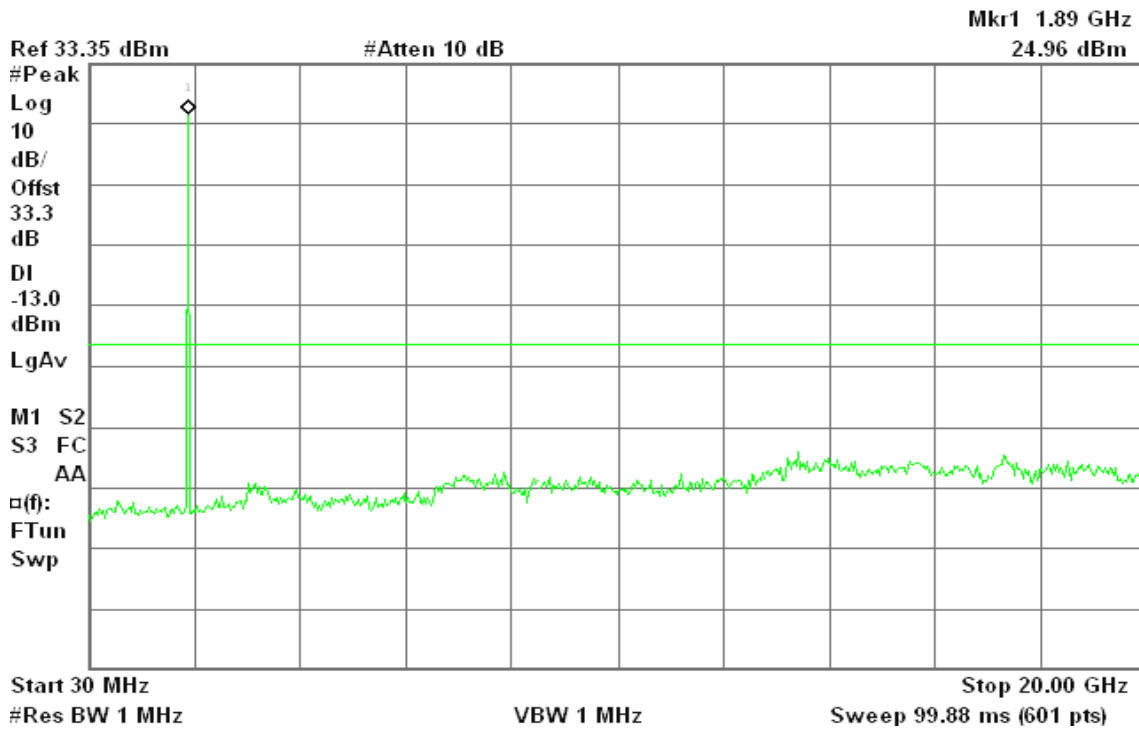
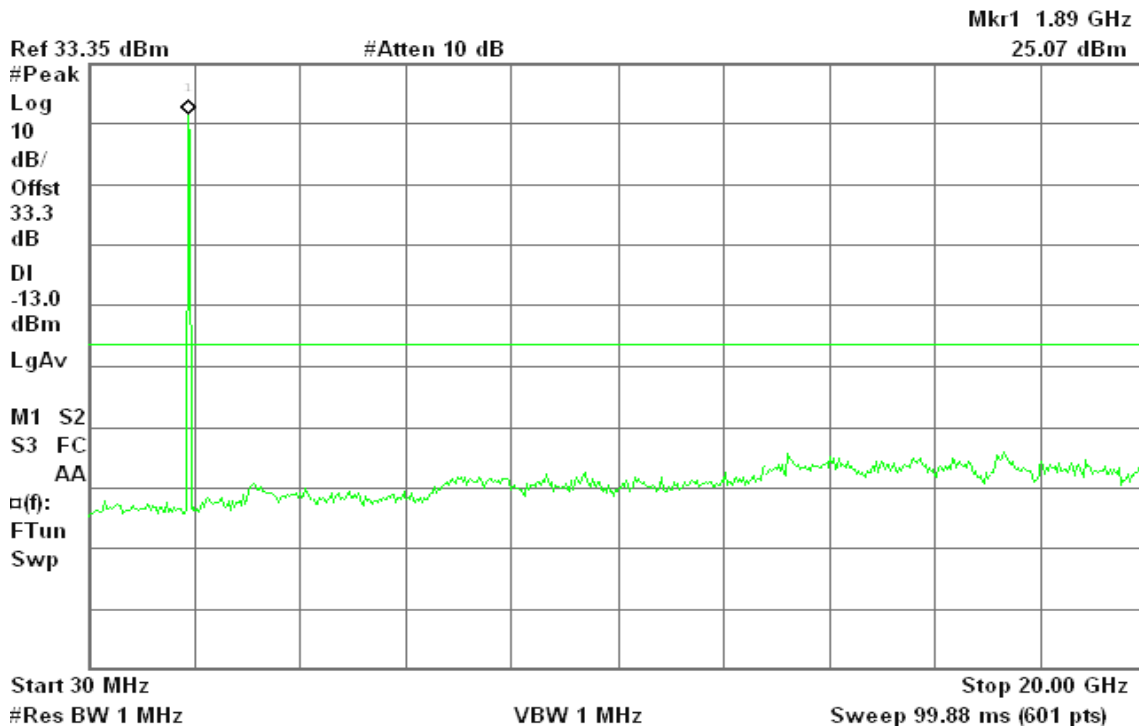


Figure 16-3: Out of Band emission at antenna terminals –EDGE CH High

Agilent 13:32:30 Nov 30, 2010

R T





### EDGE 850

Figure 17-1: Band Edge emissions – EDGE CH Low

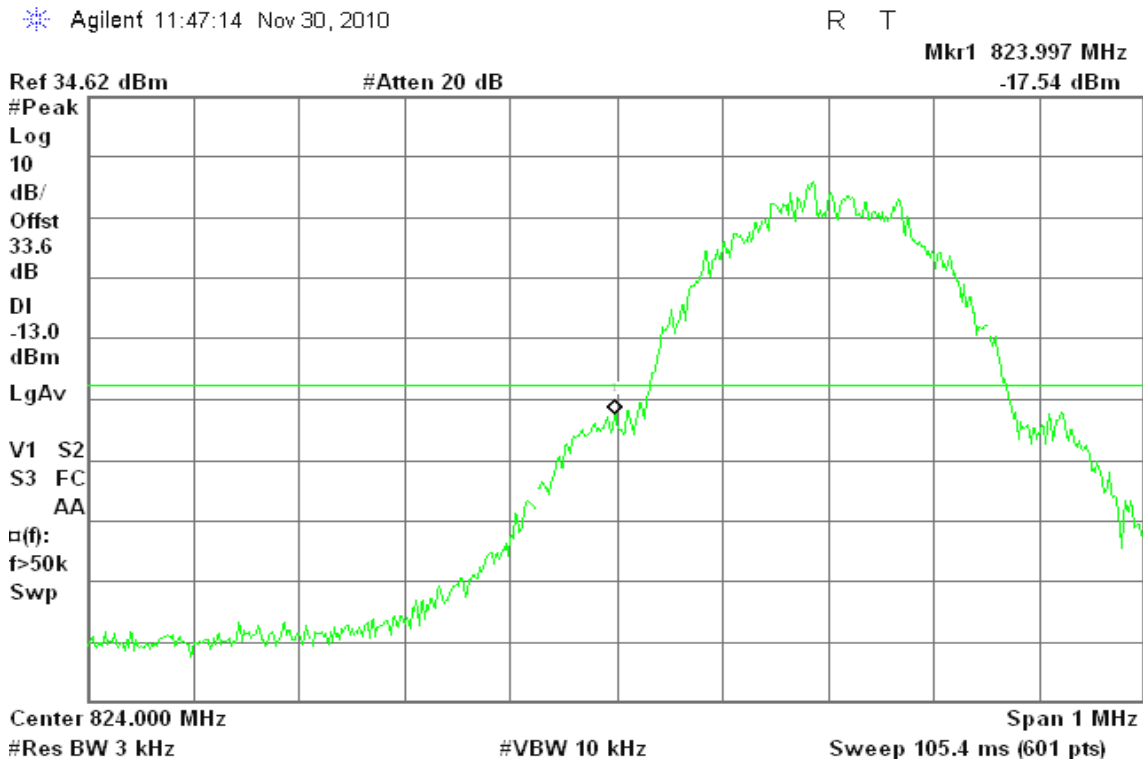
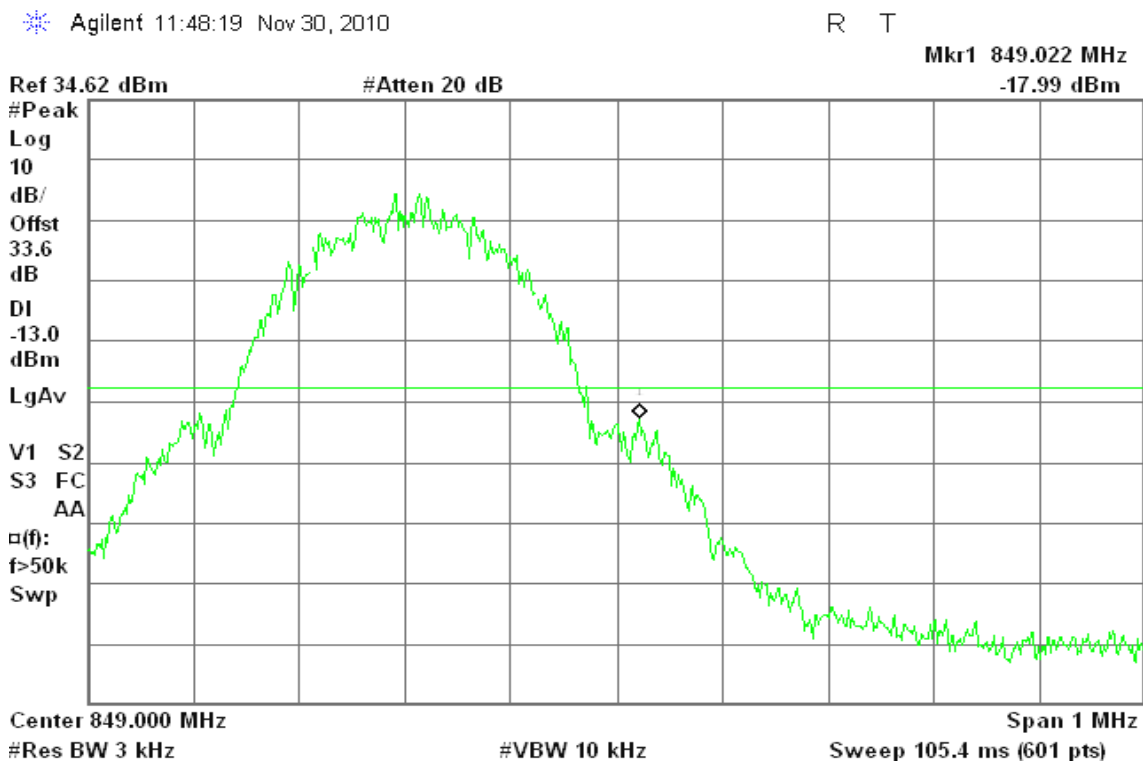


Figure 17-2: Band Edge emissions – EDGE CH High





### EDGE 1900

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

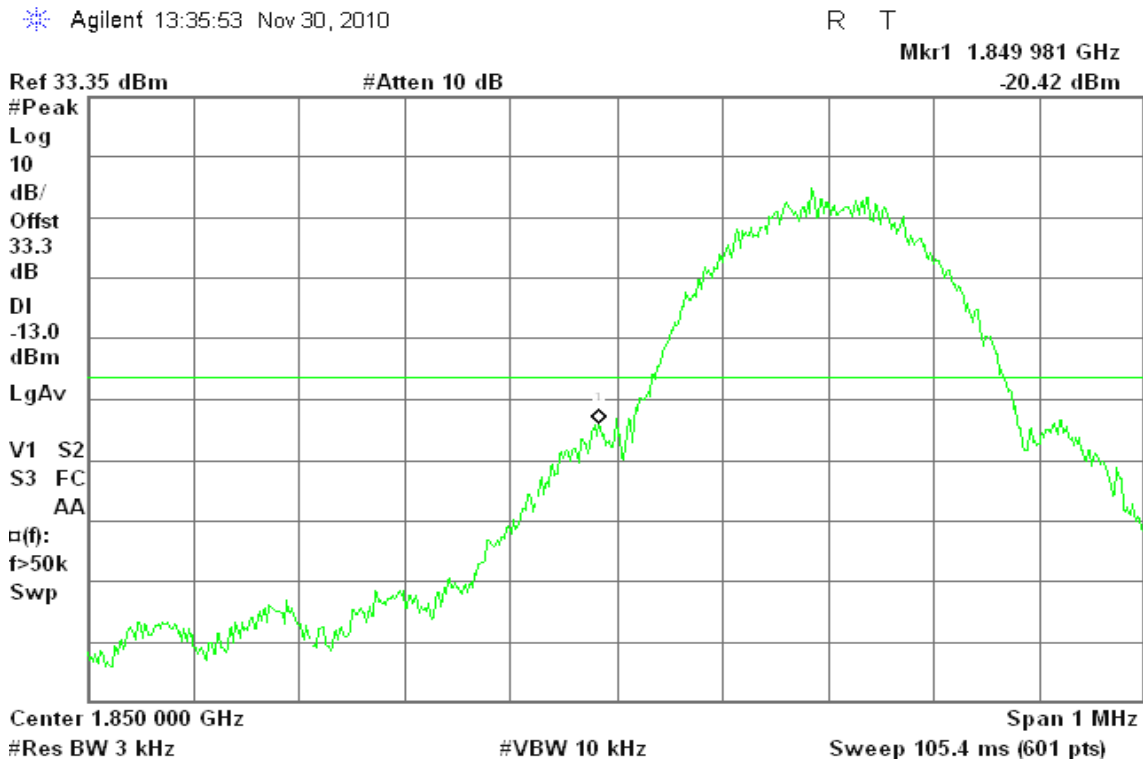
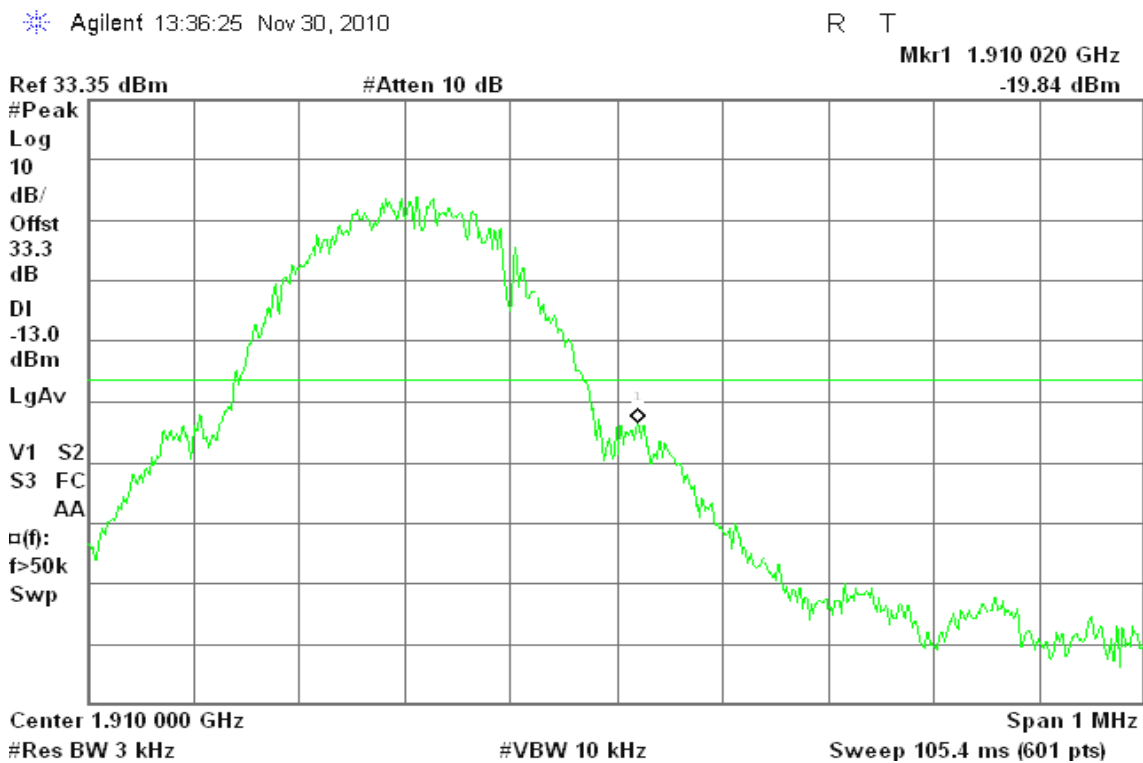


Figure 18-2: Band Edge emissions – EDGE CH High





## WCDMA Band II

Figure 19-1: Out of Band emission at antenna terminals – WCDMA CH Low

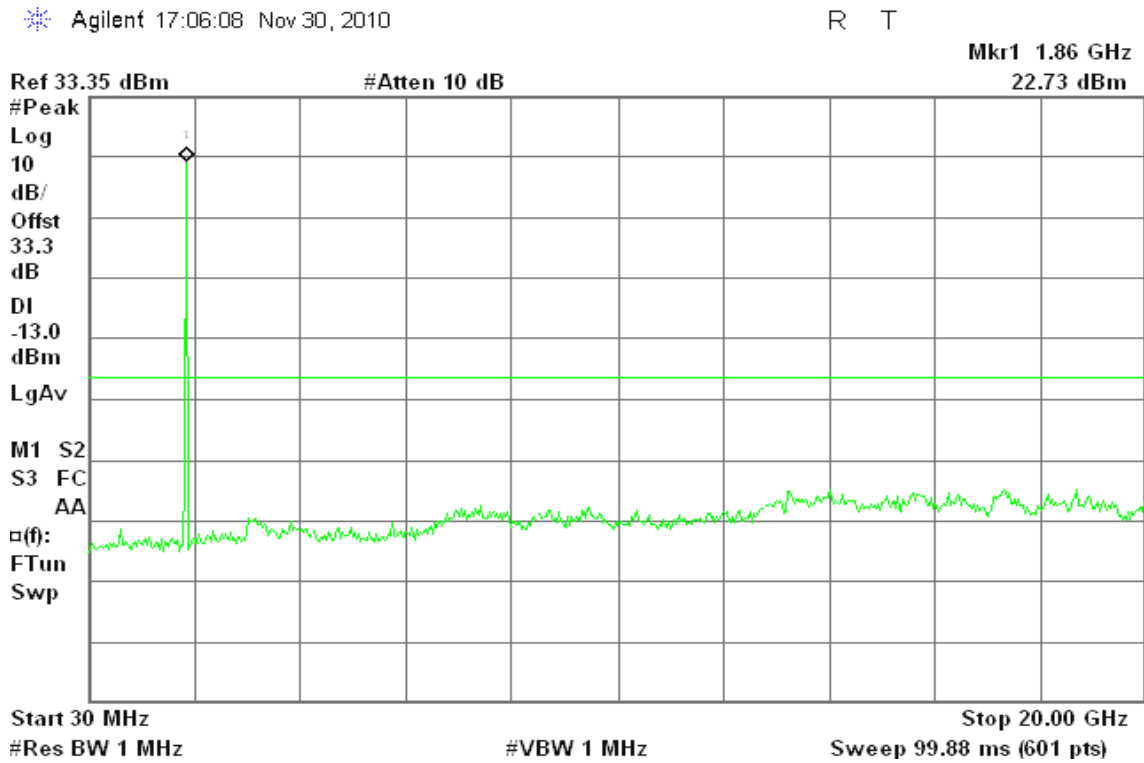


Figure 19-2: Out of Band emission at antenna terminals – WCDMA CH Mid

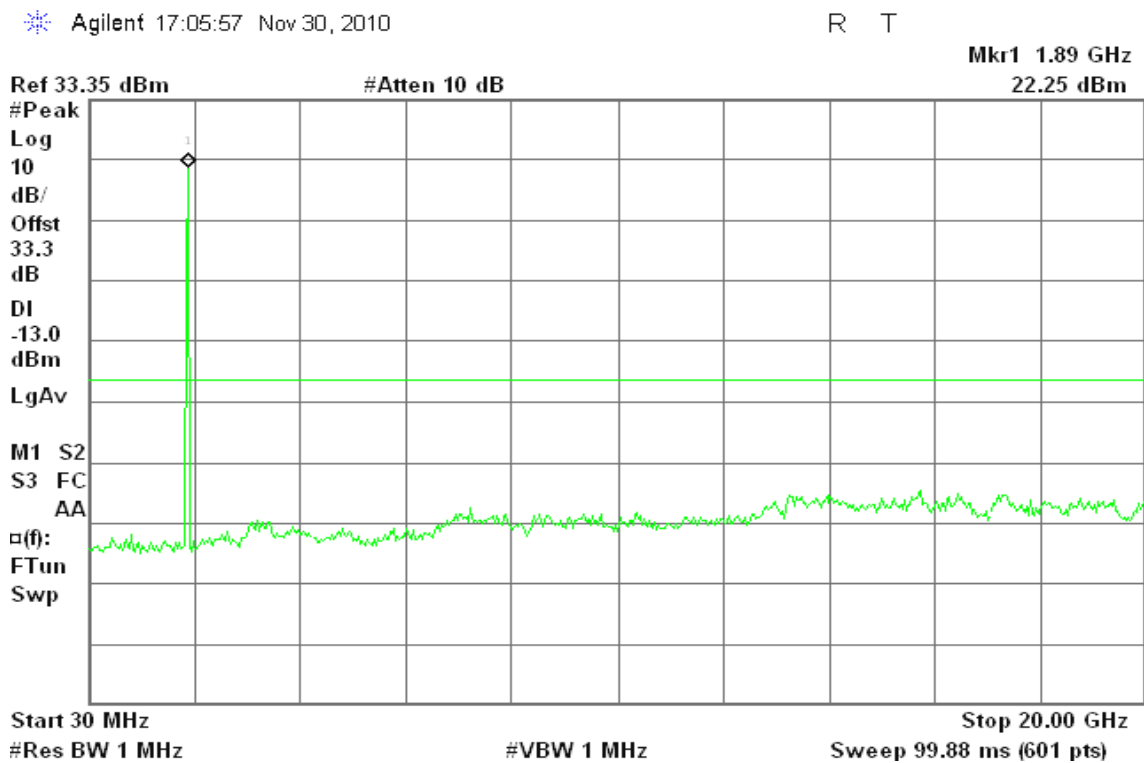
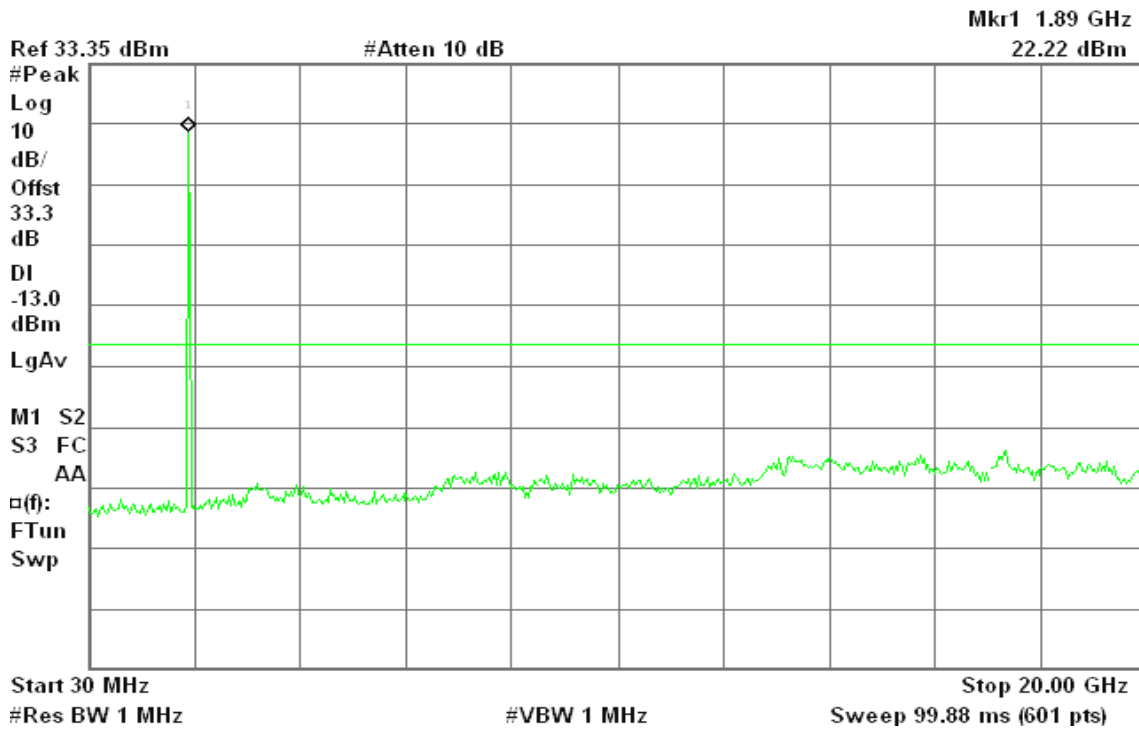




Figure 19-3: Out of Band emission at antenna terminals – WCDMA CH High

Agilent 17:05:43 Nov 30, 2010

R T



### WCDMA Band V

Figure 20-1: Out of Band emission at antenna terminals – WCDMA CH Low

Agilent 17:24:17 Nov 30, 2010

R T

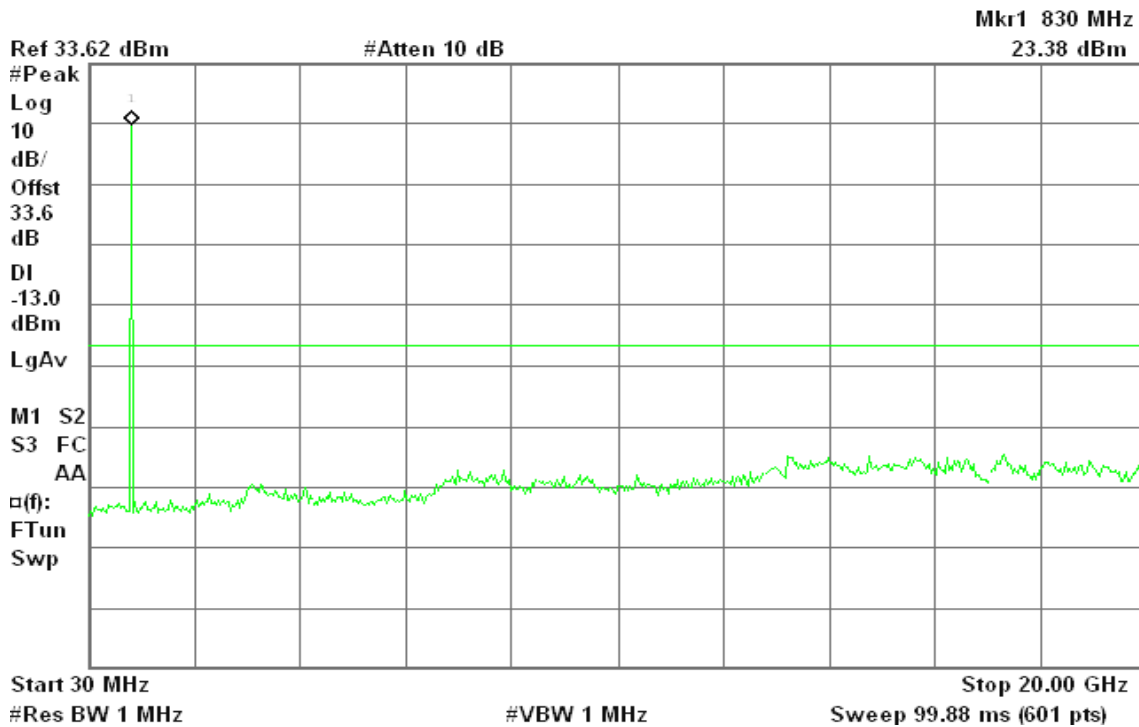




Figure 20-2: Out of Band emission at antenna terminals – WCDMA CH Mid

Agilent 17:24:29 Nov 30, 2010

R T

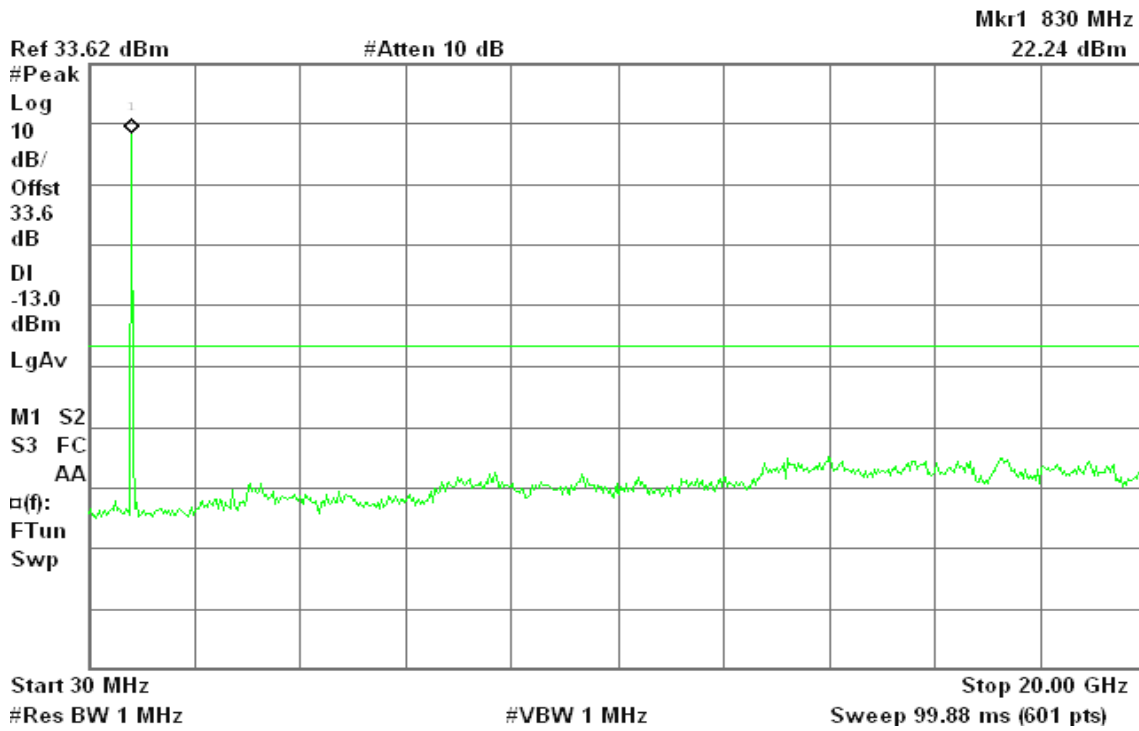
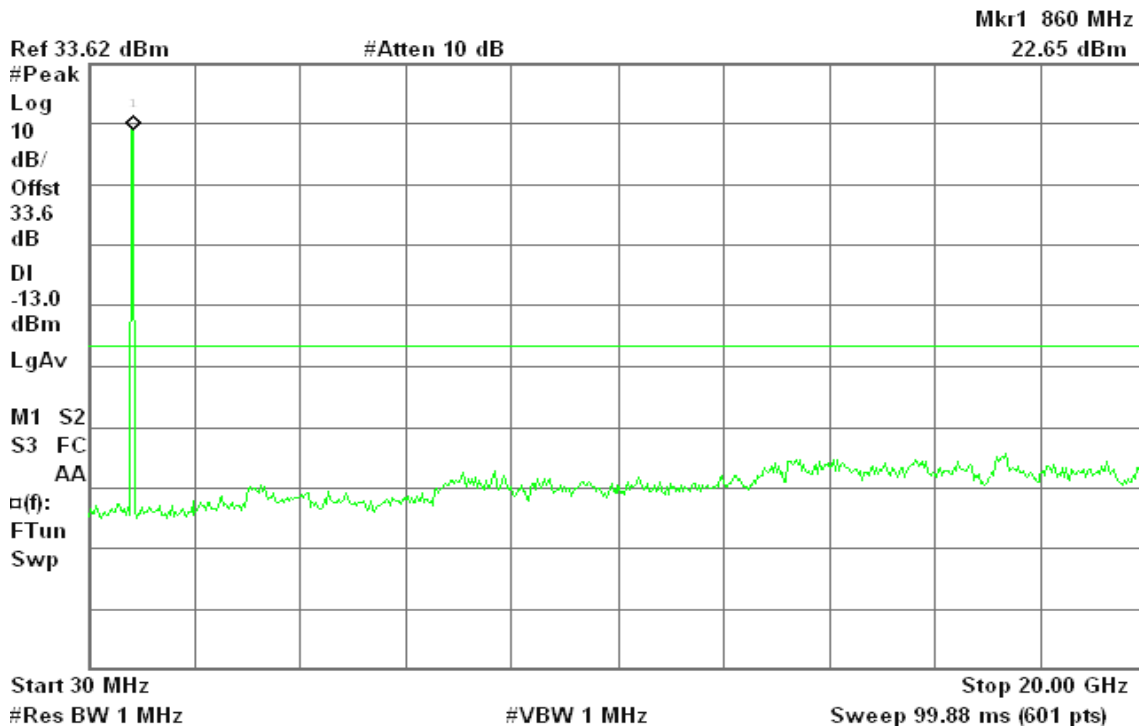


Figure 20-3: Out of Band emission at antenna terminals – WCDMA CH High

Agilent 17:24:41 Nov 30, 2010

R T





### WCDMA Band II

Figure 21-1: Band Edge emissions – WCDMA CH Low

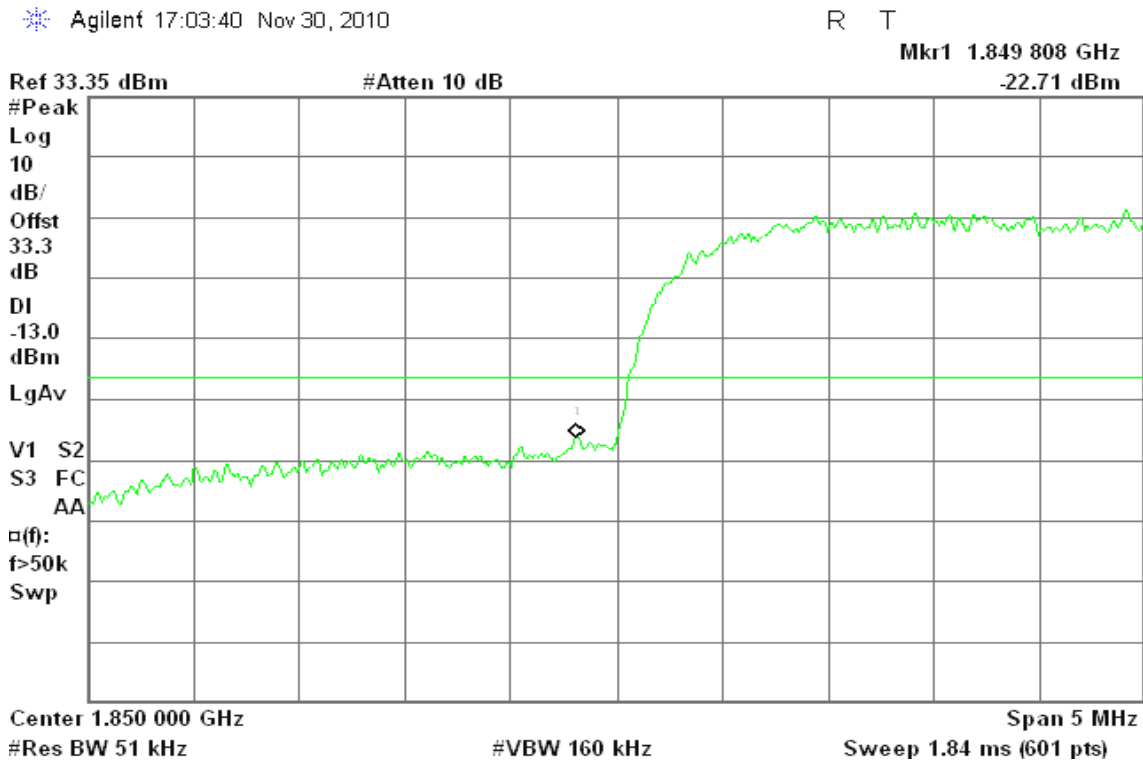
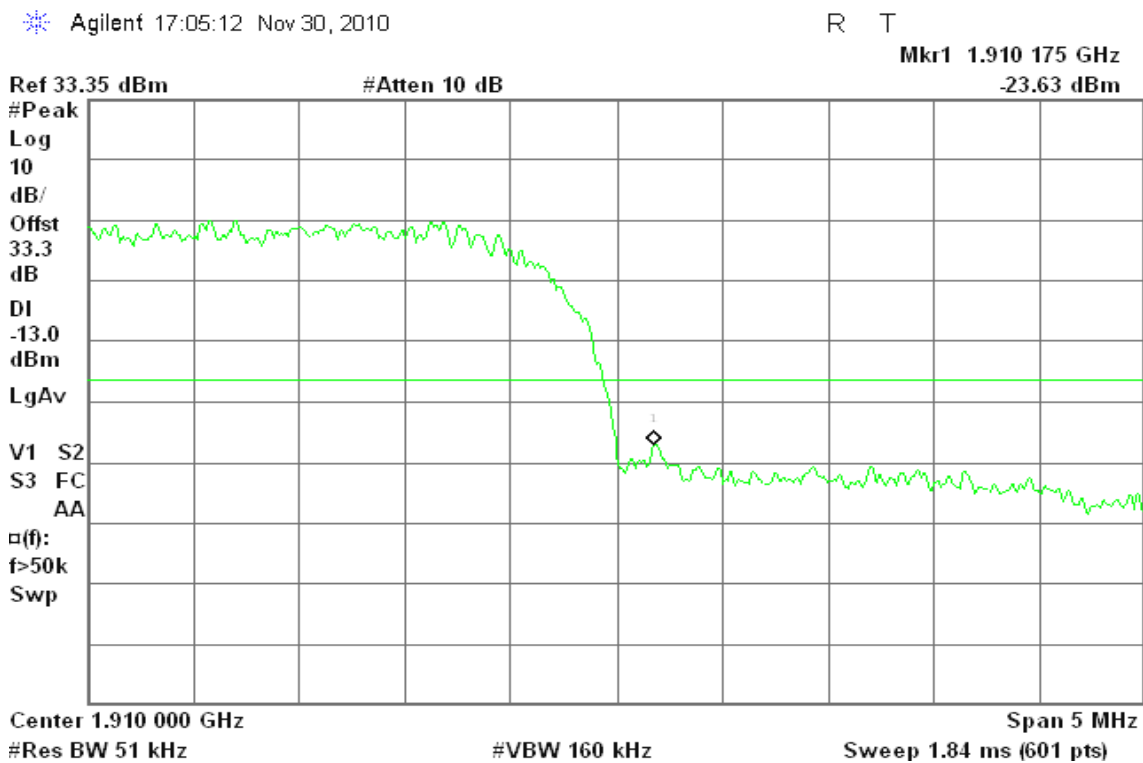


Figure 21-2: Band Edge emissions –WCDMA CH High







### WCDMA Band V

Figure 22-1: Band Edge emissions –WCDMA CH Low

Agilent 17:27:42 Nov 30, 2010

R T

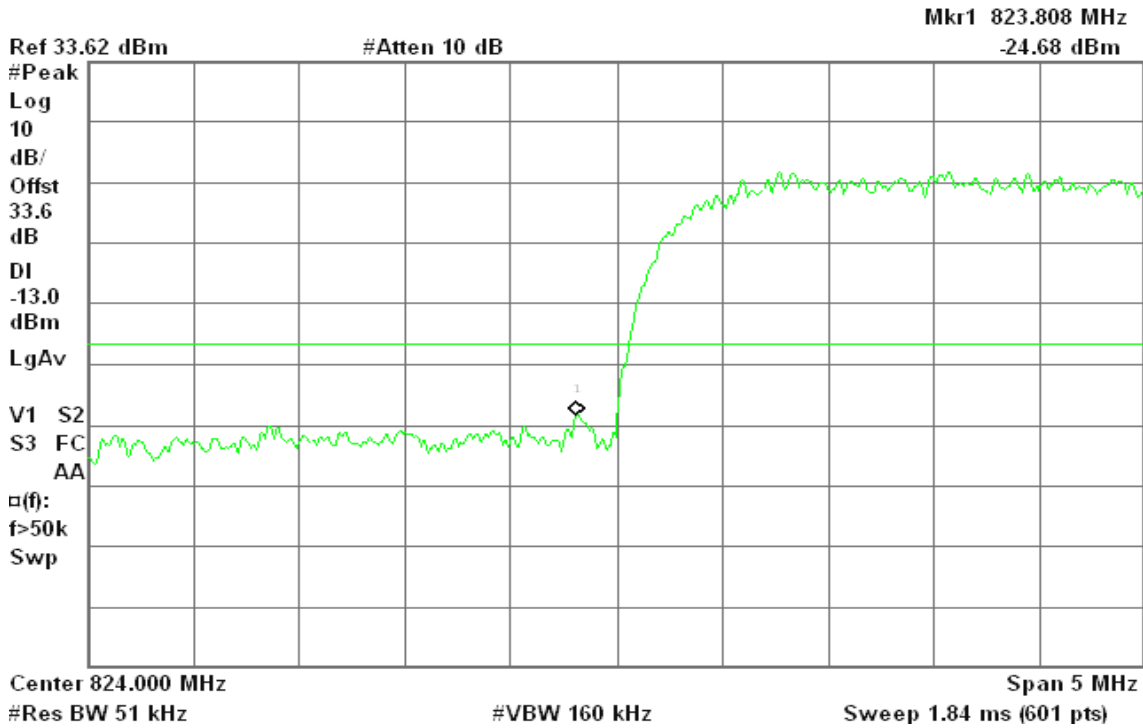
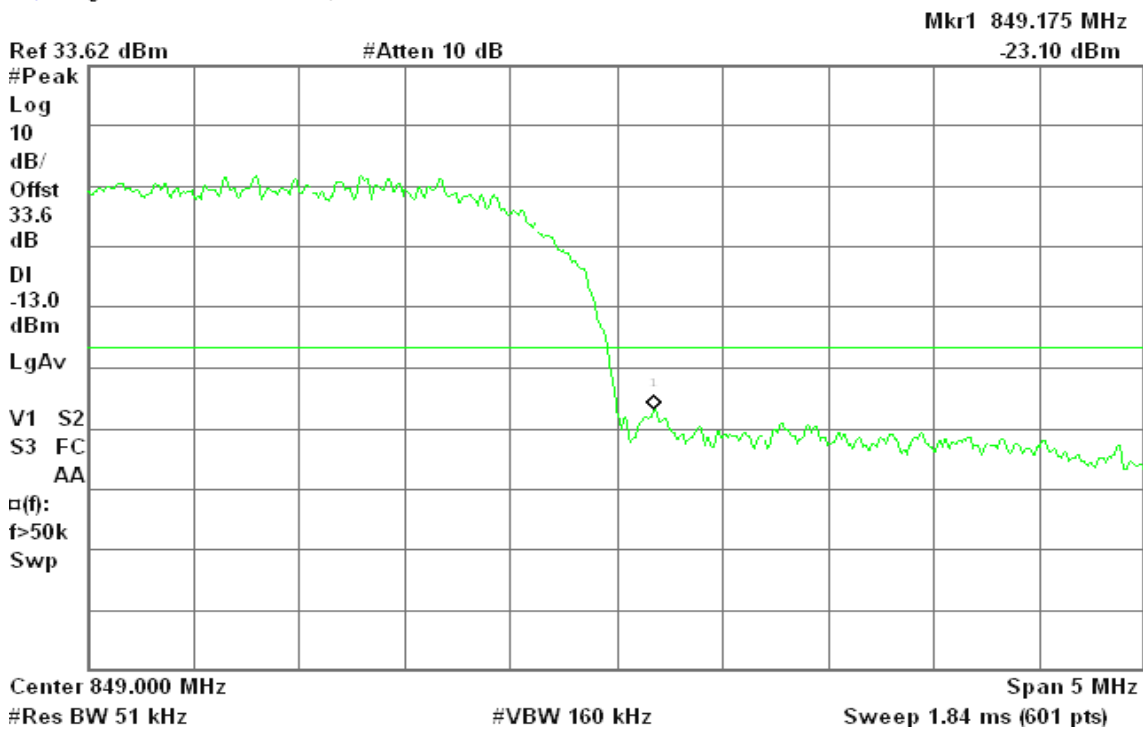


Figure 22-2: Band Edge emissions –WCDMA CH High

Agilent 17:25:55 Nov 30, 2010

R T





### WCDMA / HSDPA Band II

Figure 23-1: Out of Band emission at antenna terminals – HSDPA CH Low

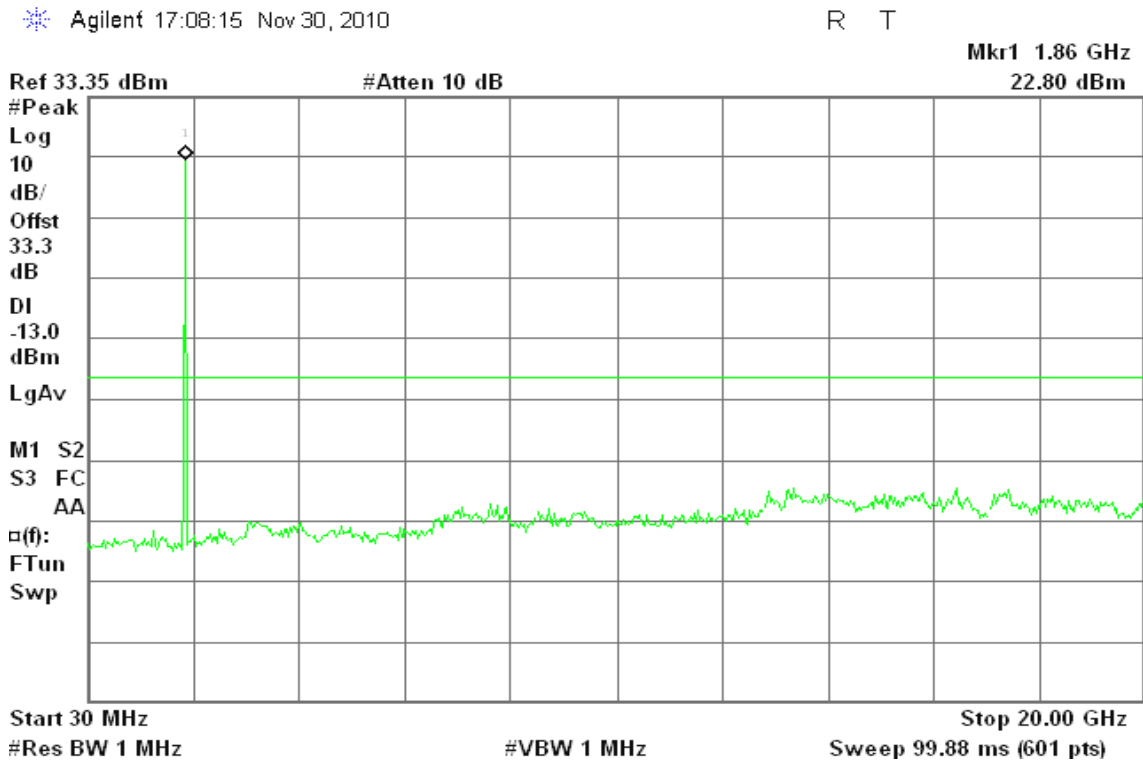


Figure 23-2: Out of Band emission at antenna terminals – HSDPA CH Mid

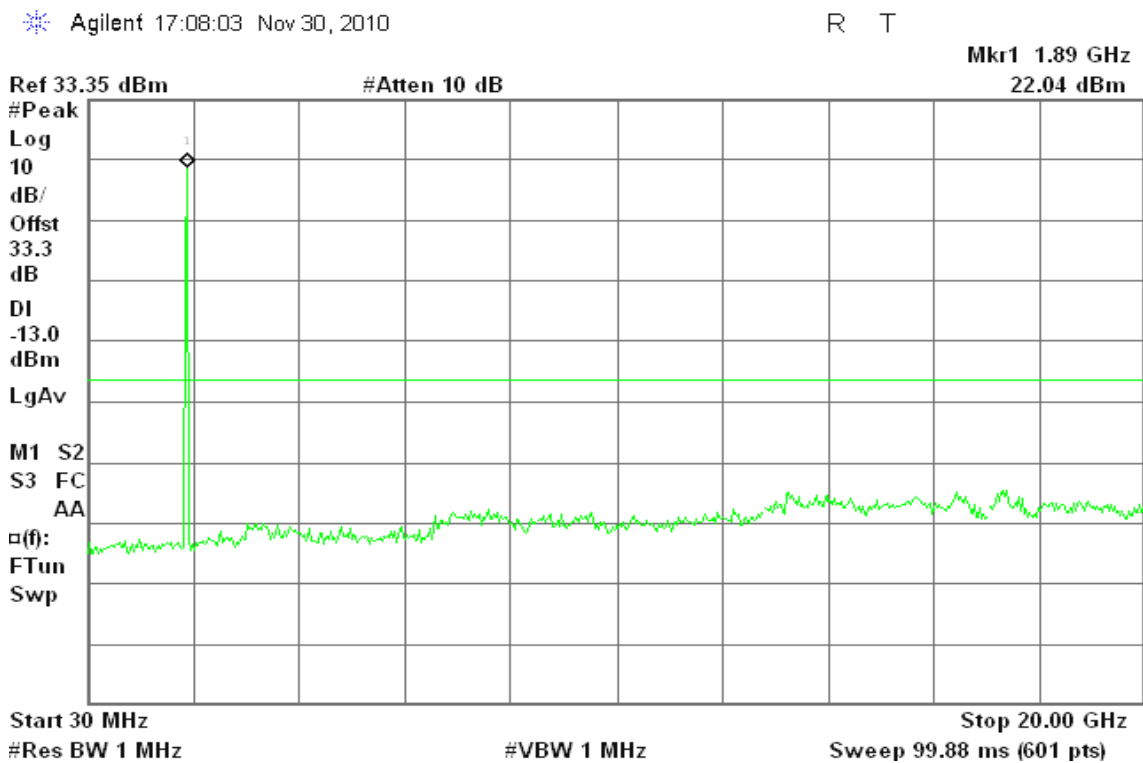
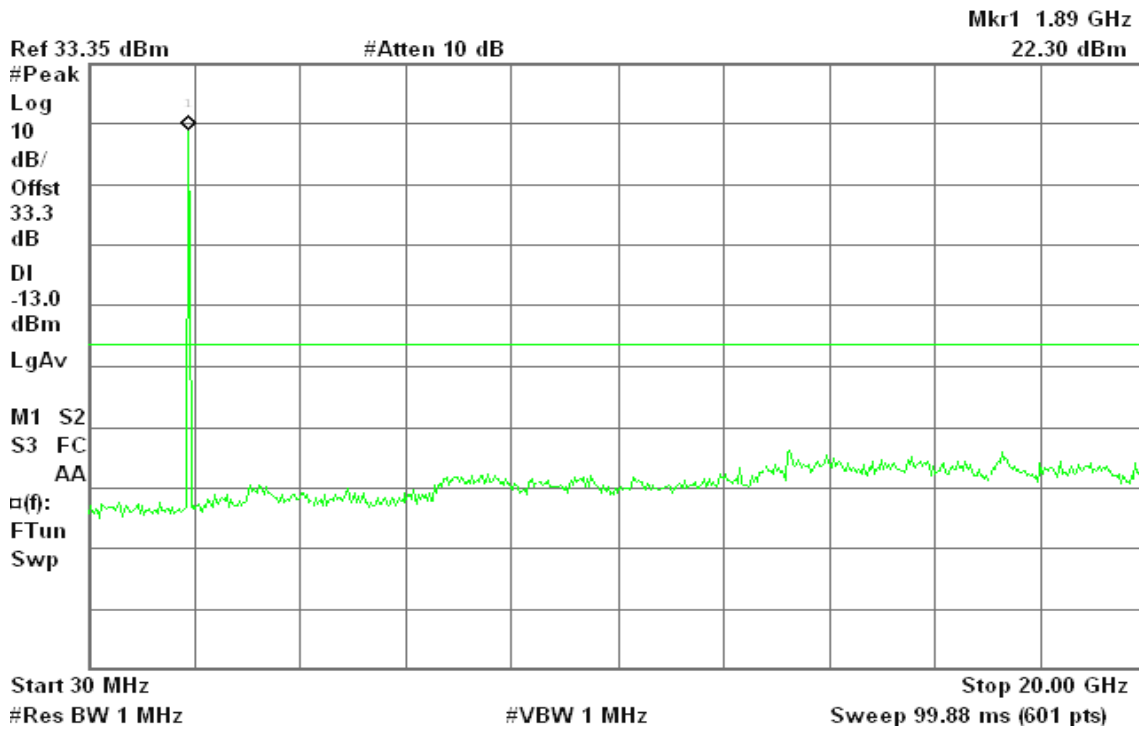




Figure 23-3: Out of Band emission at antenna terminals – HSDPA CH High

Agilent 17:07:48 Nov 30, 2010

R T



### WCDMA / HSDPA Band V

Figure 24-1: Out of Band emission at antenna terminals – HSDPA CH Low

Agilent 17:09:38 Nov 30, 2010

R T

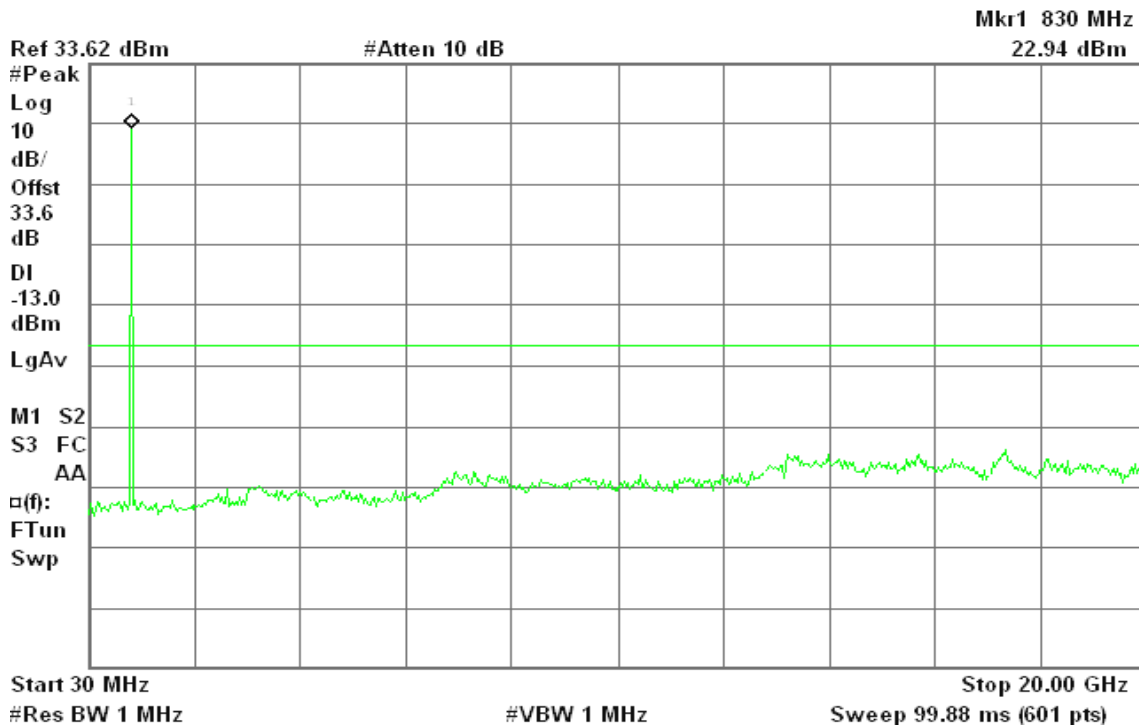




Figure 24-2: Out of Band emission at antenna terminals – HSDPA CH Mid

Agilent 17:09:49 Nov 30, 2010

R T

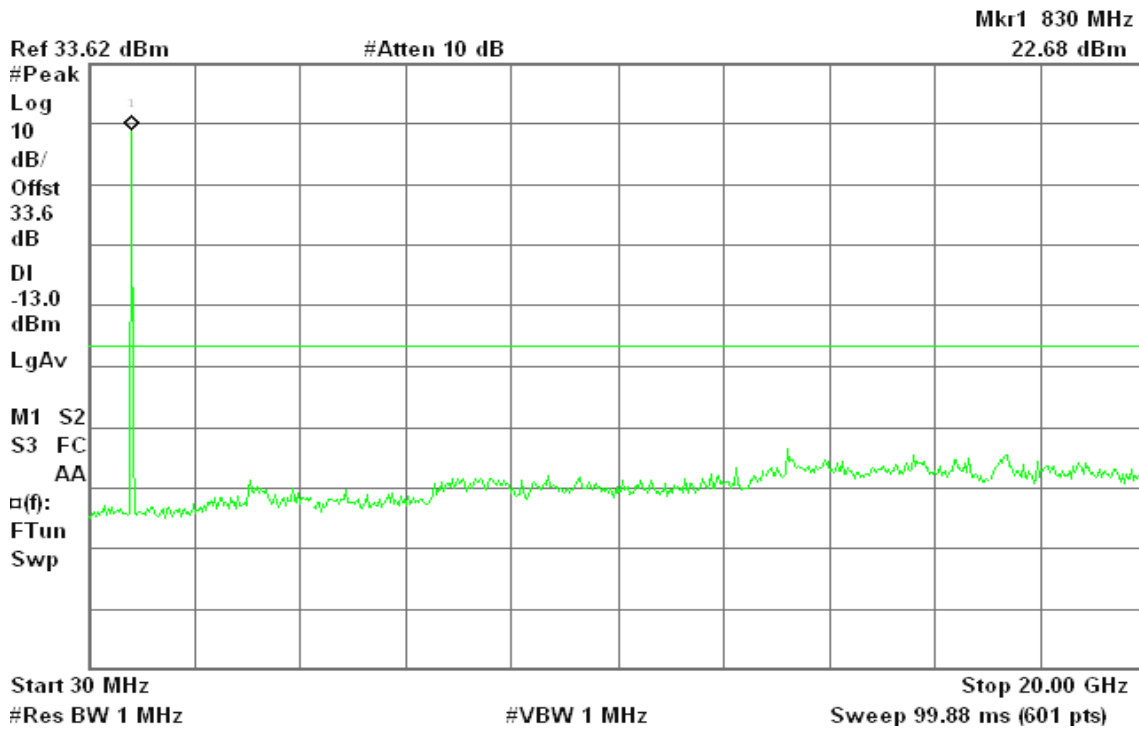
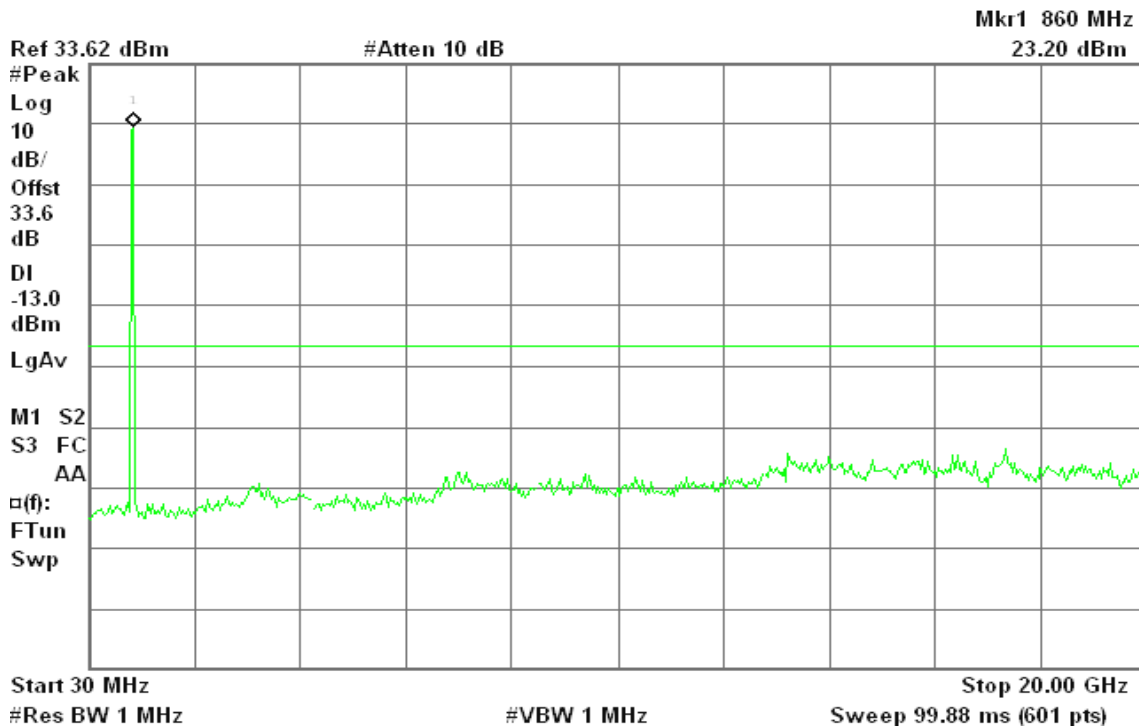


Figure 24-3: Out of Band emission at antenna terminals – HSDPA CH High

Agilent 17:10:00 Nov 30, 2010

R T





### WCDMA / HSDPA Band II

Figure 25-1: Band Edge emissions – HSDPA CH Low

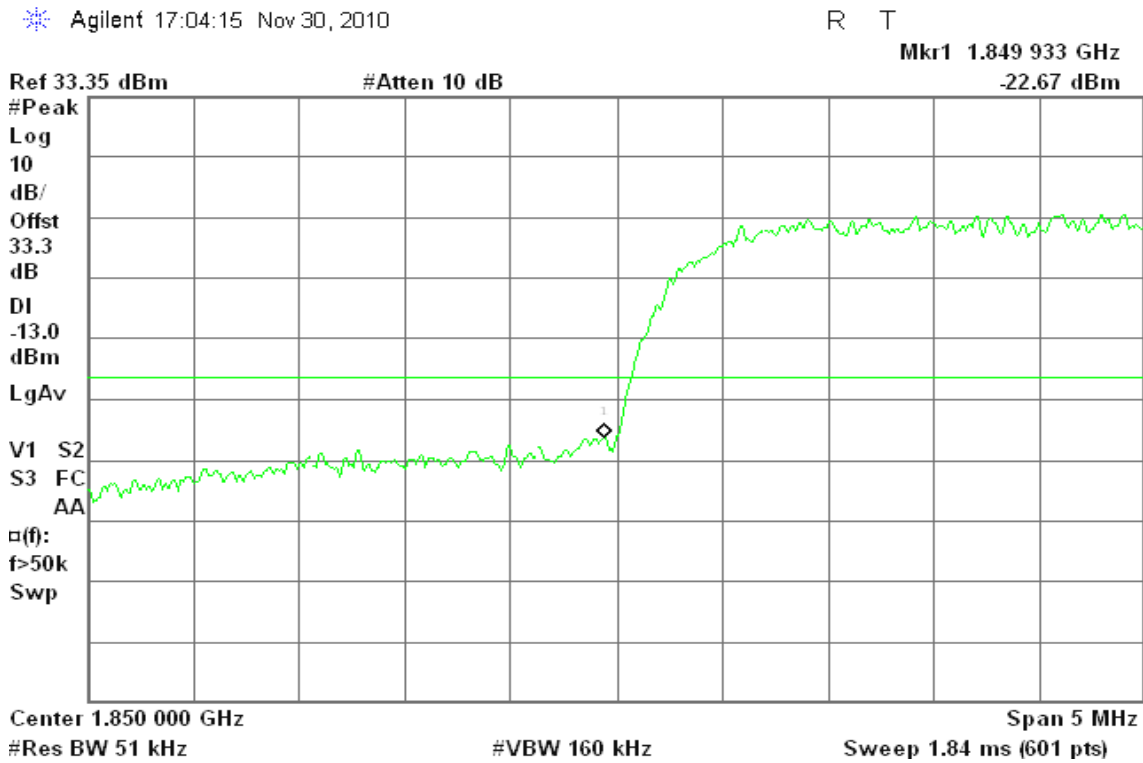
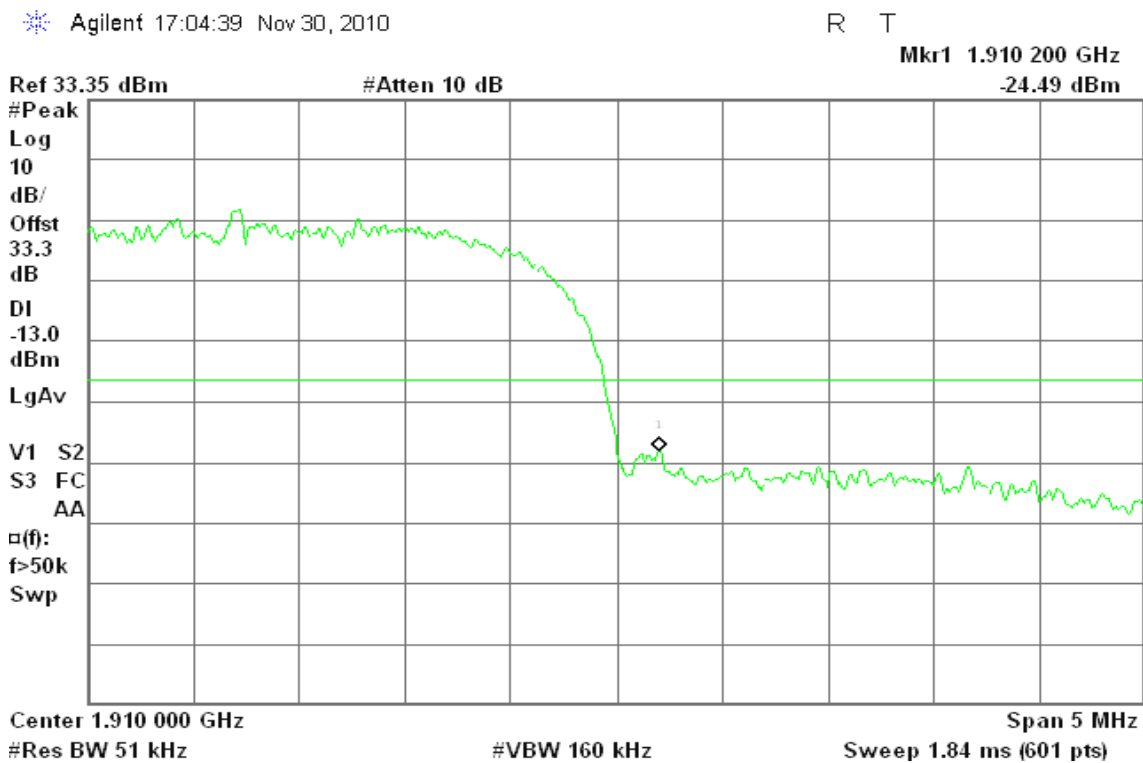


Figure 25-2: Band Edge emissions – HSDPA CH High





### WCDMA / HSDPA Band V

Figure 26-1: Band Edge emissions – HSDPA CH Low

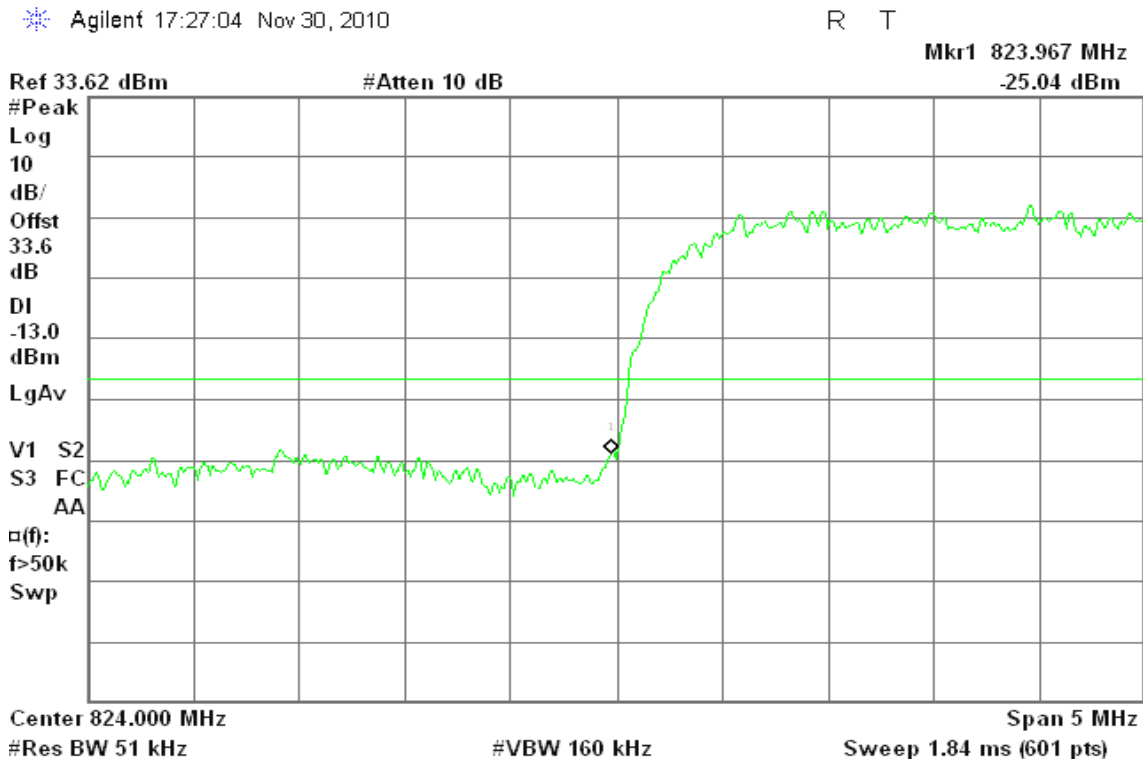
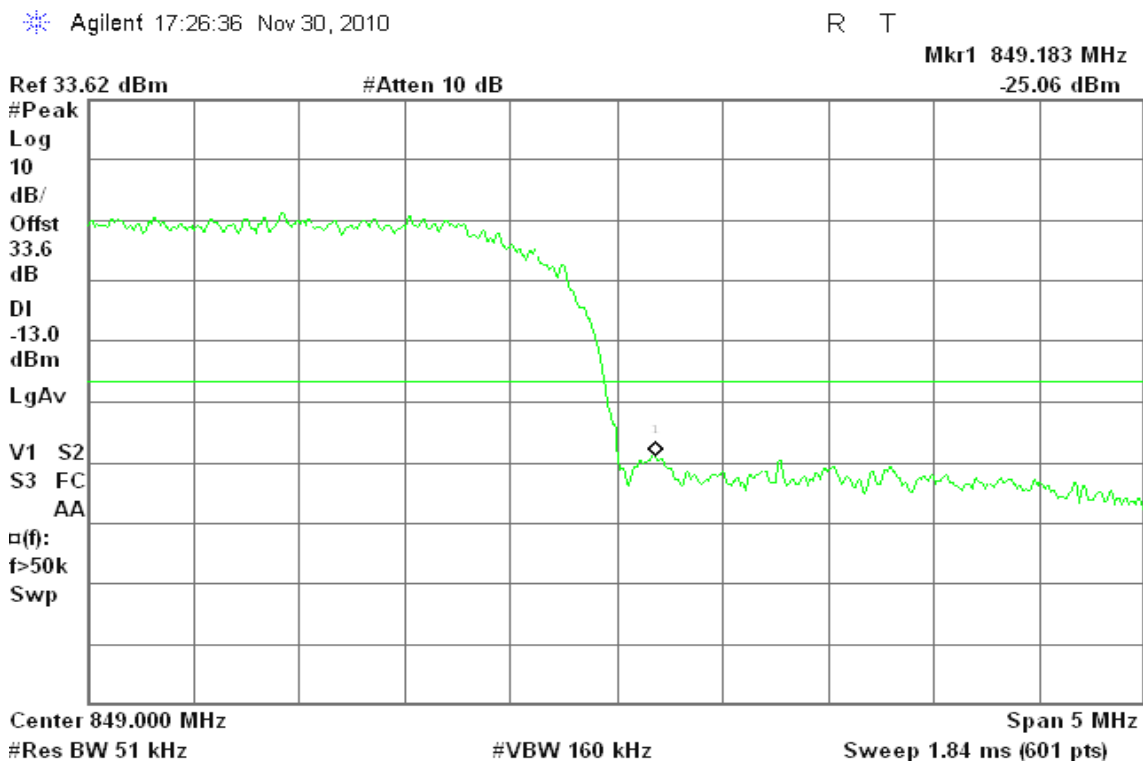


Figure 26-2: Band Edge emissions – HSDPA CH High





### WCDMA / HSUPA Band II

Figure 27-1: Out of Band emission at antenna terminals – HSUPA CH Low

Agilent 17:06:34 Nov 30, 2010

R T

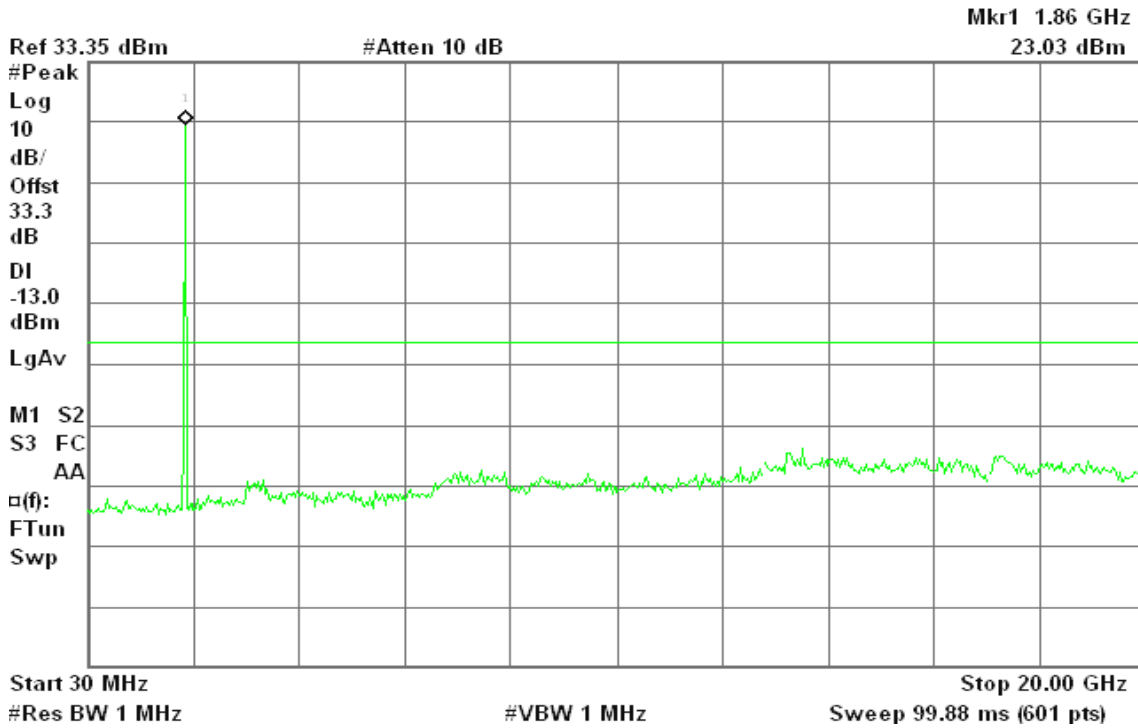


Figure 27-2: Out of Band emission at antenna terminals – HSUPA CH Mid

Agilent 17:06:44 Nov 30, 2010

R T

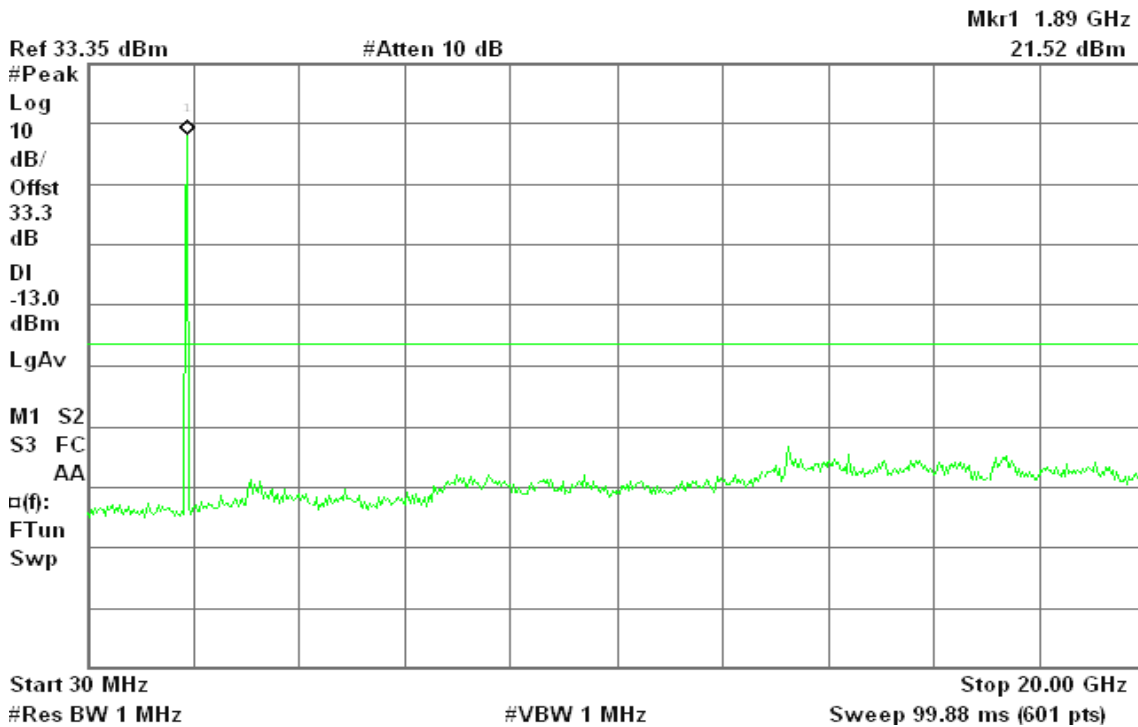
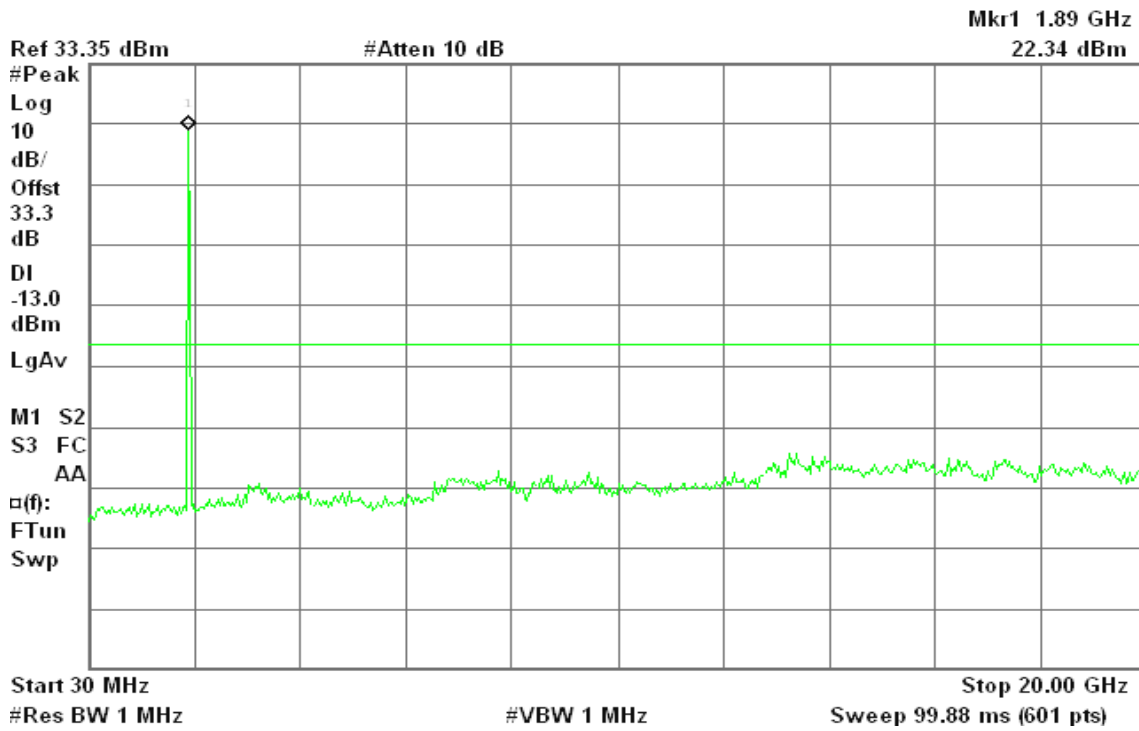




Figure 27-3: Out of Band emission at antenna terminals – HSUPA CH High

Agilent 17:06:57 Nov 30, 2010

R T



### HSUPA / WCDMA Band V

Figure 28-1: Out of Band emission at antenna terminals – HSUPA CH Low

Agilent 17:23:52 Nov 30, 2010

R T

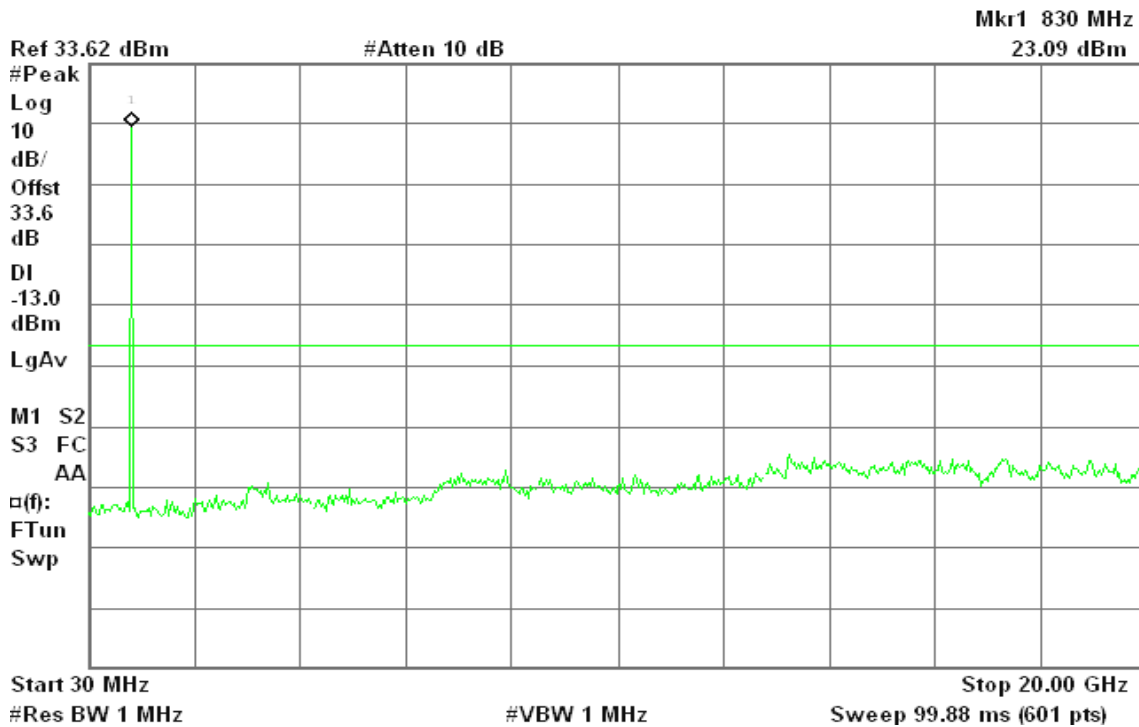






Figure 28-2: Out of Band emission at antenna terminals – HSUPA CH Mid

Agilent 17:10:27 Nov 30, 2010

R T

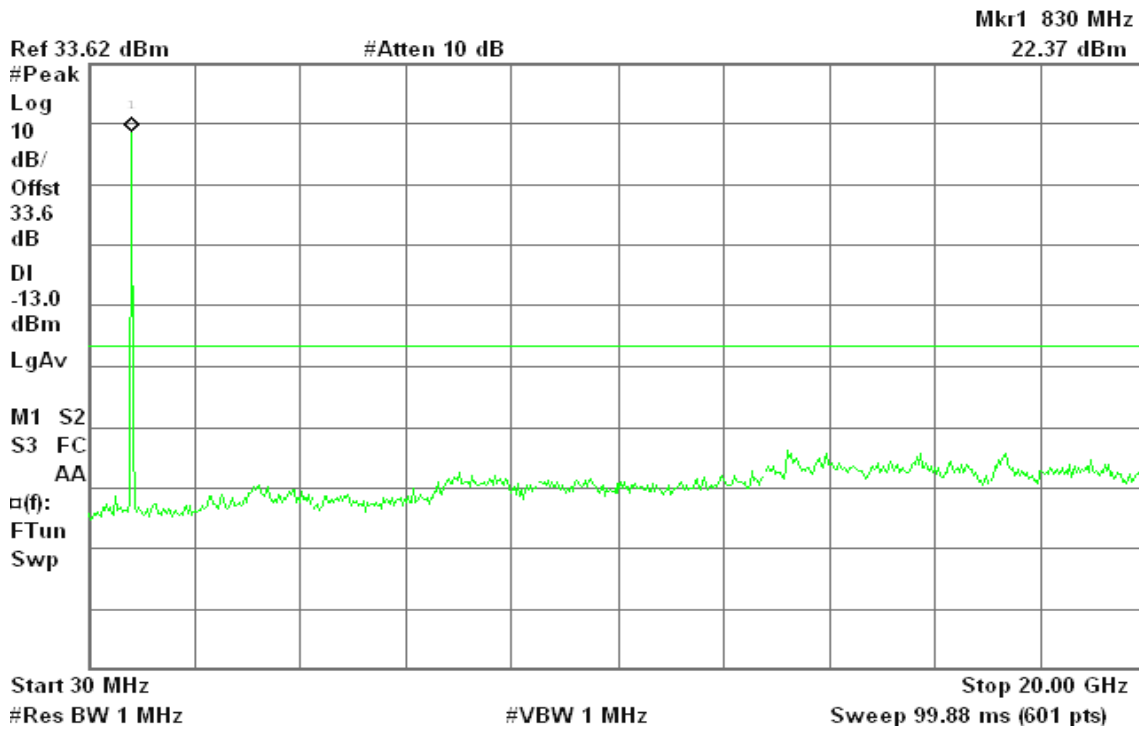
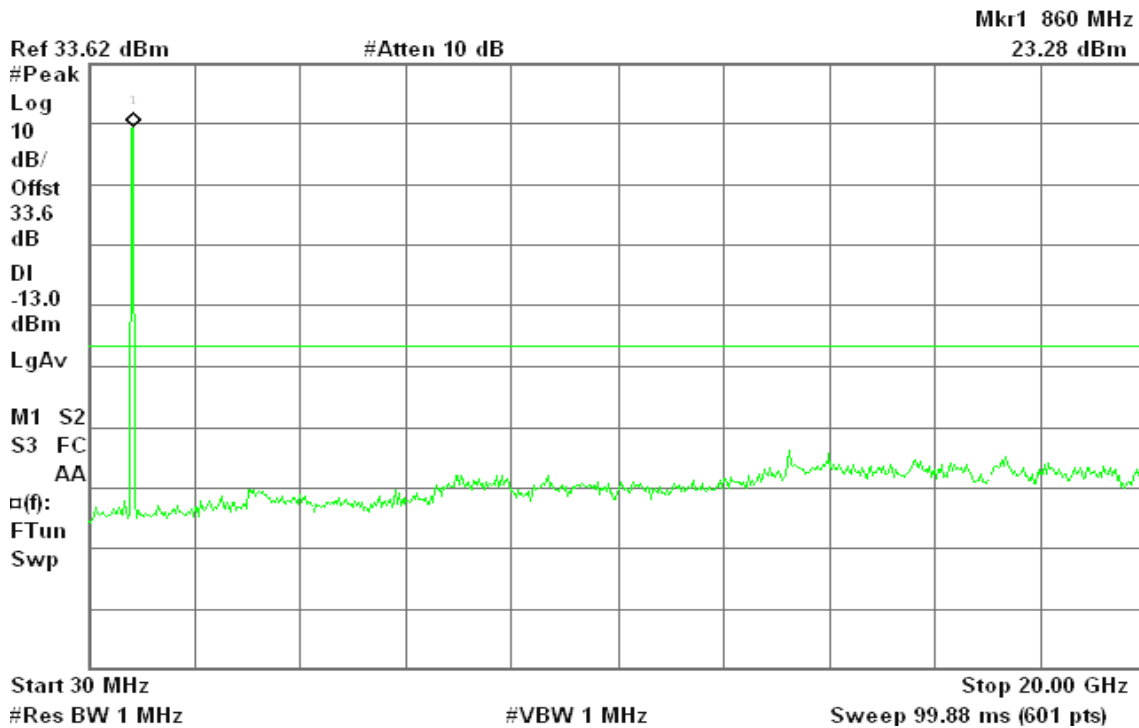


Figure 28-3: Out of Band emission at antenna terminals – HSUPA CH High

Agilent 17:10:13 Nov 30, 2010

R T





### WCDMA / HSUPA Band II

Figure 29-1: Band Edge emissions – HSUPA CH Low

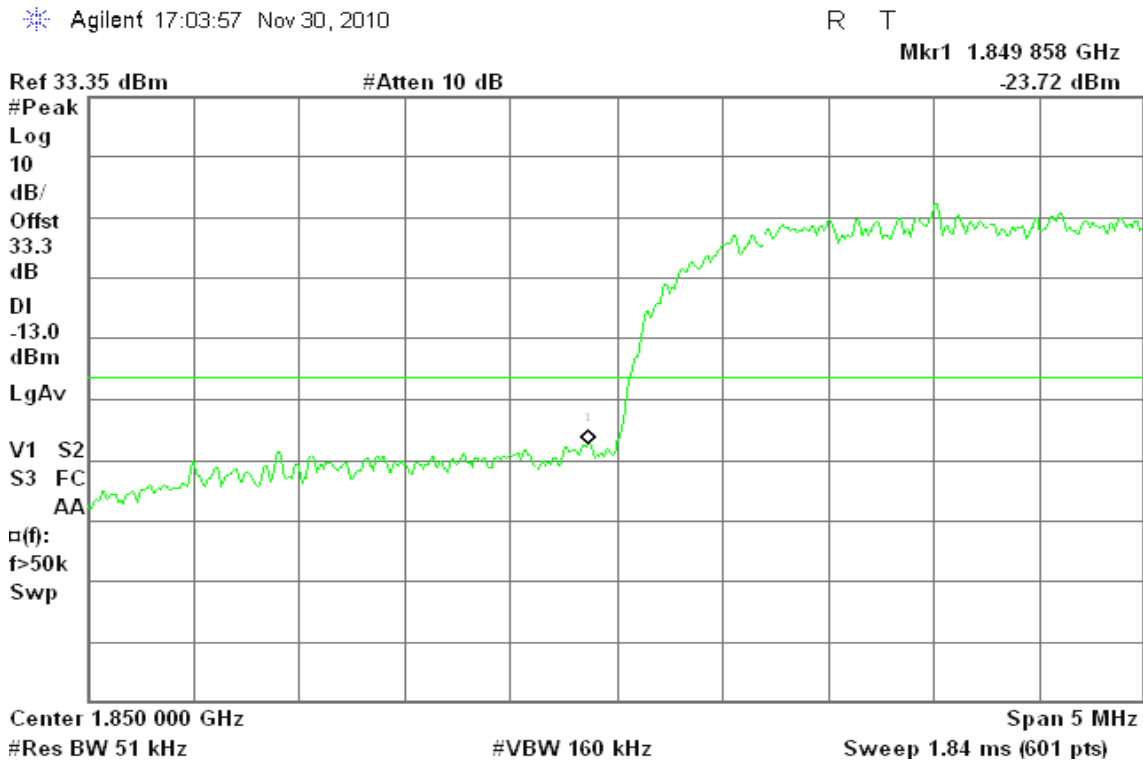
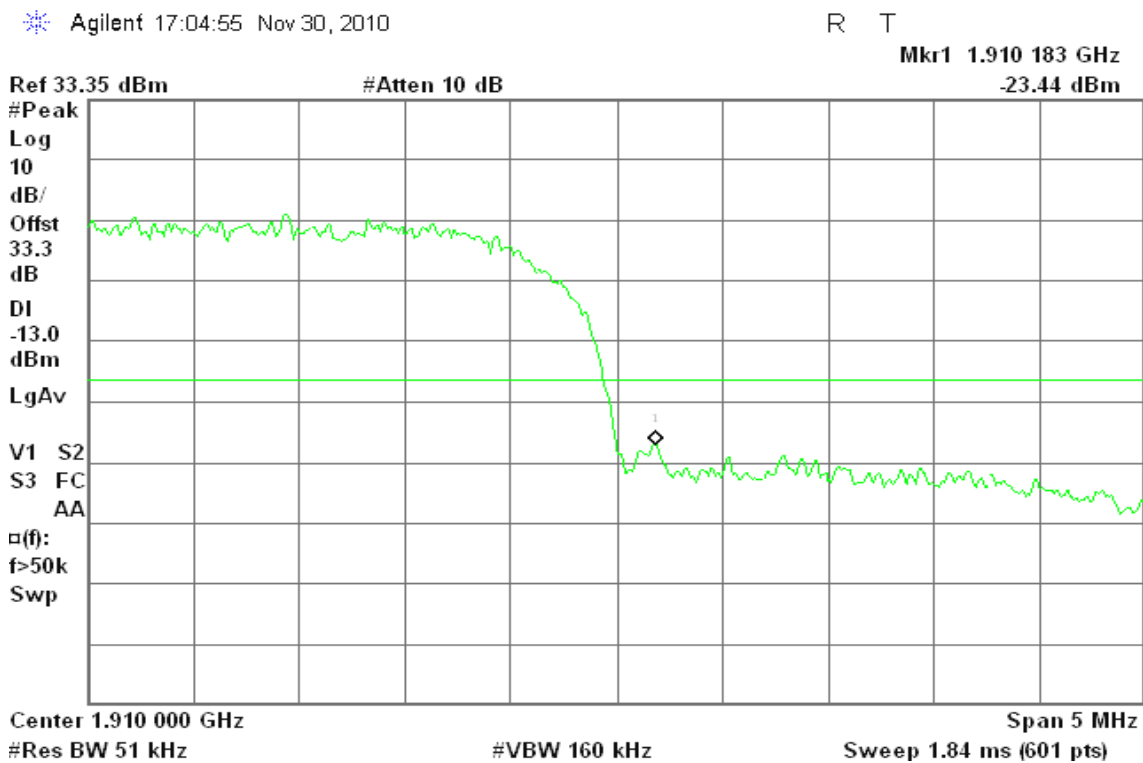


Figure 29-2: Band Edge emissions – HSUPA CH High





### WCDMA / HSUPA Band V

Figure 30-1: Band Edge emissions – HSUPA CH Low

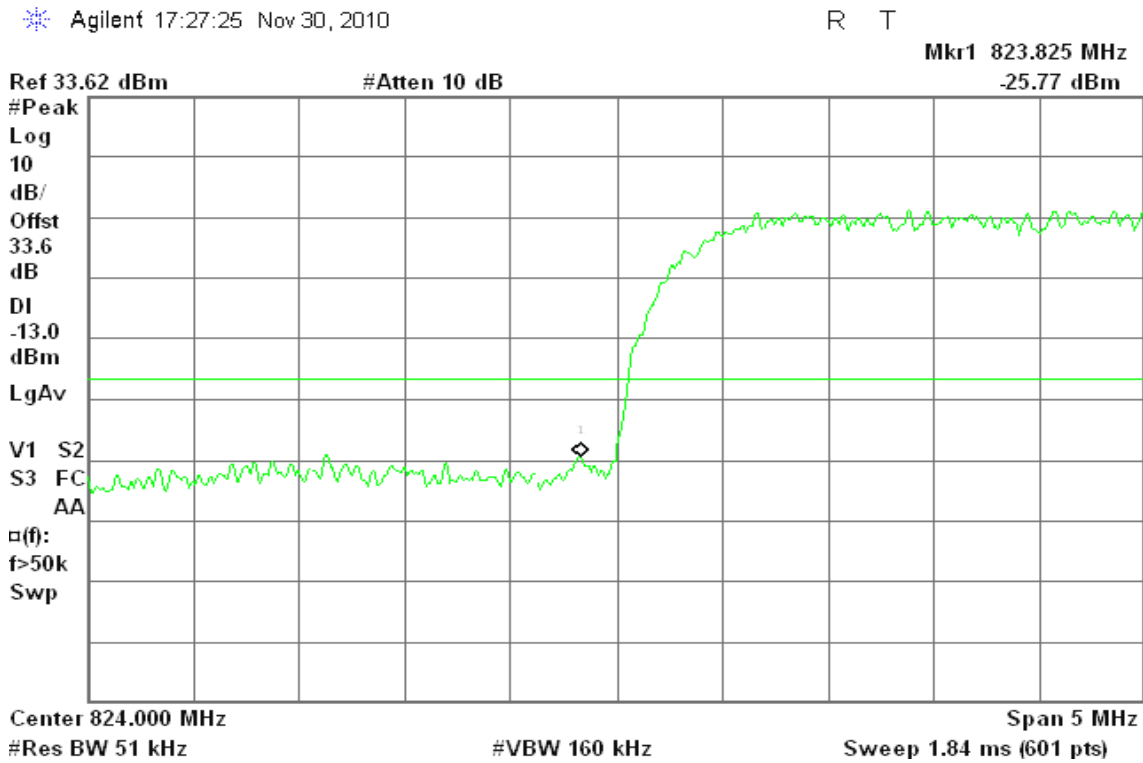
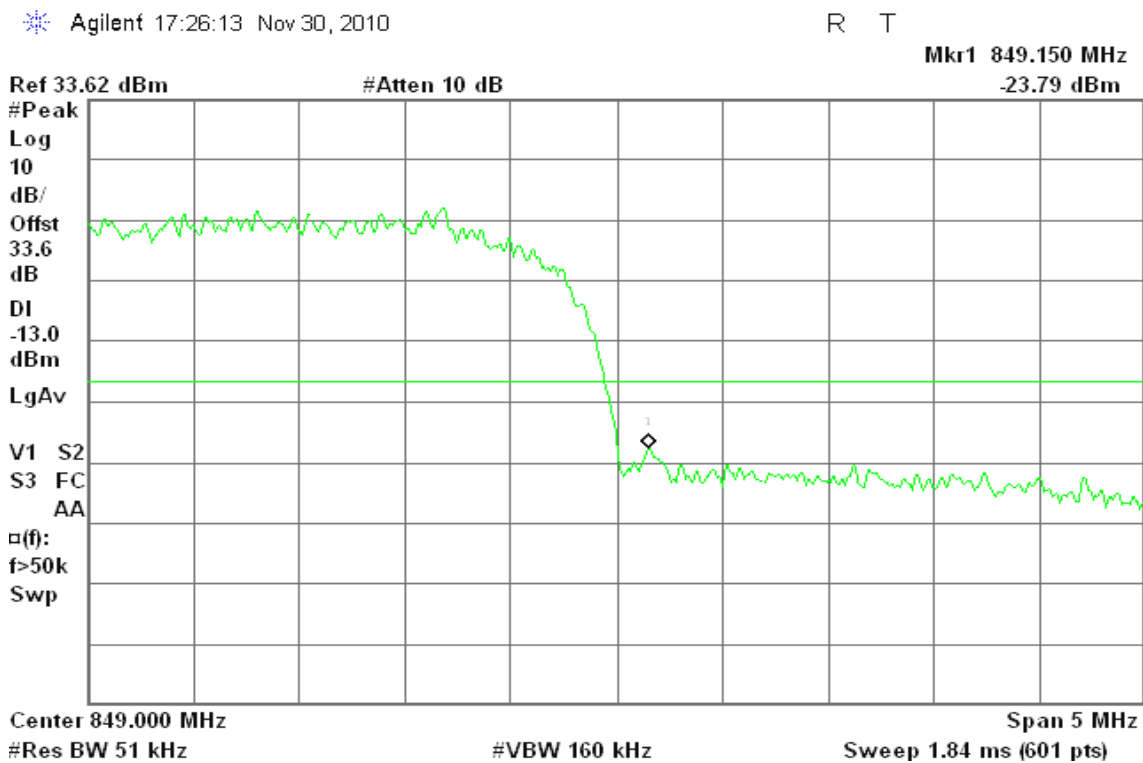


Figure 30-2: Band Edge emissions – HSUPA CH High





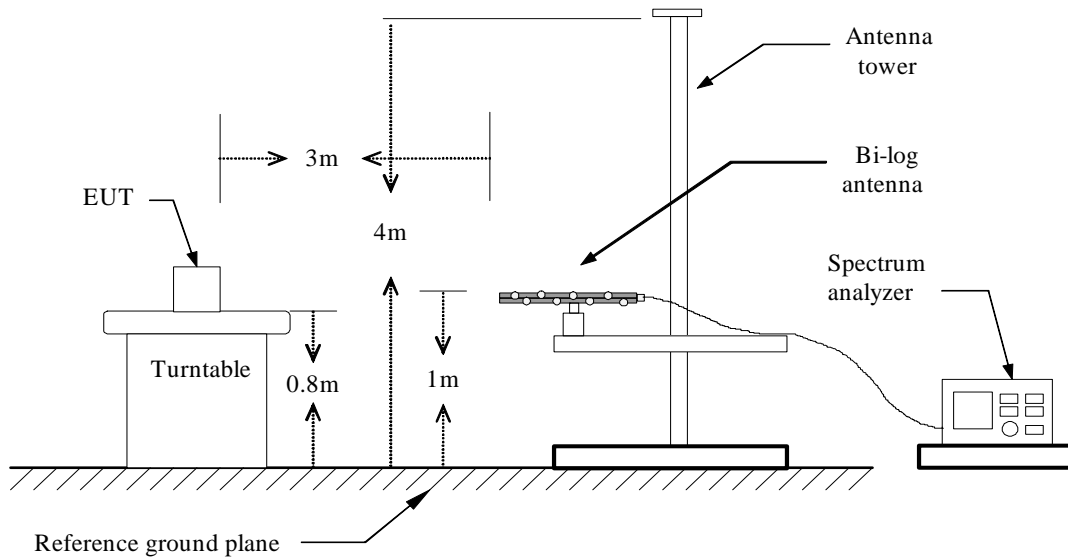
## 7.6 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

### LIMIT

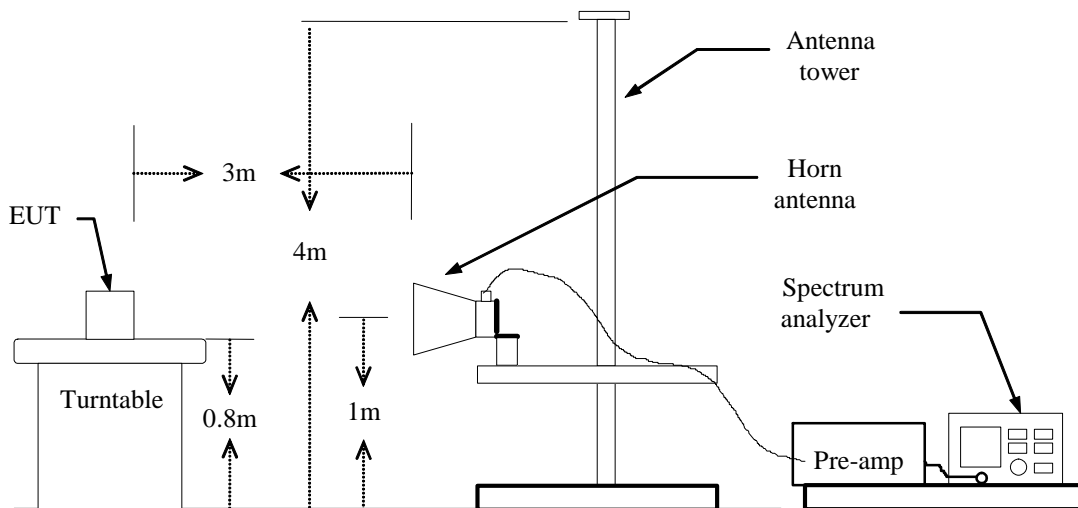
According to FCC §2.1053

### Test Configuration

#### Below 1 GHz

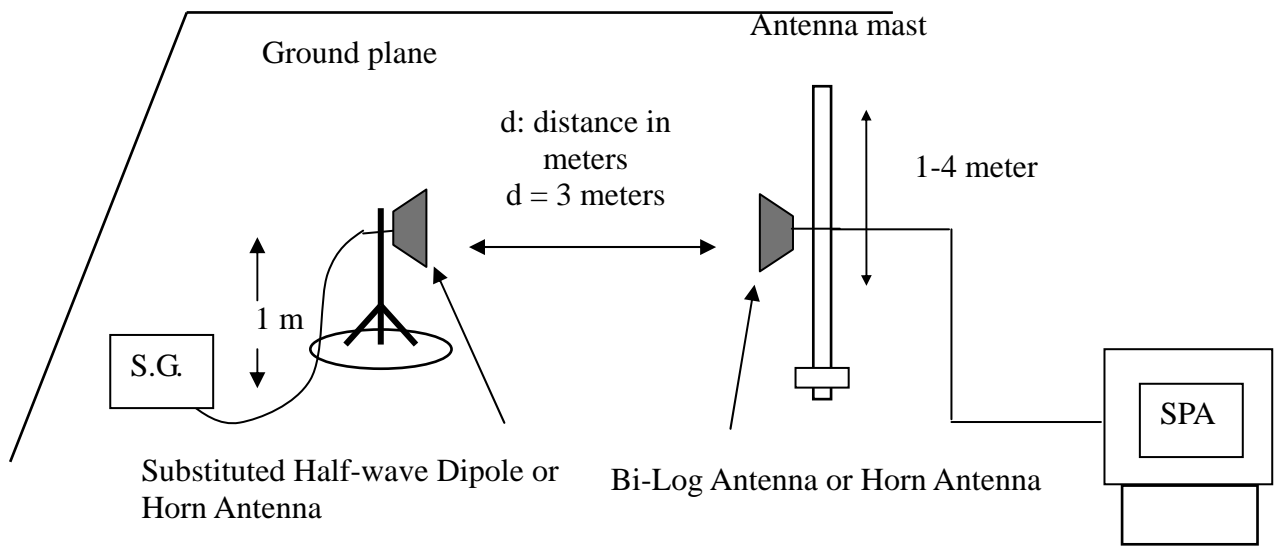


#### Above 1 GHz





## 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:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
39.70	-62.64	-12.78	-75.42	-13.00	-62.42	V
66.86	-64.91	-15.76	-80.67	-13.00	-67.67	V
120.21	-64.29	-13.73	-78.02	-13.00	-65.02	V
277.35	-67.79	-12.31	-80.11	-13.00	-67.11	V
327.79	-66.39	-13.60	-79.99	-13.00	-66.99	V
877.78	-69.35	-3.99	-73.34	-13.00	-60.34	V
43.58	-63.76	-11.71	-75.47	-13.00	-62.47	H
90.14	-62.45	-21.16	-83.61	-13.00	-70.61	H
116.33	-61.14	-14.83	-75.97	-13.00	-62.97	H
200.72	-65.48	-13.48	-78.96	-13.00	-65.96	H
452.92	-64.85	-9.87	-74.72	-13.00	-61.72	H
633.34	-68.26	-6.70	-74.96	-13.00	-61.96	H

**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:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-62.28	-12.79	-75.07	-13.00	-62.07	V
147.37	-65.60	-13.18	-78.78	-13.00	-65.78	V
194.90	-63.72	-14.79	-78.51	-13.00	-65.51	V
277.35	-66.71	-12.31	-79.03	-13.00	-66.03	V
424.79	-65.90	-10.69	-76.59	-13.00	-63.59	V
761.38	-67.65	-5.69	-73.34	-13.00	-60.34	V
43.58	-62.73	-11.71	-74.44	-13.00	-61.44	H
116.33	-61.42	-14.83	-76.25	-13.00	-63.25	H
165.80	-65.55	-14.03	-79.57	-13.00	-66.57	H
200.72	-65.32	-13.48	-78.81	-13.00	-65.81	H
234.67	-65.70	-14.09	-79.79	-13.00	-66.79	H
452.92	-64.25	-9.87	-74.12	-13.00	-61.12	H

**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:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
39.70	-60.96	-12.78	-73.74	-13.00	-60.74	V
68.80	-63.66	-15.67	-79.33	-13.00	-66.33	V
127.97	-65.01	-12.93	-77.94	-13.00	-64.94	V
270.56	-65.71	-12.78	-78.49	-13.00	-65.49	V
377.26	-64.79	-13.03	-77.82	-13.00	-64.82	V
452.92	-65.88	-9.95	-75.84	-13.00	-62.84	V
43.58	-61.89	-11.71	-73.60	-13.00	-60.60	H
120.21	-59.57	-14.02	-73.59	-13.00	-60.59	H
200.72	-63.40	-13.48	-76.88	-13.00	-63.88	H
327.79	-64.23	-14.06	-78.28	-13.00	-65.28	H
427.70	-64.67	-10.47	-75.13	-13.00	-62.13	H
452.92	-62.73	-9.87	-72.59	-13.00	-59.59	H

**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:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-64.98	-12.79	-77.77	-13.00	-64.77	V
71.71	-65.92	-16.32	-82.24	-13.00	-69.24	V
140.58	-68.06	-13.46	-81.52	-13.00	-68.52	V
197.81	-67.88	-14.44	-82.32	-13.00	-69.32	V
287.05	-69.71	-12.09	-81.79	-13.00	-68.79	V
452.92	-68.73	-9.95	-78.68	-13.00	-65.68	V
45.52	-64.92	-12.08	-77.00	-13.00	-64.00	H
116.33	-64.51	-14.83	-79.34	-13.00	-66.34	H
191.02	-67.42	-14.24	-81.66	-13.00	-68.66	H
283.17	-68.93	-13.09	-82.01	-13.00	-69.01	H
452.92	-66.48	-9.87	-76.35	-13.00	-63.35	H
555.74	-69.77	-7.89	-77.66	-13.00	-64.66	H

**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:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
40.67	-64.51	-12.66	-77.16	-13.00	-64.16	V
68.80	-66.33	-15.67	-82.00	-13.00	-69.00	V
136.70	-67.81	-13.23	-81.04	-13.00	-68.04	V
195.87	-68.59	-14.67	-83.26	-13.00	-70.26	V
283.17	-69.18	-12.11	-81.29	-13.00	-68.29	V
452.92	-69.02	-9.95	-78.97	-13.00	-65.97	V
43.58	-64.46	-11.71	-76.17	-13.00	-63.17	H
116.33	-63.67	-14.83	-78.50	-13.00	-65.50	H
200.72	-68.54	-13.48	-82.03	-13.00	-69.03	H
277.35	-66.93	-13.27	-80.20	-13.00	-67.20	H
452.92	-66.86	-9.87	-76.73	-13.00	-63.73	H
585.81	-69.76	-7.83	-77.59	-13.00	-64.59	H

**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:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
38.73	-65.00	-13.32	-78.32	-13.00	-65.32	V
58.13	-65.58	-16.20	-81.78	-13.00	-68.78	V
128.94	-68.22	-12.83	-81.04	-13.00	-68.04	V
199.75	-68.22	-14.21	-82.43	-13.00	-69.43	V
276.38	-68.65	-12.38	-81.03	-13.00	-68.03	V
339.43	-68.48	-13.62	-82.10	-13.00	-69.10	V
44.55	-64.86	-11.72	-76.58	-13.00	-63.58	H
115.36	-64.65	-15.05	-79.70	-13.00	-66.70	H
191.02	-66.36	-14.24	-80.60	-13.00	-67.60	H
246.31	-68.70	-14.30	-83.00	-13.00	-70.00	H
276.38	-69.51	-13.35	-82.86	-13.00	-69.86	H
452.92	-67.15	-9.87	-77.02	-13.00	-64.02	H

**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:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
41.64	-63.14	-12.72	-75.86	-13.00	-62.86	V
68.80	-65.35	-15.67	-81.03	-13.00	-68.03	V
128.94	-65.79	-12.83	-78.62	-13.00	-65.62	V
199.75	-66.28	-14.21	-80.49	-13.00	-67.49	V
469.41	-57.34	-9.40	-66.75	-13.00	-53.75	V
814.73	-65.59	-4.82	-70.41	-13.00	-57.41	V
43.58	-64.41	-11.71	-76.12	-13.00	-63.12	H
115.36	-62.17	-15.05	-77.22	-13.00	-64.22	H
200.72	-65.64	-13.48	-79.12	-13.00	-66.12	H
452.92	-65.32	-9.87	-75.19	-13.00	-62.19	H
469.41	-58.14	-9.30	-67.44	-13.00	-54.44	H
814.73	-65.68	-4.92	-70.60	-13.00	-57.60	H

**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:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-61.67	-12.79	-74.46	-13.00	-61.46	V
69.77	-65.22	-15.63	-80.85	-13.00	-67.85	V
117.30	-63.80	-14.36	-78.16	-13.00	-65.16	V
424.79	-66.48	-10.69	-77.17	-13.00	-64.17	V
518.88	-58.04	-8.45	-66.49	-13.00	-53.49	V
859.35	-59.65	-4.45	-64.10	-13.00	-51.10	V
42.61	-62.96	-11.70	-74.65	-13.00	-61.65	H
116.33	-62.30	-14.83	-77.13	-13.00	-64.13	H
200.72	-66.76	-13.48	-80.24	-13.00	-67.24	H
452.92	-65.29	-9.87	-75.16	-13.00	-62.16	H
518.88	-56.66	-8.56	-65.23	-13.00	-52.23	H
859.35	-59.00	-4.43	-63.43	-13.00	-50.43	H

**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:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
40.67	-63.09	-12.66	-75.75	-13.00	-62.75	V
68.80	-65.11	-15.67	-80.78	-13.00	-67.78	V
115.36	-64.45	-14.79	-79.25	-13.00	-66.25	V
165.80	-63.70	-14.46	-78.16	-13.00	-65.16	V
568.35	-67.35	-7.94	-75.29	-13.00	-62.29	V
903.97	-55.73	-3.83	-59.57	-13.00	-46.57	V
43.58	-64.14	-11.71	-75.86	-13.00	-62.86	H
116.33	-61.97	-14.83	-76.80	-13.00	-63.80	H
212.36	-65.12	-15.24	-80.37	-13.00	-67.37	H
452.92	-66.17	-9.87	-76.03	-13.00	-63.03	H
568.35	-66.72	-7.82	-74.54	-13.00	-61.54	H
903.97	-55.84	-3.75	-59.59	-13.00	-46.59	H

**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:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
40.67	-64.35	-12.66	-77.01	-13.00	-64.01	V
80.44	-59.37	-19.79	-79.16	-13.00	-66.16	V
128.94	-68.38	-12.83	-81.21	-13.00	-68.21	V
277.35	-68.11	-12.31	-80.42	-13.00	-67.42	V
469.41	-59.81	-9.40	-69.22	-13.00	-56.22	V
814.73	-66.68	-4.82	-71.50	-13.00	-58.50	V
40.67	-65.56	-11.67	-77.23	-13.00	-64.23	H
120.21	-64.71	-14.02	-78.74	-13.00	-65.74	H
402.48	-67.84	-11.56	-79.41	-13.00	-66.41	H
452.92	-66.80	-9.87	-76.67	-13.00	-63.67	H
469.41	-60.19	-9.30	-69.49	-13.00	-56.49	H
814.73	-66.47	-4.92	-71.39	-13.00	-58.39	H

**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:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
50.37	-60.48	-16.72	-77.20	-13.00	-64.20	V
130.88	-68.81	-12.79	-81.60	-13.00	-68.60	V
277.35	-68.33	-12.31	-80.64	-13.00	-67.64	V
452.92	-68.02	-9.95	-77.98	-13.00	-64.98	V
518.88	-58.23	-8.45	-66.67	-13.00	-53.67	V
859.35	-60.43	-4.45	-64.88	-13.00	-51.88	V
43.58	-65.89	-11.71	-77.60	-13.00	-64.60	H
117.30	-64.62	-14.62	-79.24	-13.00	-66.24	H
277.35	-68.66	-13.27	-81.93	-13.00	-68.93	H
452.92	-67.53	-9.87	-77.40	-13.00	-64.40	H
518.88	-61.47	-8.56	-70.04	-13.00	-57.04	H
859.35	-61.14	-4.43	-65.57	-13.00	-52.57	H

**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:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
40.67	-63.52	-12.66	-76.17	-13.00	-63.17	V
65.89	-65.65	-15.80	-81.46	-13.00	-68.46	V
116.33	-66.00	-14.58	-80.58	-13.00	-67.58	V
272.50	-63.05	-12.65	-75.70	-13.00	-62.70	V
452.92	-67.79	-9.95	-77.74	-13.00	-64.74	V
903.97	-56.24	-3.83	-60.08	-13.00	-47.08	V
43.58	-65.27	-11.71	-76.98	-13.00	-63.98	H
116.33	-64.18	-14.83	-79.01	-13.00	-66.01	H
191.02	-68.07	-14.24	-82.31	-13.00	-69.31	H
288.99	-69.49	-13.11	-82.61	-13.00	-69.61	H
452.92	-67.54	-9.87	-77.41	-13.00	-64.41	H
903.97	-60.00	-3.75	-63.75	-13.00	-50.75	H

**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 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
40.67	-63.92	-12.66	-76.58	-13.00	-63.58	V
55.22	-65.16	-16.40	-81.55	-13.00	-68.55	V
136.70	-68.26	-13.23	-81.49	-13.00	-68.49	V
231.76	-68.35	-14.80	-83.15	-13.00	-70.15	V
290.93	-69.23	-12.22	-81.45	-13.00	-68.45	V
735.19	-70.55	-5.96	-76.51	-13.00	-63.51	V
44.55	-64.43	-11.72	-76.15	-13.00	-63.15	H
69.77	-66.07	-17.82	-83.89	-13.00	-70.89	H
116.33	-64.51	-14.83	-79.34	-13.00	-66.34	H
191.99	-68.16	-14.14	-82.30	-13.00	-69.30	H
288.02	-69.65	-13.11	-82.76	-13.00	-69.76	H
452.92	-67.12	-9.87	-76.99	-13.00	-63.99	H

**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 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
40.67	-63.87	-12.66	-76.52	-13.00	-63.52	V
120.21	-66.30	-13.73	-80.03	-13.00	-67.03	V
148.34	-68.11	-13.14	-81.24	-13.00	-68.24	V
194.90	-67.45	-14.79	-82.24	-13.00	-69.24	V
279.29	-68.95	-12.18	-81.13	-13.00	-68.13	V
452.92	-69.42	-9.95	-79.37	-13.00	-66.37	V
42.61	-65.39	-11.70	-77.09	-13.00	-64.09	H
116.33	-63.37	-14.83	-78.20	-13.00	-65.20	H
191.02	-66.98	-14.24	-81.22	-13.00	-68.22	H
379.20	-68.35	-12.08	-80.43	-13.00	-67.43	H
452.92	-66.95	-9.87	-76.82	-13.00	-63.82	H
632.37	-70.17	-6.71	-76.89	-13.00	-63.89	H

**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 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
43.58	-64.81	-12.85	-77.66	-13.00	-64.66	V
70.74	-66.74	-15.92	-82.67	-13.00	-69.67	V
128.94	-67.28	-12.83	-80.11	-13.00	-67.11	V
195.87	-66.84	-14.67	-81.51	-13.00	-68.51	V
288.99	-69.47	-12.08	-81.55	-13.00	-68.55	V
452.92	-69.62	-9.95	-79.57	-13.00	-66.57	V
41.64	-65.43	-11.68	-77.11	-13.00	-64.11	H
116.33	-64.01	-14.83	-78.84	-13.00	-65.84	H
191.02	-67.22	-14.24	-81.46	-13.00	-68.46	H
283.17	-69.08	-13.09	-82.16	-13.00	-69.16	H
376.29	-68.07	-12.23	-80.30	-13.00	-67.30	H
452.92	-67.16	-9.87	-77.02	-13.00	-64.02	H

**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 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
41.64	-61.20	-12.72	-73.92	-13.00	-60.92	V
62.01	-60.28	-15.98	-76.26	-13.00	-63.26	V
80.44	-61.45	-19.79	-81.24	-13.00	-68.24	V
277.35	-67.29	-12.31	-79.60	-13.00	-66.60	V
469.41	-59.57	-9.40	-68.97	-13.00	-55.97	V
814.73	-65.62	-4.82	-70.44	-13.00	-57.44	V
45.52	-63.85	-12.08	-75.93	-13.00	-62.93	H
117.30	-62.95	-14.62	-77.57	-13.00	-64.57	H
195.87	-65.91	-13.76	-79.67	-13.00	-66.67	H
452.92	-66.01	-9.87	-75.87	-13.00	-62.87	H
469.41	-59.28	-9.30	-68.58	-13.00	-55.58	H
814.73	-66.00	-4.92	-70.92	-13.00	-57.92	H

**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 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
41.64	-63.67	-12.72	-76.39	-13.00	-63.39	V
68.80	-65.68	-15.67	-81.36	-13.00	-68.36	V
129.91	-66.11	-12.73	-78.84	-13.00	-65.84	V
277.35	-67.10	-12.31	-79.41	-13.00	-66.41	V
518.88	-57.10	-8.45	-65.54	-13.00	-52.54	V
859.35	-59.31	-4.45	-63.76	-13.00	-50.76	V
43.58	-63.82	-11.71	-75.53	-13.00	-62.53	H
116.33	-63.80	-14.83	-78.63	-13.00	-65.63	H
427.70	-67.49	-10.47	-77.96	-13.00	-64.96	H
452.92	-65.16	-9.87	-75.03	-13.00	-62.03	H
518.88	-59.60	-8.56	-68.16	-13.00	-55.16	H
859.35	-60.54	-4.43	-64.97	-13.00	-51.97	H

**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 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
40.67	-63.68	-12.66	-76.34	-13.00	-63.34	V
79.47	-62.34	-19.52	-81.86	-13.00	-68.86	V
119.24	-65.98	-13.92	-79.90	-13.00	-66.90	V
265.71	-65.31	-13.49	-78.80	-13.00	-65.80	V
568.35	-66.37	-7.94	-74.32	-13.00	-61.32	V
903.97	-55.94	-3.83	-59.77	-13.00	-46.77	V
43.58	-65.42	-11.71	-77.13	-13.00	-64.13	H
116.33	-61.69	-14.83	-76.52	-13.00	-63.52	H
200.72	-68.11	-13.48	-81.59	-13.00	-68.59	H
277.35	-68.18	-13.27	-81.46	-13.00	-68.46	H
452.92	-67.11	-9.87	-76.97	-13.00	-63.97	H
903.97	-58.33	-3.75	-62.07	-13.00	-49.07	H

**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 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-63.34	-12.92	-76.26	-13.00	-63.26	V
78.50	-58.18	-19.12	-77.31	-13.00	-64.31	V
159.98	-64.99	-14.28	-79.27	-13.00	-66.27	V
236.61	-62.63	-14.49	-77.12	-13.00	-64.12	V
276.38	-64.36	-12.38	-76.74	-13.00	-63.74	V
474.26	-66.73	-9.21	-75.94	-13.00	-62.94	V
40.67	-64.35	-11.67	-76.02	-13.00	-63.02	H
181.32	-61.16	-14.27	-75.43	-13.00	-62.43	H
236.61	-63.97	-13.92	-77.89	-13.00	-64.89	H
276.38	-63.06	-13.35	-76.41	-13.00	-63.41	H
427.70	-66.88	-10.47	-77.34	-13.00	-64.34	H
452.92	-65.67	-9.87	-75.54	-13.00	-62.54	H

**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 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
43.58	-64.37	-12.85	-77.23	-13.00	-64.23	V
80.44	-58.42	-19.79	-78.21	-13.00	-65.21	V
236.61	-62.73	-14.49	-77.22	-13.00	-64.22	V
276.38	-64.52	-12.38	-76.90	-13.00	-63.90	V
520.82	-65.32	-8.42	-73.74	-13.00	-60.74	V
858.38	-66.48	-4.46	-70.94	-13.00	-57.94	V
181.32	-60.93	-14.27	-75.20	-13.00	-62.20	H
236.61	-63.70	-13.92	-77.62	-13.00	-64.62	H
276.38	-63.89	-13.35	-77.23	-13.00	-64.23	H
452.92	-65.42	-9.87	-75.29	-13.00	-62.29	H
520.82	-65.11	-8.54	-73.65	-13.00	-60.65	H
857.41	-66.98	-4.46	-71.44	-13.00	-58.44	H

**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 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
43.58	-62.79	-12.85	-75.64	-13.00	-62.64	V
81.41	-59.49	-19.91	-79.40	-13.00	-66.40	V
162.89	-63.87	-14.37	-78.24	-13.00	-65.24	V
236.61	-62.87	-14.49	-77.36	-13.00	-64.36	V
276.38	-64.88	-12.38	-77.26	-13.00	-64.26	V
902.03	-62.82	-3.85	-66.67	-13.00	-53.67	V
43.58	-63.57	-11.71	-75.28	-13.00	-62.28	H
183.26	-60.49	-14.29	-74.77	-13.00	-61.77	H
236.61	-63.39	-13.92	-77.31	-13.00	-64.31	H
276.38	-63.62	-13.35	-76.97	-13.00	-63.97	H
452.92	-65.53	-9.87	-75.40	-13.00	-62.40	H
899.12	-63.70	-3.77	-67.47	-13.00	-54.47	H

**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 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
43.58	-60.62	-12.85	-73.48	-13.00	-60.48	V
115.36	-61.87	-14.79	-76.66	-13.00	-63.66	V
163.86	-61.31	-14.40	-75.71	-13.00	-62.71	V
236.61	-60.46	-14.49	-74.95	-13.00	-61.95	V
276.38	-60.56	-12.38	-72.94	-13.00	-59.94	V
452.92	-65.22	-9.95	-75.17	-13.00	-62.17	V
43.58	-61.29	-11.71	-73.00	-13.00	-60.00	H
78.50	-55.76	-20.83	-76.58	-13.00	-63.58	H
180.35	-56.45	-14.26	-70.72	-13.00	-57.72	H
236.61	-60.23	-13.92	-74.15	-13.00	-61.15	H
276.38	-59.72	-13.35	-73.07	-13.00	-60.07	H
452.92	-61.25	-9.87	-71.11	-13.00	-58.11	H

**Remark:**

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



**Operation Mode:** WCDMA Band V / TX / CH 4182

**Test Date:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-60.66	-12.92	-73.58	-13.00	-60.58	V
78.50	-58.83	-19.12	-77.95	-13.00	-64.95	V
162.89	-61.41	-14.37	-75.78	-13.00	-62.78	V
236.61	-60.73	-14.49	-75.22	-13.00	-62.22	V
276.38	-60.14	-12.38	-72.52	-13.00	-59.52	V
452.92	-65.60	-9.95	-75.55	-13.00	-62.55	V
45.52	-63.06	-12.08	-75.15	-13.00	-62.15	H
118.27	-62.49	-14.40	-76.90	-13.00	-63.90	H
183.26	-59.06	-14.29	-73.35	-13.00	-60.35	H
236.61	-62.23	-13.92	-76.15	-13.00	-63.15	H
276.38	-61.10	-13.35	-74.45	-13.00	-61.45	H
452.92	-63.62	-9.87	-73.48	-13.00	-60.48	H

**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 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-61.59	-12.92	-74.51	-13.00	-61.51	V
78.50	-59.90	-19.12	-79.02	-13.00	-66.02	V
129.91	-64.23	-12.73	-76.96	-13.00	-63.96	V
236.61	-62.37	-14.49	-76.86	-13.00	-63.86	V
276.38	-61.60	-12.38	-73.98	-13.00	-60.98	V
452.92	-66.46	-9.95	-76.41	-13.00	-63.41	V
39.70	-62.53	-11.85	-74.38	-13.00	-61.38	H
78.50	-58.60	-20.83	-79.42	-13.00	-66.42	H
117.30	-62.08	-14.62	-76.69	-13.00	-63.69	H
181.32	-59.20	-14.27	-73.47	-13.00	-60.47	H
276.38	-61.85	-13.35	-75.20	-13.00	-62.20	H
452.92	-64.15	-9.87	-74.02	-13.00	-61.02	H

**Remark:**

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



**Operation Mode:** WCDMA / HSDPA Band II /  
TX / CH 9262

**Test Date:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-63.38	-12.92	-76.30	-13.00	-63.30	V
79.47	-58.69	-19.52	-78.21	-13.00	-65.21	V
236.61	-64.51	-14.49	-79.00	-13.00	-66.00	V
276.38	-64.60	-12.38	-76.98	-13.00	-63.98	V
452.92	-67.98	-9.95	-77.93	-13.00	-64.93	V
475.23	-67.73	-9.17	-76.90	-13.00	-63.90	V
44.55	-64.08	-11.72	-75.80	-13.00	-62.80	H
116.33	-64.45	-14.83	-79.28	-13.00	-66.28	H
180.35	-60.77	-14.26	-75.04	-13.00	-62.04	H
236.61	-63.68	-13.92	-77.60	-13.00	-64.60	H
276.38	-64.26	-13.35	-77.61	-13.00	-64.61	H
452.92	-64.59	-9.87	-74.46	-13.00	-61.46	H

**Remark:**

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



**Operation Mode:** WCDMA / HSDPA Band II /  
TX / CH 9400

**Test Date:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-62.66	-12.92	-75.58	-13.00	-62.58	V
80.44	-55.55	-19.79	-75.34	-13.00	-62.34	V
162.89	-63.65	-14.37	-78.02	-13.00	-65.02	V
276.38	-64.71	-12.38	-77.09	-13.00	-64.09	V
517.91	-63.92	-8.46	-72.38	-13.00	-59.38	V
861.29	-67.38	-4.41	-71.79	-13.00	-58.79	V
43.58	-64.47	-11.71	-76.18	-13.00	-63.18	H
186.17	-61.21	-14.31	-75.52	-13.00	-62.52	H
236.61	-61.94	-13.92	-75.86	-13.00	-62.86	H
276.38	-62.59	-13.35	-75.93	-13.00	-62.93	H
516.94	-65.96	-8.59	-74.55	-13.00	-61.55	H
861.29	-67.99	-4.38	-72.37	-13.00	-59.37	H

**Remark:**

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



**Operation Mode:** WCDMA / HSDPA Band II /  
TX / CH 9538

**Test Date:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-62.87	-12.92	-75.79	-13.00	-62.79	V
81.41	-59.43	-19.91	-79.34	-13.00	-66.34	V
159.98	-65.02	-14.28	-79.30	-13.00	-66.30	V
236.61	-63.03	-14.49	-77.53	-13.00	-64.53	V
276.38	-64.29	-12.38	-76.67	-13.00	-63.67	V
902.03	-63.14	-3.85	-66.99	-13.00	-53.99	V
42.61	-62.63	-11.70	-74.33	-13.00	-61.33	H
116.33	-63.99	-14.83	-78.82	-13.00	-65.82	H
177.44	-60.70	-14.12	-74.82	-13.00	-61.82	H
236.61	-62.38	-13.92	-76.30	-13.00	-63.30	H
452.92	-66.17	-9.87	-76.03	-13.00	-63.03	H
899.12	-64.53	-3.77	-68.30	-13.00	-55.30	H

**Remark:**

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





**Operation Mode:** WCDMA / HSDPA Band V /  
TX / CH 4132

**Test Date:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-54.22	-12.92	-67.14	-13.00	-54.14	V
79.47	-49.61	-19.52	-69.13	-13.00	-56.13	V
118.27	-61.99	-14.14	-76.13	-13.00	-63.13	V
162.89	-57.50	-14.37	-71.87	-13.00	-58.87	V
196.84	-58.43	-14.56	-72.99	-13.00	-59.99	V
277.35	-58.73	-12.31	-71.05	-13.00	-58.05	V
34.85	-46.27	-14.98	-61.26	-13.00	-48.26	H
77.53	-49.21	-20.49	-69.70	-13.00	-56.70	H
162.89	-58.58	-14.23	-72.82	-13.00	-59.82	H
181.32	-53.96	-14.27	-68.23	-13.00	-55.23	H
294.81	-58.99	-13.67	-72.66	-13.00	-59.66	H
452.92	-65.50	-9.87	-75.37	-13.00	-62.37	H

**Remark:**

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



**Operation Mode:** WCDMA / HSDPA Band V /  
TX / CH 4182

**Test Date:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-53.27	-12.92	-66.19	-13.00	-53.19	V
57.16	-51.45	-16.26	-67.71	-13.00	-54.71	V
78.50	-49.01	-19.12	-68.13	-13.00	-55.13	V
127.97	-61.53	-12.93	-74.46	-13.00	-61.46	V
162.89	-56.74	-14.37	-71.11	-13.00	-58.11	V
275.41	-57.69	-12.45	-70.14	-13.00	-57.14	V
77.53	-48.56	-20.49	-69.04	-13.00	-56.04	H
161.92	-56.14	-14.30	-70.44	-13.00	-57.44	H
182.29	-52.21	-14.28	-66.49	-13.00	-53.49	H
240.49	-58.71	-13.67	-72.38	-13.00	-59.38	H
275.41	-58.82	-13.42	-72.24	-13.00	-59.24	H
452.92	-63.71	-9.87	-73.58	-13.00	-60.58	H

**Remark:**

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



**Operation Mode:** WCDMA / HSDPA Band V /  
TX / CH 4233

**Test Date:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
43.58	-55.73	-12.85	-68.59	-13.00	-55.59	V
81.41	-51.50	-19.91	-71.40	-13.00	-58.40	V
129.91	-62.20	-12.73	-74.93	-13.00	-61.93	V
180.35	-60.28	-15.28	-75.56	-13.00	-62.56	V
285.11	-59.36	-12.10	-71.46	-13.00	-58.46	V
733.25	-68.20	-5.98	-74.18	-13.00	-61.18	V
35.82	-46.44	-14.34	-60.77	-13.00	-47.77	H
82.38	-48.85	-21.32	-70.16	-13.00	-57.16	H
160.95	-58.09	-14.37	-72.46	-13.00	-59.46	H
182.29	-53.37	-14.28	-67.65	-13.00	-54.65	H
295.78	-58.45	-13.78	-72.22	-13.00	-59.22	H
452.92	-65.90	-9.87	-75.77	-13.00	-62.77	H

**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

**Test Date:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-63.09	-12.92	-76.01	-13.00	-63.01	V
80.44	-58.55	-19.79	-78.34	-13.00	-65.34	V
163.86	-65.70	-14.40	-80.10	-13.00	-67.10	V
196.84	-65.00	-14.56	-79.56	-13.00	-66.56	V
236.61	-64.41	-14.49	-78.90	-13.00	-65.90	V
276.38	-65.46	-12.38	-77.84	-13.00	-64.84	V
43.58	-64.57	-11.71	-76.28	-13.00	-63.28	H
117.30	-63.06	-14.62	-77.68	-13.00	-64.68	H
180.35	-61.97	-14.26	-76.24	-13.00	-63.24	H
236.61	-63.81	-13.92	-77.73	-13.00	-64.73	H
276.38	-63.74	-13.35	-77.09	-13.00	-64.09	H
452.92	-66.92	-9.87	-76.79	-13.00	-63.79	H

**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

**Test Date:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
41.64	-55.28	-12.72	-68.00	-13.00	-55.00	V
76.56	-51.04	-18.32	-69.36	-13.00	-56.36	V
163.86	-60.12	-14.40	-74.51	-13.00	-61.51	V
278.32	-59.54	-12.25	-71.79	-13.00	-58.79	V
520.82	-65.24	-8.42	-73.67	-13.00	-60.67	V
858.38	-67.31	-4.46	-71.77	-13.00	-58.77	V
79.47	-49.51	-21.16	-70.68	-13.00	-57.68	H
182.29	-52.06	-14.28	-66.34	-13.00	-53.34	H
290.93	-59.77	-13.23	-73.00	-13.00	-60.00	H
452.92	-66.32	-9.87	-76.19	-13.00	-63.19	H
516.94	-66.68	-8.59	-75.27	-13.00	-62.27	H
857.41	-66.73	-4.46	-71.19	-13.00	-58.19	H

**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

**Test Date:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
41.64	-63.50	-12.72	-76.22	-13.00	-63.22	V
78.50	-59.24	-19.12	-78.36	-13.00	-65.36	V
162.89	-65.06	-14.37	-79.43	-13.00	-66.43	V
236.61	-63.55	-14.49	-78.04	-13.00	-65.04	V
276.38	-63.81	-12.38	-76.19	-13.00	-63.19	V
902.03	-64.31	-3.85	-68.16	-13.00	-55.16	V
43.58	-63.06	-11.71	-74.77	-13.00	-61.77	H
76.56	-51.79	-20.15	-71.94	-13.00	-58.94	H
181.32	-57.28	-14.27	-71.55	-13.00	-58.55	H
279.29	-63.60	-13.12	-76.73	-13.00	-63.73	H
452.92	-66.05	-9.87	-75.91	-13.00	-62.91	H
902.03	-64.84	-3.76	-68.60	-13.00	-55.60	H

**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

**Test Date:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-62.63	-12.79	-75.42	-13.00	-62.42	V
162.89	-64.05	-14.37	-78.42	-13.00	-65.42	V
196.84	-63.37	-14.56	-77.92	-13.00	-64.92	V
236.61	-63.42	-14.49	-77.92	-13.00	-64.92	V
256.01	-64.03	-14.54	-78.57	-13.00	-65.57	V
276.38	-63.66	-12.38	-76.04	-13.00	-63.04	V
35.82	-46.45	-14.34	-60.79	-13.00	-47.79	H
118.27	-64.36	-14.40	-78.76	-13.00	-65.76	H
181.32	-61.74	-14.27	-76.01	-13.00	-63.01	H
276.38	-64.14	-13.35	-77.49	-13.00	-64.49	H
295.78	-64.54	-13.78	-78.32	-13.00	-65.32	H
452.92	-65.51	-9.87	-75.37	-13.00	-62.37	H

**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 4182

**Test Date:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
45.52	-51.02	-13.35	-64.37	-13.00	-51.37	V
76.56	-48.24	-18.32	-66.56	-13.00	-53.56	V
125.06	-59.34	-13.23	-72.57	-13.00	-59.57	V
161.92	-54.42	-14.34	-68.76	-13.00	-55.76	V
275.41	-55.69	-12.45	-68.13	-13.00	-55.13	V
426.73	-64.64	-10.63	-75.28	-13.00	-62.28	V
76.56	-47.60	-20.15	-67.75	-13.00	-54.75	H
117.30	-56.99	-14.62	-71.61	-13.00	-58.61	H
160.95	-54.65	-14.37	-69.02	-13.00	-56.02	H
180.35	-51.53	-14.26	-65.79	-13.00	-52.79	H
275.41	-57.77	-13.42	-71.19	-13.00	-58.19	H
452.92	-62.17	-9.87	-72.04	-13.00	-59.04	H

**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

**Test Date:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-62.38	-12.92	-75.30	-13.00	-62.30	V
82.38	-59.87	-20.02	-79.90	-13.00	-66.90	V
129.91	-65.55	-12.73	-78.28	-13.00	-65.28	V
162.89	-63.95	-14.37	-78.32	-13.00	-65.32	V
256.01	-63.08	-14.54	-77.61	-13.00	-64.61	V
276.38	-63.09	-12.38	-75.47	-13.00	-62.47	V
41.64	-63.78	-11.68	-75.46	-13.00	-62.46	H
116.33	-62.24	-14.83	-77.07	-13.00	-64.07	H
180.35	-60.41	-14.26	-74.67	-13.00	-61.67	H
236.61	-62.48	-13.92	-76.40	-13.00	-63.40	H
276.38	-63.16	-13.35	-76.51	-13.00	-63.51	H
452.92	-65.79	-9.87	-75.66	-13.00	-62.66	H

**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:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1651.00	-49.91	1.61	-48.29	-13.00	-35.29	V
2470.00	-47.11	4.41	-42.70	-13.00	-29.70	V
N/A						
1651.00	-52.77	1.42	-51.36	-13.00	-38.36	H
2470.00	-35.26	4.43	-30.83	-13.00	-17.83	H
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: December 1, 2010

Temperature: 25°C

Tested by: David Lee

Humidity: 46 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1672.00	-52.97	1.63	-51.34	-13.00	-38.34	V
2512.00	-50.90	4.62	-46.28	-13.00	-33.28	V
N/A						
1672.00	-56.62	1.40	-55.22	-13.00	-42.22	H
2512.00	-39.89	4.69	-35.20	-13.00	-22.20	H
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:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1700.00	-55.87	1.64	-54.22	-13.00	-41.22	V
2547.00	-56.24	4.76	-51.48	-13.00	-38.48	V
N/A						
1700.00	-59.16	1.38	-57.77	-13.00	-44.77	H
2547.00	-45.20	4.82	-40.38	-13.00	-27.38	H
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:** December 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1651.00	-55.04	1.61	-53.42	-13.00	-40.42	V
2470.00	-52.16	4.41	-47.76	-13.00	-34.76	V
N/A						
1651.00	-58.71	1.42	-57.29	-13.00	-44.29	H
2470.00	-43.41	4.43	-38.97	-13.00	-25.97	H
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: December 2, 2010

Temperature: 25°C

Tested by: David Lee

Humidity: 46 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1672.00	-55.47	1.63	-53.85	-13.00	-40.85	V
2512.00	-50.24	4.62	-45.62	-13.00	-32.62	V
N/A						
2512.00	-43.02	4.69	-38.34	-13.00	-25.34	H
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:** December 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2547.00	-55.52	4.76	-50.76	-13.00	-37.76	V
6600.00	-62.09	13.50	-48.58	-13.00	-35.58	V
N/A						
2547.00	-48.06	4.82	-43.23	-13.00	-30.23	H
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:** December 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5550.00	-52.01	10.32	-41.69	-13.00	-28.69	V
N/A						
5550.00	-57.47	10.12	-47.34	-13.00	-34.34	H
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:** December 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5641.00	-55.31	10.40	-44.91	-13.00	-31.91	V
N/A						
3758.00	-61.37	8.76	-52.61	-13.00	-39.61	H
5641.00	-59.65	10.23	-49.43	-13.00	-36.43	H
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: December 2, 2010

Temperature: 25°C

Tested by: David Lee

Humidity: 46 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3821.00	-60.62	8.83	-51.79	-13.00	-38.79	V
5732.00	-56.63	10.48	-46.15	-13.00	-33.15	V
N/A						
3821.00	-60.89	8.62	-52.27	-13.00	-39.27	H
5732.00	-57.63	10.33	-47.31	-13.00	-34.31	H
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:** December 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5550.00	-53.84	10.32	-43.52	-13.00	-30.52	V
N/A						
5550.00	-57.66	10.12	-47.53	-13.00	-34.53	H
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:** December 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5641.00	-56.89	10.40	-46.48	-13.00	-33.48	V
N/A						
5641.00	-58.16	10.23	-47.93	-13.00	-34.93	H
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: December 2, 2010

Temperature: 25°C

Tested by: David Lee

Humidity: 46 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5732.00	-58.34	10.48	-47.86	-13.00	-34.86	V
N/A						
5732.00	-59.77	10.33	-49.44	-13.00	-36.44	H
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 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1651.00	-56.57	1.61	-54.96	-13.00	-41.96	V
2470.00	-53.30	4.41	-48.89	-13.00	-35.89	V
N/A						
1651.00	-59.10	1.42	-57.68	-13.00	-44.68	H
2470.00	-44.63	4.43	-40.20	-13.00	-27.20	H
3471.00	-61.73	9.19	-52.54	-13.00	-39.54	H
4941.00	-62.32	10.00	-52.32	-13.00	-39.32	H
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 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1672.00	-57.30	1.63	-55.68	-13.00	-42.68	V
2512.00	-51.84	4.62	-47.22	-13.00	-34.22	V
N/A						
2512.00	-44.61	4.69	-39.93	-13.00	-26.93	H
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 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1700.00	-59.03	1.64	-57.38	-13.00	-44.38	V
2547.00	-55.77	4.76	-51.02	-13.00	-38.02	V
N/A						
2547.00	-47.99	4.82	-43.16	-13.00	-30.16	H
3282.00	-61.79	8.15	-53.65	-13.00	-40.65	H
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 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5550.00	-54.64	10.32	-44.32	-13.00	-31.32	V
N/A						
5550.00	-58.26	10.12	-48.13	-13.00	-35.13	H
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 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5641.00	-59.26	10.40	-48.85	-13.00	-35.85	V
N/A						
5641.00	-60.61	10.23	-50.38	-13.00	-37.38	H
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 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5732.00	-60.12	10.48	-49.64	-13.00	-36.64	V
N/A						
3324.00	-61.92	8.38	-53.54	-13.00	-40.54	H
7804.00	-63.52	17.69	-45.83	-13.00	-32.83	H
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 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3702.00	-54.82	9.11	-45.71	-13.00	-32.71	V
5564.00	-61.27	10.34	-50.93	-13.00	-37.93	V
N/A						
3702.00	-56.85	8.89	-47.96	-13.00	-34.96	H
5557.00	-61.82	10.13	-51.69	-13.00	-38.69	H
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 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3765.00	-54.06	8.96	-45.10	-13.00	-32.10	V
5641.00	-60.73	10.40	-50.33	-13.00	-37.33	V
N/A						
3765.00	-54.47	8.75	-45.73	-13.00	-32.73	H
5641.00	-61.70	10.23	-51.48	-13.00	-38.48	H
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 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3814.00	-54.26	8.85	-45.41	-13.00	-32.41	V
5718.00	-53.59	10.47	-43.12	-13.00	-30.12	V
N/A						
3814.00	-57.33	8.63	-48.70	-13.00	-35.70	H
4829.00	-60.35	9.74	-50.62	-13.00	-37.62	H
5718.00	-58.32	10.31	-48.01	-13.00	-35.01	H
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 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1651.00	-58.65	1.61	-57.04	-13.00	-44.04	V
3464.00	-61.56	9.35	-52.21	-13.00	-39.21	V
6530.00	-61.55	13.24	-48.32	-13.00	-35.32	V
N/A						
1973.00	-60.53	1.18	-59.35	-13.00	-46.35	H
2722.00	-61.66	5.51	-56.16	-13.00	-43.16	H
4346.00	-61.64	8.74	-52.91	-13.00	-39.91	H
4682.00	-61.98	9.40	-52.58	-13.00	-39.58	H
N/A						

**Remark:**

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



**Operation Mode:** WCDMA Band V / TX / CH 4182

**Test Date:** December 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3569.00	-62.27	9.41	-52.86	-13.00	-39.86	V
4941.00	-62.90	10.29	-52.62	-13.00	-39.62	V
7342.00	-62.40	16.37	-46.03	-13.00	-33.03	V
N/A						
3121.00	-61.27	7.26	-54.01	-13.00	-41.01	H
3961.00	-61.93	8.30	-53.63	-13.00	-40.63	H
4934.00	-62.30	9.99	-52.31	-13.00	-39.31	H
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 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1735.00	-61.20	1.67	-59.53	-13.00	-46.53	V
4815.00	-63.01	9.99	-53.02	-13.00	-40.02	V
N/A						
2169.00	-60.76	2.34	-58.42	-13.00	-45.42	H
3394.00	-61.95	8.76	-53.18	-13.00	-40.18	H
4836.00	-62.57	9.76	-52.81	-13.00	-39.81	H
7559.00	-62.66	17.02	-45.63	-13.00	-32.63	H
N/A						

**Remark:**

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



Operation Mode: WCDMA / HSDPA Band II / TX / CH 9262

Test Date: December 2, 2010

Temperature: 25°C

Tested by: David Lee

Humidity: 46 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3758.00	-58.53	8.98	-49.55	-13.00	-36.55	V
5641.00	-61.65	10.40	-51.24	-13.00	-38.24	V
N/A						
3758.00	-53.94	8.76	-45.17	-13.00	-32.17	H
6670.00	-61.79	13.69	-48.10	-13.00	-35.10	H
N/A						

**Remark:**

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



**Operation Mode:** WCDMA / HSDPA Band II /  
TX / CH 9400

**Test Date:** December 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3814.00	-57.77	8.85	-48.92	-13.00	-35.92	V
5725.00	-56.90	10.48	-46.42	-13.00	-33.42	V
6257.00	-61.63	11.95	-49.68	-13.00	-36.68	V
7251.00	-61.36	16.02	-45.34	-13.00	-32.34	V
N/A						
3814.00	-58.21	8.63	-49.58	-13.00	-36.58	H
5718.00	-56.89	10.31	-46.58	-13.00	-33.58	H
N/A						

**Remark:**

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



**Operation Mode:** WCDMA / HSDPA Band II /  
TX / CH 9538

**Test Date:** December 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3702.00	-59.58	9.11	-50.48	-13.00	-37.48	V
5564.00	-59.99	10.34	-49.65	-13.00	-36.65	V
N/A						
3702.00	-56.32	8.89	-47.43	-13.00	-34.43	H
N/A						

**Remark:**

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



**Operation Mode:** WCDMA / HSDPA Band V /  
TX / CH 4132

**Test Date:** December 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2211.00	-61.53	2.99	-58.55	-13.00	-45.55	V
4269.00	-62.74	8.86	-53.88	-13.00	-40.88	V
7363.00	-62.58	16.46	-46.12	-13.00	-33.12	V
N/A						
2477.00	-60.93	4.48	-56.45	-13.00	-43.45	H
4689.00	-62.34	9.41	-52.93	-13.00	-39.93	H
7384.00	-63.24	16.46	-46.79	-13.00	-33.79	H
N/A						

**Remark:**

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



**Operation Mode:** WCDMA / HSDPA Band V /  
TX / CH 4182

**Test Date:** December 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2715.00	-61.75	5.43	-56.32	-13.00	-43.32	V
6859.00	-63.05	14.50	-48.55	-13.00	-35.55	V
7356.00	-62.75	16.43	-46.32	-13.00	-33.32	V
N/A						
3534.00	-62.41	9.27	-53.14	-13.00	-40.14	H
6159.00	-62.75	11.36	-51.39	-13.00	-38.39	H
N/A						

**Remark:**

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



**Operation Mode:** WCDMA / HSDPA Band V /  
TX / CH 4233

**Test Date:** December 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3268.00	-62.32	8.18	-54.14	-13.00	-41.14	V
3870.00	-62.72	8.72	-54.00	-13.00	-41.00	V
6684.00	-62.63	13.83	-48.80	-13.00	-35.80	V
N/A						
1700.00	-61.32	1.38	-59.94	-13.00	-46.94	H
3877.00	-62.85	8.49	-54.36	-13.00	-41.36	H
7356.00	-62.64	16.36	-46.28	-13.00	-33.28	H
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

Test Date: December 2, 2010

Temperature: 25°C

Tested by: David Lee

Humidity: 46 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3702.00	-59.56	9.11	-50.46	-13.00	-37.46	V
5564.00	-60.94	10.34	-50.60	-13.00	-37.60	V
N/A						
3702.00	-55.54	8.89	-46.65	-13.00	-33.65	H
4745.00	-62.17	9.54	-52.63	-13.00	-39.63	H
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

**Test Date:** December 1, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3758.00	-58.47	8.98	-49.50	-13.00	-36.50	V
5641.00	-62.24	10.40	-51.83	-13.00	-38.83	V
6761.00	-61.61	14.12	-47.49	-13.00	-34.49	V
N/A						
3765.00	-53.74	8.75	-45.00	-13.00	-32.00	H
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

Test Date: December 2, 2010

Temperature: 25°C

Tested by: David Lee

Humidity: 46 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3814.00	-58.05	8.85	-49.20	-13.00	-36.20	V
5718.00	-56.87	10.47	-46.40	-13.00	-33.40	V
N/A						
3814.00	-55.49	8.63	-46.86	-13.00	-33.86	H
5718.00	-56.47	10.31	-46.16	-13.00	-33.16	H
7370.00	-60.93	16.41	-44.52	-13.00	-31.52	H
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

**Test Date:** December 2, 2010

**Temperature:** 25°C

**Tested by:** David Lee

**Humidity:** 46 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3450.00	-62.11	9.27	-52.84	-13.00	-39.84	V
5074.00	-62.58	10.41	-52.17	-13.00	-39.17	V
7678.00	-62.88	17.48	-45.40	-13.00	-32.40	V
N/A						
2477.00	-59.63	4.48	-55.15	-13.00	-42.15	H
3268.00	-61.09	8.07	-53.02	-13.00	-40.02	H
7034.00	-61.97	15.24	-46.73	-13.00	-33.73	H
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 4182

Test Date: December 2, 2010

Temperature: 25°C

Tested by: David Lee

Humidity: 46 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2834.00	-61.42	5.91	-55.51	-13.00	-42.51	V
3611.00	-61.95	9.31	-52.64	-13.00	-39.64	V
6866.00	-62.53	14.53	-48.00	-13.00	-35.00	V
N/A						
3527.00	-62.49	9.29	-53.20	-13.00	-40.20	H
6208.00	-63.36	11.59	-51.77	-13.00	-38.77	H
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

Test Date: December 2, 2010

Temperature: 25°C

Tested by: David Lee

Humidity: 46 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
4115.00	-63.33	8.61	-54.73	-13.00	-41.73	V
6152.00	-63.71	11.45	-52.26	-13.00	-39.26	V
7685.00	-63.21	17.50	-45.71	-13.00	-32.71	V
N/A						
4794.00	-63.03	9.66	-53.37	-13.00	-40.37	H
6817.00	-62.51	14.33	-48.18	-13.00	-35.18	H
7678.00	-62.72	17.34	-45.38	-13.00	-32.38	H
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.



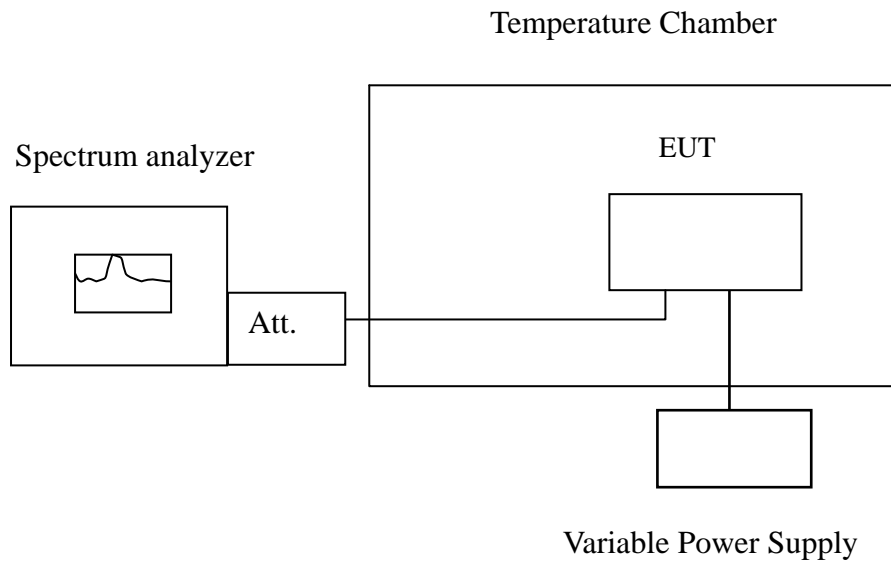
## 7.7 FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

### LIMIT

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

Frequency Tolerance: 2.5 ppm

### Test Configuration



*Remark: Measurement setup for testing on Antenna connector*



### TEST PROCEDURE

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

### TEST RESULTS

*No non-compliance noted.*

<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)
4.2	50	836600021	39	2090
	40	836600014	32	
	30	836600025	43	
	20	836599982	0	
	10	836600015	33	
	0	836600018	36	
	-10	836600022	40	
	-20	836600026	44	
	-30	836600023	41	

<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)
4.2	50	1880000030	44	4700
	40	1880000028	42	
	30	1880000016	30	
	20	1879999986	0	
	10	1880000025	39	
	0	1880000031	45	
	-10	1880000024	38	
	-20	1880000026	40	
	-30	1880000021	35	



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)
4.2	50	836600019	37	2090
	40	836600024	42	
	30	836600015	33	
	20	836599982	0	
	10	836600011	29	
	0	836600025	43	
	-10	836600022	40	
	-20	836600021	39	
	-30	836600016	34	

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.2	50	1880000021	40	4700
	40	1880000027	46	
	30	1880000033	52	
	20	1879999981	0	
	10	1880000026	45	
	0	1880000025	44	
	-10	1880000026	45	
	-20	1880000021	40	
	-30	1880000020	39	





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)
4.2	50	836600027	50	2090
	40	836600018	41	
	30	836600020	43	
	20	836599977	0	
	10	836600017	40	
	0	836600028	51	
	-10	836600023	46	
	-20	836600028	51	
	-30	836600024	47	

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.2	50	1880000031	50	4700
	40	1880000023	42	
	30	1880000022	41	
	20	1879999981	0	
	10	1880000021	40	
	0	1880000020	39	
	-10	1880000019	38	
	-20	1880000023	42	
	-30	1880000025	44	



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)
4.2	50	1879999997	-4	4700
	40	1879999996	-5	
	30	1880000000	-1	
	20	1880000001	0	
	10	1880000002	1	
	0	1880000000	-1	
	-10	1879999996	-5	
	-20	1879999999	-2	
	-30	1879999995	-6	

Reference Frequency: WCDMA Band V Mid Channel 836.4 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.2	50	836399997	-4	2090
	40	836400000	-1	
	30	836399999	-2	
	20	836400001	0	
	10	836399997	-4	
	0	836399996	-5	
	-10	836399994	-7	
	-20	836399998	-3	
	-30	836399996	-5	



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)
4.2	50	1879999999	-2	4700
	40	1880000000	-1	
	30	1879999995	-6	
	20	1880000001	0	
	10	1879999997	-4	
	0	1879999999	-2	
	-10	1879999998	-3	
	-20	1879999996	-5	
	-30	1879999998	-3	

Reference Frequency: WCDMA / HSDPA Band V Mid Channel 836.4 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.2	50	836399996	-4	2090
	40	836400000	0	
	30	836399998	-2	
	20	836400000	0	
	10	836399995	-5	
	0	836399999	-1	
	-10	836399997	-3	
	-20	836399999	-1	
	-30	836399996	-4	



<b>Reference Frequency: WCDMA / HSUPA Band II 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)
4.2	50	1879999997	-3	4700
	40	1879999996	-4	
	30	1879999998	-2	
	20	1880000000	0	
	10	1880000001	1	
	0	1879999999	-1	
	-10	1880000000	0	
	-20	1879999998	-2	
	-30	1879999997	-3	

<b>Reference Frequency: WCDMA / HSUPA Band V Mid Channel 836.6 MHz @ 20°C</b>				
Limit: $\pm 2.5$ ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.2	50	836399999	-2	2090
	40	836399997	-4	
	30	836399998	-3	
	20	836400001	0	
	10	836400002	1	
	0	836399995	-6	
	-10	836399999	-2	
	-20	836399996	-5	
	-30	836399997	-4	

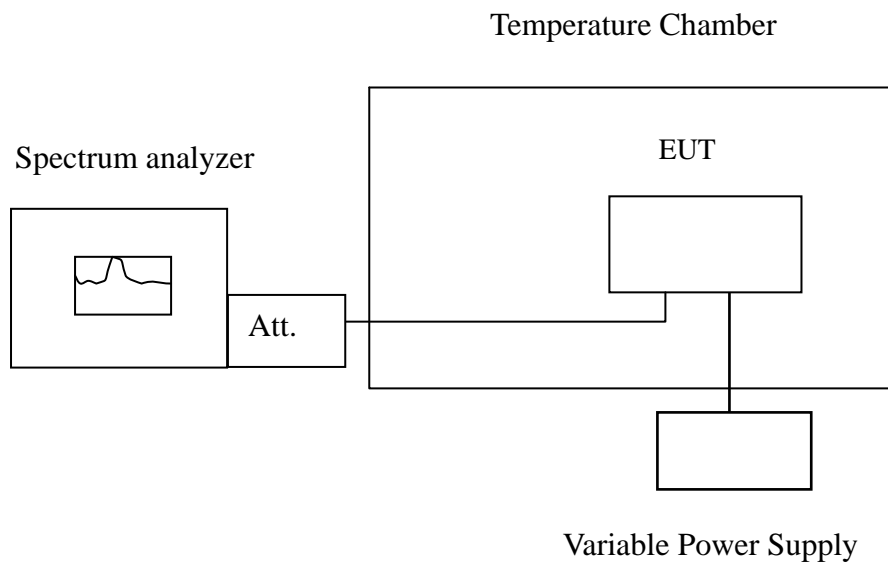


## 7.8 FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

### LIMIT

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

### Test Configuration



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



**TEST PROCEDURE**

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

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

**TEST RESULTS**

*No non-compliance noted.*

Reference Frequency: GSM 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)
4.2	20	836599979	-3	2090
3.8		836599982	0	
3.6		836599976	-6	
3.5 END		836599906	-76	

Reference Frequency: GSM 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)
4.2	20	1879999983	-3	4700
3.8		1879999986	0	
3.6		1879999975	-11	
3.5 END		1879999922	-64	



<b>Reference Frequency: GPRS 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)
4.2	20	836599980	-2	2090
3.8		836599982	0	
3.6		836599974	-8	
3.5 END		836599927	-55	

<b>Reference Frequency: GPRS 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)
4.2	20	1879999972	-9	4700
3.8		1879999981	0	
3.6		1879999980	-1	
3.5 END		1879999952	-29	



<b>Reference Frequency: EDGE 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)
4.2	20	836599972	-5	2090
3.8		836599977	0	
3.6		836599982	5	
3.5 END		836599885	-92	

<b>Reference Frequency: EDGE 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)
4.2	20	1879999976	-5	4700
3.8		1879999981	0	
3.6		1879999977	-4	
3.5 END		1879999912	-69	





<b>Reference Frequency: WCDMA Band II 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)
4.2	20	1880000004	3	4700
3.8		1880000001	0	
3.6		1880000003	2	
3.5 END		1880000056	55	

<b>Reference Frequency: WCDMA Band V Mid Channel 836.4 MHz @ 20°C</b>				
Limit: $\pm 2.5$ ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.2	20	836400000	-1	2090
3.8		836400001	0	
3.6		836400002	1	
3.5 END		836400057	56	



<b>Reference Frequency: WCDMA HSDPA Band II 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)
4.2	20	1880000005	4	4700
3.8		1880000001	0	
3.6		1880000002	1	
3.5 END		1880000046	45	

<b>Reference Frequency: WCDMA HSDPA Band V Mid Channel 836.4 MHz @ 20°C</b>				
Limit: $\pm 2.5$ ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.2	20	836400001	1	2090
3.8		836400000	0	
3.6		836400005	5	
3.5 END		836400034	34	



<b>Reference Frequency: WCDMA HSUPA Band II 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)
4.2	20	1880000001	1	4700
3.8		1880000000	0	
3.6		1880000002	2	
3.5 END		1880000073	73	

<b>Reference Frequency: WCDMA HSUPA Band V Mid Channel 836.4 MHz @ 20°C</b>				
Limit: $\pm 2.5$ ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.2	20	836400000	-1	2090
3.8		836400001	0	
3.6		836400002	1	
3.5 END		836400058	57	



## 7.9 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                      **Test Date:**              December 2, 2010  
**Temperature:**        26°C    **Tested by:**              Shawn Wu  
**Humidity:**              60% 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
0.2400	36.97	32.87	0.13	37.10	33.00	62.10	52.10	-25.00	-19.10	L1
0.3600	31.76	27.96	0.14	31.90	28.10	58.73	48.73	-26.83	-20.63	L1
0.4800	29.76	25.86	0.14	29.90	26.00	56.34	46.34	-26.44	-20.34	L1
4.0500	23.01	16.71	0.09	23.10	16.80	56.00	46.00	-32.90	-29.20	L1
10.5000	35.10	25.00	0.30	35.40	25.30	60.00	50.00	-24.60	-24.70	L1
20.1600	38.07	16.97	0.43	38.50	17.40	60.00	50.00	-21.50	-32.60	L1
0.2400	32.38	28.58	0.12	32.50	28.70	62.10	52.10	-29.60	-23.40	L2
0.3600	34.97	32.07	0.13	35.10	32.20	58.73	48.73	-23.63	-16.53	L2
0.6000	27.17	21.47	0.13	27.30	21.60	56.00	46.00	-28.70	-24.40	L2
3.2100	23.84	16.24	0.06	23.90	16.30	56.00	46.00	-32.10	-29.70	L2
10.5000	39.62	29.32	0.28	39.90	29.60	60.00	50.00	-20.10	-20.40	L2
19.2300	43.23	24.23	0.37	43.60	24.60	60.00	50.00	-16.40	-25.40	L2

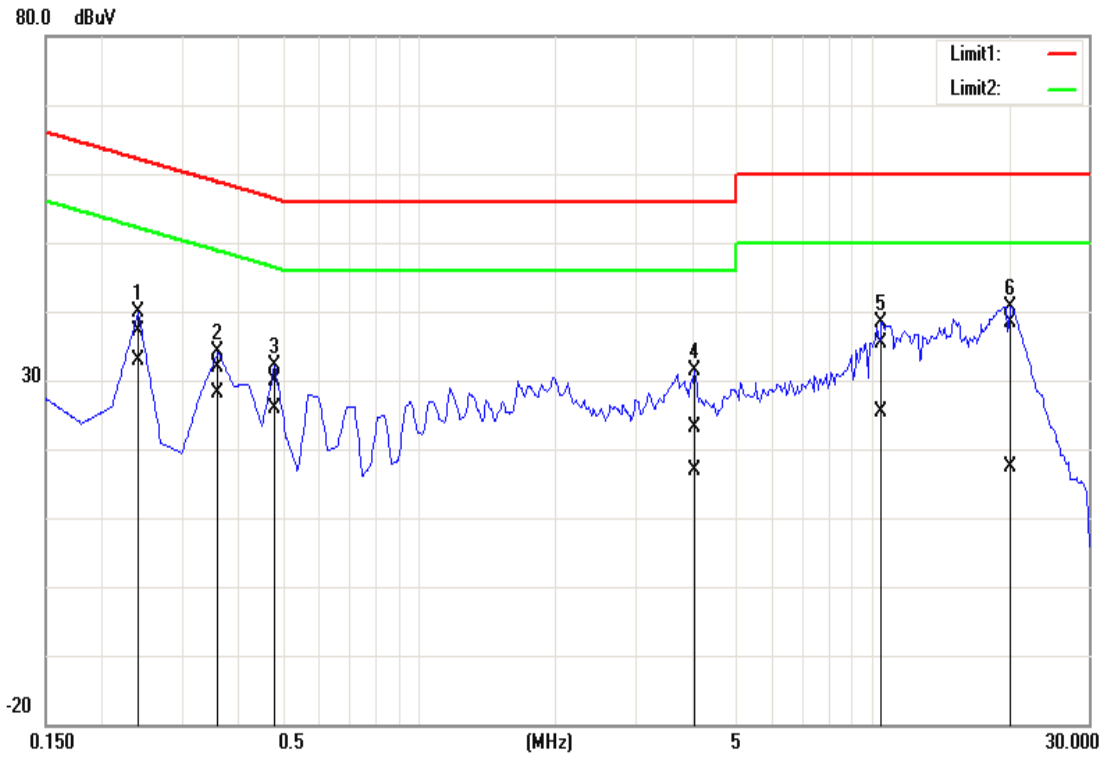
**Remark:**

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

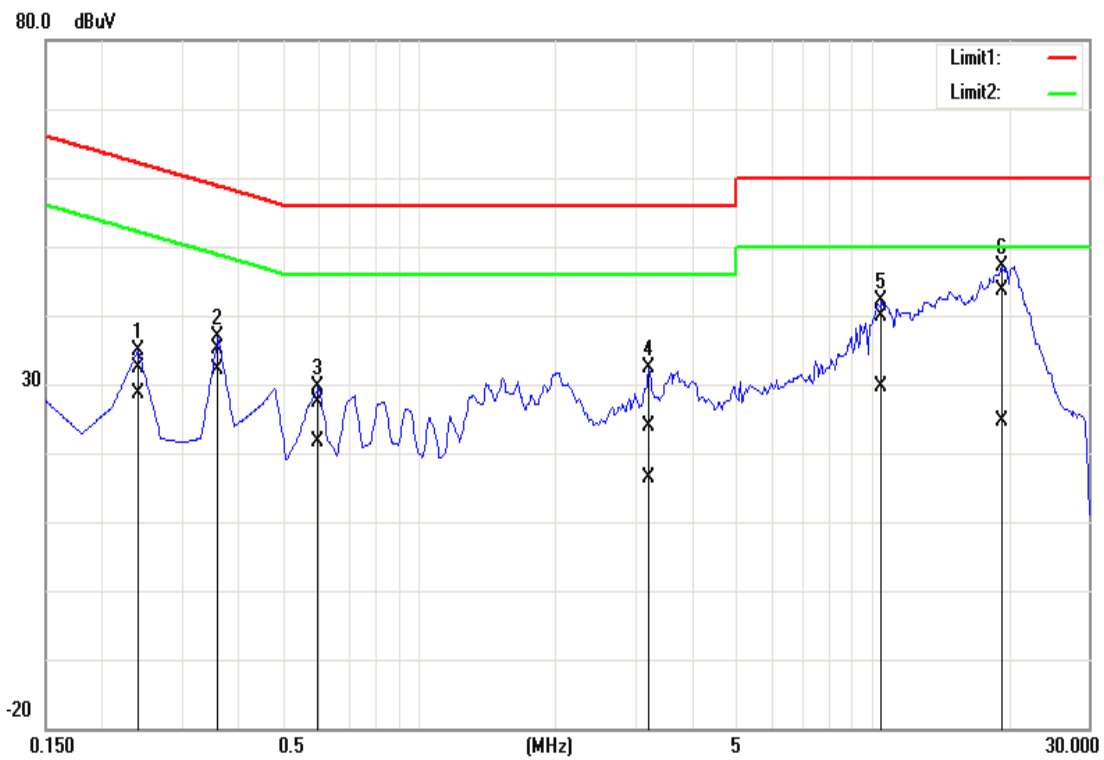


**Test Plots**

**Conducted emissions (Line 1)**



**Conducted emissions (Line 2)**





## APPENDIX I RADIO FREQUENCY EXPOSURE

### LIMIT

#### EUT Specification

<b>EUT</b>	Smart Handheld
<b>Frequency band (Operating)</b>	<input type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input type="checkbox"/> WLAN: 5.18GHz ~ 5.32GHz / 5.50GHz ~ 5.70GHz <input type="checkbox"/> WLAN: 5.745GHz ~ 5.825GHz <input checked="" type="checkbox"/> Others: 824 ~ 849 MHz
<b>Device category</b>	<input checked="" type="checkbox"/> Portable (<20cm separation) <input type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others
<b>Exposure classification</b>	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm <sup>2</sup> ) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm <sup>2</sup> )
<b>Antenna diversity</b>	<input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
<b>Max. output power</b>	ERP: 27.01 dBm (502.34 mW)
<b>Antenna gain (Max)</b>	-1.83 dBi(Numeric gain: 0.01)
<b>Evaluation applied</b>	<input type="checkbox"/> MPE Evaluation <input checked="" type="checkbox"/> SAR Evaluation* <input type="checkbox"/> N/A

#### **Remark:**

1. The maximum output power is 27.01 dBm (502.34mW) at 824.2MHz (with 0.01 numeric antenna gain.)
2. DTS device is not subject to routine RF evaluation; MPE estimate is used to justify the compliance.
3. For mobile or fixed location transmitters, no SAR consideration applied. The maximum power density is 1.0 mW/cm<sup>2</sup> even if the calculation indicates that the power density would be larger.

### TEST RESULTS

No non-compliance noted.

Not applicable, Please refers to the SAR test report.



**EUT Specification**

<b>EUT</b>	Smart Handheld
<b>Frequency band (Operating)</b>	<input type="checkbox"/> WLAN: 2.412GHz ~ 2.462GHz <input type="checkbox"/> WLAN: 5.725GHz ~ 5.850GHz <input type="checkbox"/> WLAN: 5.15GHz ~ 5.35GHz <input checked="" type="checkbox"/> Others: 1850 ~ 1910 MHz
<b>Device category</b>	<input checked="" type="checkbox"/> Portable (<20cm separation) <input type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others
<b>Exposure classification</b>	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm2) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm2)
<b>Antenna diversity</b>	<input checked="" type="checkbox"/> Single antenna <input type="checkbox"/> Multiple antennas <input type="checkbox"/> Tx diversity <input type="checkbox"/> Rx diversity <input type="checkbox"/> Tx/Rx diversity
<b>Max. output power</b>	ERP: 29.44 dBm (879.02 mW)
<b>Antenna gain (Max)</b>	0.14 dBi (Numeric gain: 1.03)
<b>Evaluation applied</b>	<input type="checkbox"/> MPE Evaluation <input checked="" type="checkbox"/> SAR Evaluation* <input type="checkbox"/> N/A

***Remark:***

- 1. The maximum output power is 29.44 dBm (879.02 mW) at 1850.20MHz (with 1.03 numeric antenna gain.)*
- 2. DTS device is not subject to routine RF evaluation; MPE estimate is used to justify the compliance.*
- 3. For mobile or fixed location transmitters, no SAR consideration applied. The maximum power density is 1.0 mW/cm<sup>2</sup> even if the calculation indicates that the power density would be larger.*

**TEST RESULTS**

*No non-compliance noted.*

*Not applicable, Please refers to the SAR test report.*