



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

**TEST REPORT**

**For**

**Smart Handheld**

**Model: E140**

**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)**

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## 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:** E140

**Date of Test:** October 7 ~ 20, 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:

Rex Lai  
Section Manager  
Compliance Certification Services Inc.

Reviewed by:

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>	E140
<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 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: 31.24dBm GSM 1900: 32.57 dBm GPRS 850: 31.25 dBm GPRS 1900: 32.72 dBm EDGE 850: 28.83 dBm EDGE 1900: 31.71 dBm WCDMA Band II: 26.00 dBm HSDPA Band II: 26.04 dBm HSUPA Band II: 25.93 dBm WCDMA Band V: 21.78 dBm HSDPA Band V: 21.26 dBm HSUPA Band V: 21.50 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: 246KGXW--- GSM 1900: 247KGXW--- GPRS 850: 245KGXW--- GPRS 1900: 247KGXW--- EDGE 850: 244KG7W--- EDGE 1900: 251KG7W--- WCDMA Band II: 4M17F9W--- WCDMA Band V: 4M18F9W--- WCDMA HSDPA Band II: 4M17F9W--- WCDMA HSDPA Band V: 4M19F9W--- WCDMA HSUPA Band II: 4M20F9W--- WCDMA HSUPA Band V: 4M18F9W---
<b>Antenna Gain</b>	GSM / GPRS / EDGE 850: -1.62 dBi GSM / GPRS / EDGE 1900: 0.25 dBi WCDMA band II: 0.25dBi WCDMA band V: -1.62 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: **HLZDME140SC** 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: E140) 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 stand-up (X axis) for GSM 1900 / GPRS 1900 / EDGE 850 / EDGE 1900 / WCDMA Band II / HSDPA Band II / HSUPA Band II .

and

in lie-down (Z axis) for GSM 850 / GPRS 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	Agilent	E4416A	GB41291611	06/27/2011
Power Sensor	Agilent	E9327A	US40441097	06/27/2011
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	11/20/2010
Bilog Antenna	Sunol Sciences	JB3	A030105	09/10/2011
Horn Antenna	EMCO	3117	00055165	12/07/2010
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	ESCI	101073	07/15/2011
LISN	R&S	ENV216	101054	04/28/2011
LISN	FCC	FCC-LISN-50/250-16-2-07	06012	11/29/2010
ISN	FCC	FCC-TLISN-T2-02-09	100105	02/16/2011
ISN	FCC	FCC-TLISN-T8-02-09	100106	02/16/2011
Current Probe	TEGAM	95236-1	12567	03/22/2011
Capacitive Voltag Probe	FCC	F-CVP-1	100185	02/17/2011
Test S/W	CCS-3A1-CE-wugu			



### 4.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
Powerline Conducted Emission	+/- 1.6516
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	 IC 2324G-1 IC 2324G-2

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



## 6. SETUP OF EQUIPMENT UNDER TEST

### 6.1 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.	Universal Radio Communication Tester	R&S	CMU200	101245	N/A	N/A	Unshielded, 1.8m
2.	SIM Card	N/A	N/A	N/A	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.



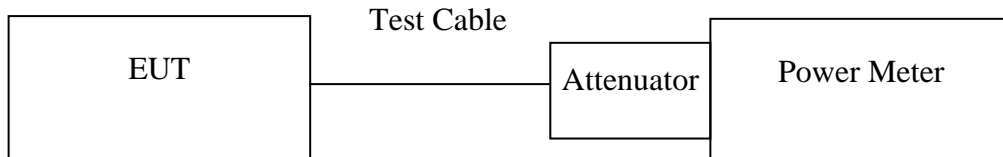
## 7. FCC PART 22 & 24 REQUIREMENTS

### 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	32.50	1.77828
	251	848.80	32.30	1.69824
GPRS 850	128	824.20	28.40	0.69183
	190	836.60	28.40	0.69183
	251	848.80	28.20	0.66069
EDGE 850	128	824.20	26.90	0.48978
	190	836.60	26.90	0.48978
	251	848.80	26.70	0.46774

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
GSM 1900	512	1850.20	29.10	0.81283
	661	1880.00	29.30	0.85114
	810	1909.80	29.40	0.87096
GPRS 1900	512	1850.20	25.00	0.31623
	661	1880.00	25.30	0.33884
	810	1909.80	25.30	0.33884
EDGE 1900	512	1850.20	23.60	0.22909
	661	1880.00	23.80	0.23988
	810	1909.80	23.80	0.23988

**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	26.30	0.42658
	9400	1880.00	25.89	0.38815
	9538	1907.60	26.18	0.41495
WCDMA (BAND V)	4132	826.40	27.18	0.52240
	4182	836.40	26.89	0.48865
	4233	846.60	26.68	0.46559

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
WCDMA / HSDPA (BAND II)	9262	1852.40	26.38	0.43451
	9400	1880.00	26.01	0.39902
	9538	1907.60	26.21	0.41783
WCDMA / HSDPA (BAND V)	4132	826.40	27.26	0.53211
	4182	836.40	26.71	0.46881
	4233	846.60	26.72	0.46989

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
WCDMA / HSUPA (BAND II)	9262	1852.40	26.38	0.43451
	9400	1880.00	26.15	0.41210
	9538	1907.60	26.27	0.42364
WCDMA / HSUPA (BAND V)	4132	826.40	27.31	0.53827
	4182	836.40	26.83	0.48195
	4233	846.60	26.71	0.46881

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



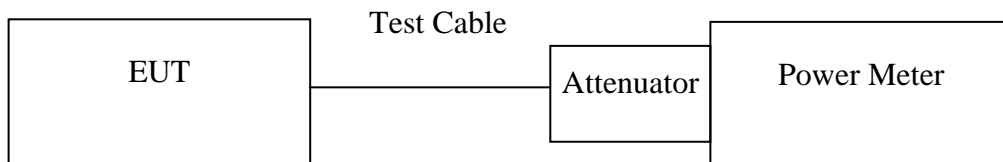


## 7.2 AVERAGE POWER

### 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	23.37	0.21723
	190	836.60	23.47	0.22228
	251	848.80	23.27	0.21228
GPRS 850	128	824.20	25.39	0.34592
	190	836.60	25.39	0.34592
	251	848.80	25.19	0.33035
EDGE 850	128	824.20	23.89	0.24489
	190	836.60	23.89	0.24489
	251	848.80	23.69	0.23387

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
GSM 1900	512	1850.20	20.07	0.10160
	661	1880.00	20.27	0.10639
	810	1909.80	20.37	0.10887
GPRS 1900	512	1850.20	21.99	0.15811
	661	1880.00	22.29	0.16942
	810	1909.80	22.29	0.16942
EDGE 1900	512	1850.20	20.59	0.11454
	661	1880.00	20.79	0.11994
	810	1909.80	20.79	0.11994

**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	22.96	0.19770
	9400	1880.00	23.17	0.20749
	9538	1907.60	23.12	0.20512
WCDMA (BAND V)	4132	826.40	23.68	0.23335
	4182	836.40	23.71	0.23496
	4233	846.60	23.66	0.23227

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
WCDMA / HSDPA (BAND II)	9262	1852.40	22.88	0.19409
	9400	1880.00	23.12	0.20512
	9538	1907.60	23.11	0.20464
WCDMA / HSDPA (BAND V)	4132	826.40	23.59	0.22856
	4182	836.40	23.65	0.23174
	4233	846.60	23.59	0.22856

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
WCDMA / HSUPA (BAND II)	9262	1852.40	22.89	0.19454
	9400	1880.00	23.03	0.20091
	9538	1907.60	23.00	0.19953
WCDMA / HSUPA (BAND V)	4132	826.40	23.35	0.21627
	4182	836.40	23.40	0.21878
	4233	846.60	23.35	0.21627

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



## 7.3 ERP & EIRP MEASUREMENT

### LIMIT

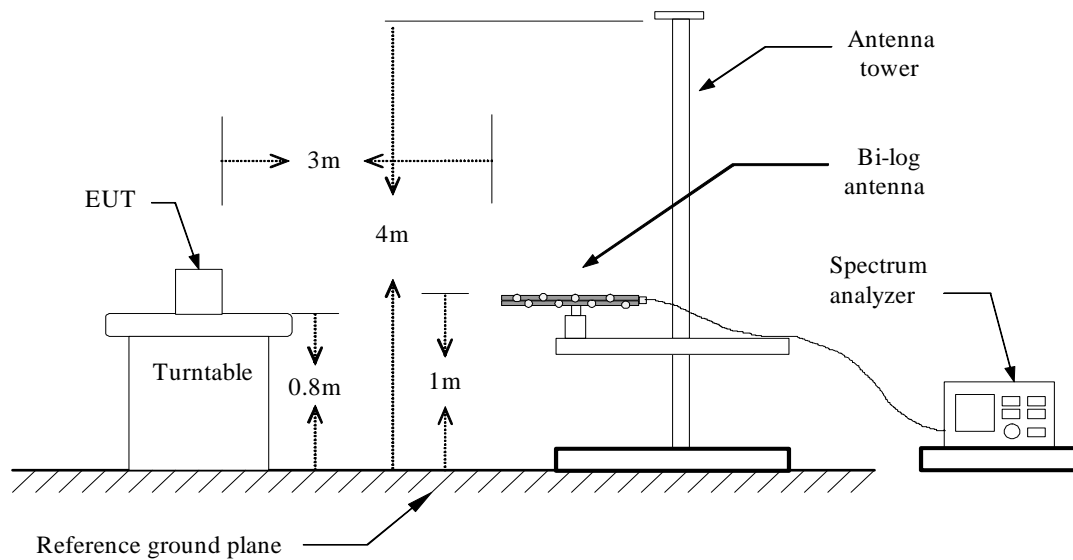
According to FCC §2.1046

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

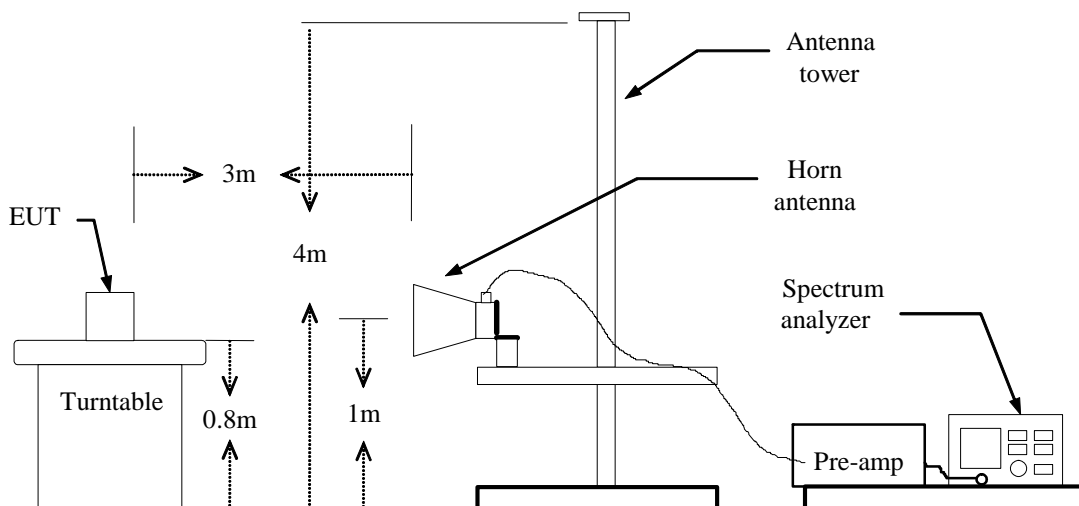
FCC 24.232(b): The equivalent Isotropic Radiated Power (EIRP) must not exceed 2 Watts.

### Test Configuration

#### Below 1 GHz

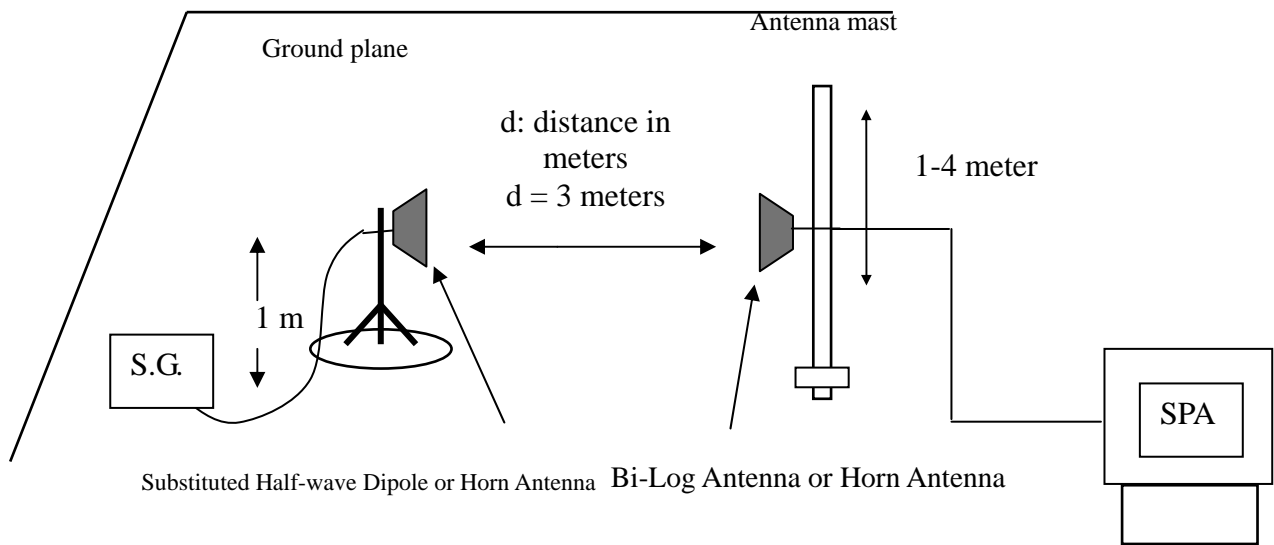


#### Above 1 GHz





## For Substituted Method Test Set-UP



## TEST PROCEDURE

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

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

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

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

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

## TEST RESULTS

*No non-compliance noted.*

**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	-11.28	34.62	23.34	38.50	-15.16
		824.20	H	-7.80	34.65	26.84	38.50	-11.66
	190	836.60	V	-10.96	34.52	23.56	38.50	-14.94
		836.60	H	-6.41	34.63	28.22	38.50	-10.28
	251	848.80	V	-12.26	34.63	22.37	38.50	-16.13
		848.80	H	-6.28	34.75	28.48	38.50	-10.02
Y	128	824.20	V	-13.32	34.62	21.30	38.50	-17.20
		824.20	H	-7.40	34.65	27.25	38.50	-11.25
	190	836.60	V	-13.60	34.53	20.92	38.50	-17.58
		836.60	H	-5.45	34.63	29.18	38.50	-9.32
	251	848.80	V	-12.30	34.64	22.34	38.50	-16.16
		848.80	H	-6.32	34.75	28.43	38.50	-10.07
Z	128	824.20	V	-5.64	34.62	28.97	38.50	-9.53
		824.20	H	-17.87	34.65	16.78	38.50	-21.72
	190	836.60	V	-4.43	34.52	30.09	38.50	-8.41
		836.60	H	-16.08	34.63	18.55	38.50	-19.95
	251	848.80	V	-3.40	34.64	<b>*31.24</b>	38.50	-7.26
		848.80	H	-13.66	34.75	21.09	38.50	-17.41

**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	-18.56	34.62	16.06	38.50	-22.44
		824.20	H	-7.51	34.65	27.14	38.50	-11.36
	190	836.60	V	-16.54	34.53	17.99	38.50	-20.51
		836.60	H	-6.25	34.63	28.38	38.50	-10.12
	251	848.80	V	-15.63	34.64	19.00	38.50	-19.50
		848.80	H	-5.89	34.75	28.86	38.50	-9.64
Y	128	824.20	V	-15.41	34.62	19.21	38.50	-19.29
		824.20	H	-6.68	34.65	27.97	38.50	-10.53
	190	836.60	V	-13.97	34.53	20.55	38.50	-17.95
		836.60	H	-6.22	34.63	28.41	38.50	-10.09
	251	848.80	V	-11.48	34.64	23.16	38.50	-15.34
		848.80	H	-6.28	34.75	28.47	38.50	-10.03
Z	128	824.20	V	-5.72	34.62	28.90	38.50	-9.60
		824.20	H	-17.59	34.65	17.06	38.50	-21.44
	190	836.60	V	-4.21	34.52	30.31	38.50	-8.19
		836.60	H	-15.10	34.63	19.54	38.50	-18.96
	251	848.80	V	-3.39	34.64	<b>*31.25</b>	38.50	-7.25
		848.80	H	-14.12	34.75	20.64	38.50	-17.86

**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	-17.62	41.17	23.55	33.00	-9.45
		1850.20	H	-9.24	40.79	31.55	33.00	-1.45
	661	1880.00	V	-18.92	41.23	22.31	33.00	-10.69
		1880.00	H	-8.58	41.14	<b>*32.57</b>	33.00	-0.43
	810	1909.80	V	-19.95	41.30	21.36	33.00	-11.64
		1909.80	H	-9.59	41.37	31.79	33.00	-1.21
Y	512	1850.20	V	-11.63	41.17	29.54	33.00	-3.46
		1850.20	H	-12.74	40.79	28.05	33.00	-4.95
	661	1880.00	V	-11.68	41.30	29.63	33.00	-3.37
		1880.00	H	-13.93	41.38	27.45	33.00	-5.55
	810	1909.80	V	-11.07	41.23	30.16	33.00	-2.84
		1909.80	H	-13.10	41.14	28.04	33.00	-4.96
Z	512	1850.20	V	-14.06	41.17	27.11	33.00	-5.89
		1850.20	H	-13.86	40.79	26.93	33.00	-6.07
	661	1880.00	V	-14.61	41.23	26.62	33.00	-6.38
		1880.00	H	-14.48	41.14	26.66	33.00	-6.34
	810	1909.80	V	-15.30	41.30	26.00	33.00	-7.00
		1909.80	H	-16.86	41.37	24.52	33.00	-8.48

**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	-18.91	41.17	22.26	33.00	-10.74
		1850.20	H	-9.45	40.79	31.34	33.00	-1.66
	661	1880.00	V	-20.08	41.23	21.15	33.00	-11.85
		1880.00	H	-8.94	41.14	32.20	33.00	-0.80
	810	1909.80	V	-20.39	41.30	20.91	33.00	-12.09
		1909.80	H	-10.12	41.37	31.26	33.00	-1.74
Y	512	1850.20	V	-12.21	41.17	28.96	33.00	-4.04
		1850.20	H	-12.67	40.79	28.11	33.00	-4.89
	661	1880.00	V	-13.38	41.23	27.85	33.00	-5.15
		1880.00	H	-13.00	41.14	28.15	33.00	-4.85
	810	1909.80	V	-12.96	41.30	28.34	33.00	-4.66
		1909.80	H	-12.87	41.38	28.51	33.00	-4.49
Z	512	1850.20	V	-12.57	41.17	28.60	33.00	-4.40
		1850.20	H	-15.78	40.79	25.00	33.00	-8.00
	661	1880.00	V	-19.16	41.23	22.07	33.00	-10.93
		1880.00	H	-8.42	41.14	<b>*32.72</b>	33.00	-0.28
	810	1909.80	V	-14.47	41.30	26.83	33.00	-6.17
		1909.80	H	-9.80	41.38	31.58	33.00	-1.42

**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	-22.00	34.62	12.62	38.50	-25.88
		824.20	H	-8.81	34.65	25.84	38.50	-12.66
	190	836.60	V	-20.44	34.53	14.09	38.50	-24.41
		836.60	H	-7.69	34.63	26.95	38.50	-11.55
	251	848.80	V	-12.96	34.63	21.67	38.50	-16.83
		848.80	H	-9.34	34.75	25.40	38.50	-13.10
Y	128	824.20	V	-22.29	34.62	12.33	38.50	-26.17
		824.20	H	-8.64	34.65	26.01	38.50	-12.49
	190	836.60	V	-15.41	34.52	19.12	38.50	-19.38
		836.60	H	-9.25	34.63	25.38	38.50	-13.12
	251	848.80	V	-12.19	34.64	22.44	38.50	-16.06
		848.80	H	-8.73	34.75	26.02	38.50	-12.48
Z	128	824.20	V	-8.35	34.62	26.26	38.50	-12.24
		824.20	H	-17.97	34.65	16.68	38.50	-21.82
	190	836.60	V	-6.89	34.52	27.64	38.50	-10.86
		836.60	H	-15.10	34.63	19.54	38.50	-18.96
	251	848.80	V	-5.81	34.64	<b>*28.83</b>	38.50	-9.67
		848.80	H	-14.29	34.75	20.46	38.50	-18.04

**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	-20.57	41.17	20.60	33.00	-12.40
		1850.20	H	-10.32	40.79	30.47	33.00	-2.53
	661	1880.00	V	-23.40	41.23	17.83	33.00	-15.17
		1880.00	H	-9.43	41.15	<b>*31.71</b>	33.00	-1.29
	810	1909.80	V	-24.96	41.30	16.34	33.00	-16.66
		1909.80	H	-10.46	41.37	30.92	33.00	-2.08
Y	512	1850.20	V	-12.40	41.17	28.77	33.00	-4.23
		1850.20	H	-13.72	40.79	27.08	33.00	-5.92
	661	1880.00	V	-12.24	41.23	28.99	33.00	-4.01
		1880.00	H	-12.39	41.14	28.75	33.00	-4.25
	810	1909.80	V	-11.71	41.30	29.59	33.00	-3.41
		1909.80	H	-13.33	41.38	28.05	33.00	-4.95
Z	512	1850.20	V	-13.43	41.17	27.75	33.00	-5.25
		1850.20	H	-16.55	40.79	24.24	33.00	-8.76
	661	1880.00	V	-13.70	41.23	27.53	33.00	-5.47
		1880.00	H	-16.52	41.14	24.62	33.00	-8.38
	810	1909.80	V	-13.13	41.30	28.17	33.00	-4.83
		1909.80	H	-16.12	41.38	25.25	33.00	-7.75



**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	1850.20	V	-22.42	41.18	18.76	33.00	-14.24
		1850.20	H	-15.74	40.82	25.08	33.00	-7.92
	9400	1880.00	V	-22.26	41.23	18.97	33.00	-14.03
		1880.00	H	-15.54	41.13	25.59	33.00	-7.41
	9538	1909.80	V	-22.45	41.29	18.84	33.00	-14.16
		1909.80	H	-15.38	41.38	<b>*26.00</b>	33.00	-7.00
Y	9262	1850.20	V	-19.56	41.18	21.62	33.00	-11.38
		1850.20	H	-18.32	40.83	22.51	33.00	-10.49
	9400	1880.00	V	-18.48	41.23	22.75	33.00	-10.25
		1880.00	H	-18.46	41.13	22.66	33.00	-10.34
	9538	1909.80	V	-19.30	41.29	21.99	33.00	-11.01
		1909.80	H	-17.87	41.38	23.50	33.00	-9.50
Z	9262	1850.20	V	-19.37	41.18	21.80	33.00	-11.20
		1850.20	H	-23.09	40.83	17.74	33.00	-15.26
	9400	1880.00	V	-19.57	41.23	21.66	33.00	-11.34
		1880.00	H	-23.92	41.15	17.22	33.00	-15.78
	9538	1909.80	V	-19.76	41.29	21.53	33.00	-11.47
		1909.80	H	-24.51	41.38	16.87	33.00	-16.13

**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	824.20	V	-23.22	34.60	11.37	38.50	-27.13
		824.20	H	-15.86	34.64	18.78	38.50	-19.72
	4182	836.60	V	-24.45	34.54	10.09	38.50	-28.41
		836.60	H	-14.11	34.63	20.52	38.50	-17.98
	4233	848.80	V	-24.77	34.61	9.84	38.50	-28.66
		848.80	H	-13.84	34.72	20.88	38.50	-17.62
Y	4132	824.20	V	-21.15	34.59	13.45	38.50	-25.05
		824.20	H	-15.80	34.64	18.85	38.50	-19.65
	4182	836.60	V	-22.20	34.54	12.34	38.50	-26.16
		836.60	H	-13.90	34.63	20.73	38.50	-17.77
	4233	848.80	V	-24.78	34.61	9.82	38.50	-28.68
		848.80	H	-13.20	34.72	21.52	38.50	-16.98
Z	4132	824.20	V	-13.02	34.59	21.58	38.50	-16.92
		824.20	H	-21.47	34.64	13.18	38.50	-25.32
	4182	836.60	V	-13.56	34.53	20.97	38.50	-17.53
		836.60	H	-21.93	34.63	12.71	38.50	-25.79
	4233	848.80	V	-12.82	34.60	<b>*21.78</b>	38.50	-16.72
		848.80	H	-22.61	34.72	12.10	38.50	-26.40

**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	1850.20	V	-22.75	41.18	18.42	33.00	-14.58
		1850.20	H	-16.14	40.83	24.68	33.00	-8.32
	9400	1880.00	V	-31.40	41.23	9.83	33.00	-23.17
		1880.00	H	-15.76	41.13	25.37	33.00	-7.63
	9538	1909.80	V	-31.37	41.29	9.92	33.00	-23.08
		1909.80	H	-15.34	41.38	<b>*26.04</b>	33.00	-6.96
Y	9262	1850.20	V	-19.37	41.18	21.80	33.00	-11.20
		1850.20	H	-18.63	40.83	22.20	33.00	-10.80
	9400	1880.00	V	-19.36	41.23	21.87	33.00	-11.13
		1880.00	H	-18.37	41.13	22.76	33.00	-10.24
	9538	1909.80	V	-18.14	41.29	23.16	33.00	-9.84
		1909.80	H	-18.55	41.38	22.82	33.00	-10.18
Z	9262	1850.20	V	-20.14	41.18	21.04	33.00	-11.96
		1850.20	H	-23.11	40.82	17.71	33.00	-15.29
	9400	1880.00	V	-20.35	41.23	20.88	33.00	-12.12
		1880.00	H	-24.43	41.13	16.70	33.00	-16.30
	9538	1909.80	V	-20.30	41.29	21.00	33.00	-12.00
		1909.80	H	-23.31	41.38	18.07	33.00	-14.93

**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	824.20	V	-26.63	34.60	7.97	38.50	-30.53
		824.20	H	-14.03	34.64	20.61	38.50	-17.89
	4182	836.60	V	-27.00	34.53	7.53	38.50	-30.97
		836.60	H	-14.96	34.63	19.68	38.50	-18.82
	4233	848.80	V	-30.08	34.61	4.53	38.50	-33.97
		848.80	H	-14.03	34.73	20.70	38.50	-17.80
Y	4132	824.20	V	-26.12	34.60	8.48	38.50	-30.02
		824.20	H	-14.21	34.64	20.43	38.50	-18.07
	4182	836.60	V	-25.98	34.53	8.55	38.50	-29.95
		836.60	H	-14.72	34.63	19.91	38.50	-18.59
	4233	848.80	V	-26.53	34.62	8.09	38.50	-30.41
		848.80	H	-13.65	34.71	21.06	38.50	-17.44
Z	4132	824.20	V	-13.62	34.60	20.98	38.50	-17.52
		824.20	H	-24.00	34.64	10.64	38.50	-27.86
	4182	836.60	V	-14.04	34.54	20.50	38.50	-18.00
		836.60	H	-24.86	34.63	9.77	38.50	-28.73
	4233	848.80	V	-13.33	34.59	<b>*21.26</b>	38.50	-17.24
		848.80	H	-23.54	34.73	11.19	38.50	-27.31

**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	1850.20	V	-23.12	41.17	18.05	33.00	-14.95
		1850.20	H	-16.24	40.83	24.59	33.00	-8.41
	9400	1880.00	V	-33.01	41.23	8.22	33.00	-24.78
		1880.00	H	-15.47	41.13	25.66	33.00	-7.34
	9538	1909.80	V	-32.30	41.29	8.99	33.00	-24.01
		1909.80	H	-15.45	41.38	<b>*25.93</b>	33.00	-7.07
Y	9262	1850.20	V	-17.18	41.18	24.00	33.00	-9.00
		1850.20	H	-18.17	40.83	22.66	33.00	-10.34
	9400	1880.00	V	-19.22	41.23	22.01	33.00	-10.99
		1880.00	H	-18.06	41.14	23.08	33.00	-9.92
	9538	1909.80	V	-19.26	41.29	22.03	33.00	-10.97
		1909.80	H	-17.01	41.38	24.37	33.00	-8.63
Z	9262	1850.20	V	-19.48	41.18	21.69	33.00	-11.31
		1850.20	H	-22.75	40.83	18.08	33.00	-14.92
	9400	1880.00	V	-19.24	41.23	21.99	33.00	-11.01
		1880.00	H	-23.04	41.13	18.09	33.00	-14.91
	9538	1909.80	V	-18.41	41.29	22.88	33.00	-10.12
		1909.80	H	-23.89	41.38	17.49	33.00	-15.51

**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	824.20	V	-24.02	34.60	10.58	38.50	-27.92
		824.20	H	-17.29	34.64	17.35	38.50	-21.15
	4182	836.60	V	-23.86	34.53	10.67	38.50	-27.83
		836.60	H	-17.31	34.63	17.32	38.50	-21.18
	4233	848.80	V	-20.62	34.61	13.99	38.50	-24.51
		848.80	H	-15.75	34.73	18.98	38.50	-19.52
Y	4132	824.20	V	-23.68	34.60	10.92	38.50	-27.58
		824.20	H	-17.57	34.64	17.07	38.50	-21.43
	4182	836.60	V	-23.26	34.53	11.28	38.50	-27.22
		836.60	H	-15.75	34.63	18.89	38.50	-19.61
	4233	848.80	V	-22.25	34.62	12.36	38.50	-26.14
		848.80	H	-14.86	34.73	19.86	38.50	-18.64
Z	4132	824.20	V	-14.28	34.60	20.31	38.50	-18.19
		824.20	H	-18.18	34.64	16.46	38.50	-22.04
	4182	836.60	V	-14.06	34.54	20.47	38.50	-18.03
		836.60	H	-24.66	34.63	9.97	38.50	-28.53
	4233	848.80	V	-13.10	34.60	<b>*21.50</b>	38.50	-17.00
		848.80	H	-23.73	34.72	10.99	38.50	-27.51

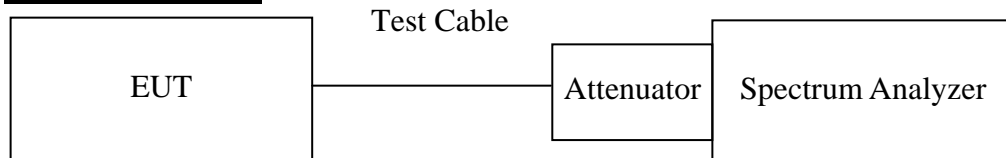


## 7.4 OCCUPIED BANDWIDTH MEASUREMENT

### 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**

Test Mode	CH	Frequency (MHz)	99% Bandwidth (kHz)
GSM 850	128	824.20	246.5320
	190	836.60	242.7068
	251	848.80	243.8436
GPRS 850	128	824.20	245.2864
	190	836.60	244.1097
	251	848.80	245.7161
EDGE 850	128	824.20	241.7914
	190	836.60	240.7403
	251	848.80	244.3431

Test Mode	CH	Frequency (MHz)	99% Bandwidth (kHz)
GSM 1900	512	1850.20	247.9065
	661	1880.00	245.2736
	810	1909.80	247.8351
GPRS 1900	512	1850.20	241.5775
	661	1880.00	247.7418
	810	1909.80	244.2290
EDGE 1900	512	1850.20	246.9155
	661	1880.00	246.0142
	810	1909.80	251.0712



Test Mode	CH	Frequency (MHz)	99% Bandwidth (MHz)
WCDMA (Band II)	9262	1852.40	4.1534
	9400	1880.00	4.1701
	9538	1907.60	4.1709
WCDMA (Band V)	4132	826.40	4.1812
	4182	836.40	4.1611
	4233	846.60	4.1724
WCDMA / HSDPA (BAND II)	9262	1852.40	4.1533
	9400	1880.00	4.1677
	9538	1907.60	4.1768
WCDMA / HSDPA (BAND V)	4132	826.40	4.1973
	4182	836.40	4.1986
	4233	846.60	4.1643
WCDMA / HSUPA (BAND II)	9262	1852.40	4.1607
	9400	1880.00	4.2093
	9538	1907.60	4.1668
WCDMA / HSUPA (BAND V)	4132	826.40	4.1793
	4182	836.40	4.1812
	4233	846.60	4.1861

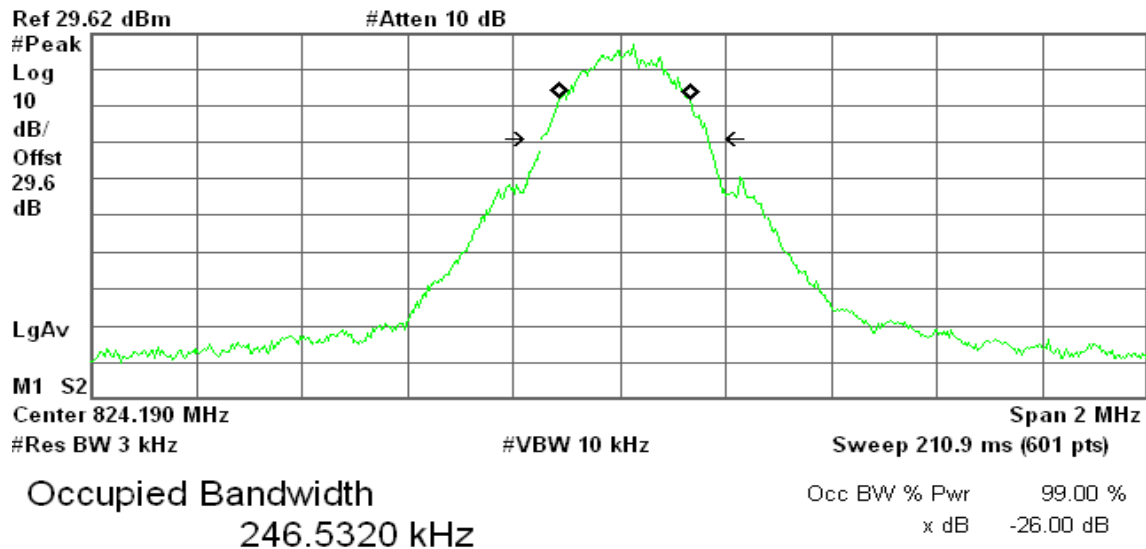


## Test Plot

### GSM 850 (CH Low)

Agilent 15:33:15 Oct 14, 2010

R T

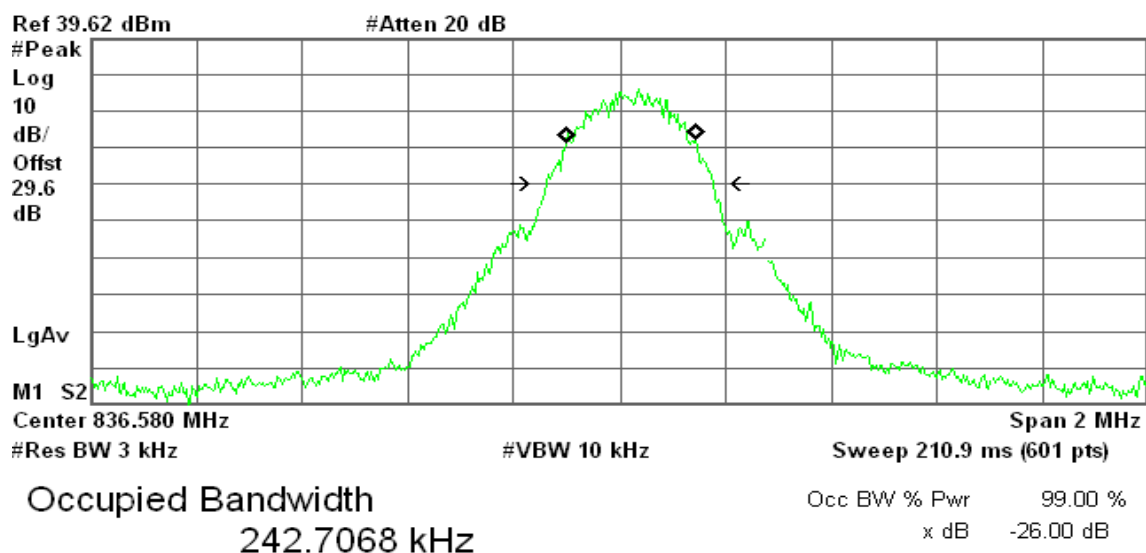


Transmit Freq Error 10.582 kHz  
x dB Bandwidth 312.472 kHz

### GSM 850 (CH Mid)

Agilent 15:36:04 Oct 14, 2010

R T



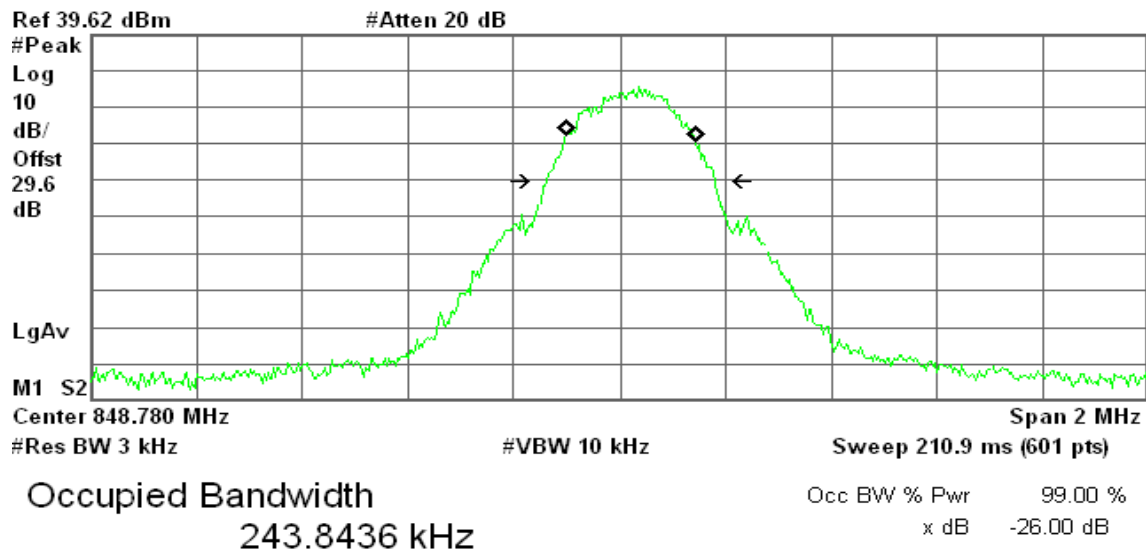
Transmit Freq Error 21.866 kHz  
x dB Bandwidth 315.213 kHz



## GSM 850 (CH High)

Agilent 15:37:22 Oct 14, 2010

R T

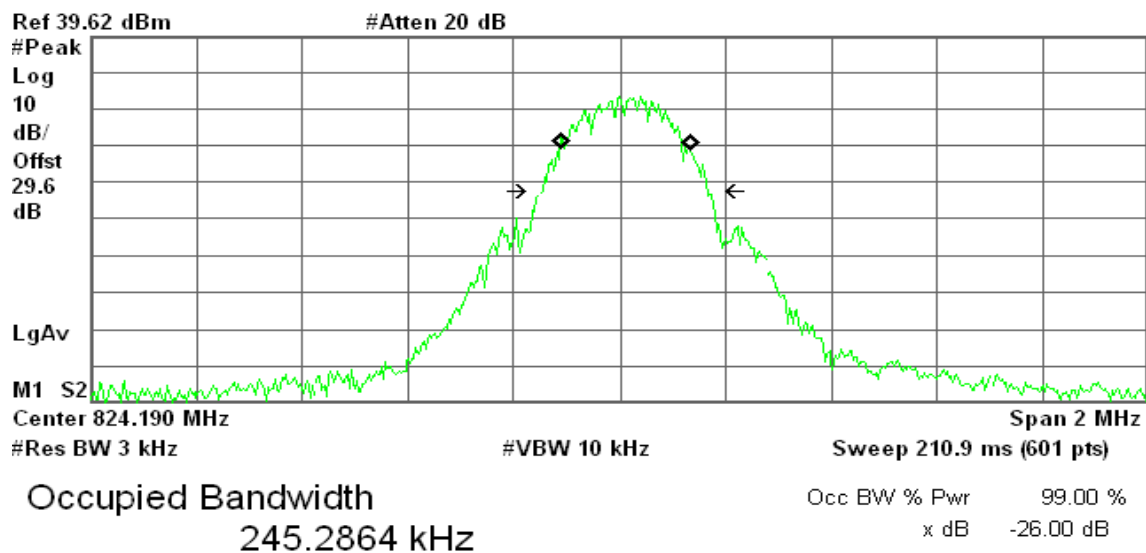


Transmit Freq Error 20.872 kHz  
x dB Bandwidth 316.004 kHz

## GPRS 850 (CH Low)

Agilent 15:44:58 Oct 14, 2010

R T



Transmit Freq Error 10.999 kHz  
x dB Bandwidth 309.208 kHz

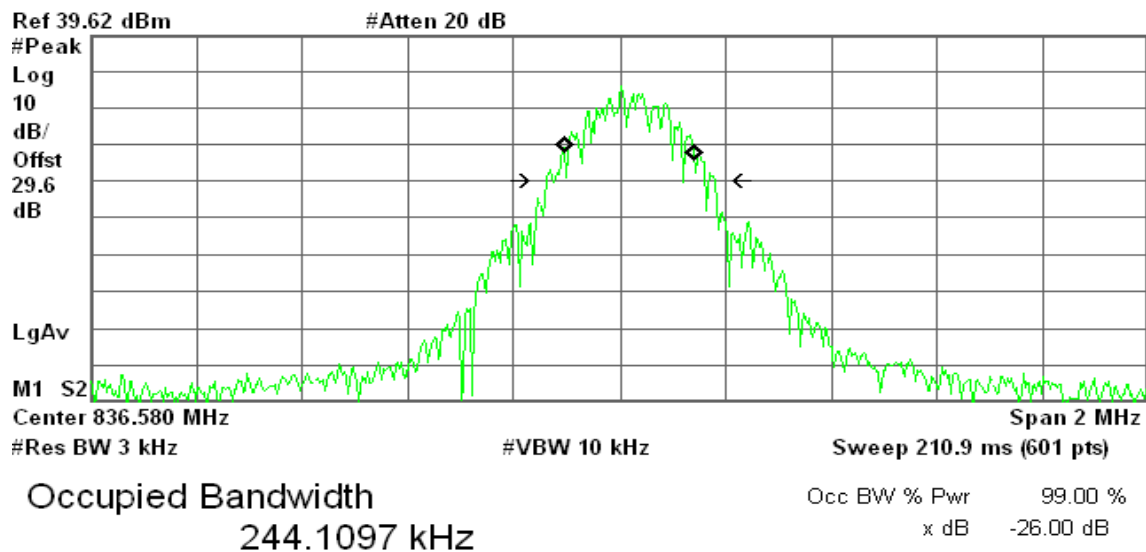




## GPRS 850 (CH Mid)

Agilent 15:43:08 Oct 14, 2010

R T

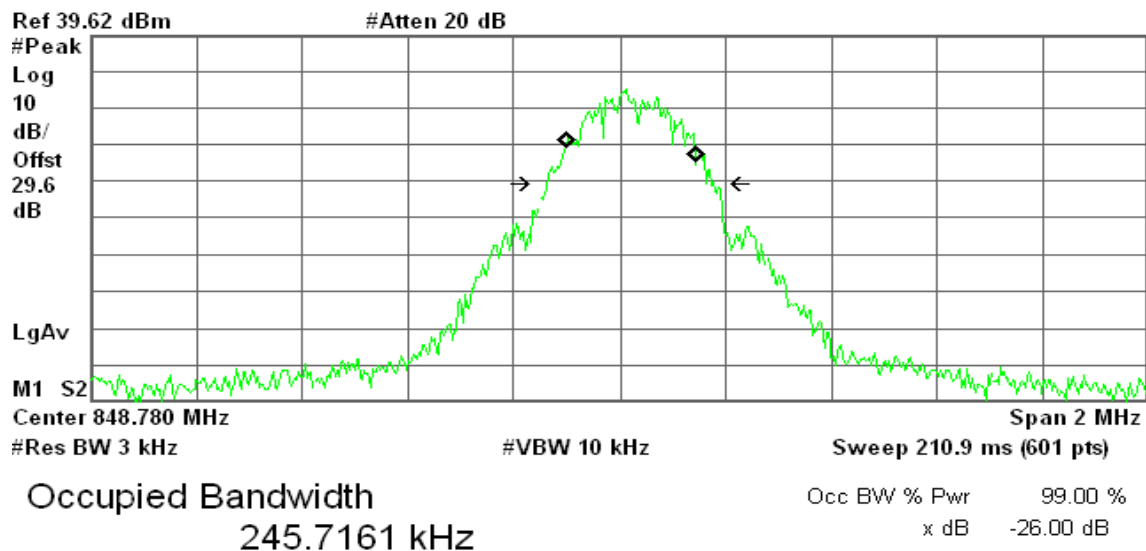


Transmit Freq Error 19.334 kHz  
x dB Bandwidth 317.534 kHz

## GPRS 850(CH High)

Agilent 15:42:23 Oct 14, 2010

R T



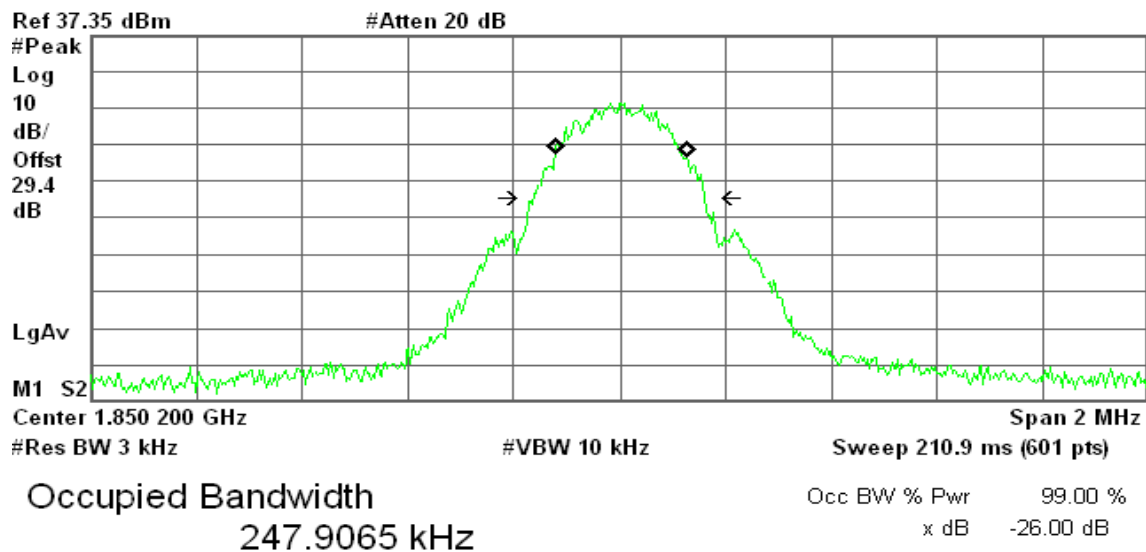
Transmit Freq Error 21.930 kHz  
x dB Bandwidth 313.031 kHz



## GSM 1900 (CH Low)

Agilent 16:42:05 Oct 14, 2010

R T

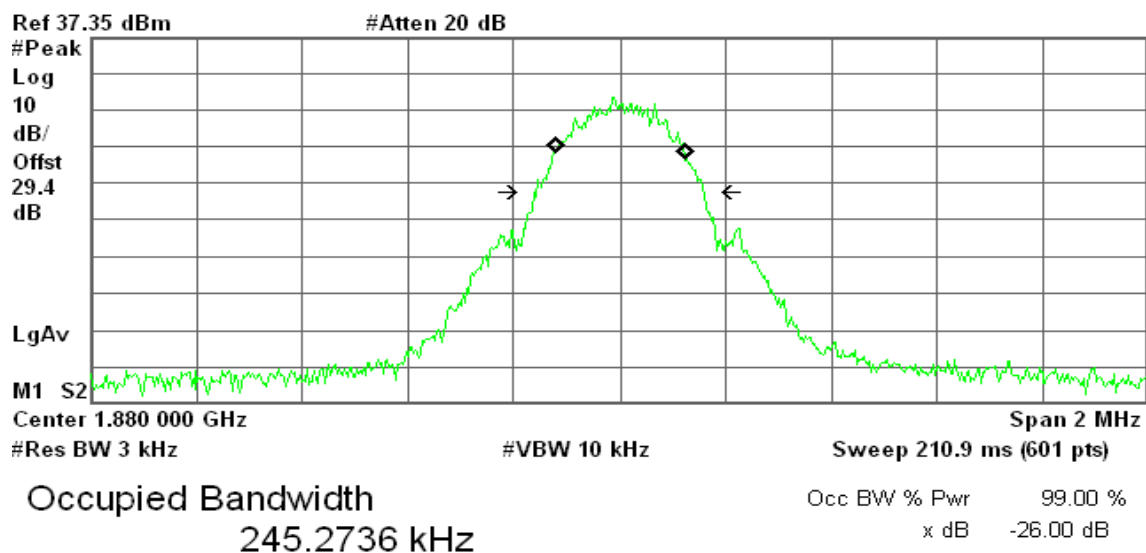


Transmit Freq Error 2.792 kHz  
x dB Bandwidth 321.408 kHz

## GSM 1900 (CH Mid)

Agilent 16:39:42 Oct 14, 2010

R T



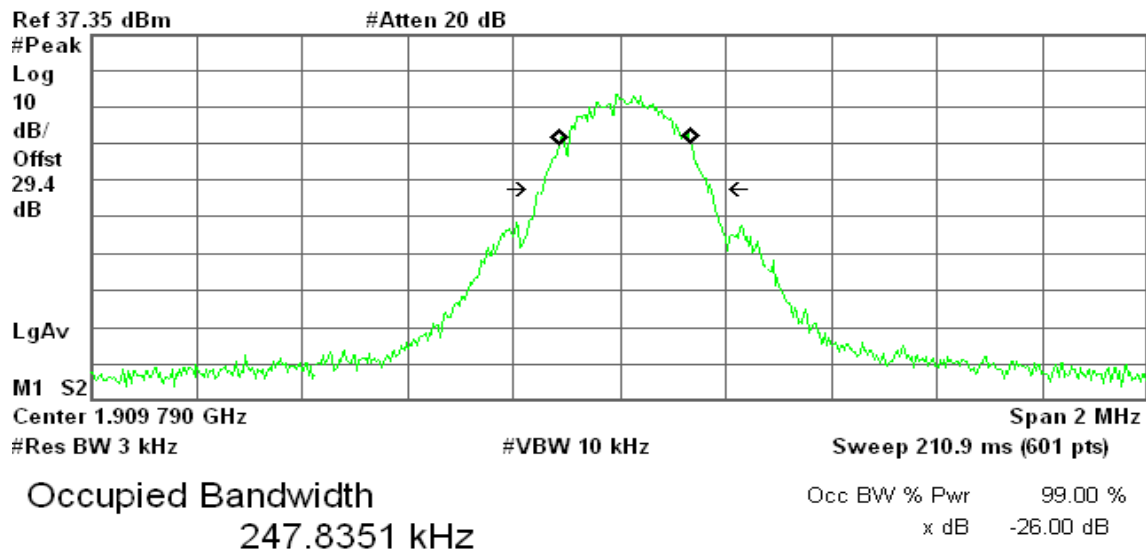
Transmit Freq Error 1.447 kHz  
x dB Bandwidth 319.500 kHz



## GSM 1900 (CH High)

Agilent 16:34:15 Oct 14, 2010

R T

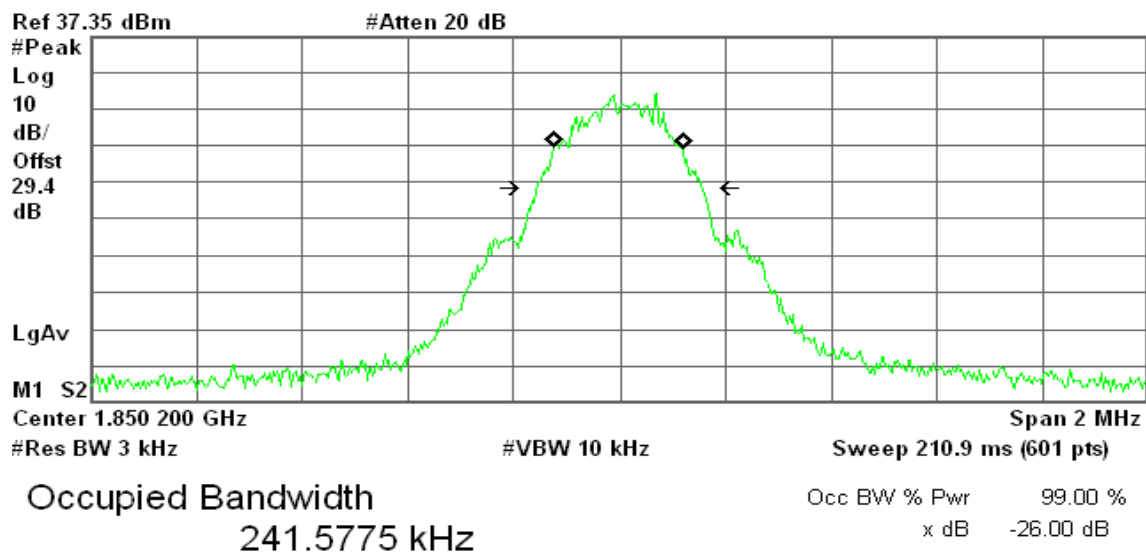


Transmit Freq Error 10.399 kHz  
x dB Bandwidth 316.040 kHz

## GPRS 1900 (CH Low)

Agilent 16:41:43 Oct 14, 2010

R T



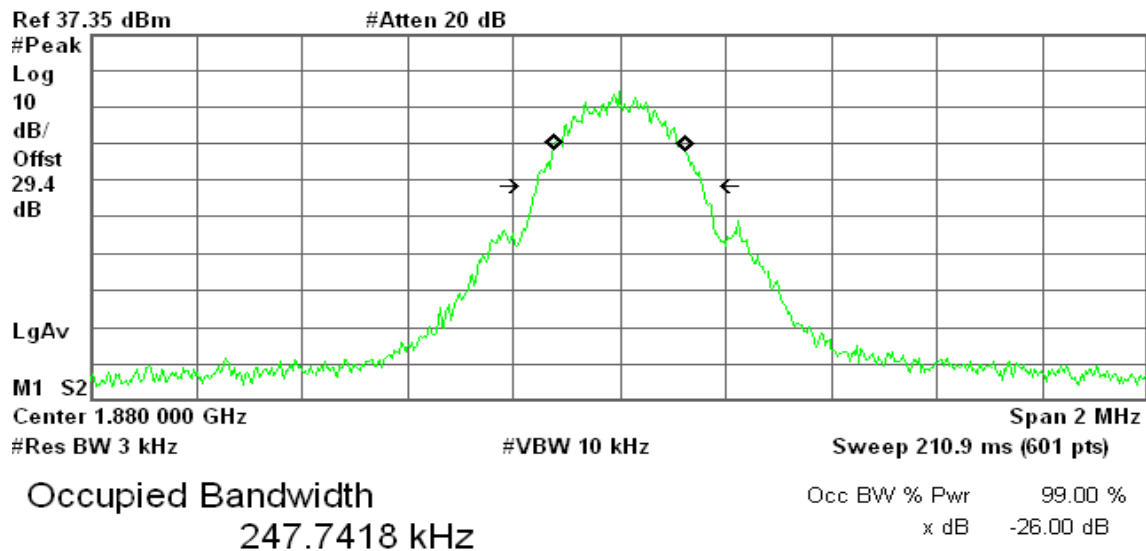
Transmit Freq Error -1.453 kHz  
x dB Bandwidth 311.282 kHz



## GPRS 1900 (CH Mid)

Agilent 16:40:11 Oct 14, 2010

R T

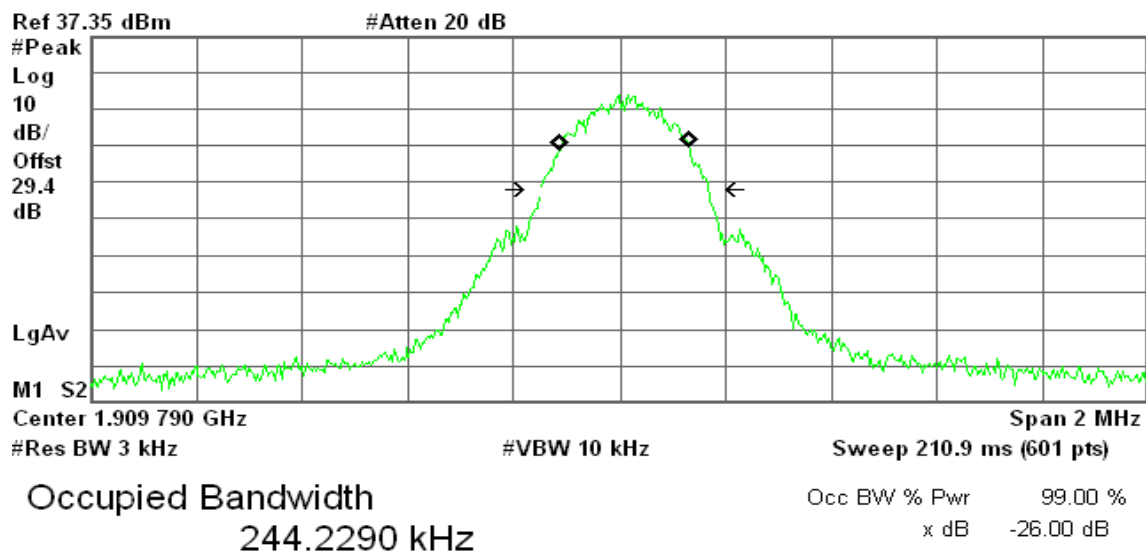


Transmit Freq Error 522.118 Hz  
x dB Bandwidth 311.719 kHz

## GPRS 1900 (CH High)

Agilent 16:34:43 Oct 14, 2010

R T



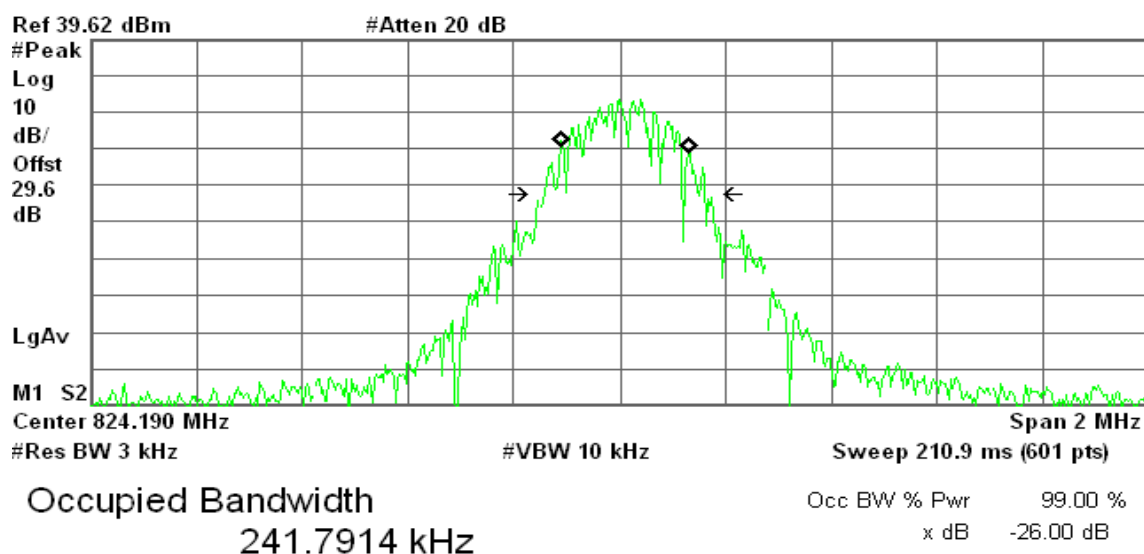
Transmit Freq Error 9.516 kHz  
x dB Bandwidth 316.173 kHz



## EDGE 850 (CH Low)

Agilent 15:44:49 Oct 14, 2010

R T

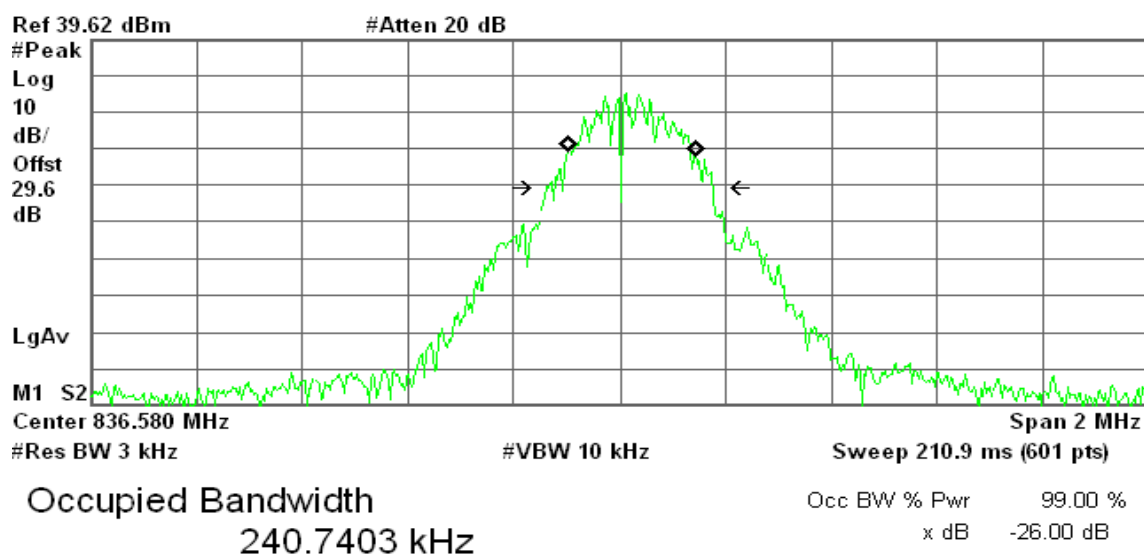


Transmit Freq Error 10.188 kHz  
x dB Bandwidth 303.609 kHz

## EDGE 850 (CH Mid)

Agilent 15:43:22 Oct 14, 2010

R T



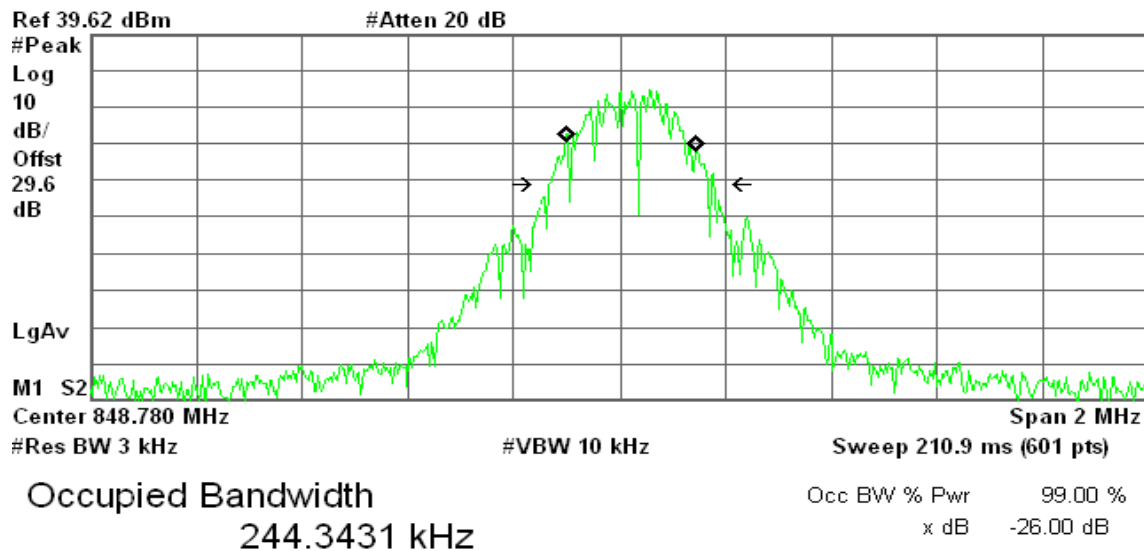
Transmit Freq Error 23.651 kHz  
x dB Bandwidth 307.617 kHz



## EDGE 850 (CH High)

Agilent 15:42:09 Oct 14, 2010

R T

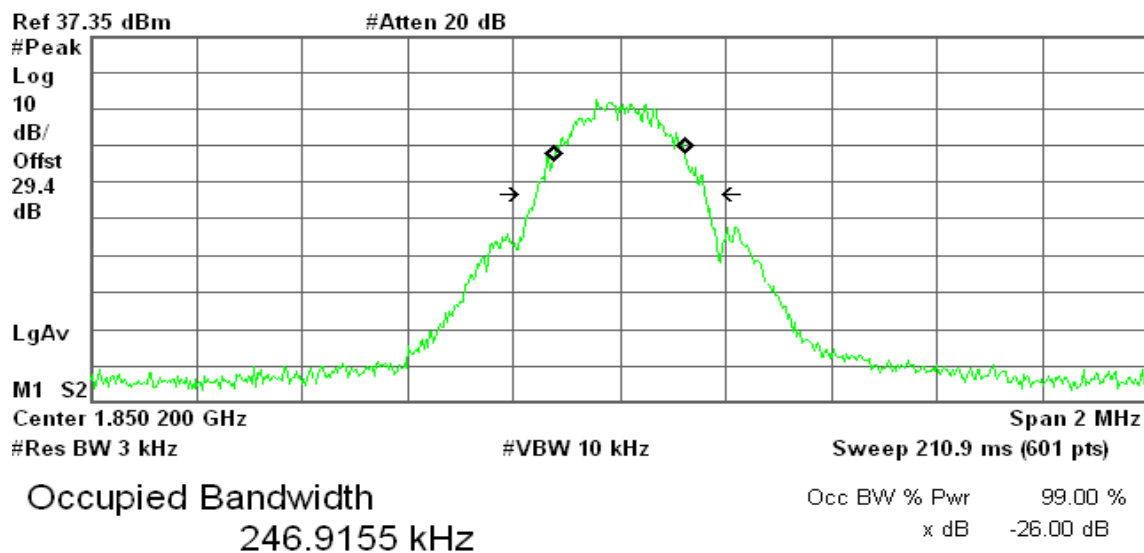


Transmit Freq Error 21.017 kHz  
x dB Bandwidth 312.228 kHz

## EDGE 1900 (CH Low)

Agilent 16:41:16 Oct 14, 2010

R T



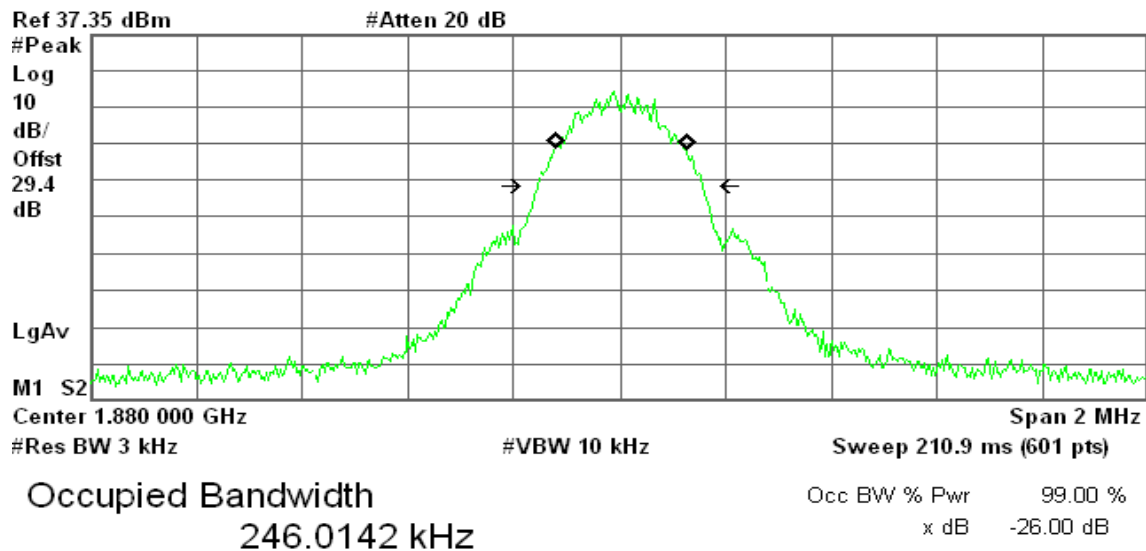
Transmit Freq Error -212.022 Hz  
x dB Bandwidth 316.503 kHz



## EDGE 1900 (CH Mid)

Agilent 16:40:39 Oct 14, 2010

R T

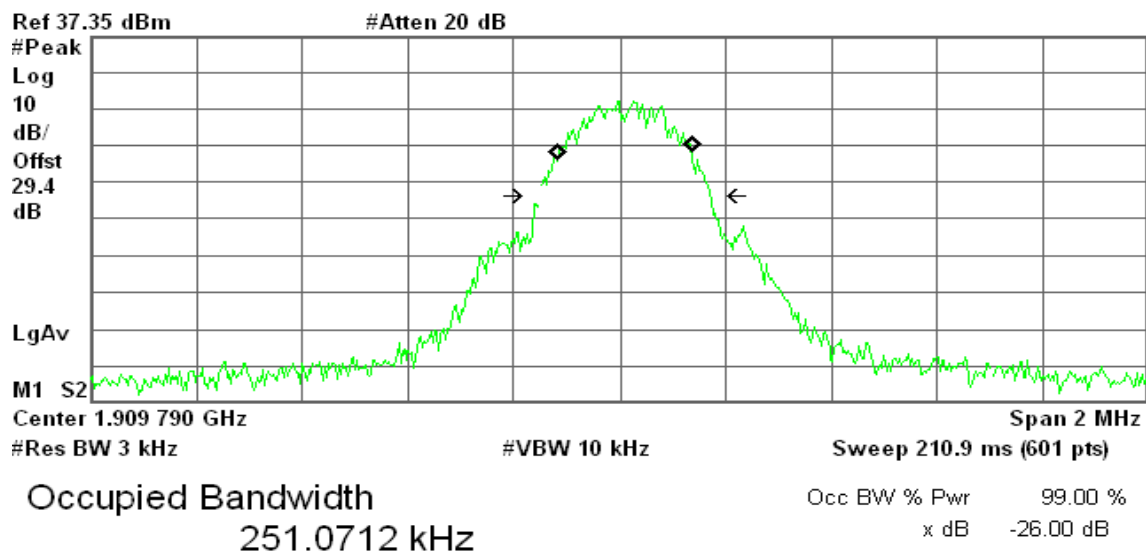


Transmit Freq Error 2.148 kHz  
x dB Bandwidth 309.145 kHz

## EDGE 1900 (CH High)

Agilent 16:35:04 Oct 14, 2010

R T



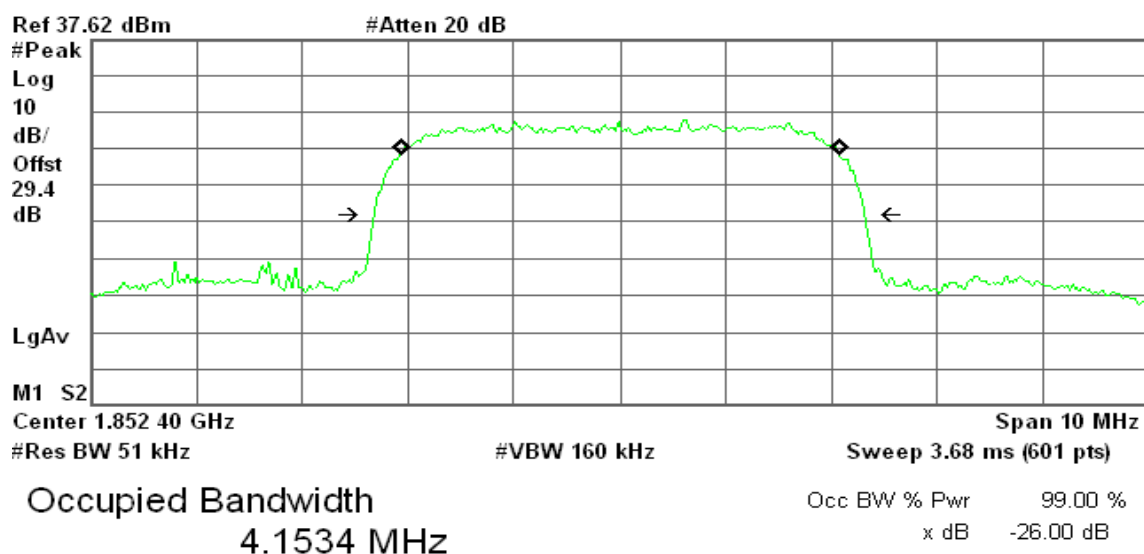
Transmit Freq Error 9.474 kHz  
x dB Bandwidth 320.615 kHz



## WCDMA Band II (CH Low)

Agilent 16:57:17 Oct 14, 2010

R T

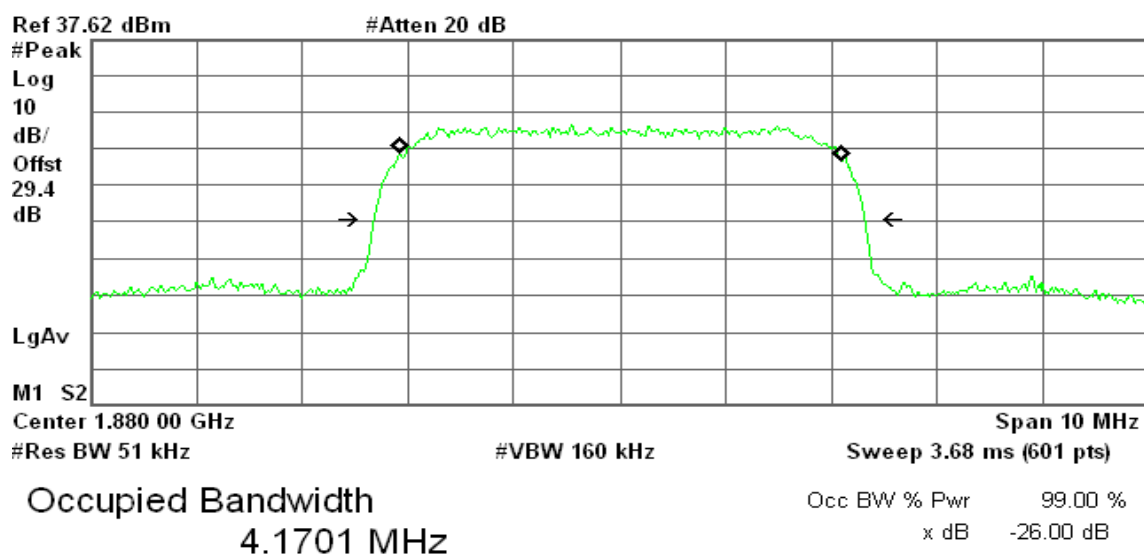


Transmit Freq Error 5.512 kHz  
x dB Bandwidth 4.649 MHz

## WCDMA Band II (CH Mid)

Agilent 17:30:46 Oct 14, 2010

R T



Transmit Freq Error 7.153 kHz  
x dB Bandwidth 4.651 MHz

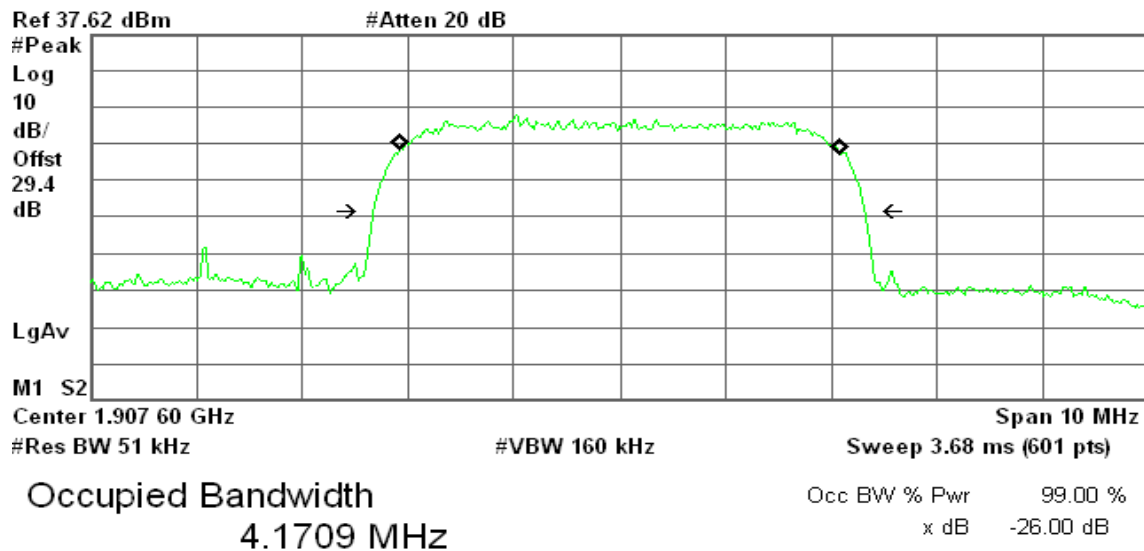




## WCDMA Band II (CH High)

Agilent 17:03:01 Oct 14, 2010

R T

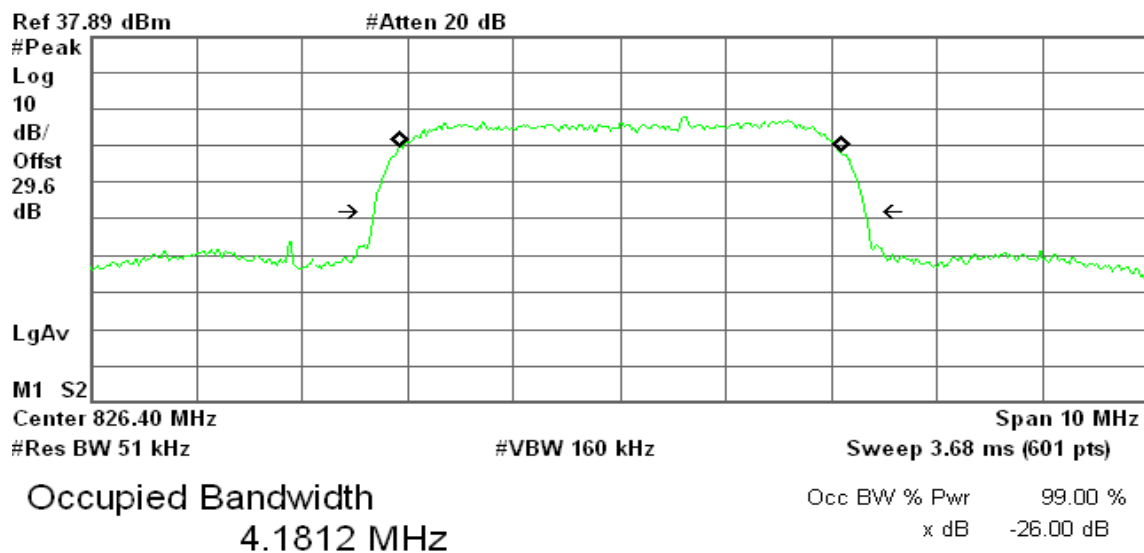


Transmit Freq Error 4.245 kHz  
x dB Bandwidth 4.653 MHz

## WCDMA Band V (CH Low)

Agilent 17:23:40 Oct 14, 2010

R T



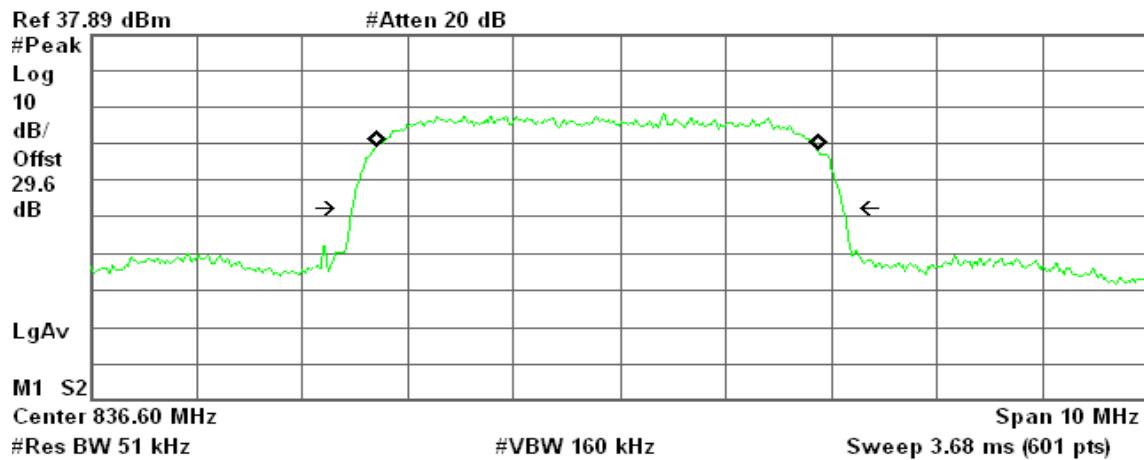
Transmit Freq Error 3.067 kHz  
x dB Bandwidth 4.649 MHz



## WCDMA Band V (CH Mid)

Agilent 17:26:11 Oct 14, 2010

R T

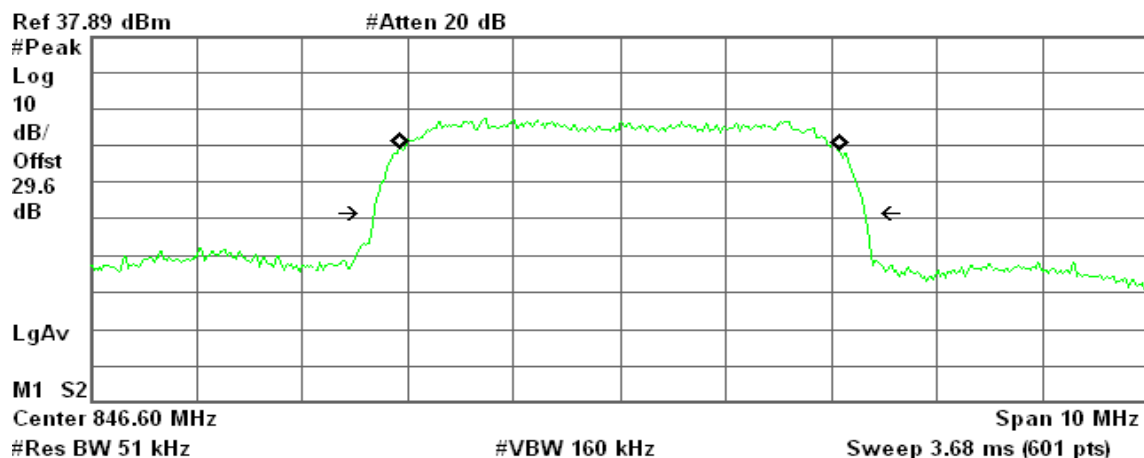


Transmit Freq Error -213.911 kHz  
x dB Bandwidth 4.645 MHz

## WCDMA Band V (CH High)

Agilent 17:26:31 Oct 14, 2010

R T



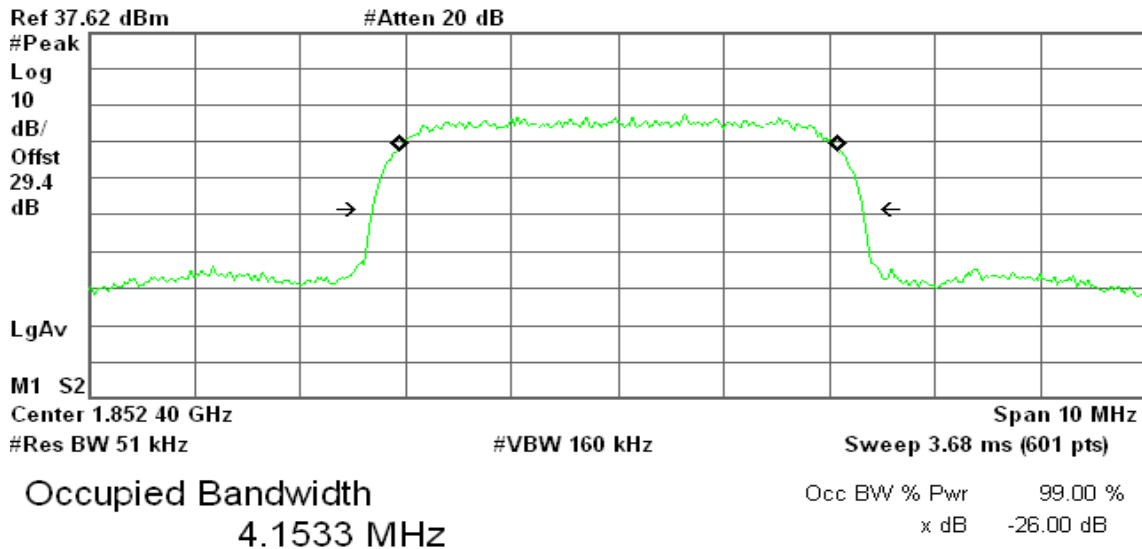
Transmit Freq Error -1.642 kHz  
x dB Bandwidth 4.648 MHz



## WCDMA / HSDPA Band II (CH Low)

Agilent 16:57:39 Oct 14, 2010

R T

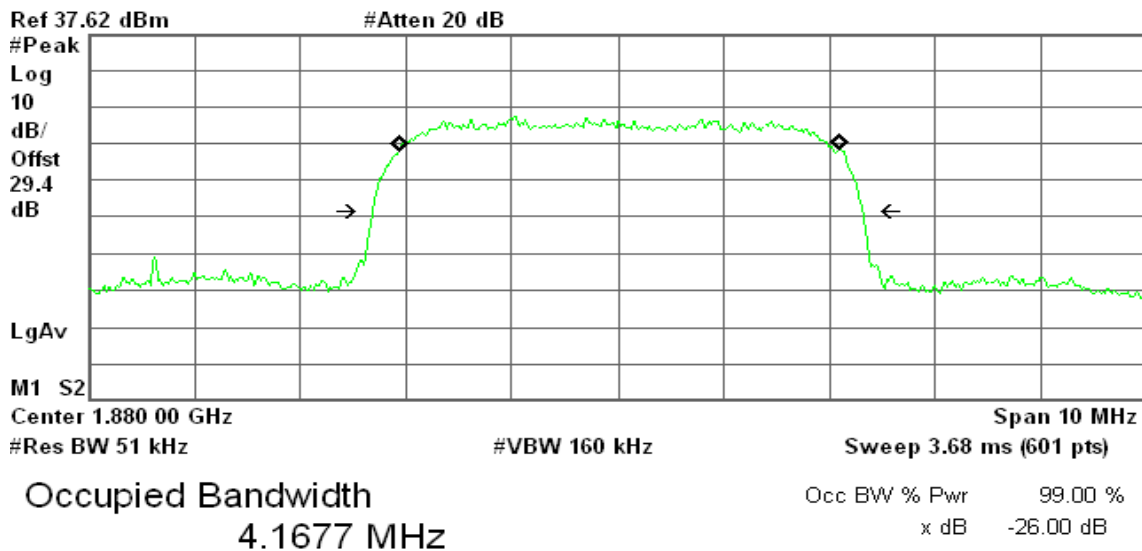


Transmit Freq Error 5.555 kHz  
x dB Bandwidth 4.645 MHz

## WCDMA / HSDPA Band II (CH Mid)

Agilent 17:02:15 Oct 14, 2010

R T



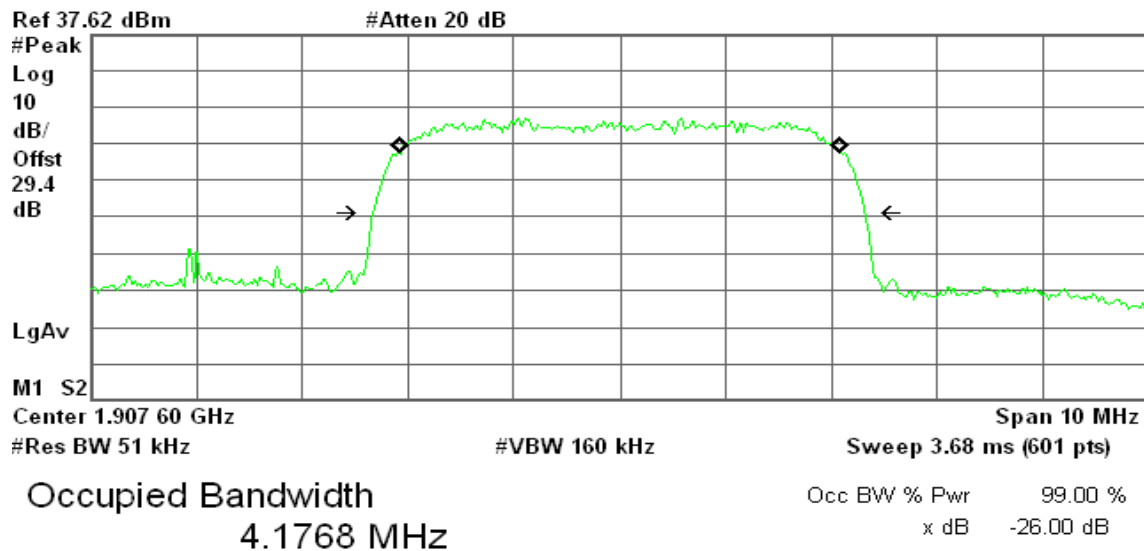
Transmit Freq Error 15.676 kHz  
x dB Bandwidth 4.639 MHz



## WCDMA / HSDPA Band II (CH High)

Agilent 17:02:41 Oct 14, 2010

R T

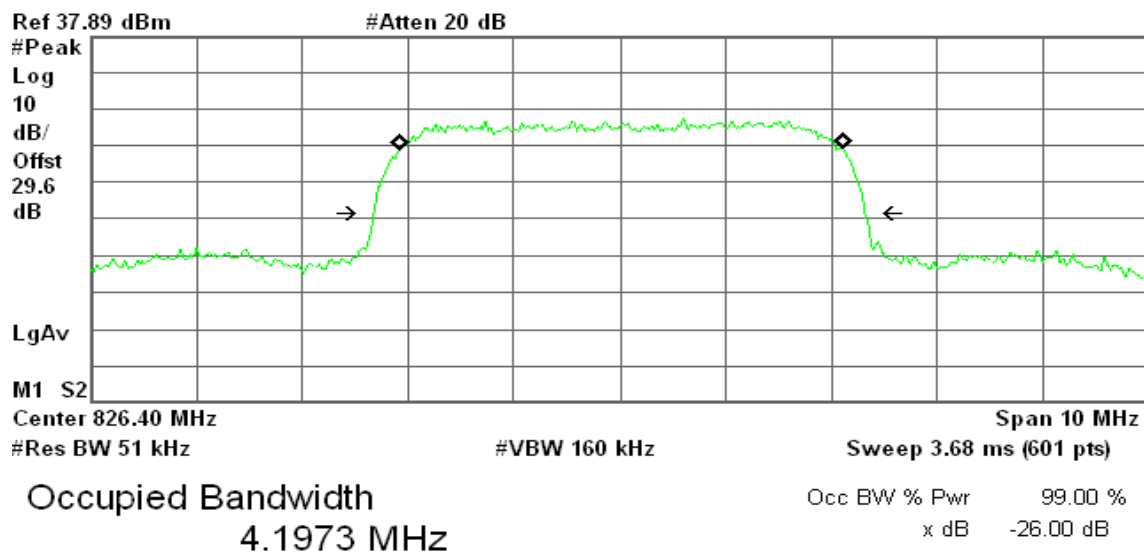


Transmit Freq Error 2.807 kHz  
x dB Bandwidth 4.659 MHz

## WCDMA / HSDPA Band V (CH Low)

Agilent 17:24:01 Oct 14, 2010

R T



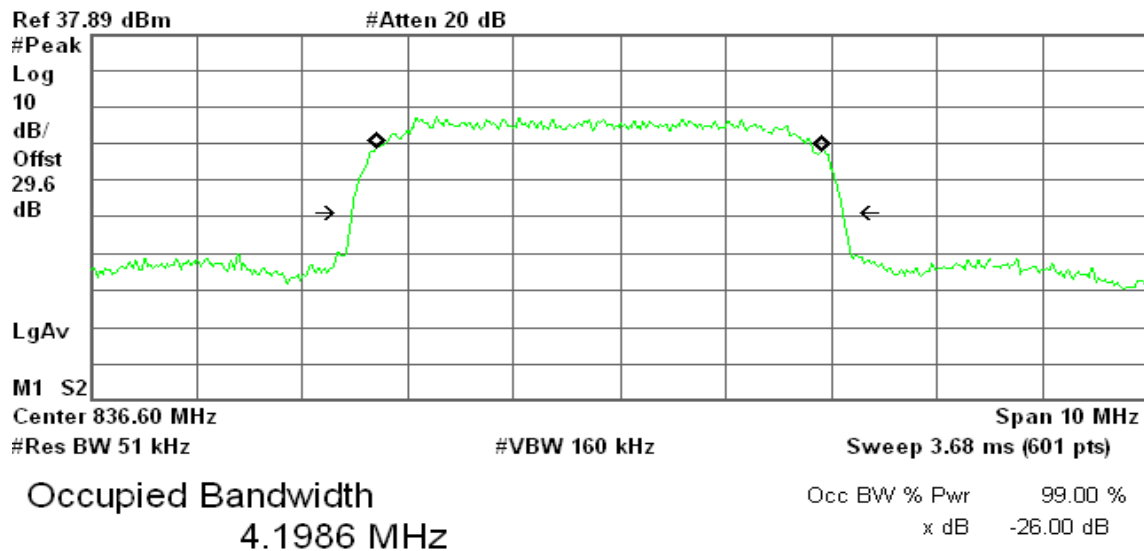
Transmit Freq Error 12.810 kHz  
x dB Bandwidth 4.655 MHz



## WCDMA / HSDPA Band V (CH Mid)

Agilent 17:25:48 Oct 14, 2010

R T

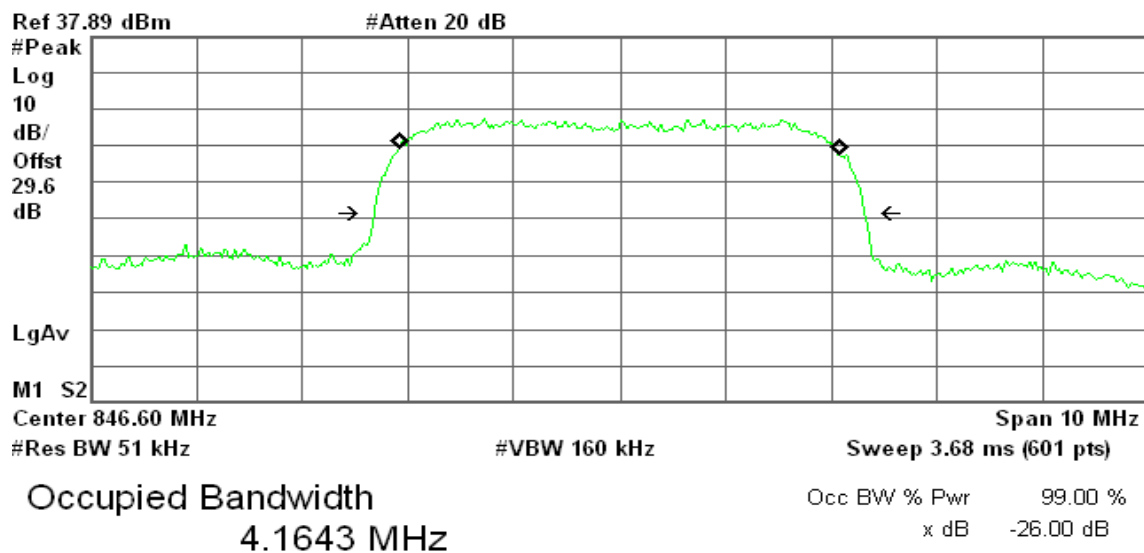


Transmit Freq Error -201.943 kHz  
x dB Bandwidth 4.646 MHz

## WCDMA / HSDPA Band V (CH High)

Agilent 17:26:47 Oct 14, 2010

R T



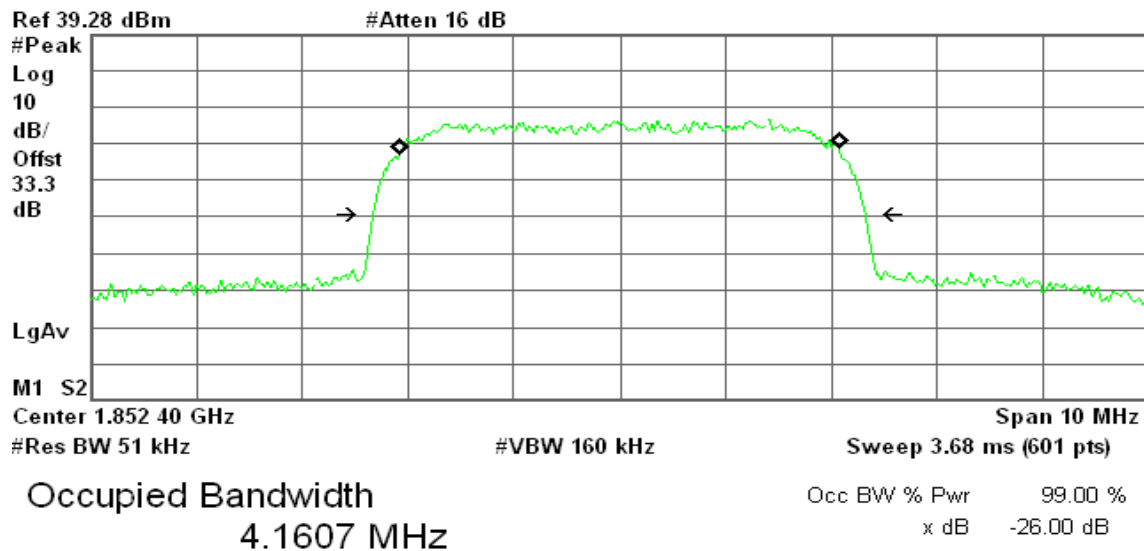
Transmit Freq Error -4.153 kHz  
x dB Bandwidth 4.646 MHz



## WCDMA / HSUPA Band II (CH Low)

Agilent 15:40:43 Oct 20, 2010

R T

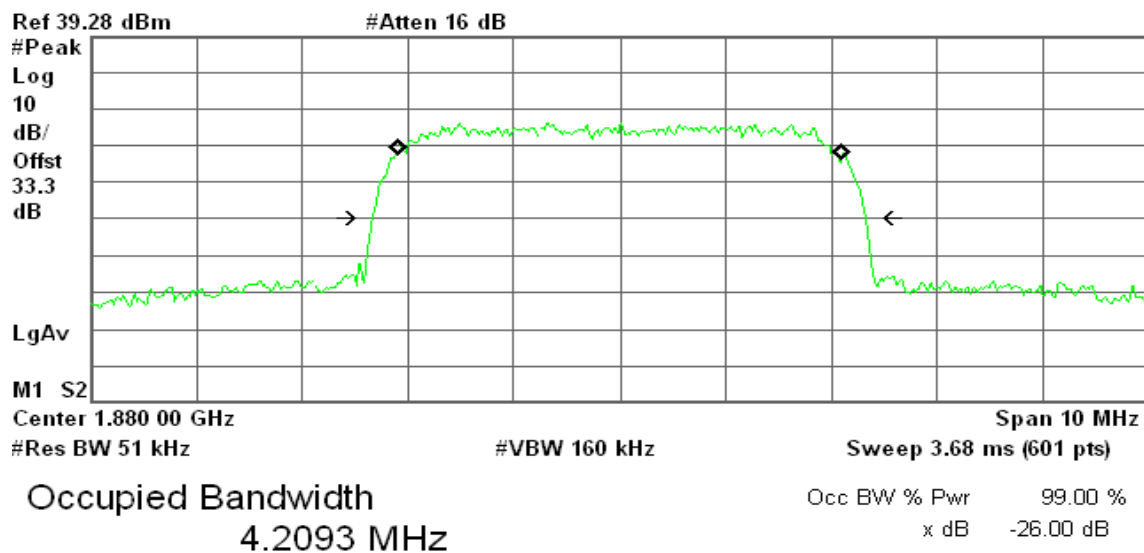


Transmit Freq Error -2.576 kHz  
x dB Bandwidth 4.666 MHz

## WCDMA / HSUPA Band II (CH Mid)

Agilent 15:41:44 Oct 20, 2010

R T



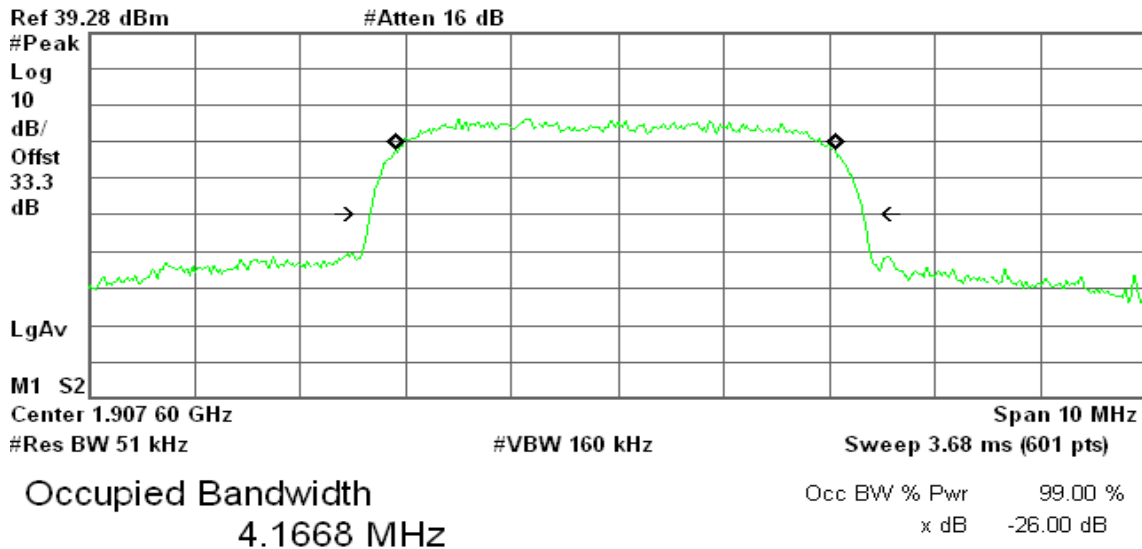
Transmit Freq Error 2.074 kHz  
x dB Bandwidth 4.668 MHz



## WCDMA / HSUPA Band II (CH High)

Agilent 15:43:07 Oct 20, 2010

R T

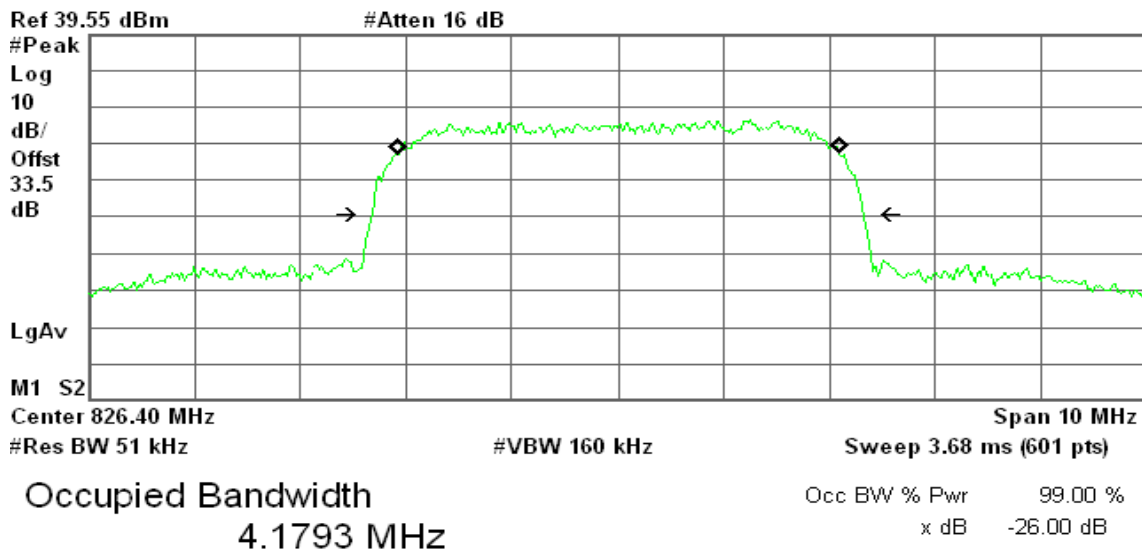


Transmit Freq Error -18.881 kHz  
x dB Bandwidth 4.667 MHz

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

Agilent 15:58:19 Oct 20, 2010

R T



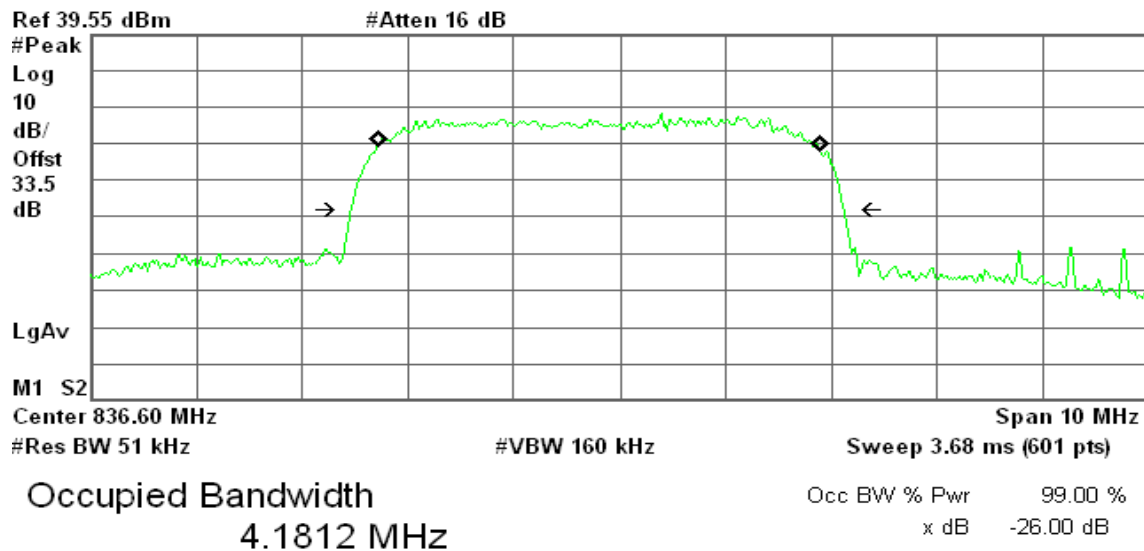
Transmit Freq Error 6.576 kHz  
x dB Bandwidth 4.650 MHz



## WCDMA / HSUPA Band V (CH Mid)

Agilent 15:59:25 Oct 20, 2010

R T

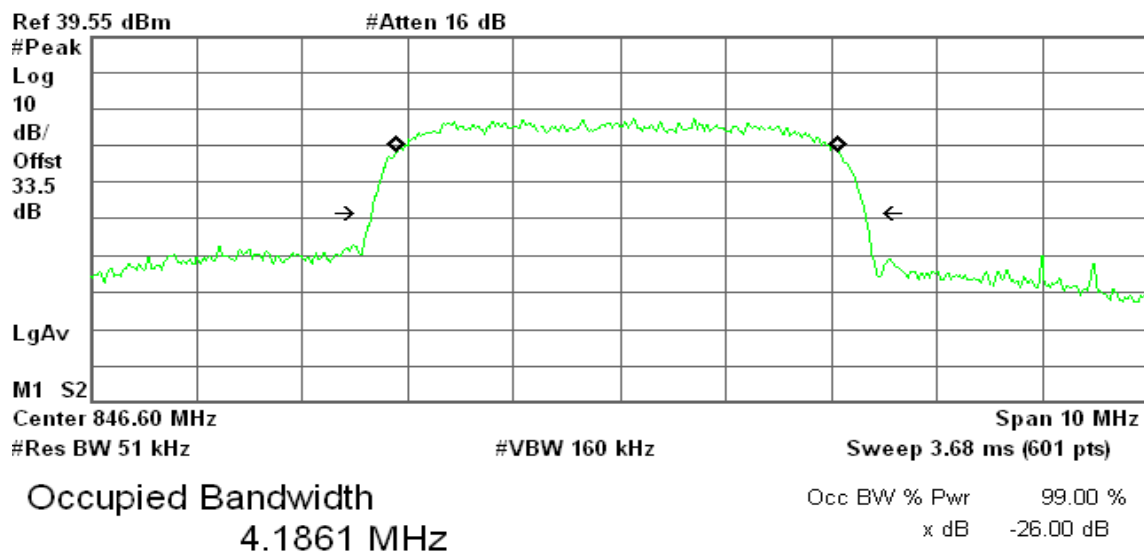


Transmit Freq Error -199.293 kHz  
x dB Bandwidth 4.664 MHz

## WCDMA / HSUPA Band V (CH High)

Agilent 16:01:07 Oct 20, 2010

R T



Transmit Freq Error -21.762 kHz  
x dB Bandwidth 4.675 MHz





## 7.5 OUT OF BAND EMISSION AT ANTENNA TERMINALS

### LIMIT

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

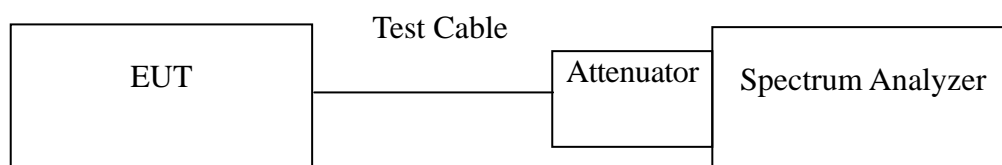
**Out of Band Emissions:** The mean power of emission must be attenuated below the mean power of the non-modulated carrier (P) on any frequency twice or more than twice the fundamental frequency by at least  $43 + 10 \log P$  dB.

**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 = -13dBm

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

### TEST RESULTS

*No non-compliance noted.*

**Test Data**

Mode	CH	Location	Description
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



Mode	CH	Location	Description
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

Mode	CH	Location	Description
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



Mode	CH	Location	Description
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

Mode	CH	Location	Description
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

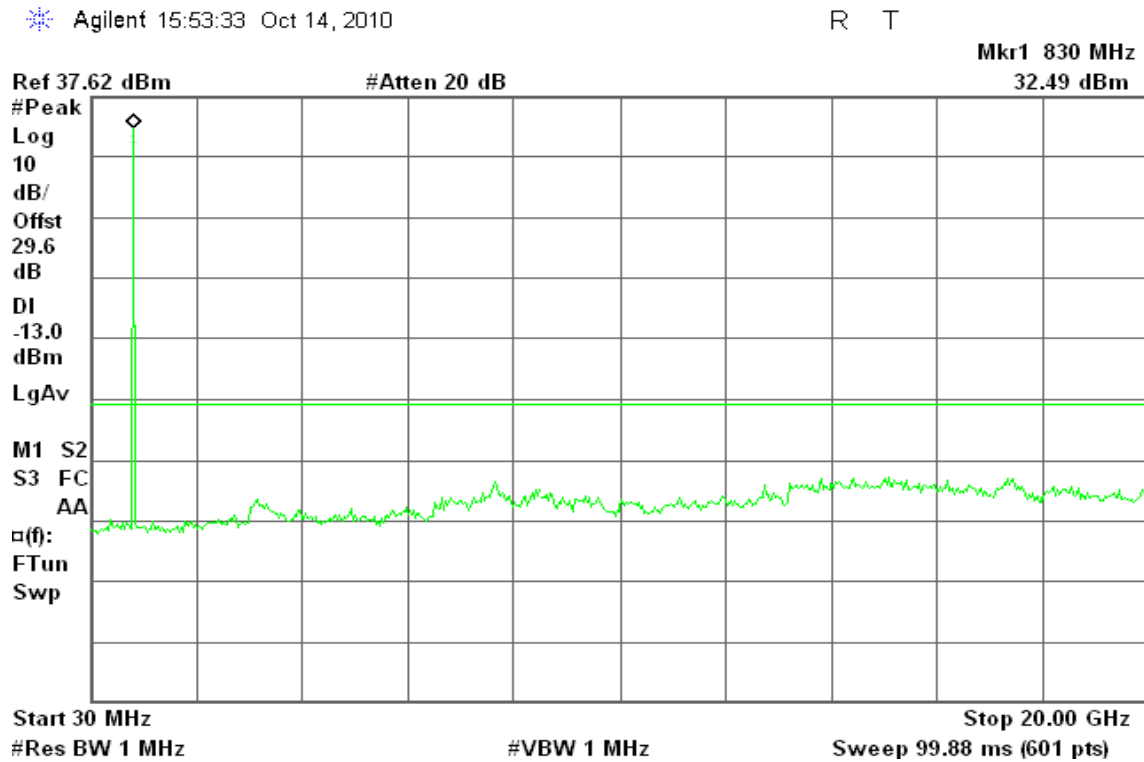


Figure 7-2: Out of Band emission at antenna terminals – GSM CH Mid

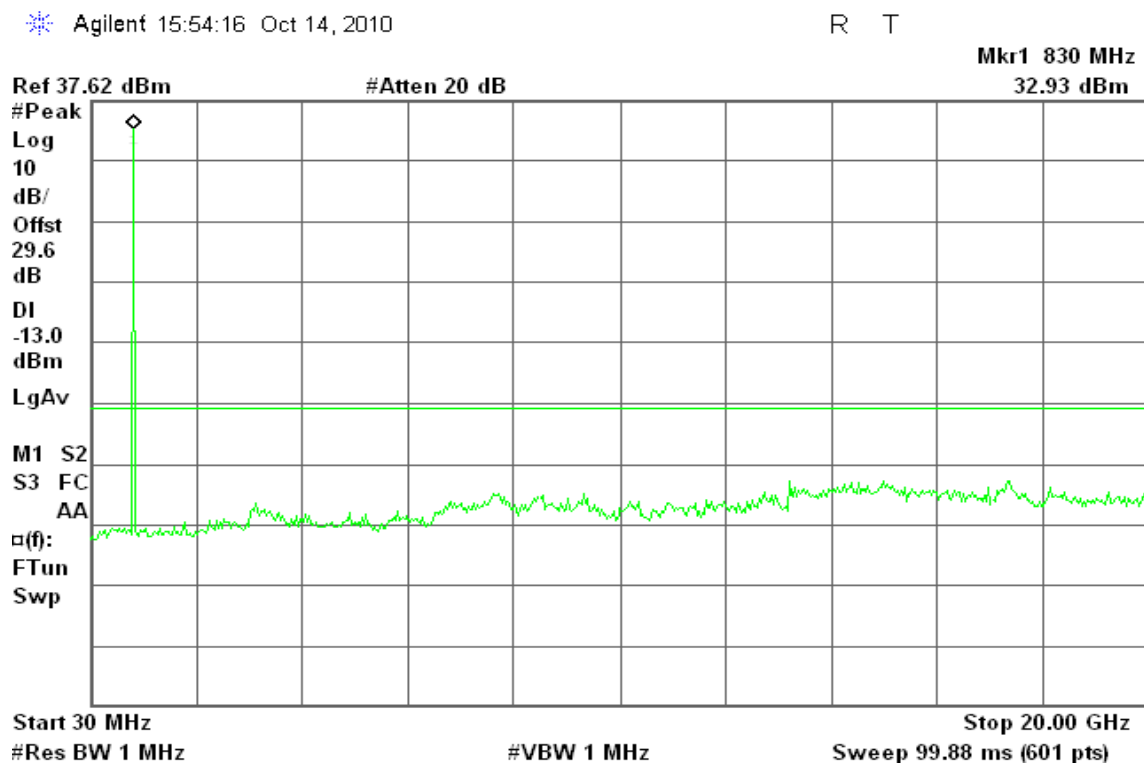
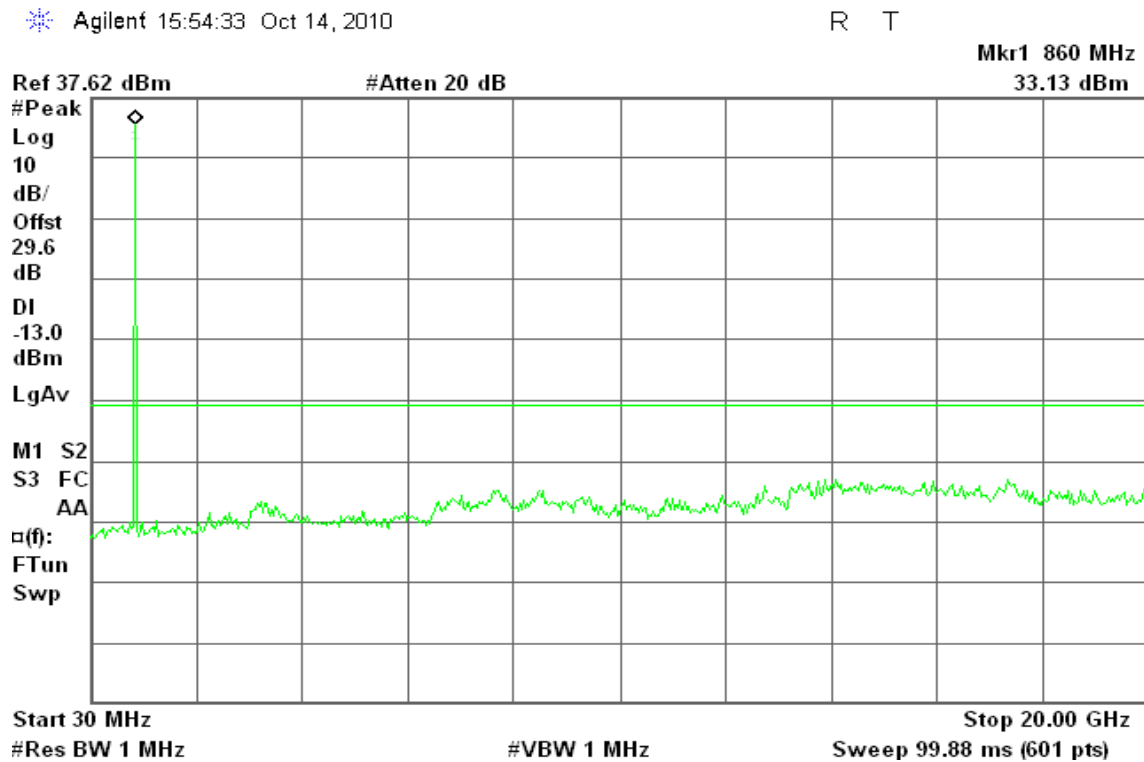




Figure 7-3: Out of Band emission at antenna terminals – GSM CH High



## GPRS 850

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

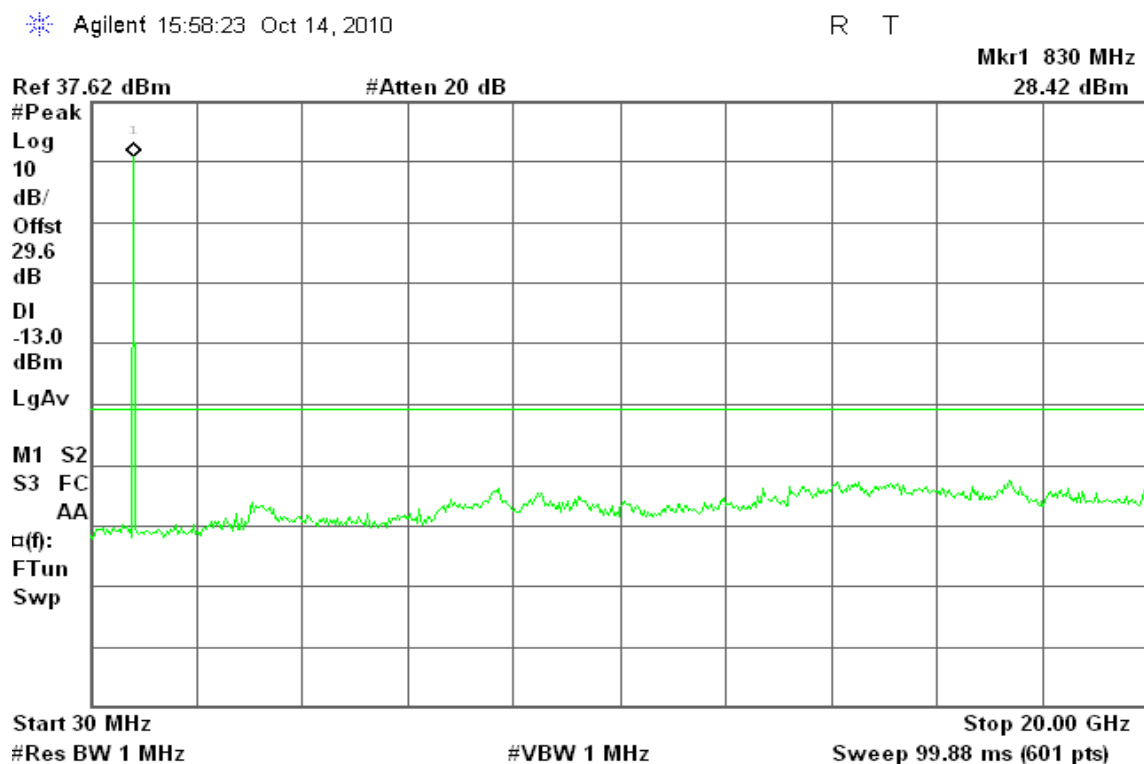




Figure 8-2: Out of Band emission at antenna terminals –GPRS CH Mid

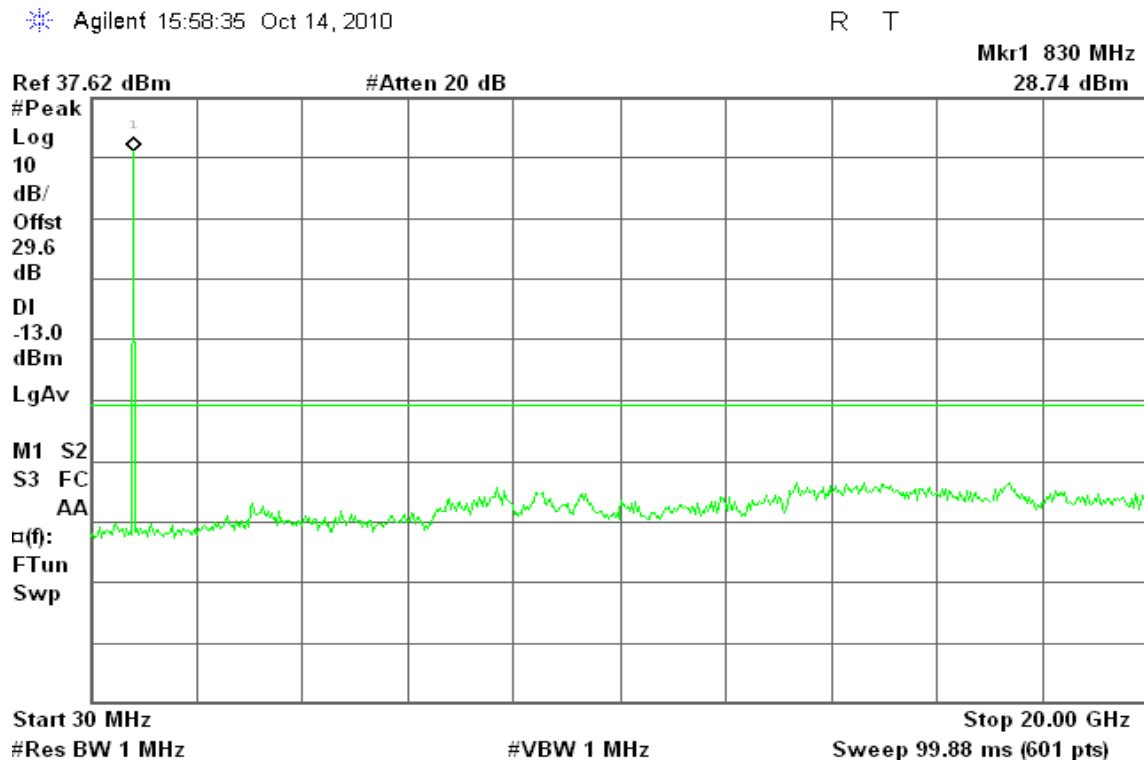
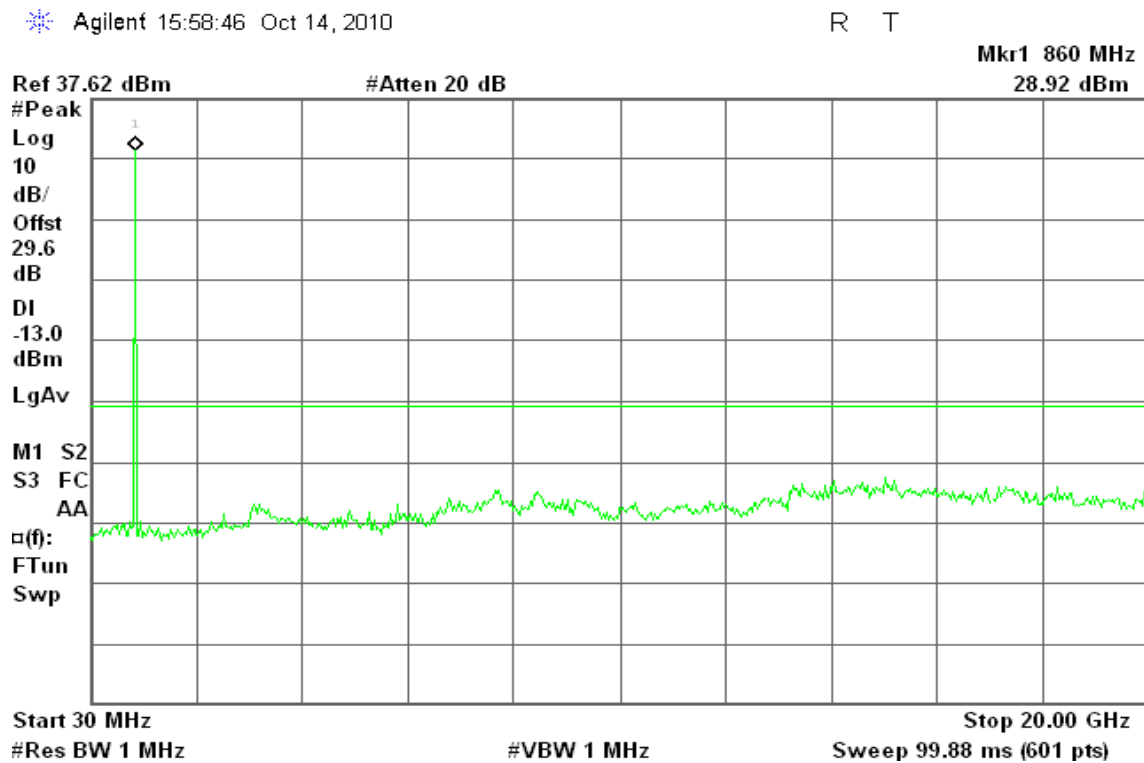


Figure 8-3: Out of Band emission at antenna terminals –GPRS CH High







## GSM 1900

Figure 9-1: Out of Band emission at antenna terminals – GSM CH Low

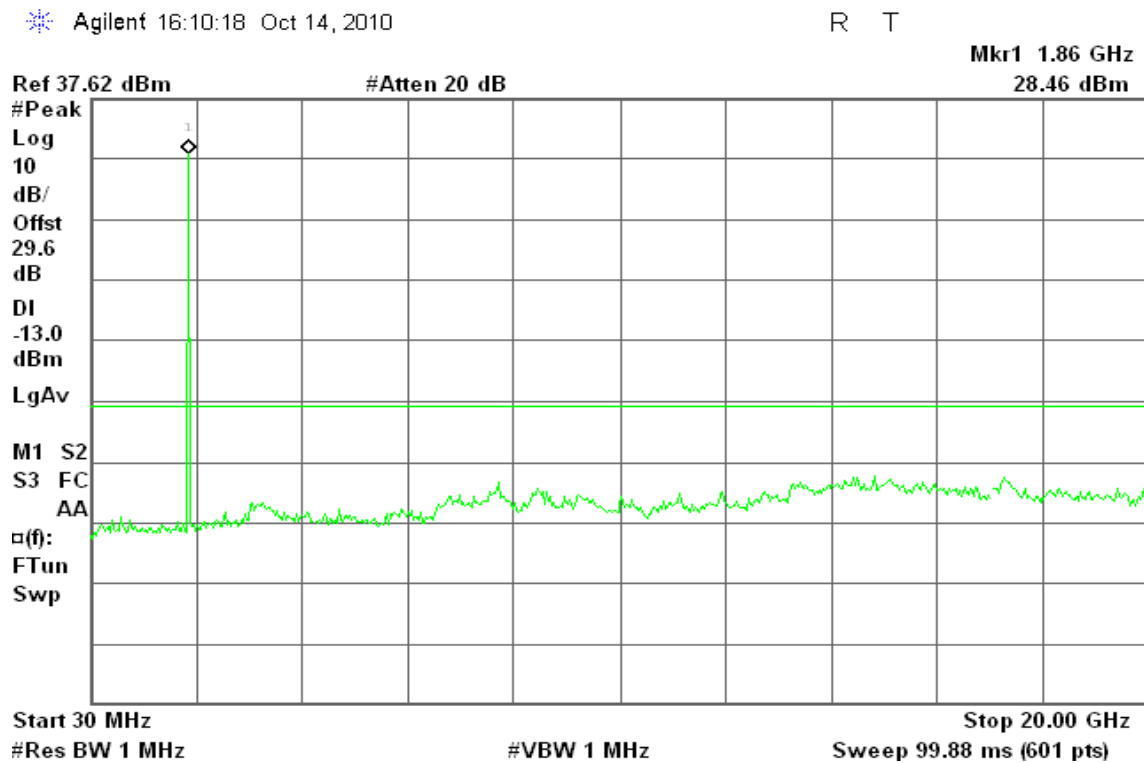


Figure 9-2: Out of Band emission at antenna terminals – GSM CH Mid

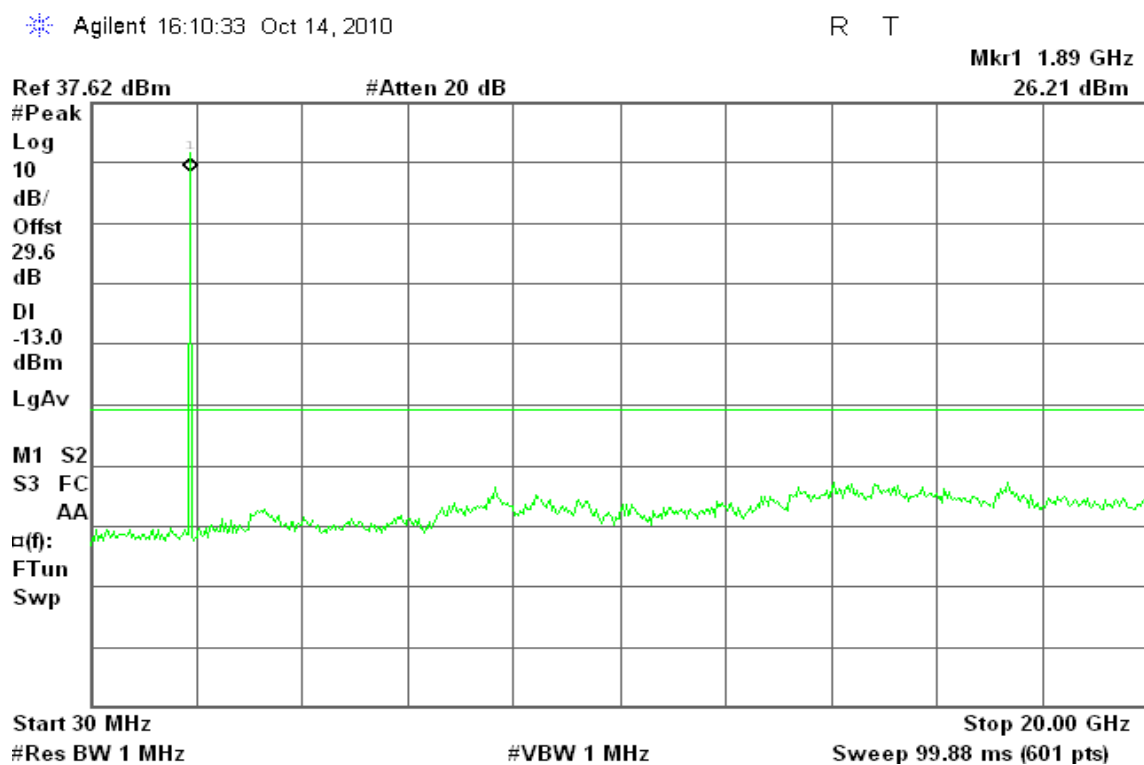
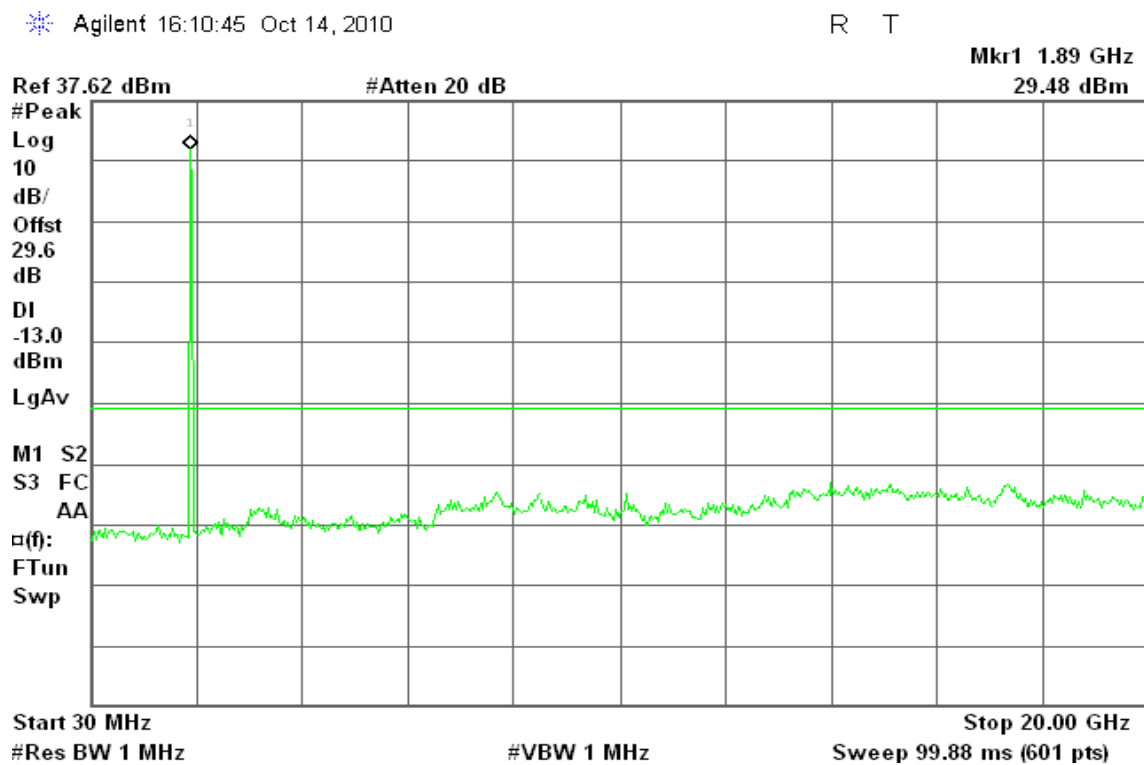




Figure 9-3: Out of Band emission at antenna terminals – GSM CH High



## GPRS 1900

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

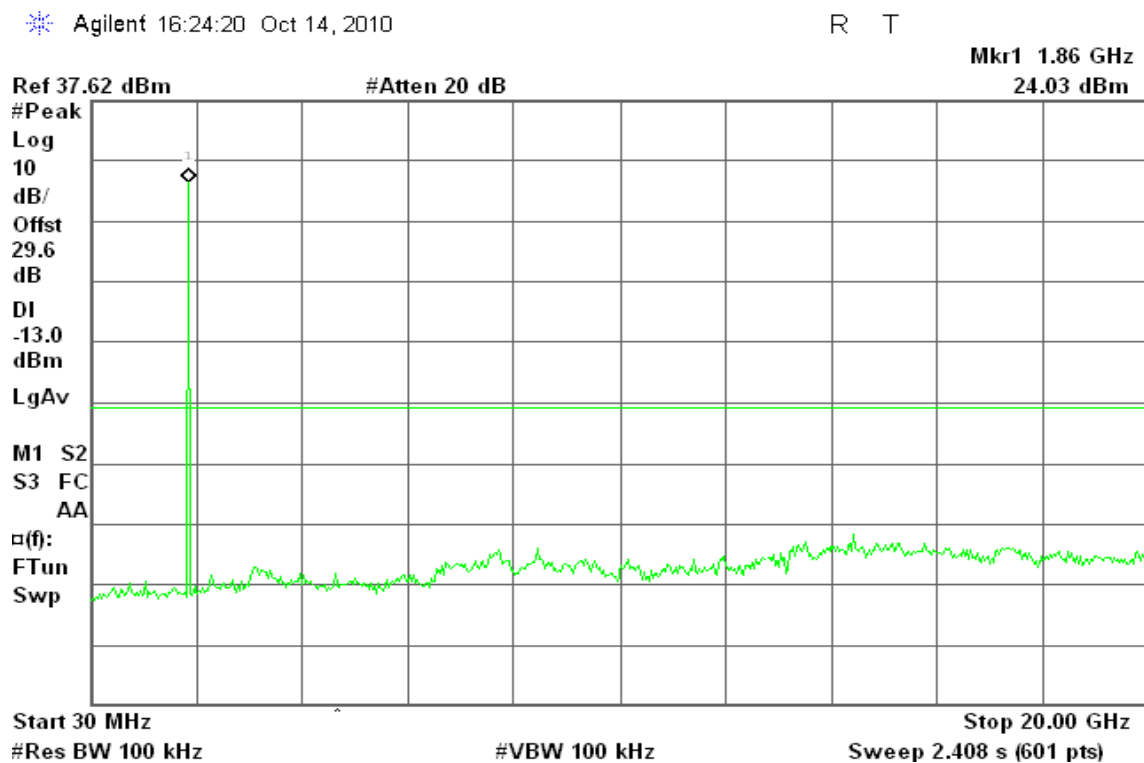




Figure 10-2: Out of Band emission at antenna terminals –GPRS CH Mid

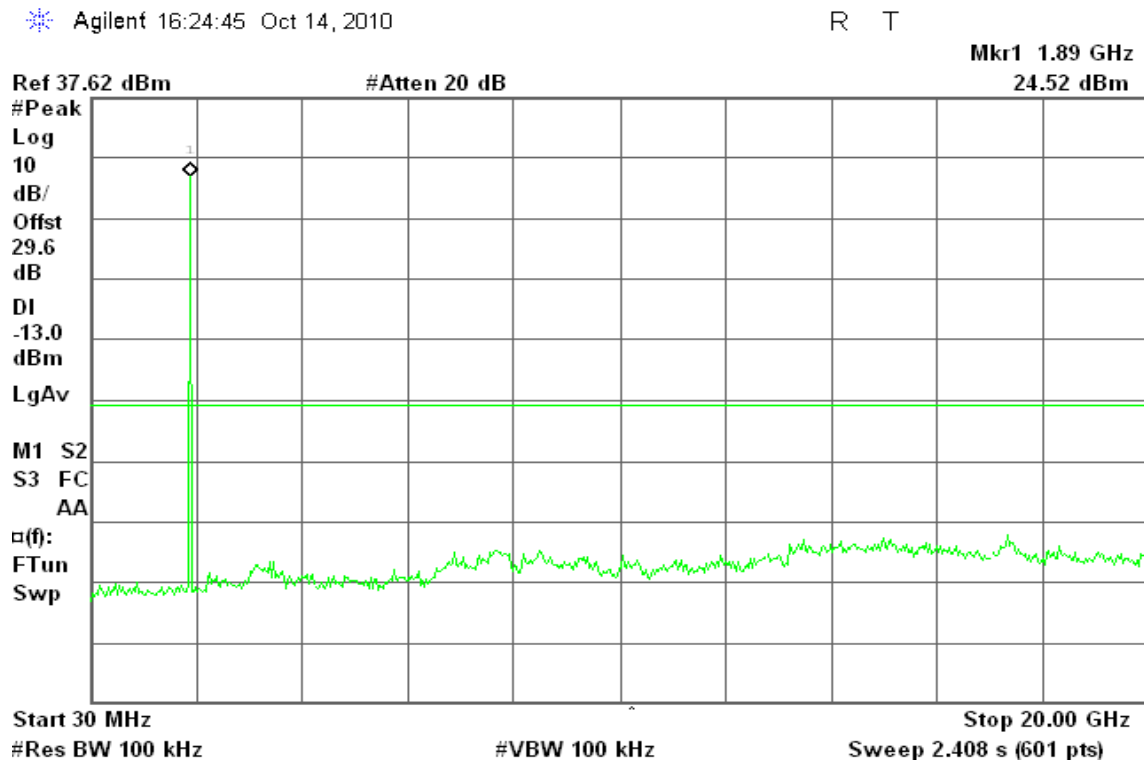
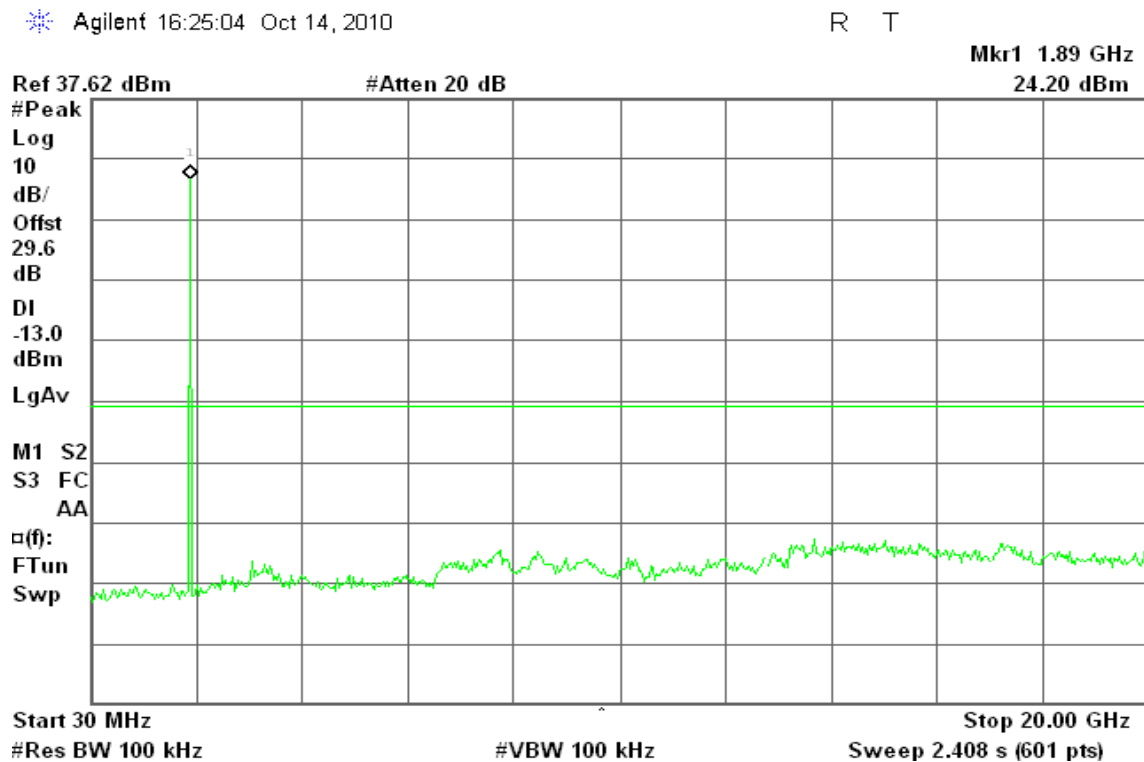


Figure 10-3: Out of Band emission at antenna terminals –GPRS CH High





## GSM 850

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

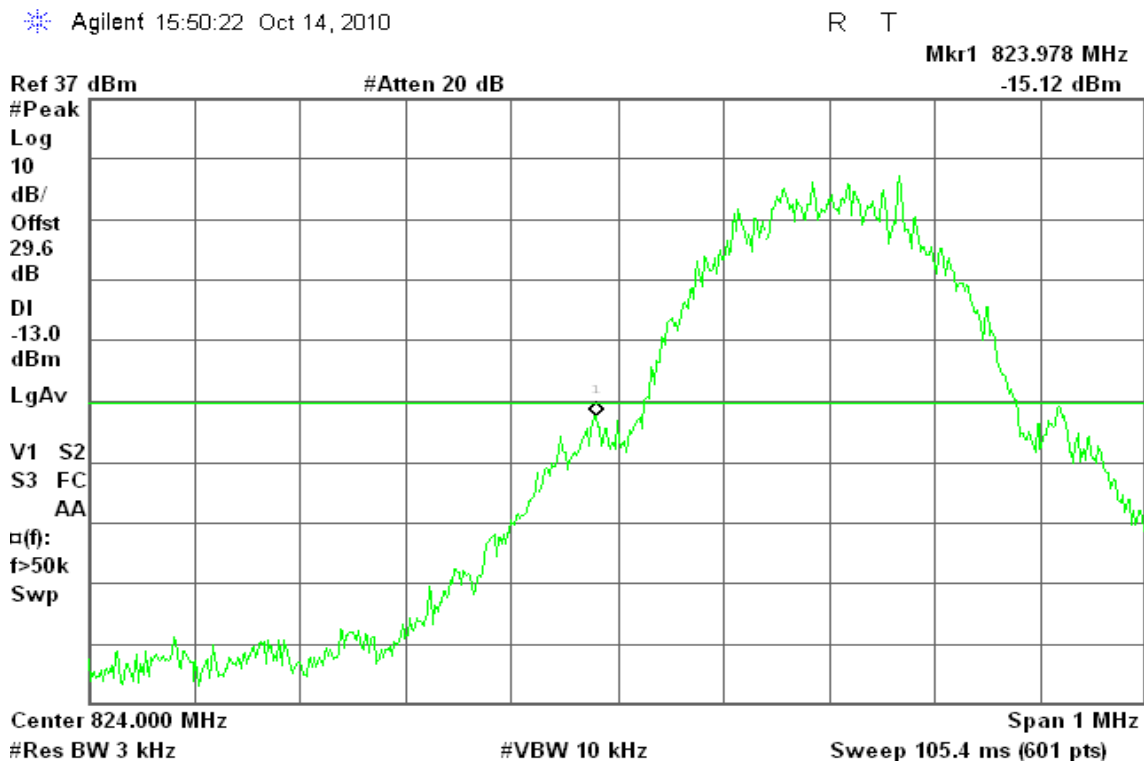
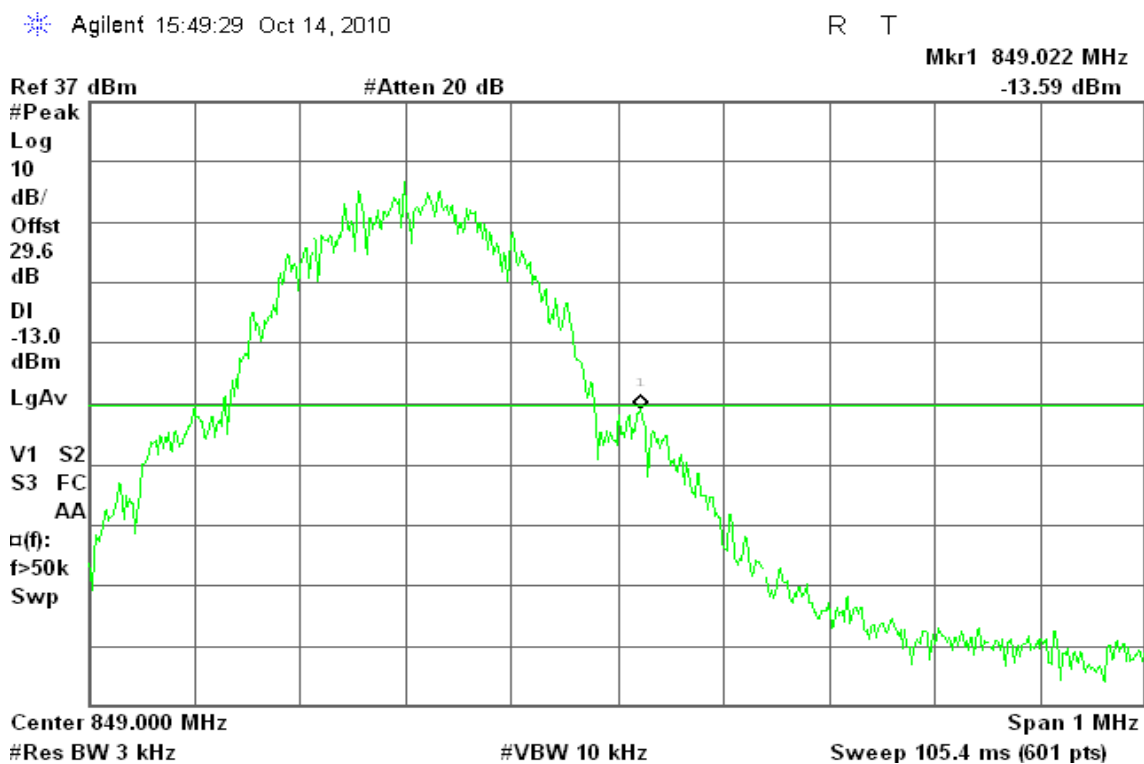


Figure 11-2: Band Edge emissions – GSM CH High





## GPRS 850

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

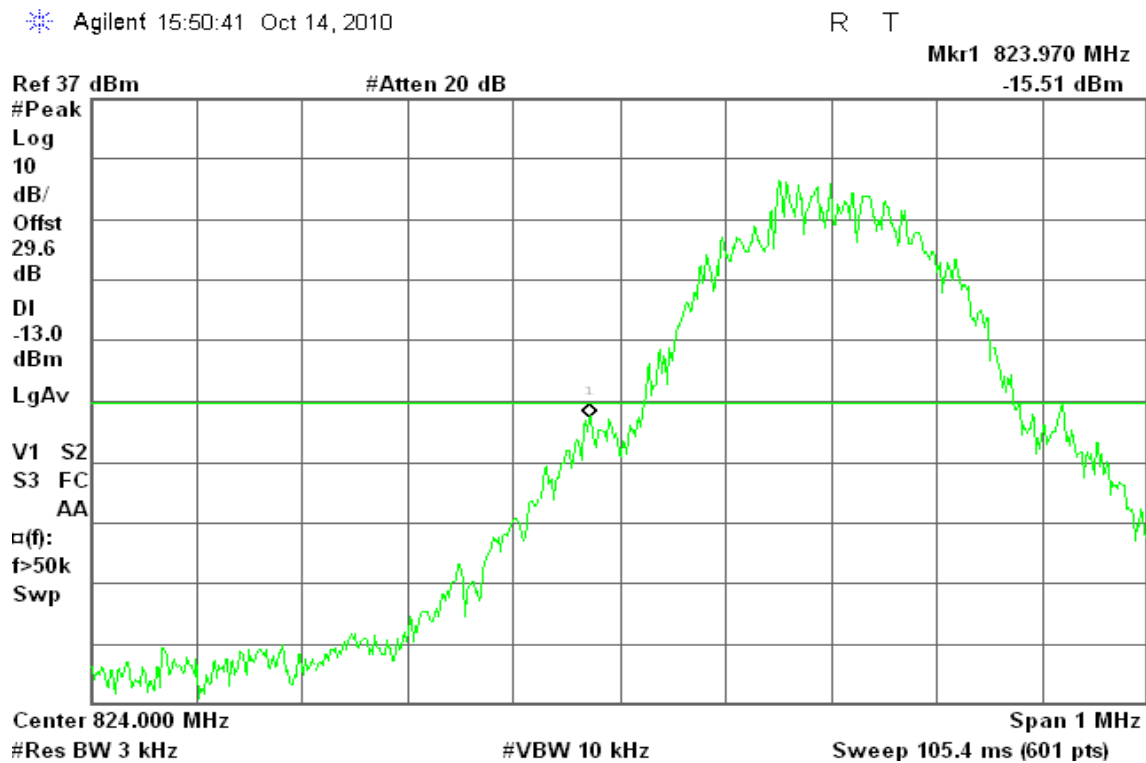
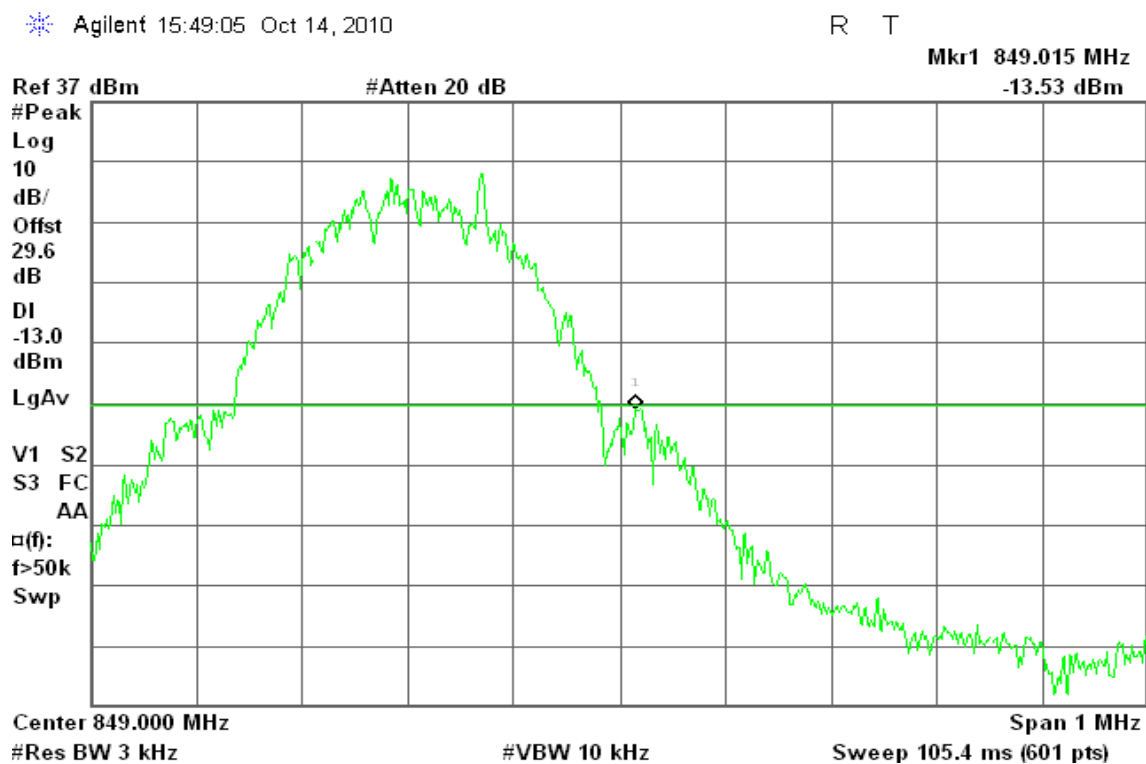


Figure 12-2: Band Edge emissions –GPRS CH High





## GSM 1900

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

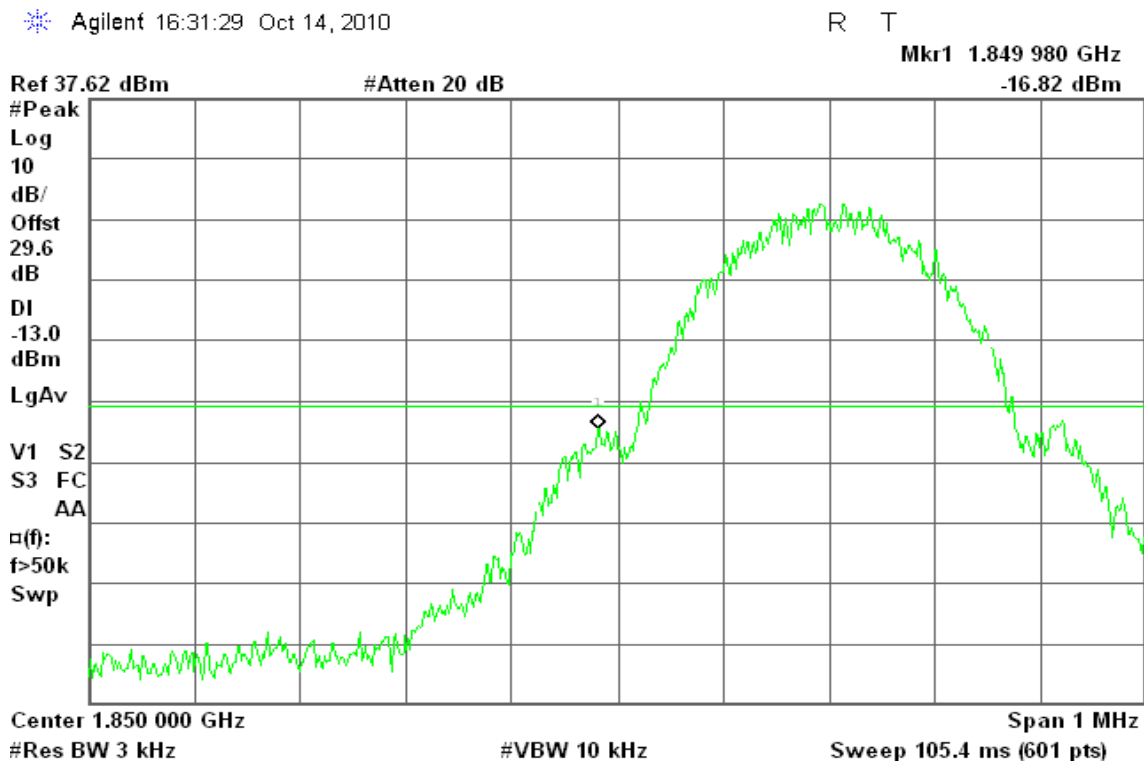
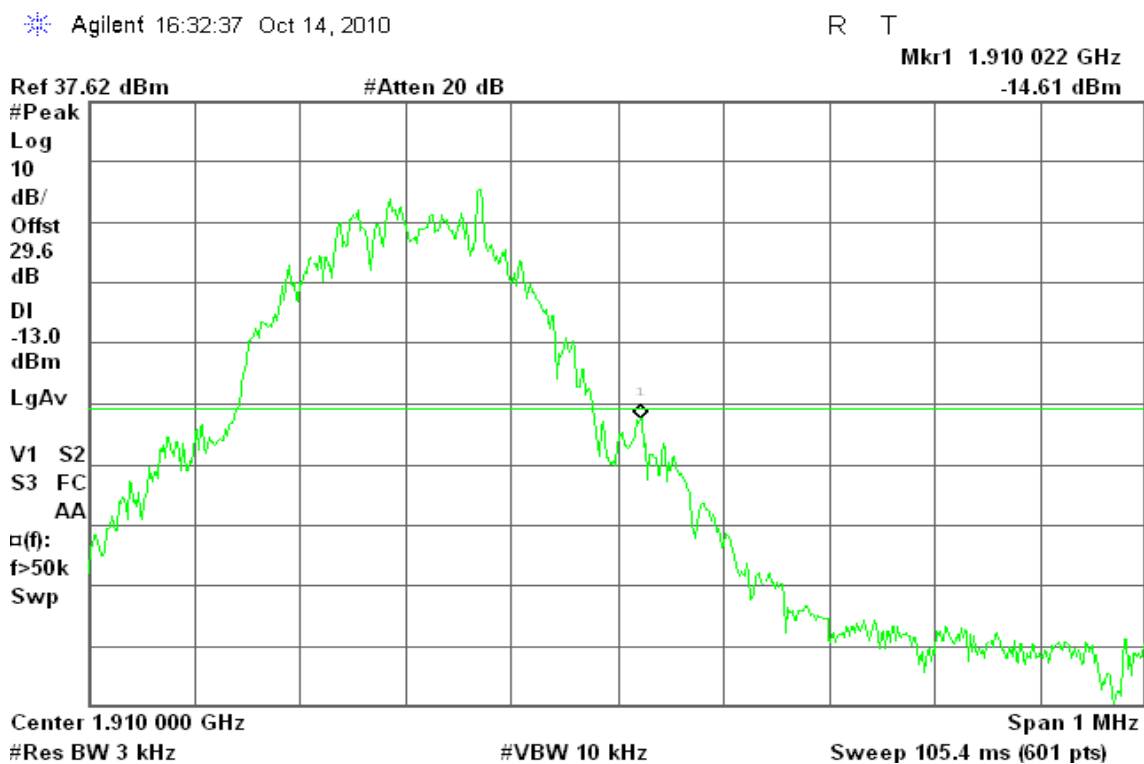


Figure 13-2: Band Edge emissions – GSM CH High





## GPRS 1900

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

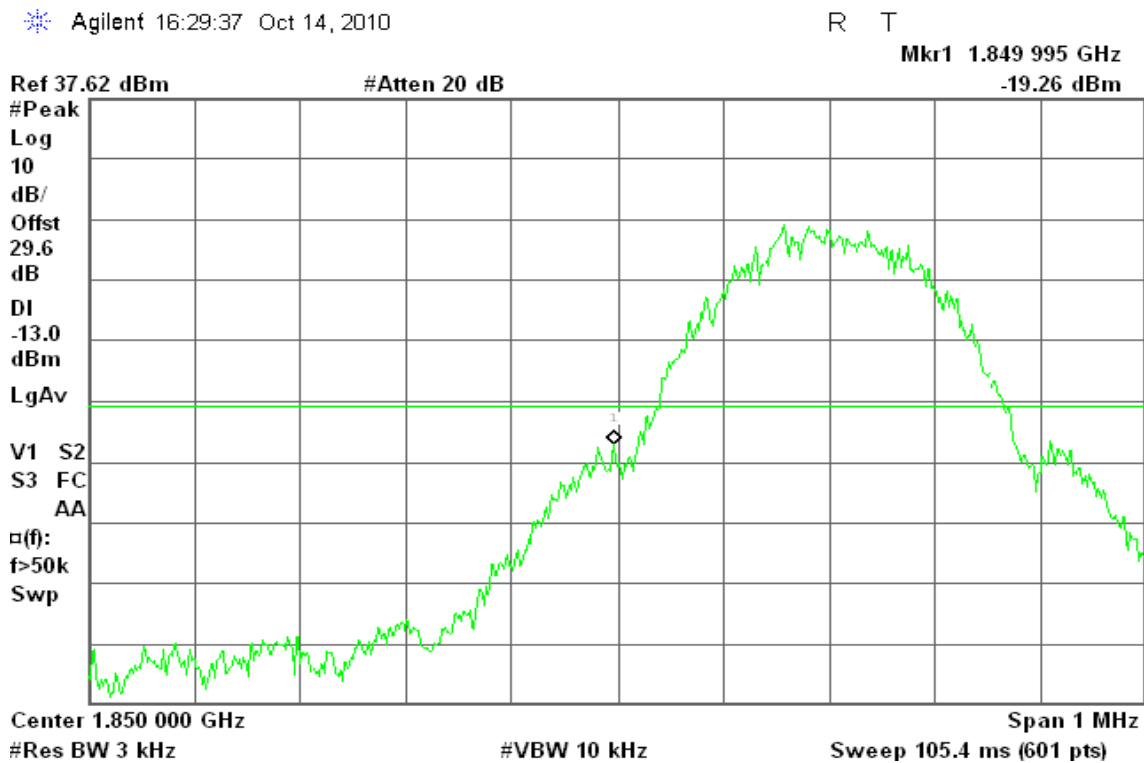
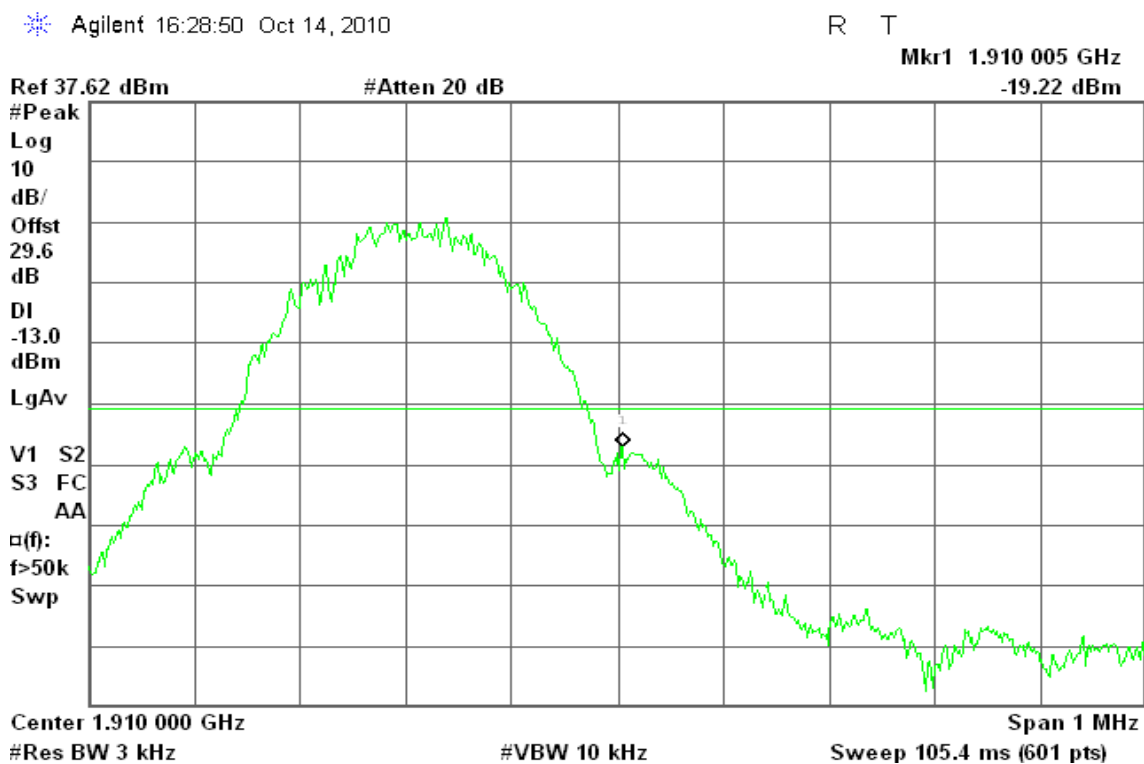


Figure 14-2: Band Edge emissions – GPRS CH High





## EDGE 850

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

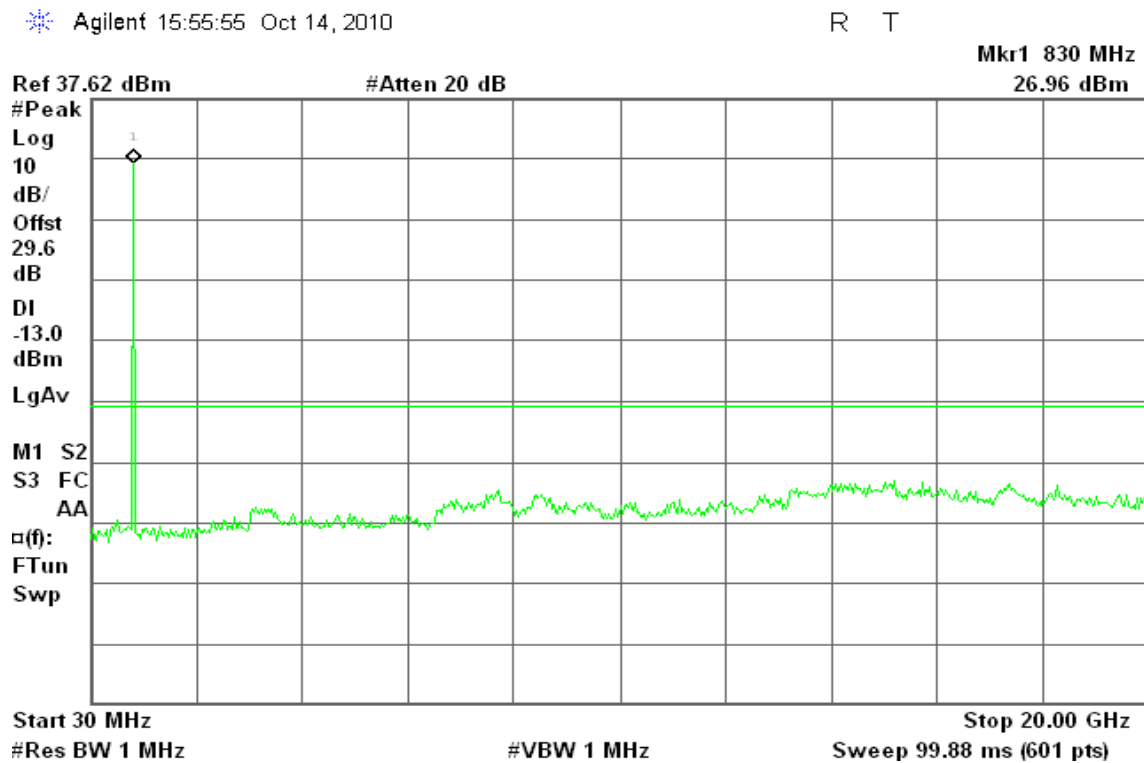


Figure 15-2: Out of Band emission at antenna terminals –EDGE CH Mid

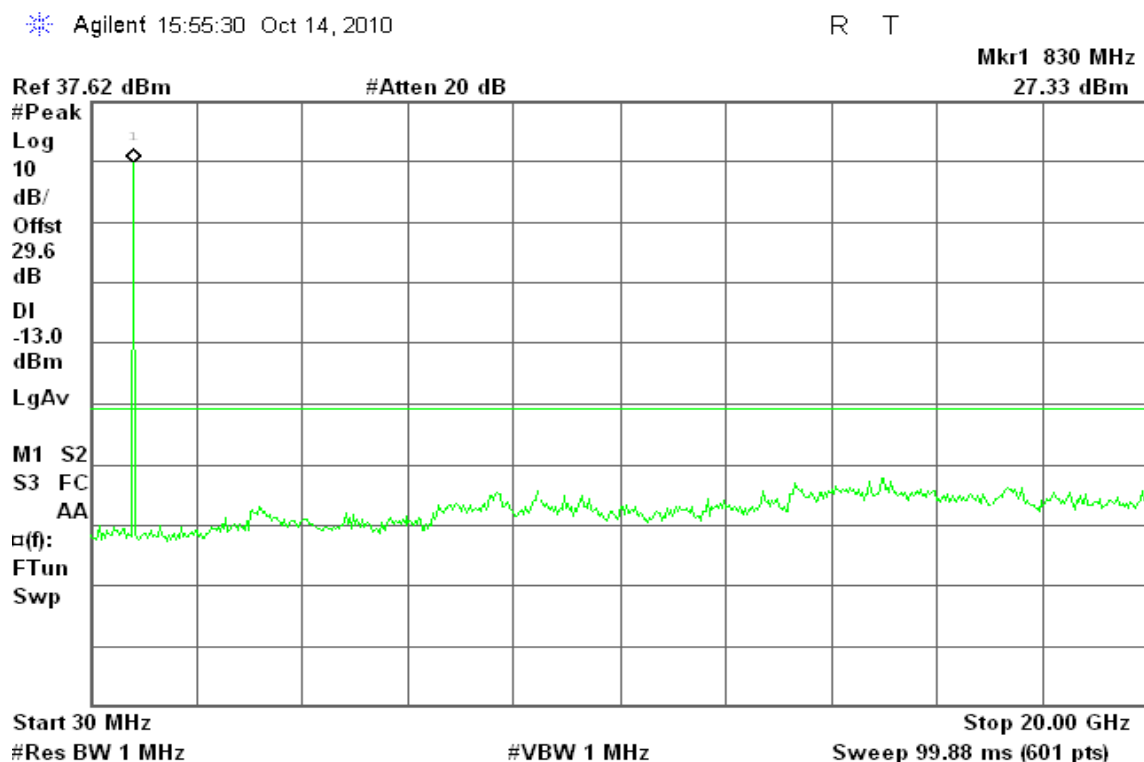
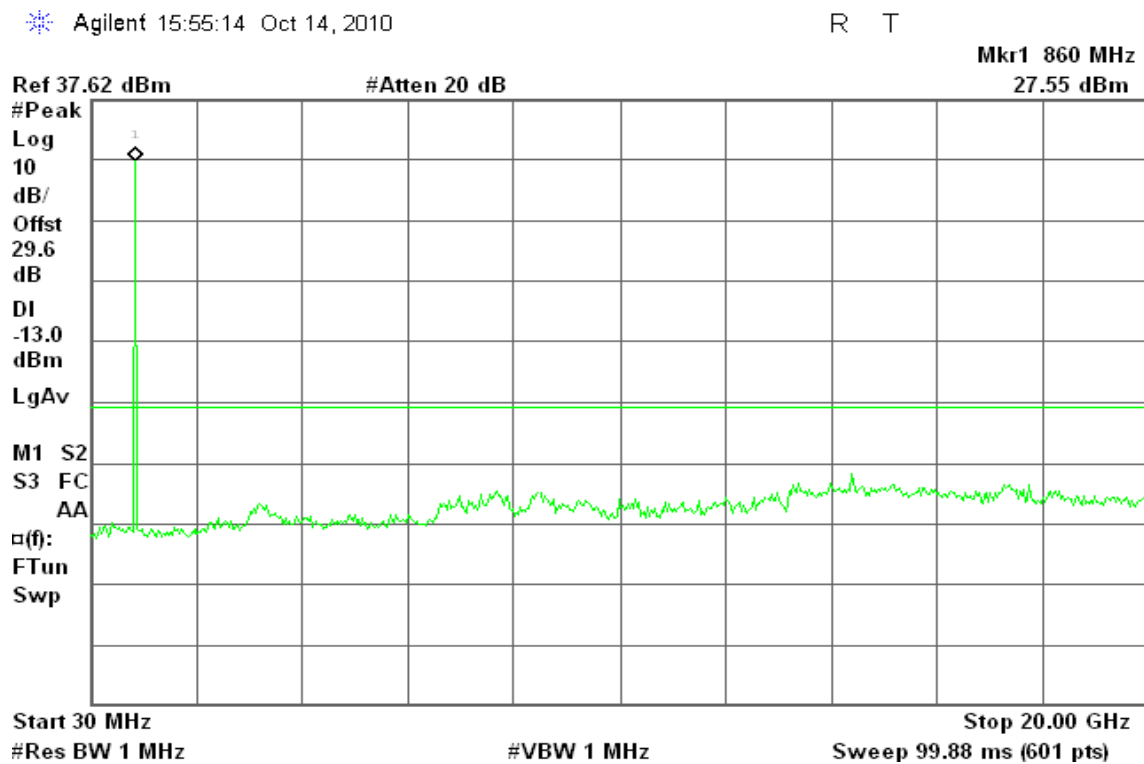






Figure 15-3: Out of Band emission at antenna terminals –EDGE CH High



## EDGE 1900

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

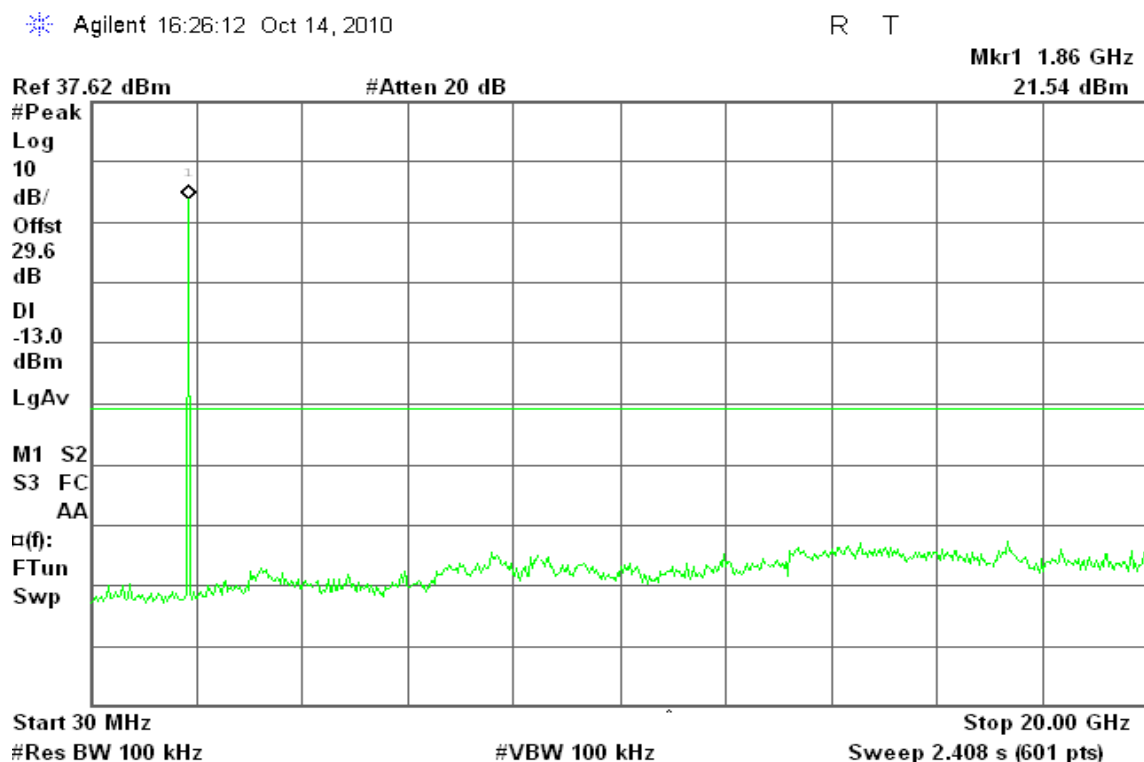




Figure 16-2: Out of Band emission at antenna terminals –EDGE CH Mid

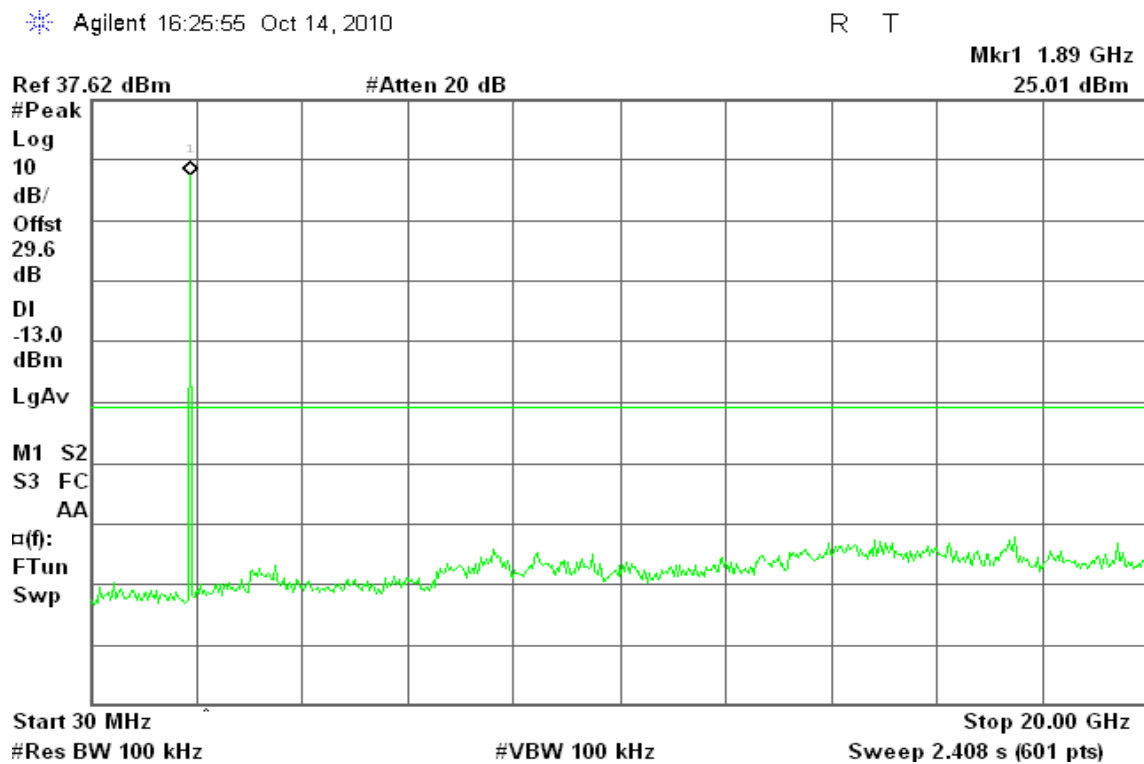
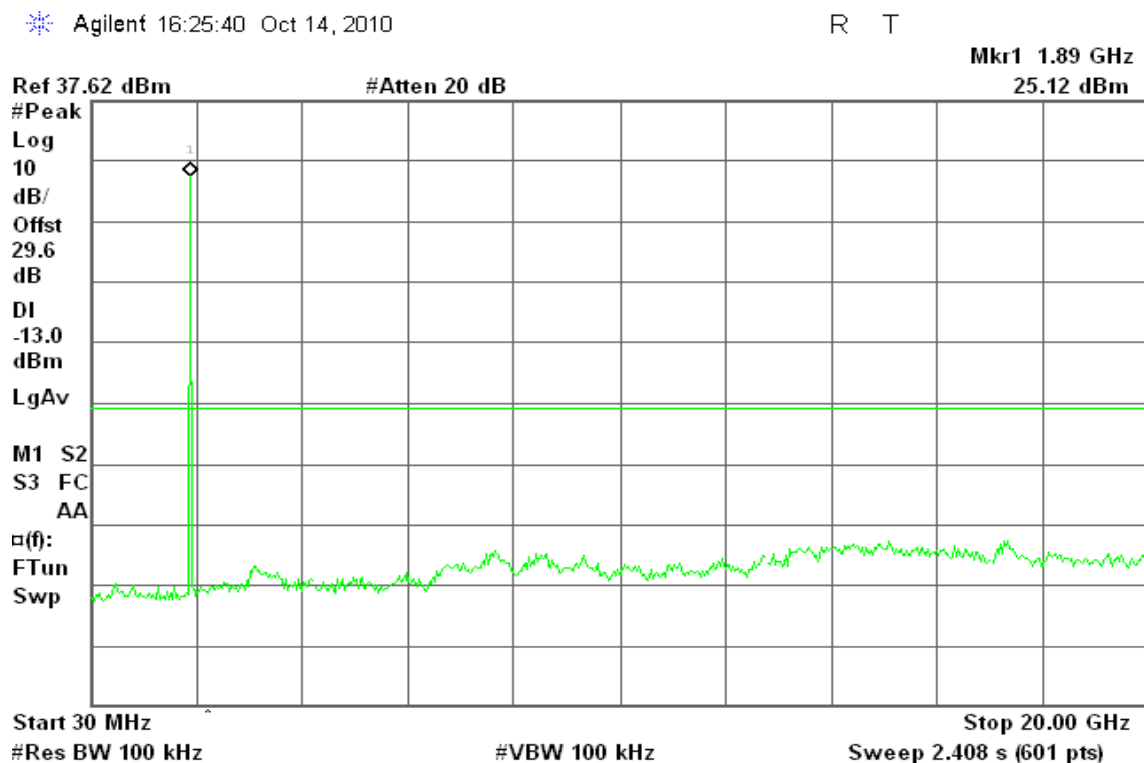


Figure 16-3: Out of Band emission at antenna terminals –EDGE CH High





## EDGE 850

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

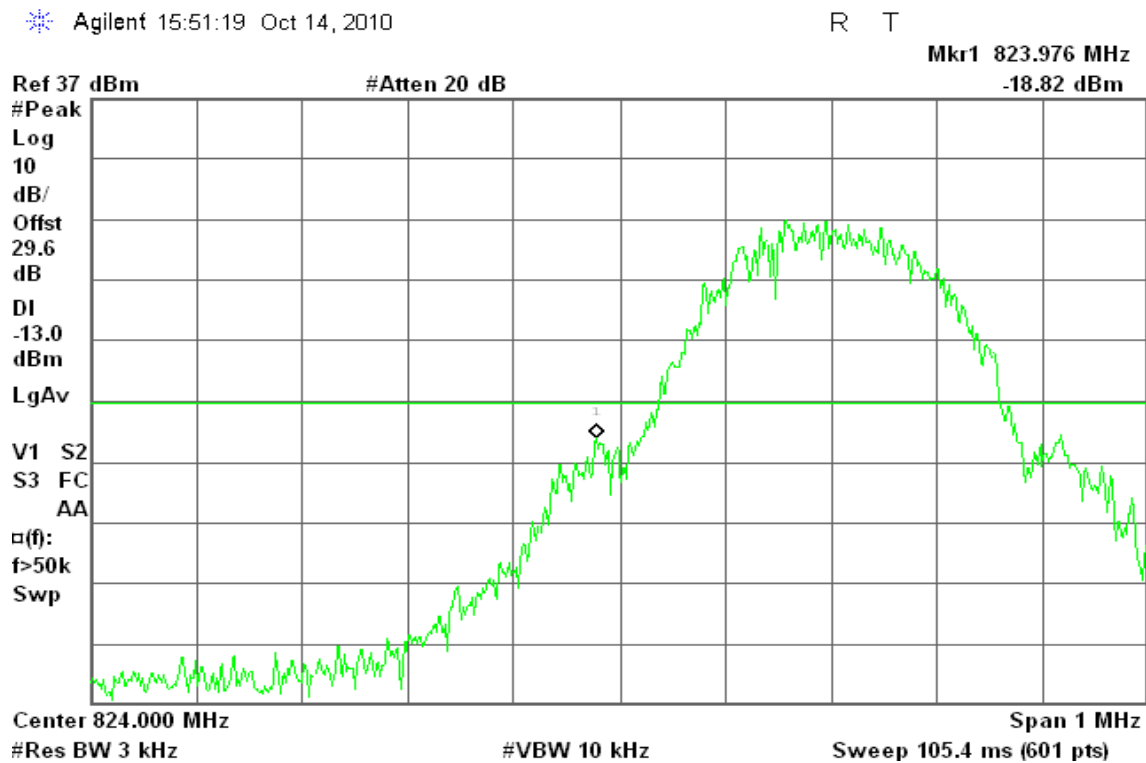
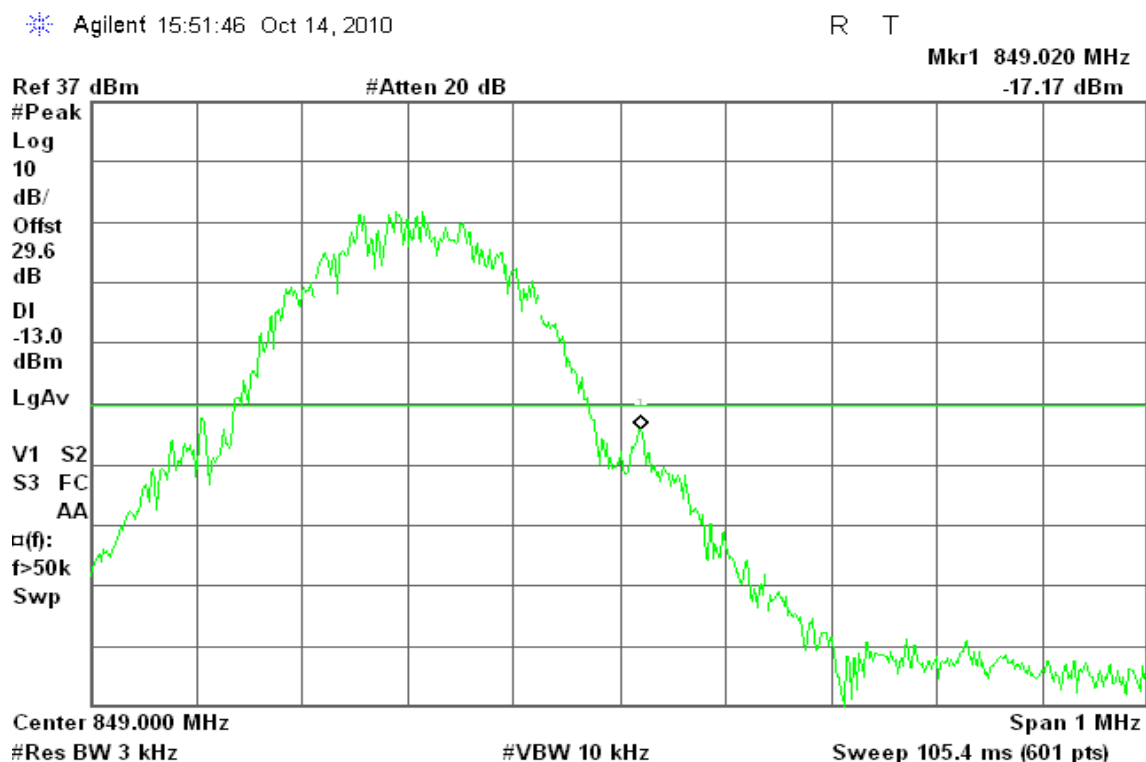


Figure 17-2: Band Edge emissions – EDGE CH High





## EDGE 1900

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

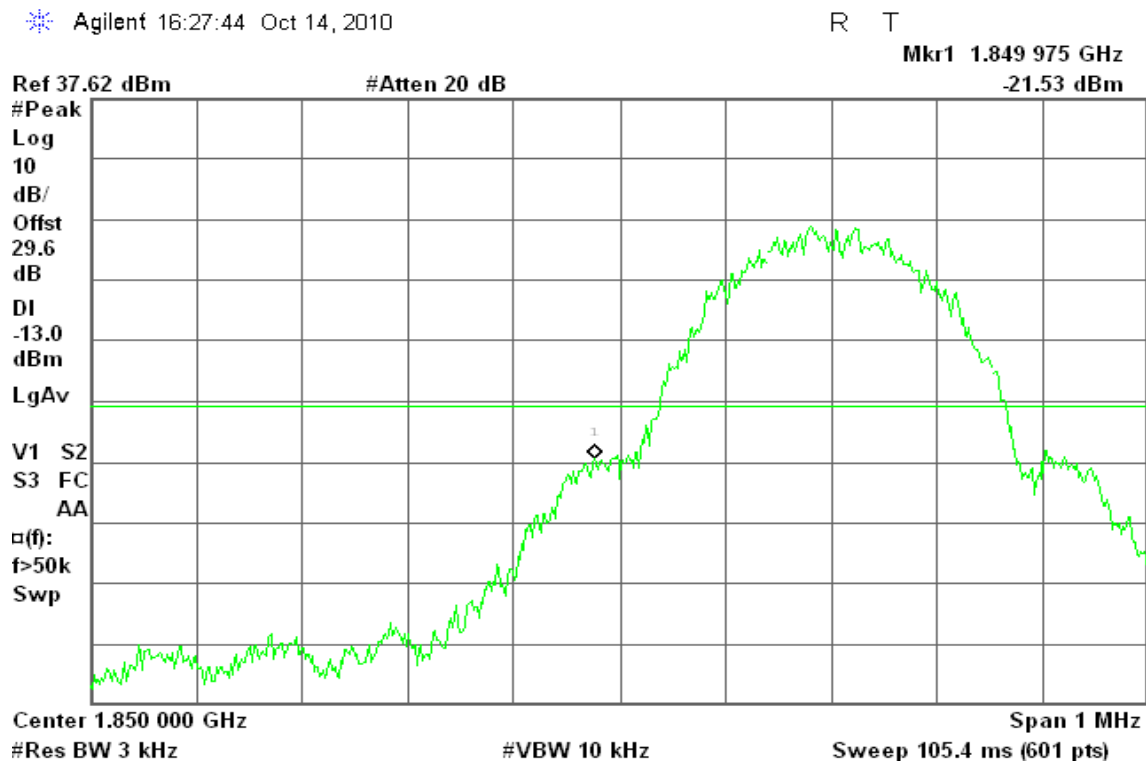
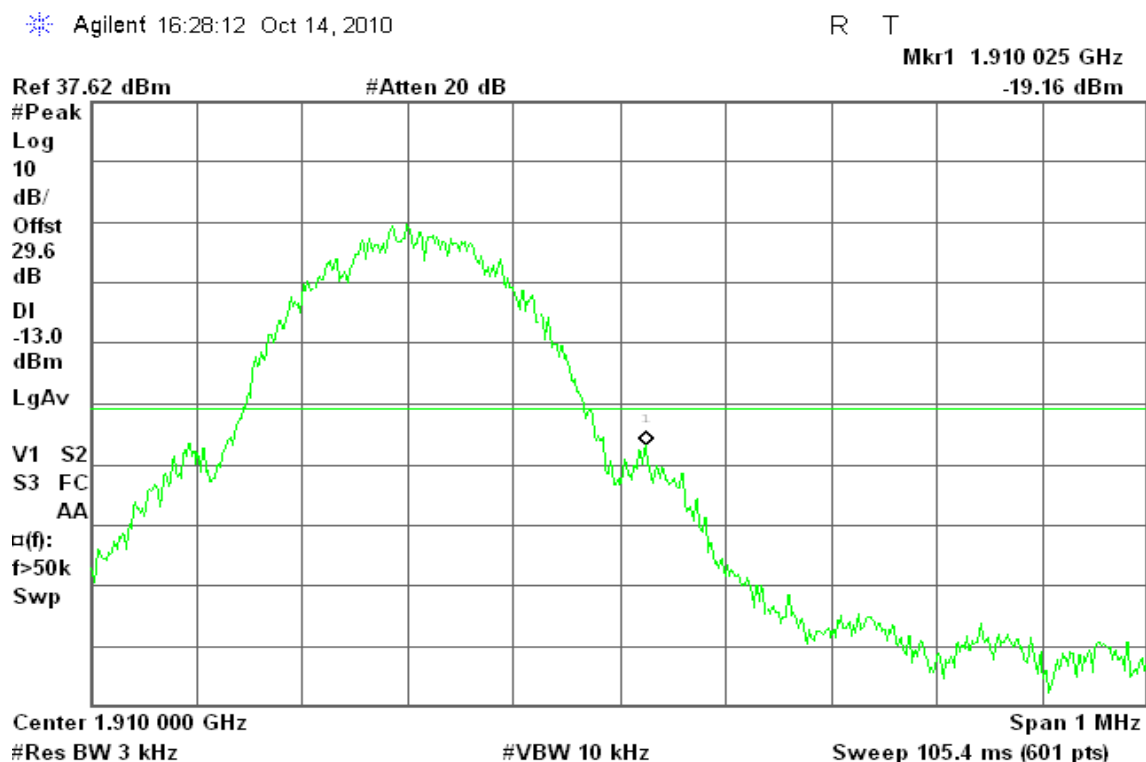


Figure 18-2: Band Edge emissions – EDGE CH High





## WCDMA Band II

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

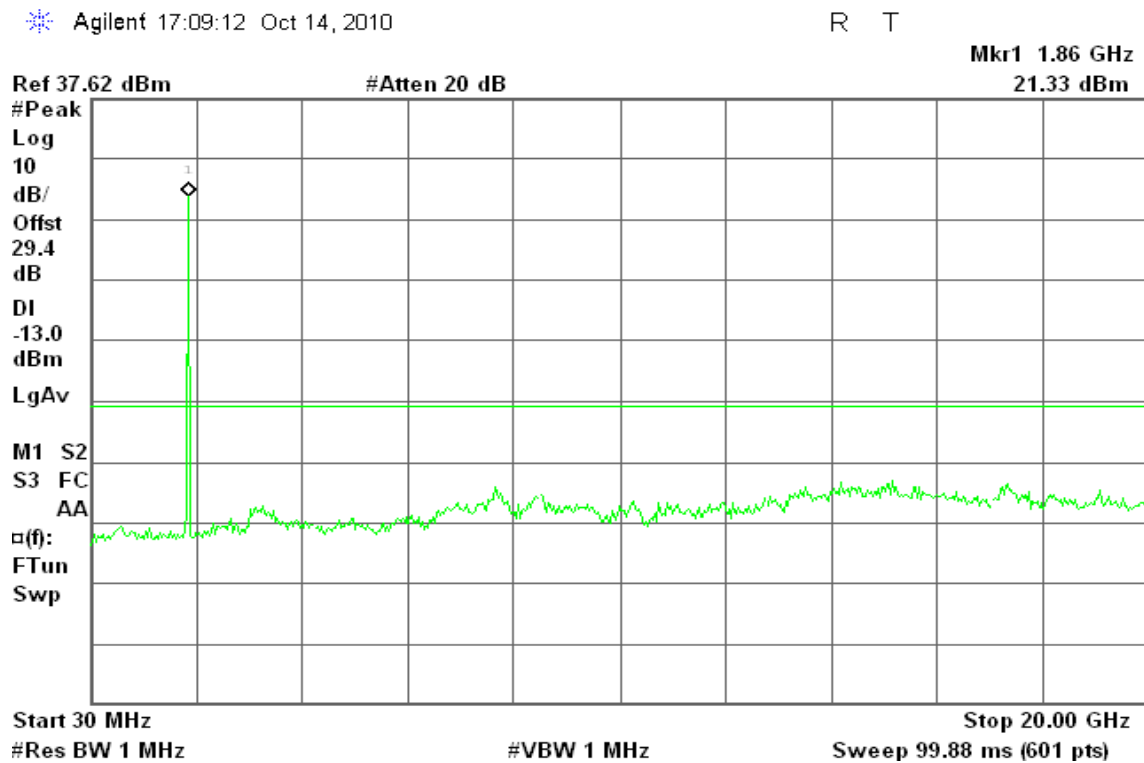


Figure 19-2: Out of Band emission at antenna terminals – WCDMA CH Mid

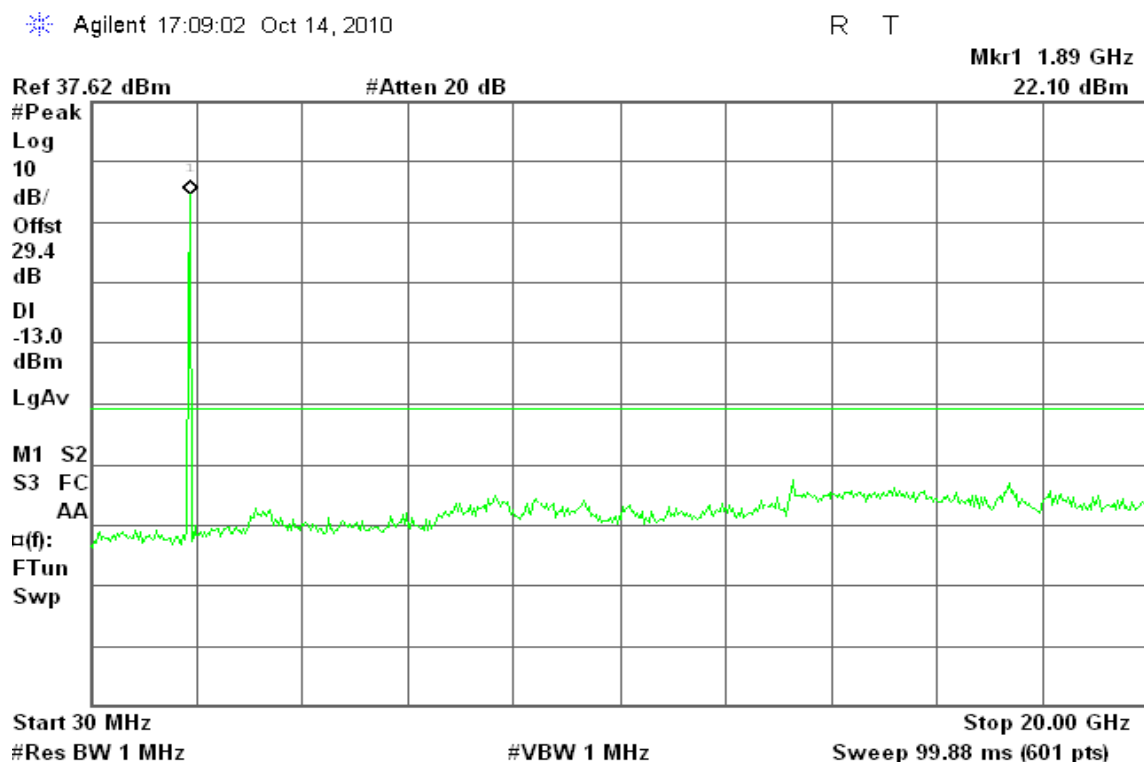
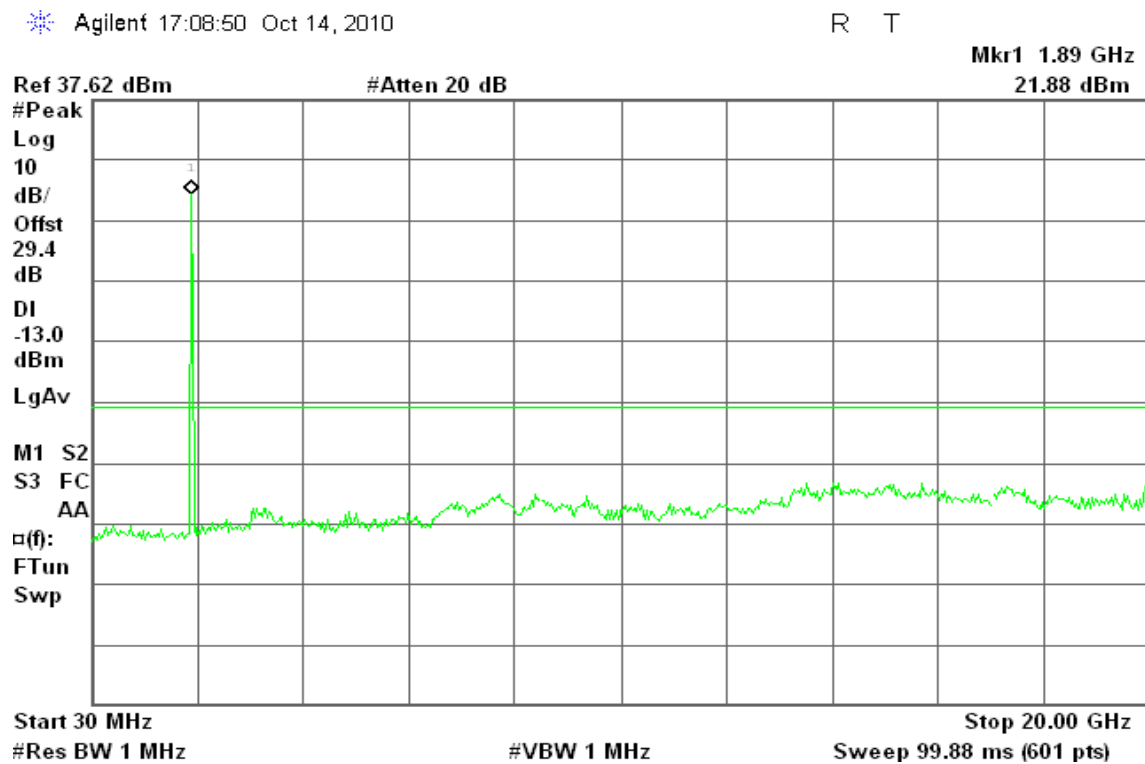




Figure 19-3: Out of Band emission at antenna terminals – WCDMA CH High



## WCDMA Band V

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

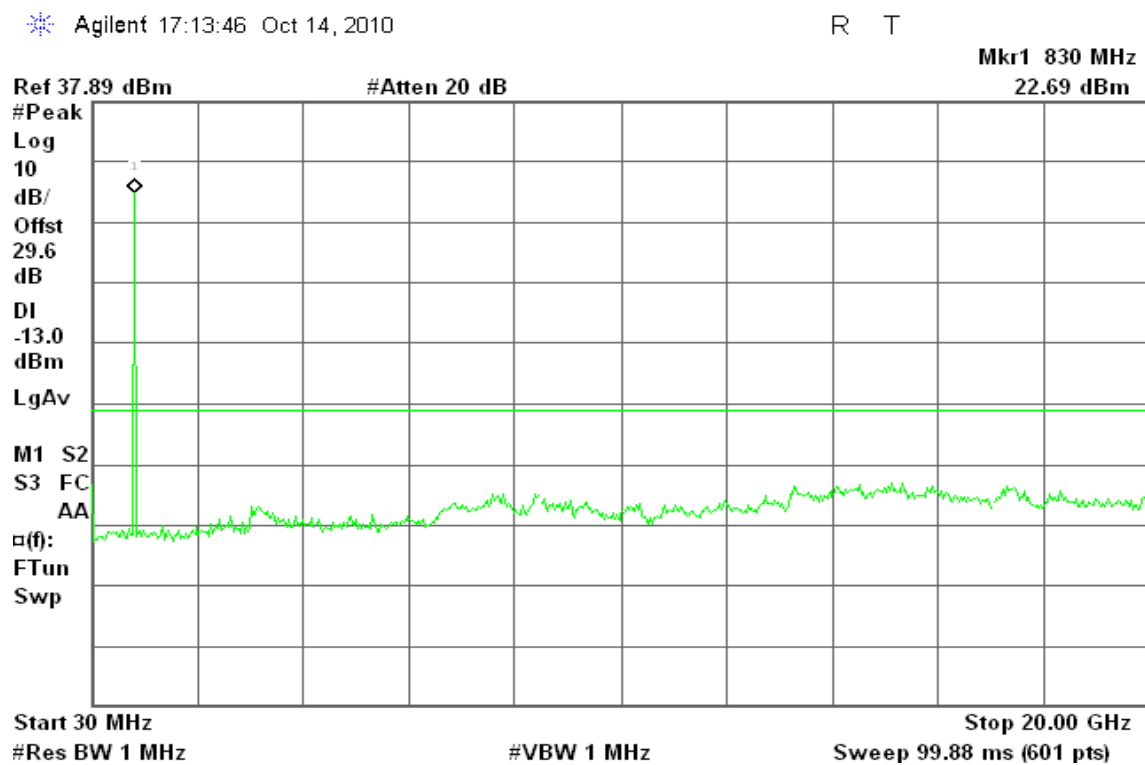




Figure 20-2: Out of Band emission at antenna terminals – WCDMA CH Mid

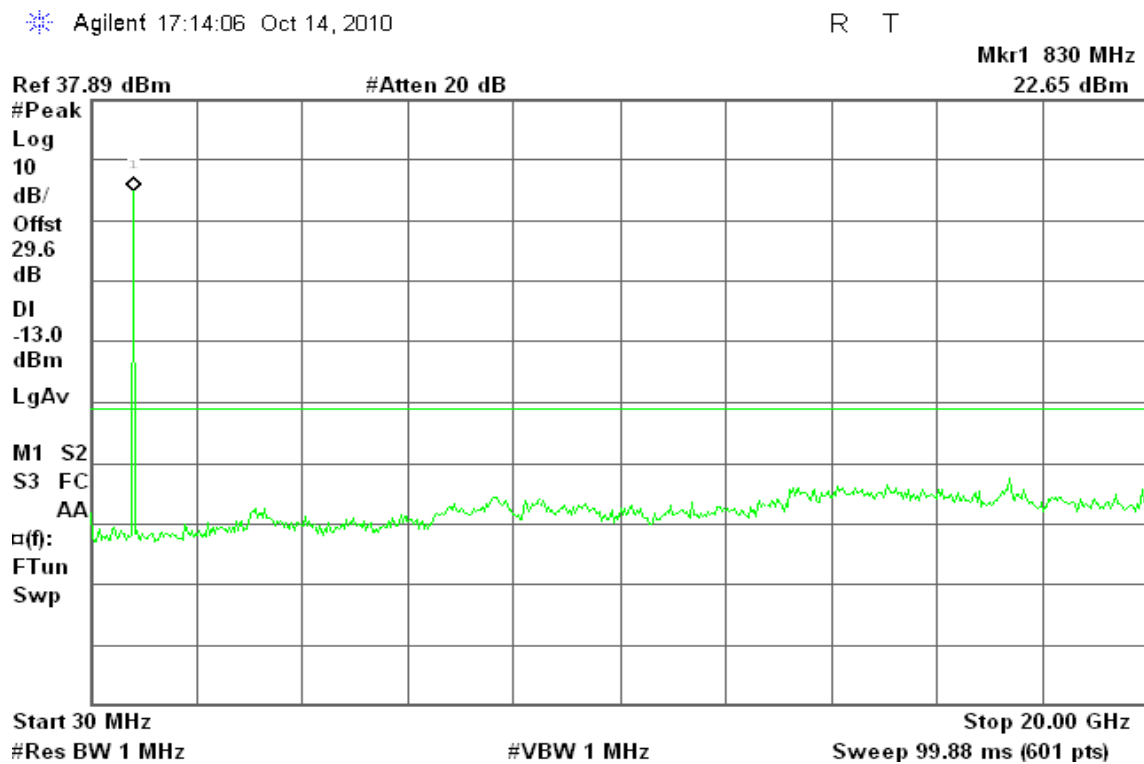
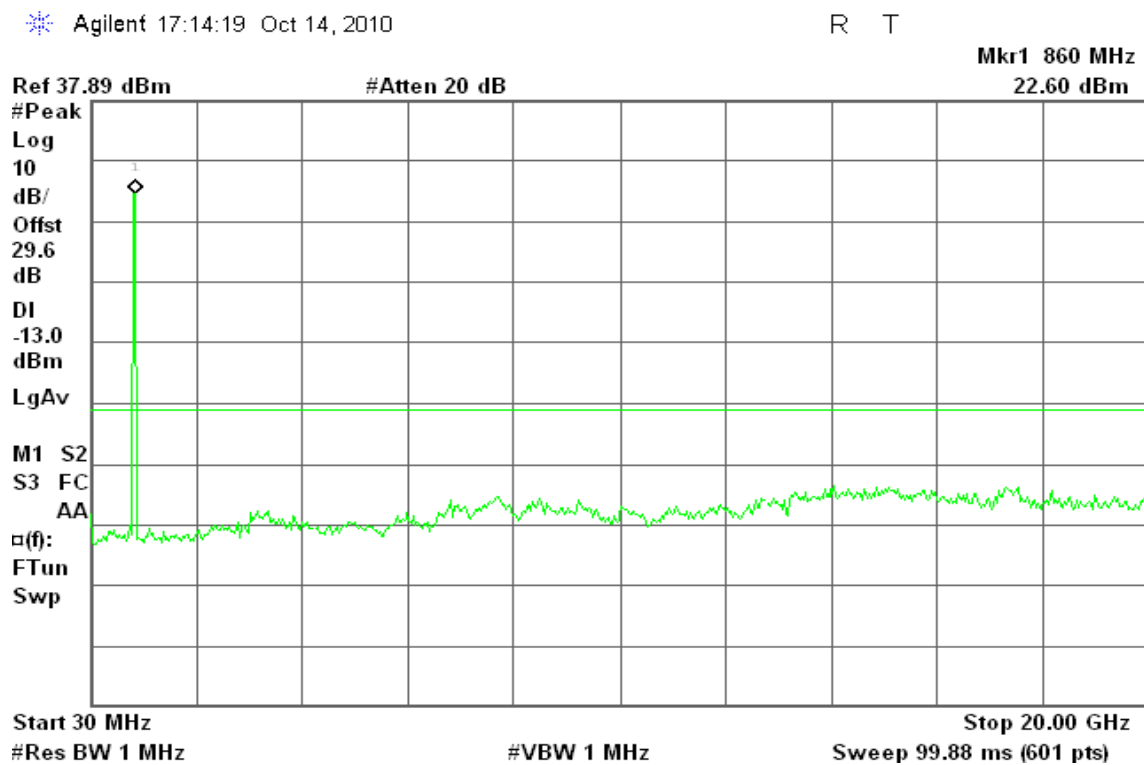


Figure 20-3: Out of Band emission at antenna terminals – WCDMA CH High





## WCDMA Band II

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

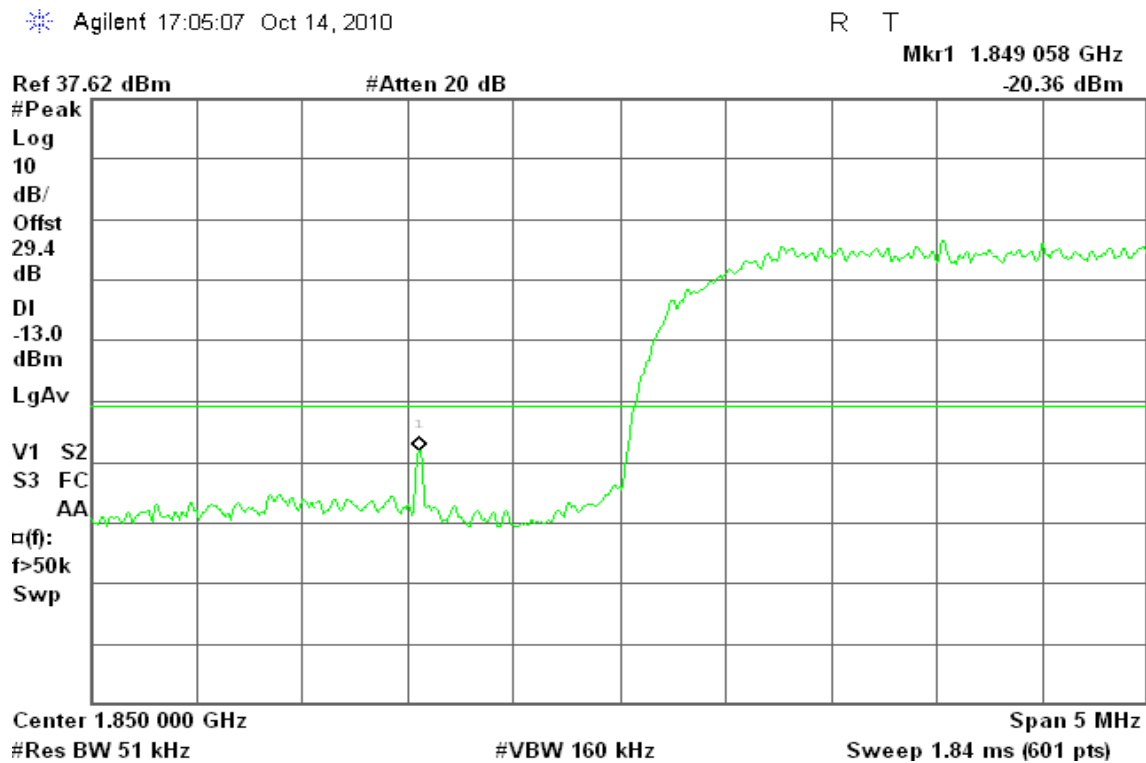
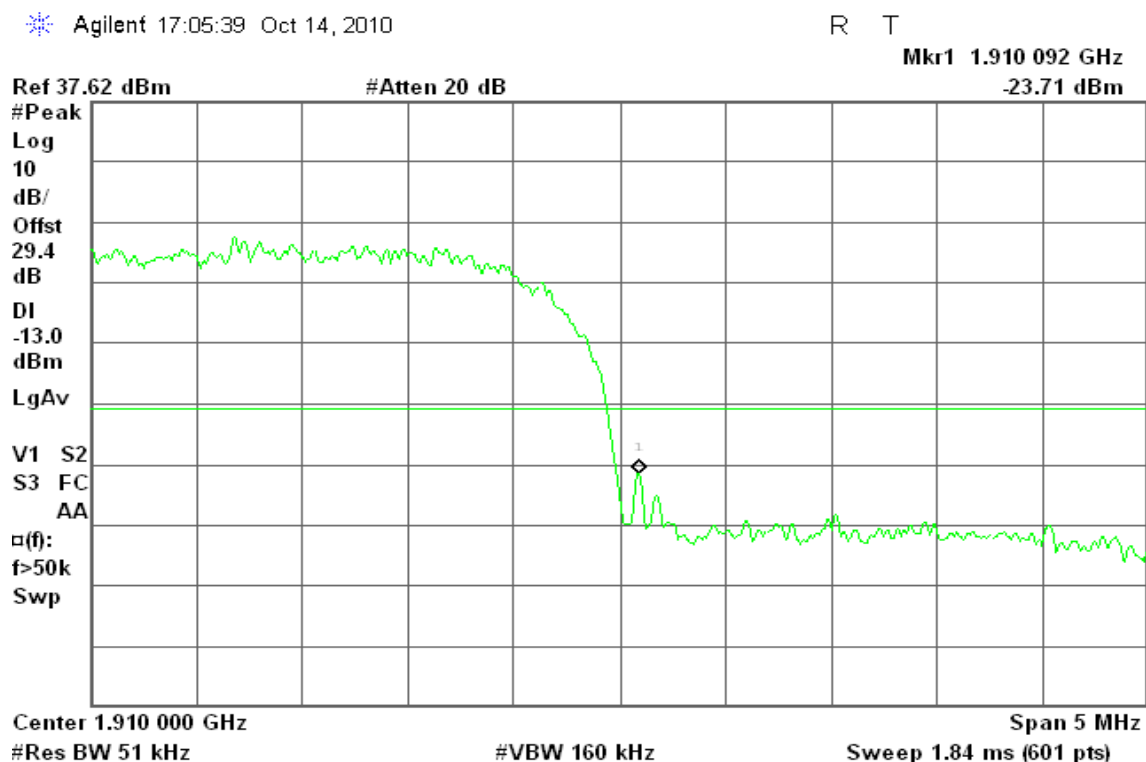


Figure 21-2: Band Edge emissions –WCDMA CH High







## WCDMA Band V

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

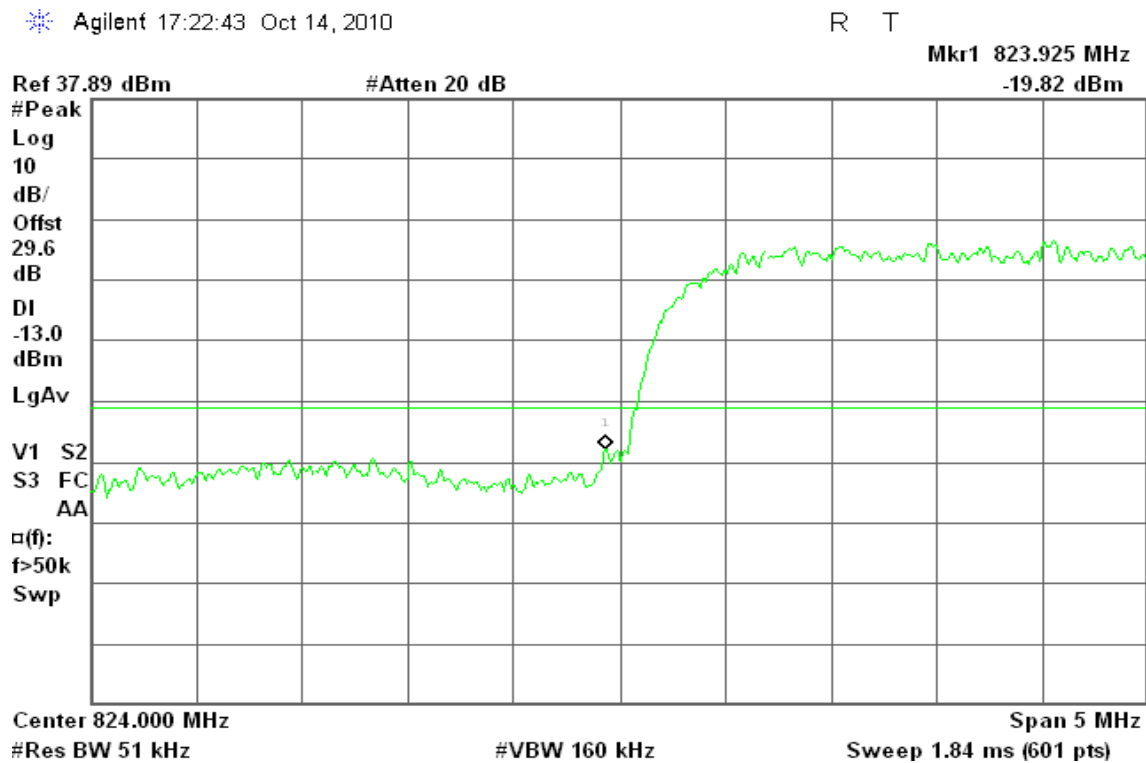
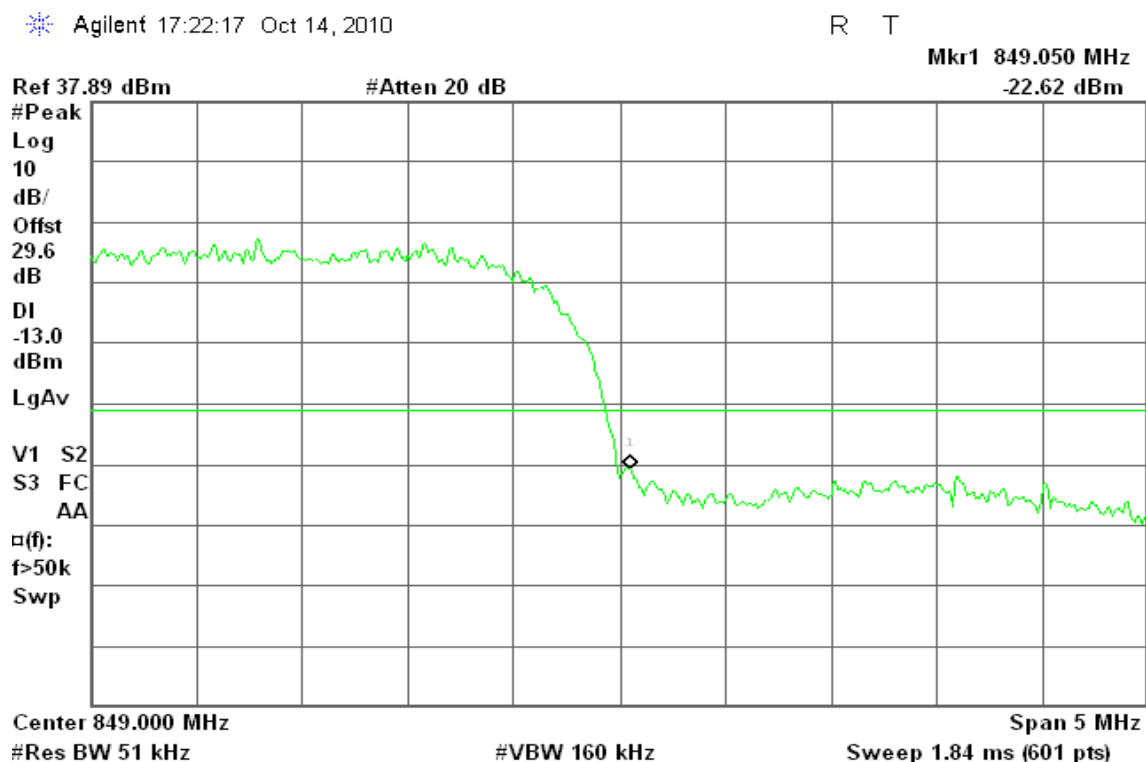


Figure 22-2: Band Edge emissions –WCDMA CH High





## WCDMA / HSDPA Band II

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

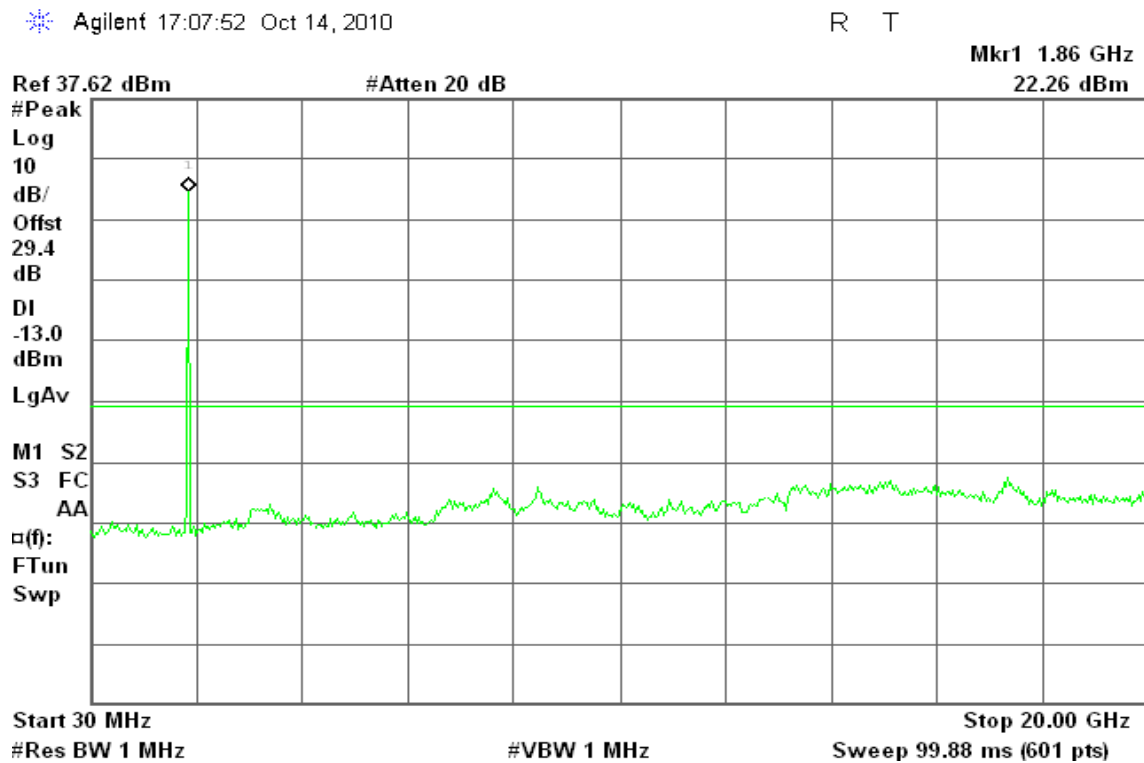


Figure 23-2: Out of Band emission at antenna terminals – HSDPA CH Mid

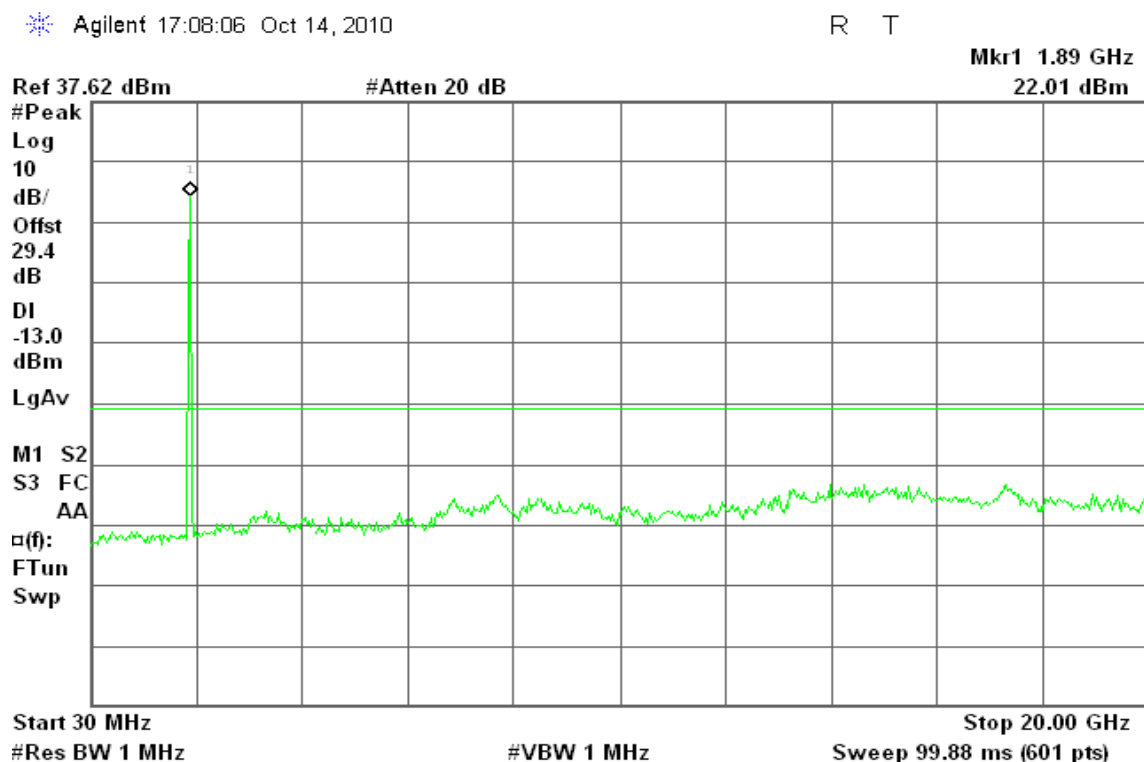
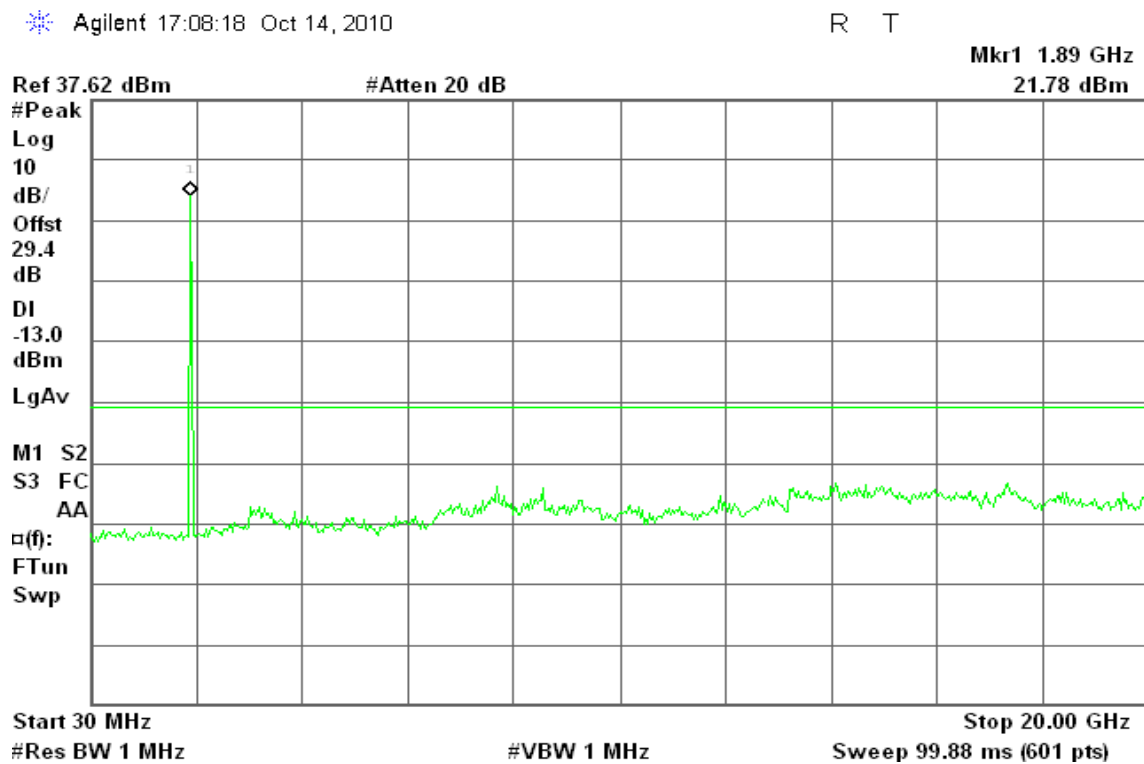




Figure 23-3: Out of Band emission at antenna terminals – HSDPA CH High



## WCDMA / HSDPA Band V

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

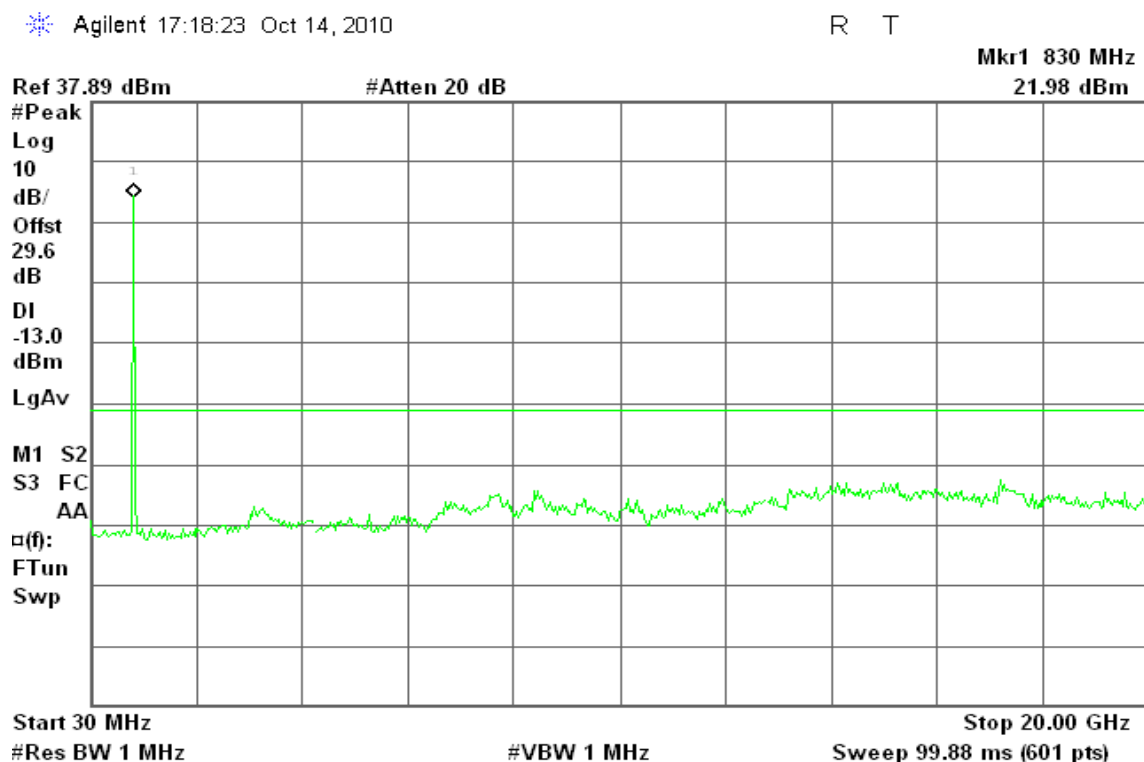




Figure 24-2: Out of Band emission at antenna terminals – HSDPA CH Mid

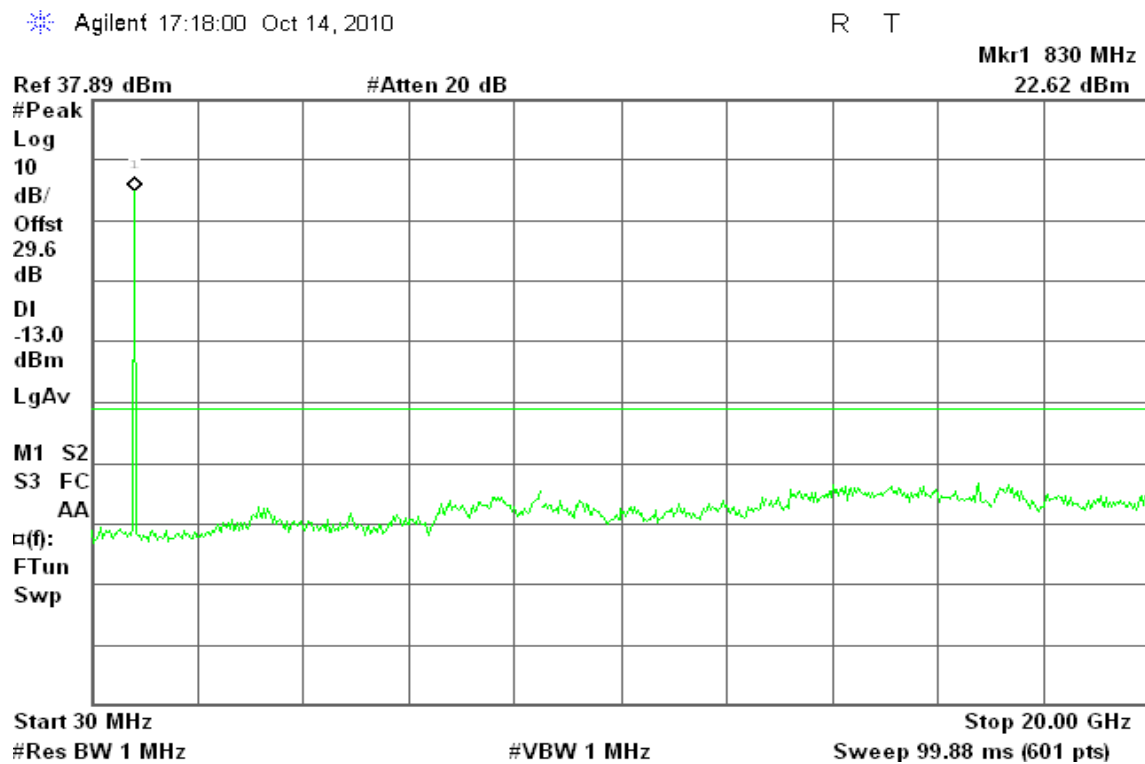
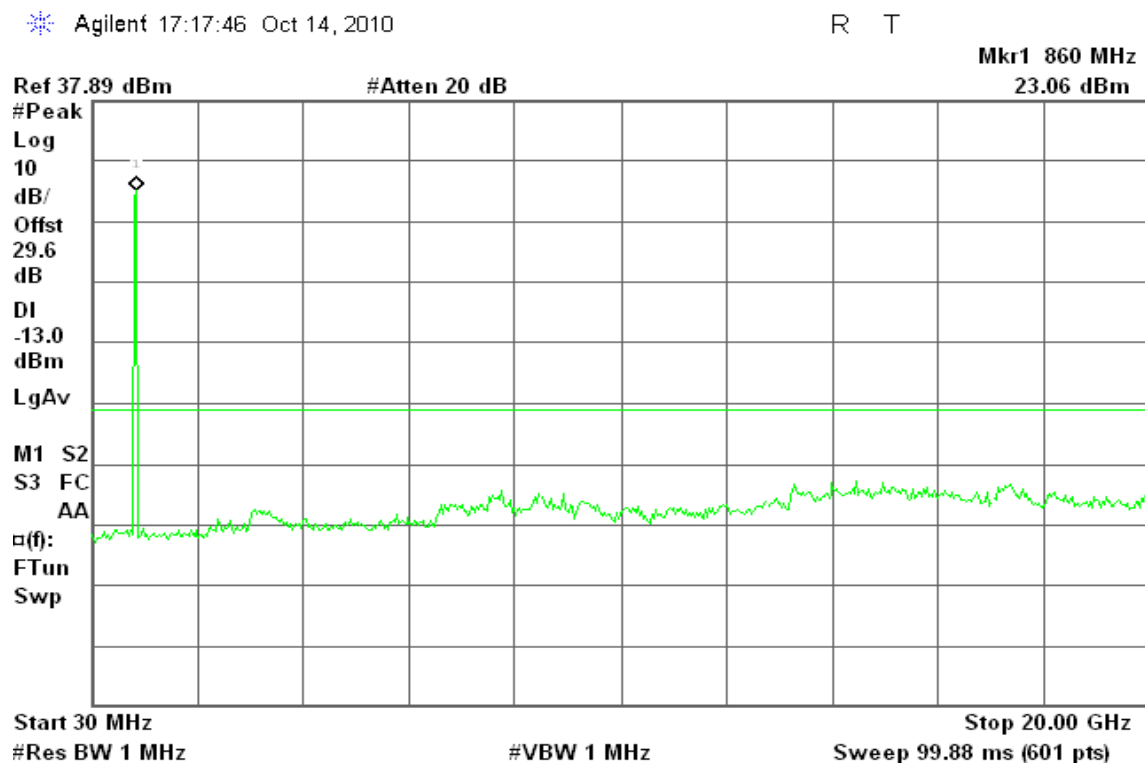


Figure 24-3: Out of Band emission at antenna terminals – HSDPA CH High





## WCDMA / HSDPA Band II

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

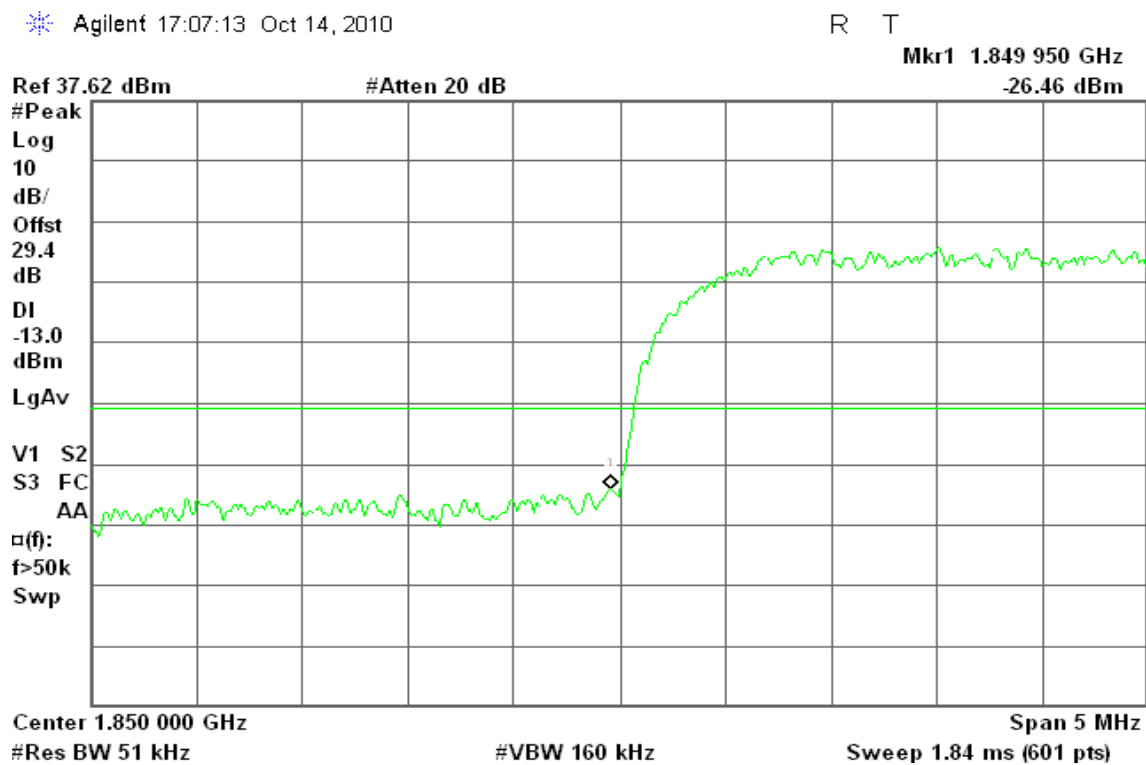
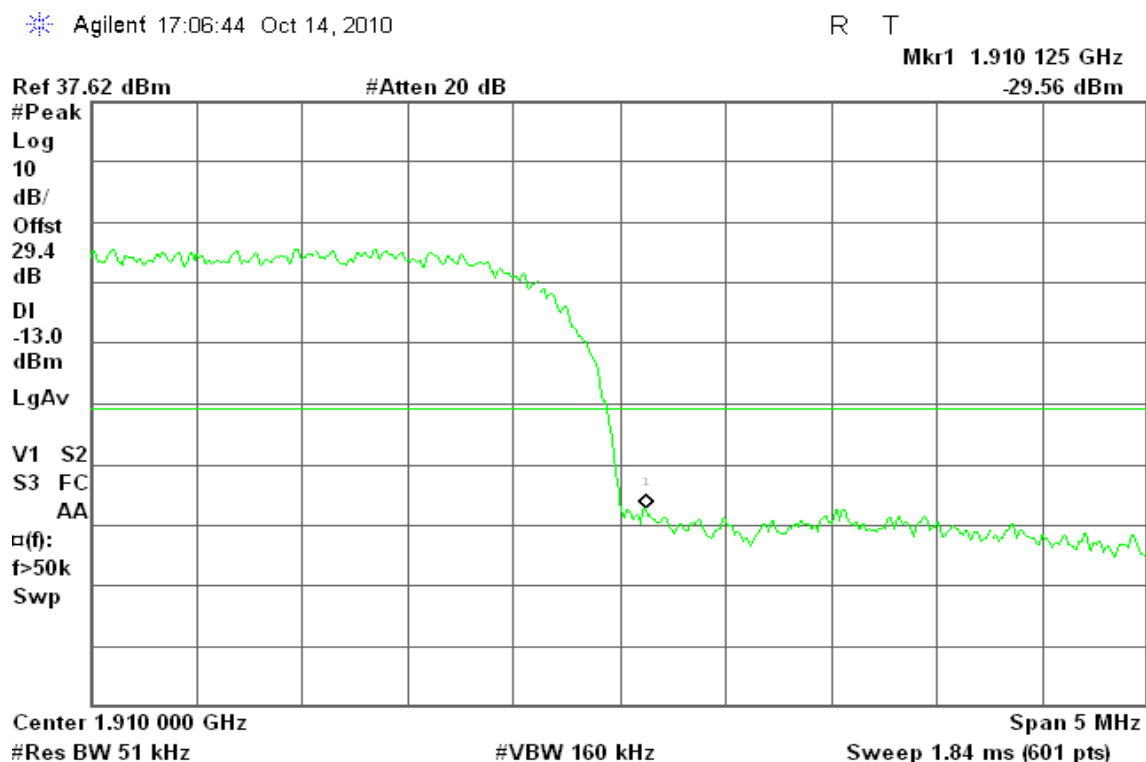


Figure 25-2: Band Edge emissions – HSDPA CH High





## WCDMA / HSDPA Band V

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

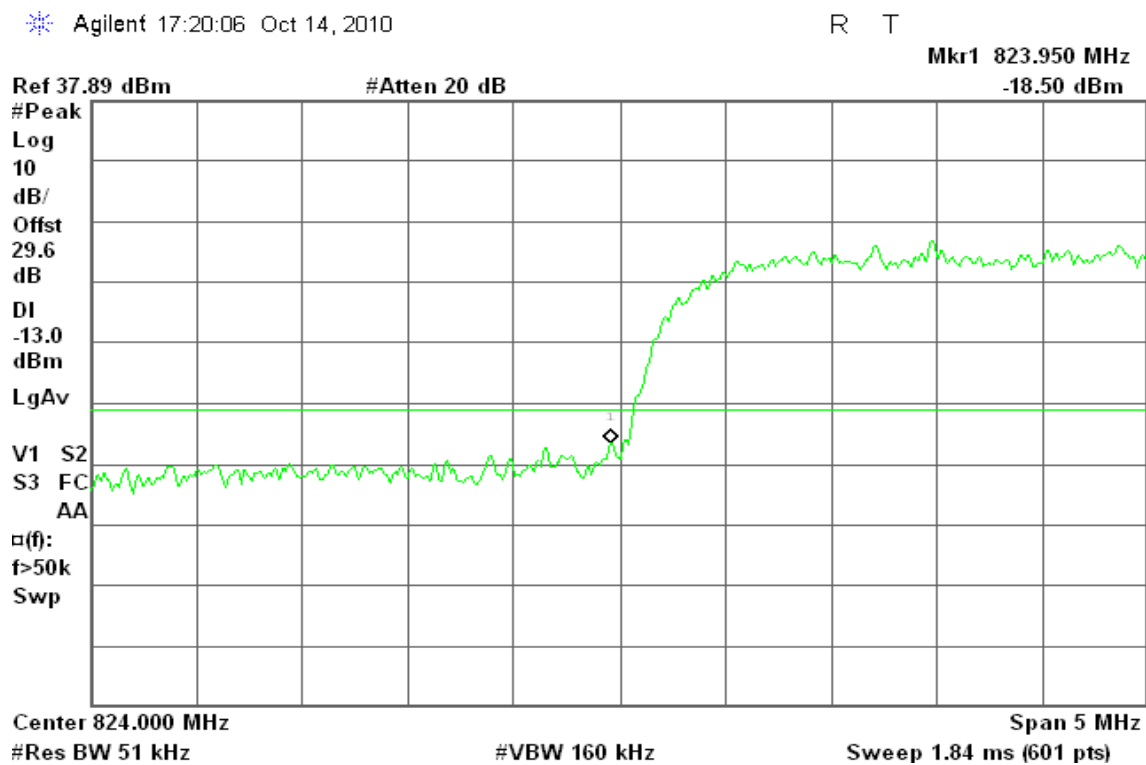
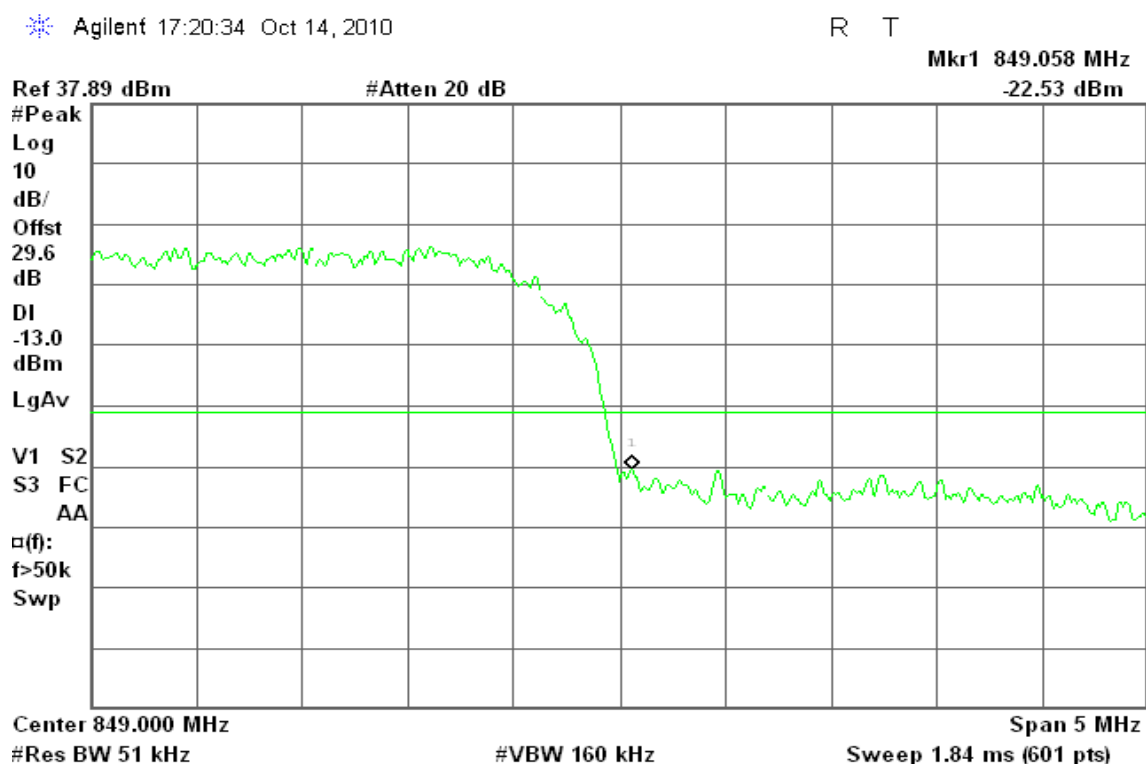


Figure 26-2: Band Edge emissions – HSDPA CH High





## WCDMA / HSUPA Band II

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

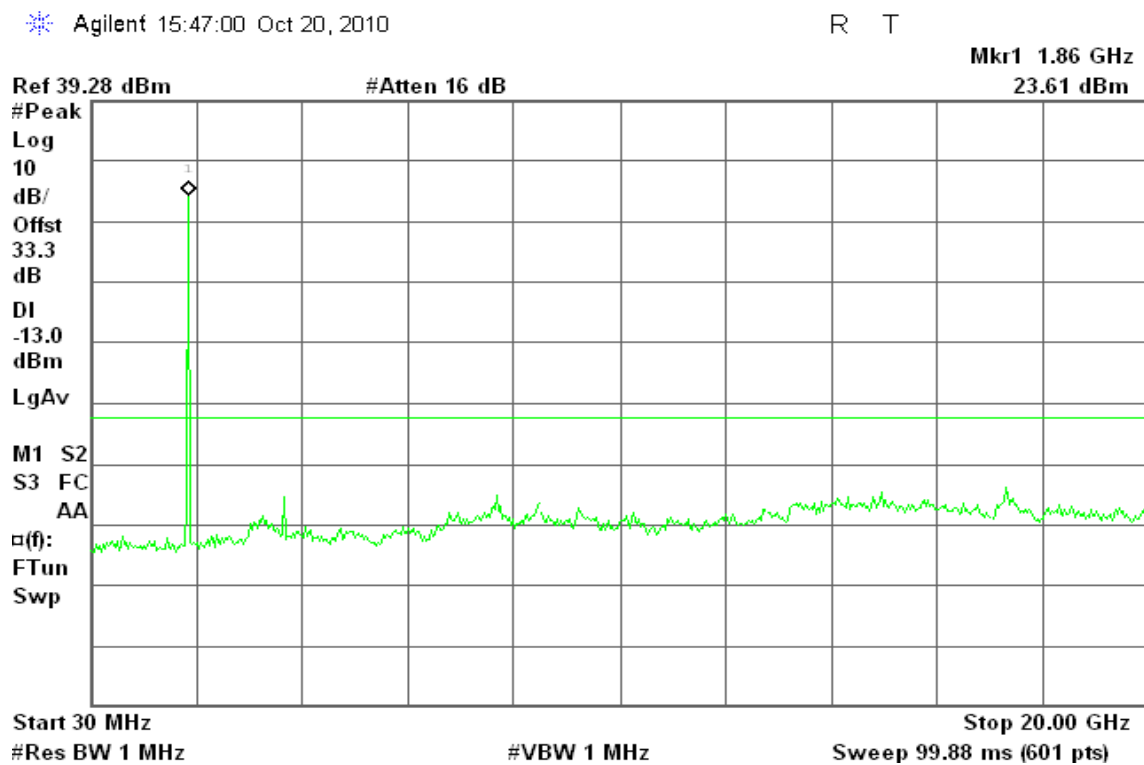


Figure 27-2: Out of Band emission at antenna terminals – HSUPA CH Mid

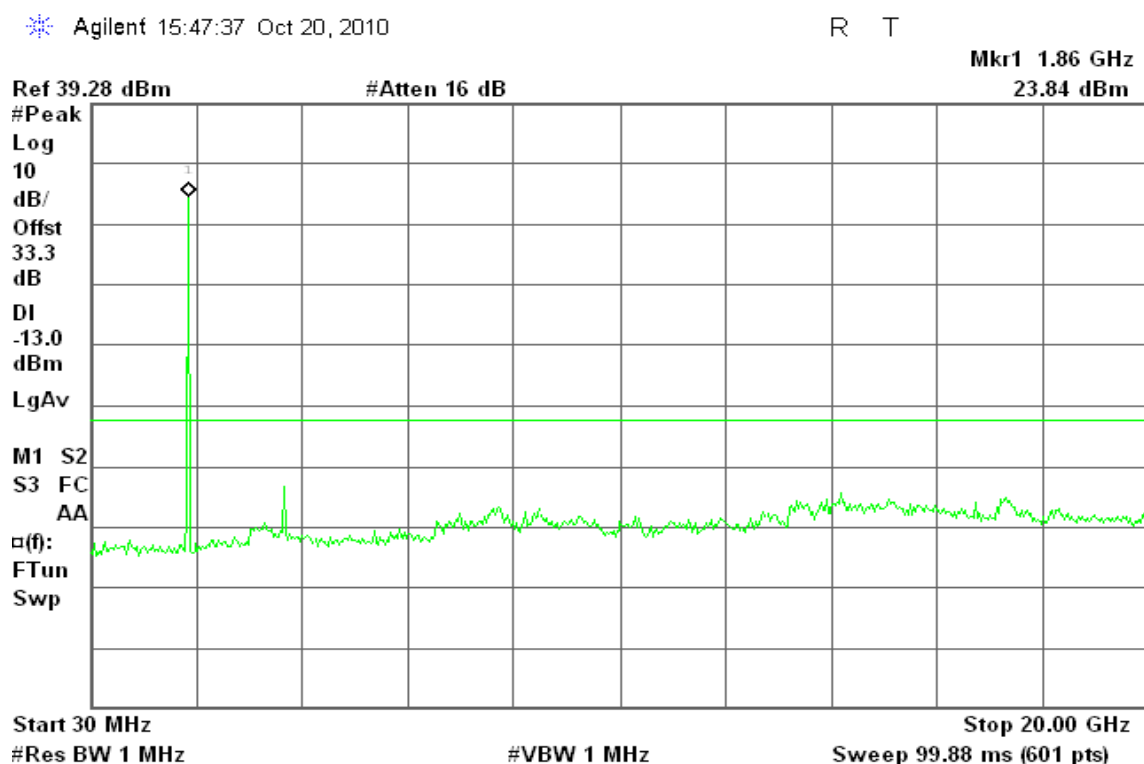
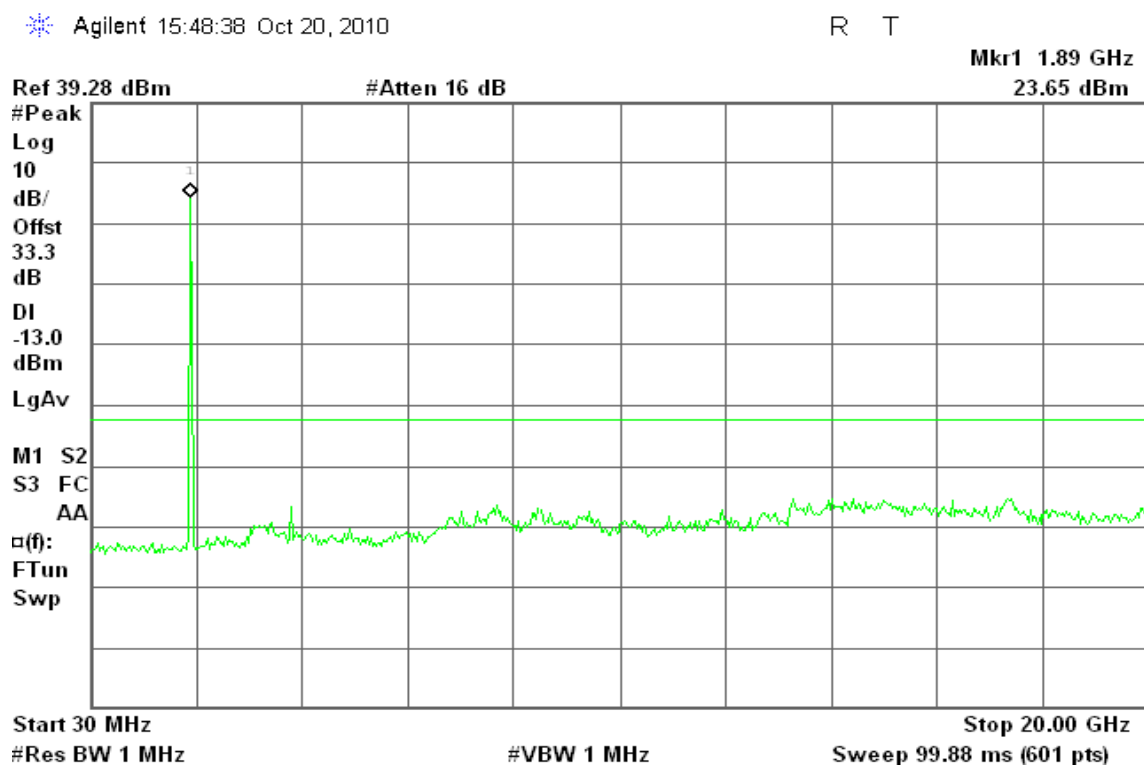




Figure 27-3: Out of Band emission at antenna terminals – HSUPA CH High



## HSUPA / WCDMA Band V

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

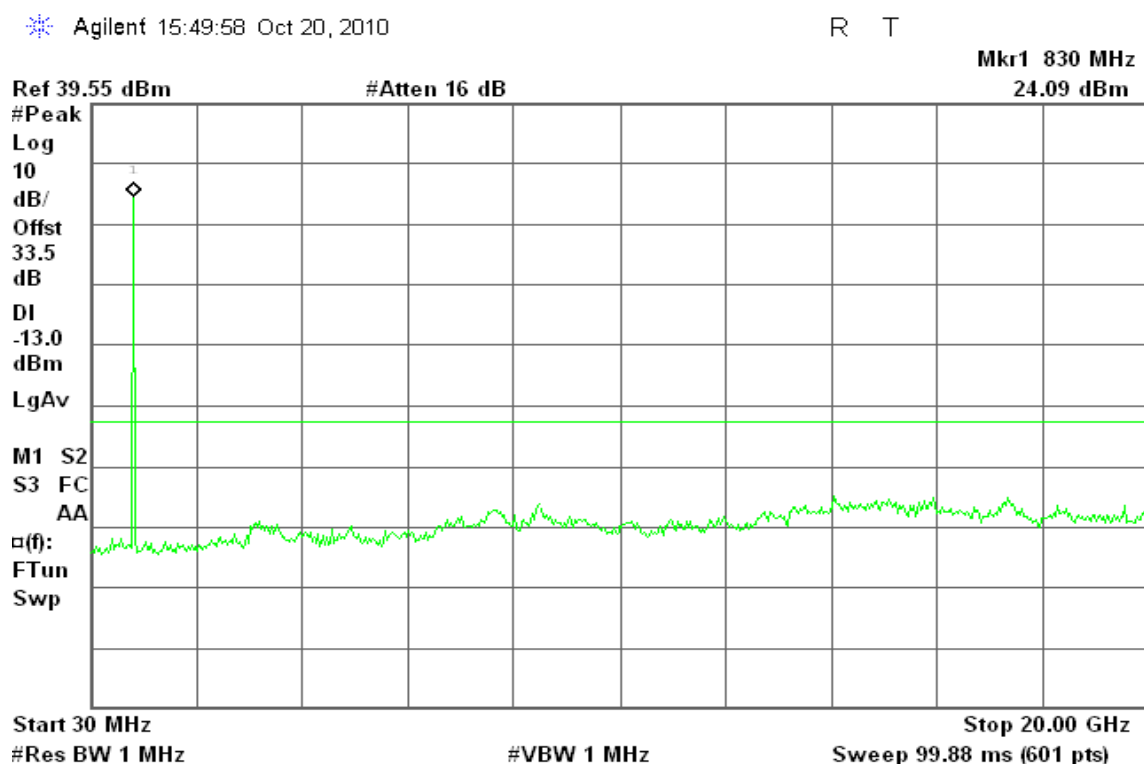






Figure 28-2: Out of Band emission at antenna terminals – HSUPA CH Mid

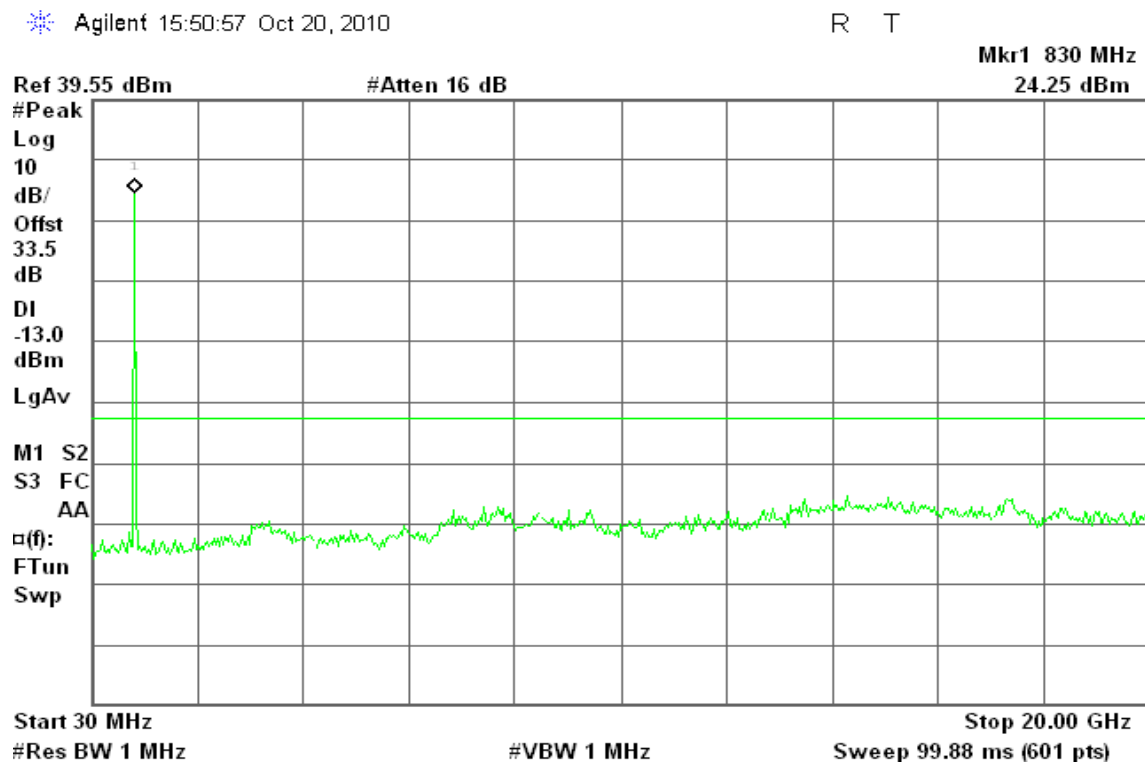
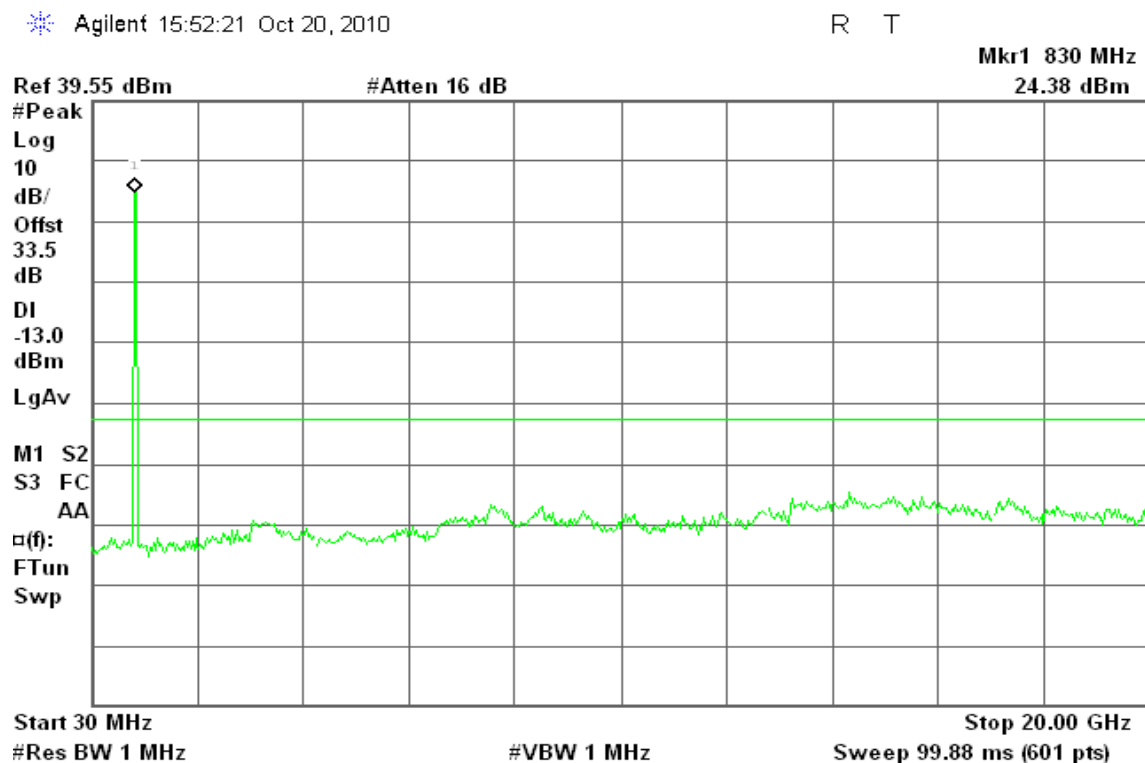


Figure 28-3: Out of Band emission at antenna terminals – HSUPA CH High





## WCDMA / HSUPA Band II

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

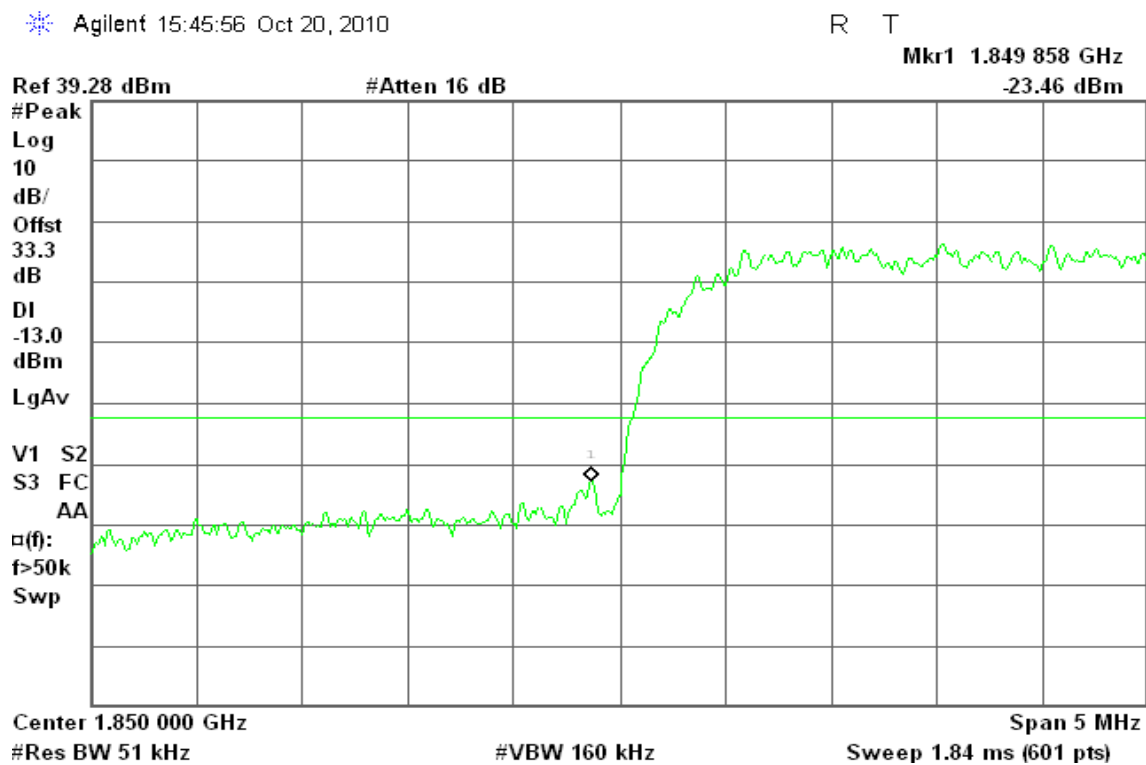
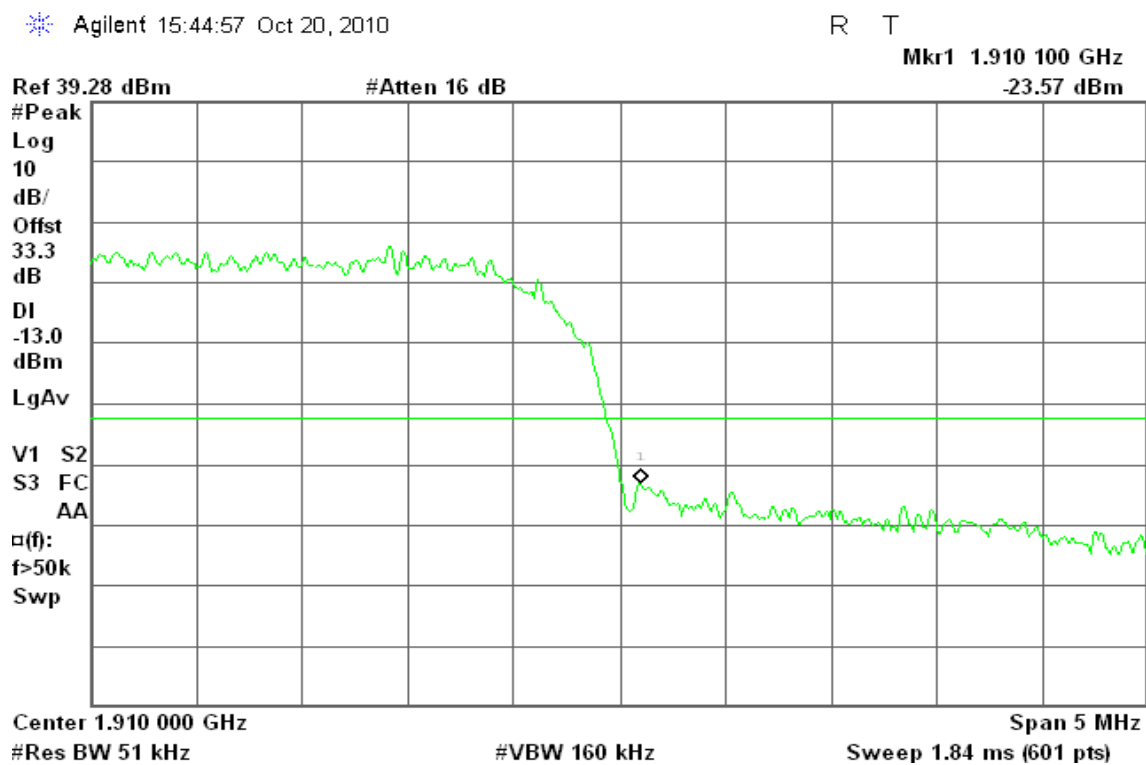


Figure 29-2: Band Edge emissions – HSUPA CH High





## WCDMA / HSUPA Band V

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

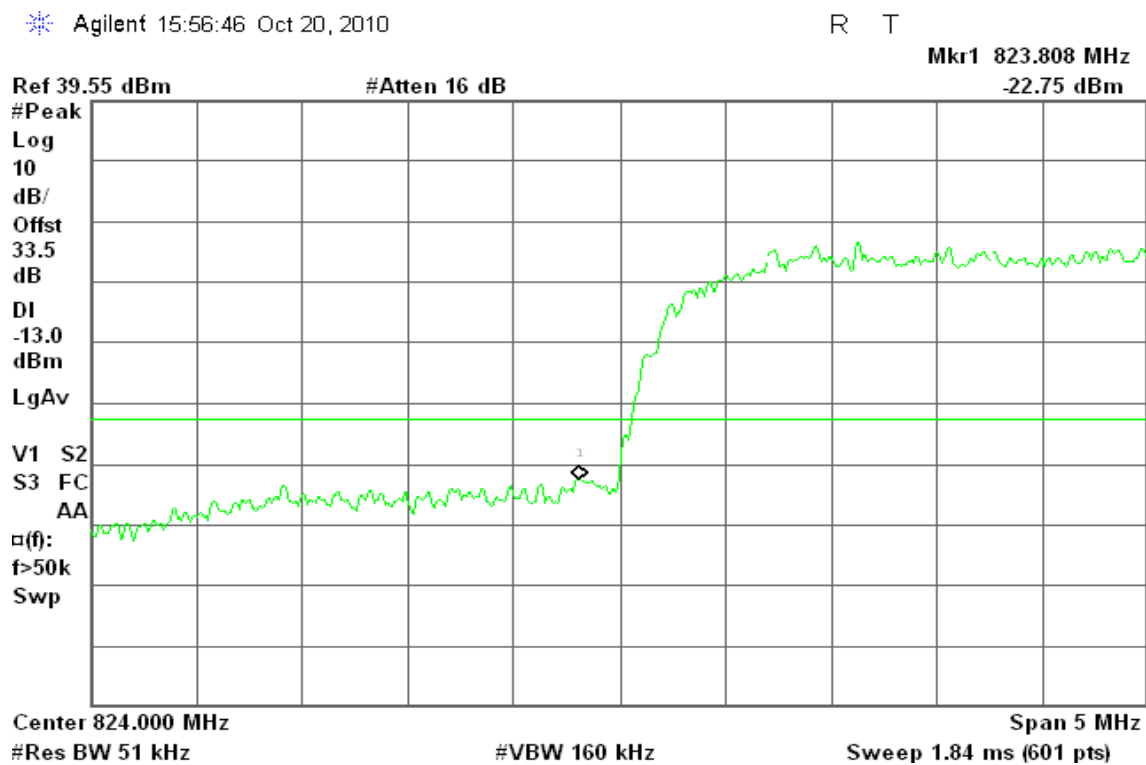
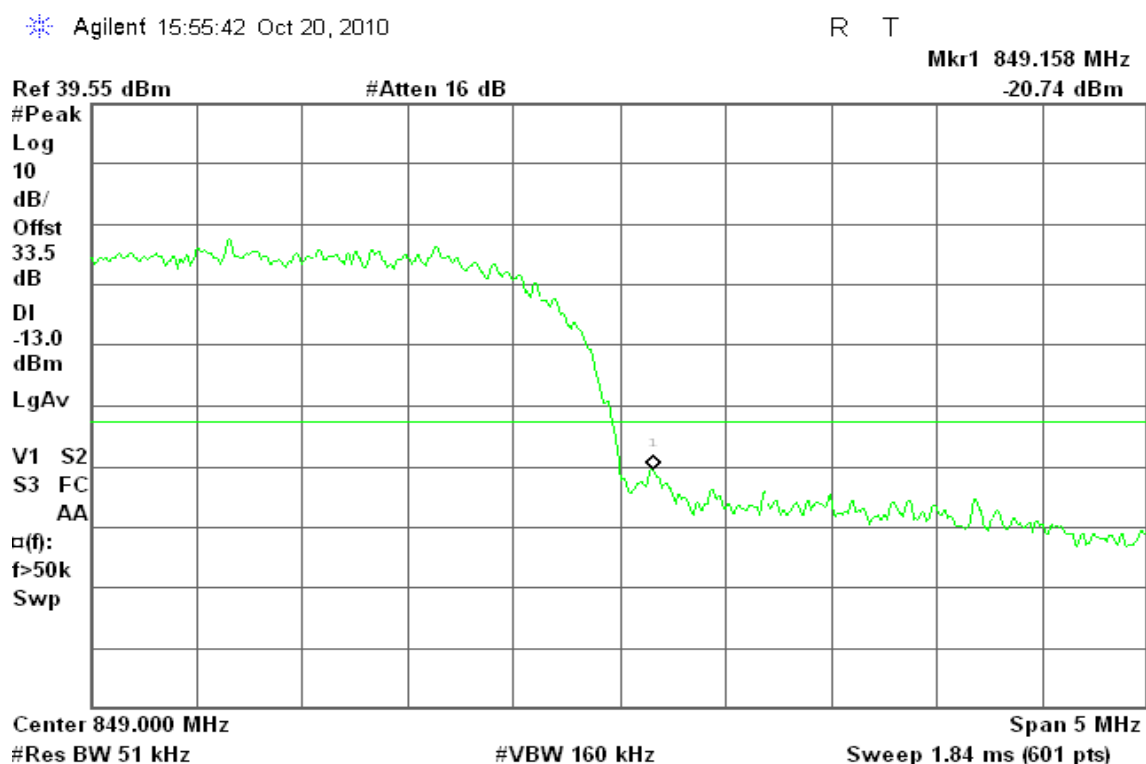


Figure 30-2: Band Edge emissions – HSUPA CH High



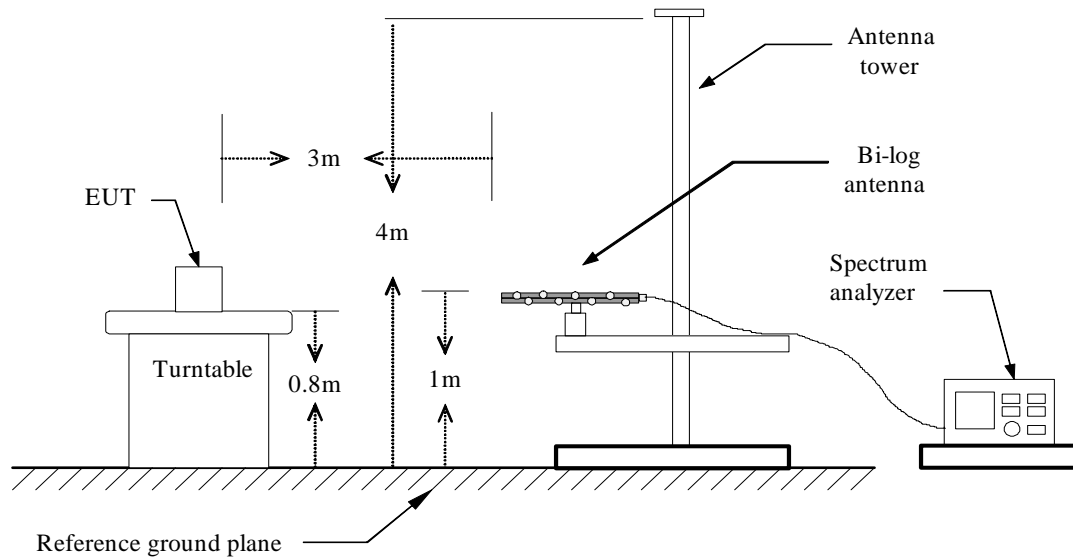
## 7.6 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

## LIMIT

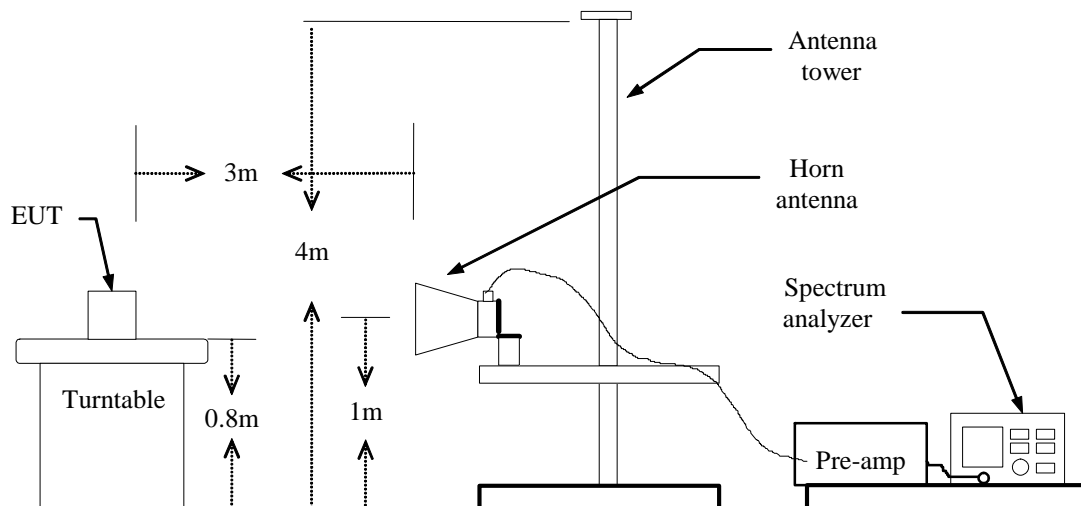
According to FCC §2.1053

## Test Configuration

## Below 1 GHz

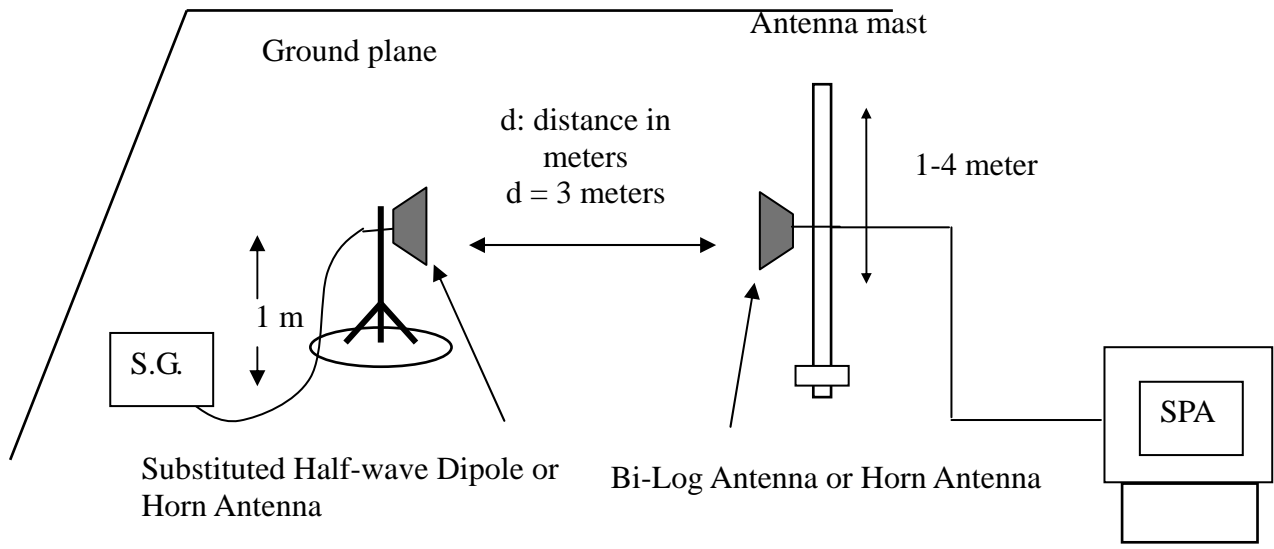


## Above 1 GHz





## 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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-57.87	-12.79	-70.66	-13.00	-57.66	V
75.59	-50.47	-17.92	-68.39	-13.00	-55.39	V
194.90	-51.59	-14.79	-66.38	-13.00	-53.38	V
263.77	-55.97	-13.80	-69.77	-13.00	-56.77	V
288.99	-58.61	-12.08	-70.69	-13.00	-57.69	V
473.29	-65.19	-9.25	-74.44	-13.00	-61.44	V
64.92	-55.94	-17.20	-73.15	-13.00	-60.15	H
75.59	-53.13	-19.81	-72.94	-13.00	-59.94	H
98.87	-55.77	-18.35	-74.12	-13.00	-61.12	H
136.70	-59.55	-14.51	-74.06	-13.00	-61.06	H
179.38	-52.62	-14.23	-66.85	-13.00	-53.85	H
278.32	-63.02	-13.20	-76.22	-13.00	-63.22	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-56.79	-12.79	-69.58	-13.00	-56.58	V
76.56	-49.41	-18.32	-67.74	-13.00	-54.74	V
149.31	-61.59	-13.10	-74.69	-13.00	-61.69	V
199.75	-51.44	-14.21	-65.65	-13.00	-52.65	V
275.41	-60.53	-12.45	-72.98	-13.00	-59.98	V
350.10	-64.59	-13.31	-77.91	-13.00	-64.91	V
41.64	-62.77	-11.68	-74.46	-13.00	-61.46	H
59.10	-55.67	-16.45	-72.12	-13.00	-59.12	H
73.65	-51.41	-19.13	-70.53	-13.00	-57.53	H
98.87	-53.49	-18.35	-71.84	-13.00	-58.84	H
178.41	-52.22	-14.18	-66.39	-13.00	-53.39	H
280.26	-63.19	-13.07	-76.26	-13.00	-63.26	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-55.62	-12.79	-68.40	-13.00	-55.40	V
73.65	-47.36	-17.12	-64.48	-13.00	-51.48	V
161.92	-50.99	-14.34	-65.33	-13.00	-52.33	V
196.84	-49.54	-14.56	-64.10	-13.00	-51.10	V
277.35	-59.11	-12.31	-71.42	-13.00	-58.42	V
455.83	-61.71	-9.88	-71.59	-13.00	-58.59	V
44.55	-61.70	-11.72	-73.42	-13.00	-60.42	H
73.65	-51.38	-19.13	-70.50	-13.00	-57.50	H
98.87	-53.89	-18.35	-72.25	-13.00	-59.25	H
136.70	-58.34	-14.51	-72.84	-13.00	-59.84	H
176.47	-51.51	-14.07	-65.58	-13.00	-52.58	H
279.29	-61.96	-13.12	-75.08	-13.00	-62.08	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-56.25	-12.79	-69.04	-13.00	-56.04	V
60.07	-53.32	-16.07	-69.39	-13.00	-56.39	V
74.62	-48.28	-17.52	-65.81	-13.00	-52.81	V
147.37	-60.15	-13.18	-73.33	-13.00	-60.33	V
205.57	-52.01	-15.48	-67.50	-13.00	-54.50	V
280.26	-62.57	-12.13	-74.70	-13.00	-61.70	V
41.64	-62.04	-11.68	-73.72	-13.00	-60.72	H
58.13	-57.78	-16.31	-74.09	-13.00	-61.09	H
75.59	-50.14	-19.81	-69.95	-13.00	-56.95	H
144.46	-59.73	-14.33	-74.06	-13.00	-61.06	H
179.38	-52.57	-14.23	-66.80	-13.00	-53.80	H
280.26	-62.98	-13.07	-76.06	-13.00	-63.06	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
43.58	-55.36	-12.85	-68.21	-13.00	-55.21	V
60.07	-52.23	-16.07	-68.29	-13.00	-55.29	V
73.65	-50.64	-17.12	-67.76	-13.00	-54.76	V
199.75	-52.63	-14.21	-66.84	-13.00	-53.84	V
271.53	-60.85	-12.71	-73.56	-13.00	-60.56	V
335.55	-62.90	-13.61	-76.51	-13.00	-63.51	V
75.59	-51.78	-19.81	-71.59	-13.00	-58.59	H
102.75	-56.42	-17.51	-73.92	-13.00	-60.92	H
178.41	-51.69	-14.18	-65.87	-13.00	-52.87	H
195.87	-53.33	-13.76	-67.08	-13.00	-54.08	H
280.26	-62.10	-13.07	-75.18	-13.00	-62.18	H
330.70	-62.02	-14.00	-76.01	-13.00	-63.01	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-54.43	-12.79	-67.21	-13.00	-54.21	V
59.10	-51.27	-16.13	-67.40	-13.00	-54.40	V
78.50	-52.58	-19.12	-71.70	-13.00	-58.70	V
178.41	-53.53	-15.17	-68.70	-13.00	-55.70	V
199.75	-55.36	-14.21	-69.57	-13.00	-56.57	V
286.08	-61.50	-12.09	-73.59	-13.00	-60.59	V
60.07	-48.73	-16.59	-65.31	-13.00	-52.31	H
106.63	-46.42	-16.82	-63.25	-13.00	-50.25	H
180.35	-50.34	-14.26	-64.60	-13.00	-51.60	H
262.80	-48.02	-14.81	-62.83	-13.00	-49.83	H
407.33	-52.55	-11.28	-63.83	-13.00	-50.83	H
612.00	-58.50	-7.21	-65.71	-13.00	-52.71	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-58.61	-12.79	-71.39	-13.00	-58.39	V
74.62	-51.99	-17.52	-69.51	-13.00	-56.51	V
193.93	-51.84	-14.90	-66.75	-13.00	-53.75	V
273.47	-58.35	-12.58	-70.93	-13.00	-57.93	V
423.82	-63.65	-10.71	-74.36	-13.00	-61.36	V
469.41	-55.10	-9.40	-64.50	-13.00	-51.50	V
41.64	-63.38	-11.68	-75.06	-13.00	-62.06	H
94.02	-49.80	-19.92	-69.71	-13.00	-56.71	H
179.38	-54.09	-14.23	-68.32	-13.00	-55.32	H
452.92	-65.31	-9.87	-75.18	-13.00	-62.18	H
469.41	-55.26	-9.30	-64.56	-13.00	-51.56	H
814.73	-65.02	-4.92	-69.94	-13.00	-56.94	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
71.71	-53.62	-16.32	-69.95	-13.00	-56.95	V
195.87	-52.16	-14.67	-66.84	-13.00	-53.84	V
280.26	-62.43	-12.13	-74.56	-13.00	-61.56	V
368.53	-61.56	-13.02	-74.58	-13.00	-61.58	V
518.88	-54.26	-8.45	-62.70	-13.00	-49.70	V
859.35	-58.55	-4.45	-63.00	-13.00	-50.00	V
75.59	-53.59	-19.81	-73.40	-13.00	-60.40	H
98.87	-56.67	-18.35	-75.02	-13.00	-62.02	H
179.38	-54.29	-14.23	-68.52	-13.00	-55.52	H
340.40	-62.14	-13.79	-75.93	-13.00	-62.93	H
518.88	-54.99	-8.56	-63.55	-13.00	-50.55	H
859.35	-58.59	-4.43	-63.02	-13.00	-50.02	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:** GSM 1900 / TX / CH 810**Test Date:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-58.33	-12.79	-71.11	-13.00	-58.11	V
78.50	-52.03	-19.12	-71.16	-13.00	-58.16	V
194.90	-52.14	-14.79	-66.93	-13.00	-53.93	V
276.38	-62.10	-12.38	-74.48	-13.00	-61.48	V
569.32	-62.69	-7.94	-70.63	-13.00	-57.63	V
903.97	-53.74	-3.83	-57.57	-13.00	-44.57	V
75.59	-54.84	-19.81	-74.65	-13.00	-61.65	H
99.84	-56.65	-18.04	-74.69	-13.00	-61.69	H
179.38	-54.31	-14.23	-68.54	-13.00	-55.54	H
194.90	-56.27	-13.85	-70.13	-13.00	-57.13	H
568.35	-64.08	-7.82	-71.90	-13.00	-58.90	H
903.97	-54.39	-3.75	-58.14	-13.00	-45.14	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
43.58	-57.68	-12.85	-70.54	-13.00	-57.54	V
73.65	-52.86	-17.12	-69.98	-13.00	-56.98	V
147.37	-61.88	-13.18	-75.05	-13.00	-62.05	V
204.60	-52.55	-15.26	-67.80	-13.00	-54.80	V
245.34	-59.26	-14.54	-73.79	-13.00	-60.79	V
469.41	-65.46	-9.40	-74.86	-13.00	-61.86	V
75.59	-53.43	-19.81	-73.23	-13.00	-60.23	H
147.37	-59.94	-14.08	-74.02	-13.00	-61.02	H
180.35	-52.87	-14.26	-67.14	-13.00	-54.14	H
196.84	-55.36	-13.66	-69.02	-13.00	-56.02	H
469.41	-55.42	-9.30	-64.72	-13.00	-51.72	H
814.73	-63.87	-4.92	-68.79	-13.00	-55.79	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:** GPRS 1900 / TX / CH 661**Test Date:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-56.31	-12.79	-69.10	-13.00	-56.10	V
60.07	-53.54	-16.07	-69.60	-13.00	-56.60	V
75.59	-51.17	-17.92	-69.10	-13.00	-56.10	V
204.60	-52.46	-15.26	-67.72	-13.00	-54.72	V
469.41	-58.47	-9.40	-67.88	-13.00	-54.88	V
814.73	-66.13	-4.82	-70.95	-13.00	-57.95	V
45.52	-62.92	-12.08	-75.00	-13.00	-62.00	H
68.80	-56.67	-17.70	-74.36	-13.00	-61.36	H
98.87	-56.51	-18.35	-74.86	-13.00	-61.86	H
180.35	-52.34	-14.26	-66.61	-13.00	-53.61	H
469.41	-55.98	-9.30	-65.27	-13.00	-52.27	H
814.73	-64.69	-4.92	-69.61	-13.00	-56.61	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
41.64	-58.01	-12.72	-70.73	-13.00	-57.73	V
60.07	-53.83	-16.07	-69.90	-13.00	-56.90	V
75.59	-51.76	-17.92	-69.69	-13.00	-56.69	V
148.34	-61.23	-13.14	-74.37	-13.00	-61.37	V
206.54	-52.96	-15.71	-68.67	-13.00	-55.67	V
469.41	-59.92	-9.40	-69.32	-13.00	-56.32	V
44.55	-63.67	-11.72	-75.40	-13.00	-62.40	H
77.53	-53.94	-20.49	-74.43	-13.00	-61.43	H
99.84	-57.59	-18.04	-75.64	-13.00	-62.64	H
179.38	-52.37	-14.23	-66.60	-13.00	-53.60	H
469.41	-57.85	-9.30	-67.15	-13.00	-54.15	H
814.73	-65.49	-4.92	-70.41	-13.00	-57.41	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-56.27	-12.79	-69.06	-13.00	-56.06	V
73.65	-52.26	-17.12	-69.39	-13.00	-56.39	V
128.94	-59.46	-12.83	-72.29	-13.00	-59.29	V
193.93	-53.96	-14.90	-68.86	-13.00	-55.86	V
267.65	-54.44	-13.19	-67.63	-13.00	-54.63	V
484.93	-58.87	-8.91	-67.78	-13.00	-54.78	V
69.77	-54.82	-17.82	-72.64	-13.00	-59.64	H
149.31	-57.56	-13.92	-71.48	-13.00	-58.48	H
178.41	-49.90	-14.18	-64.07	-13.00	-51.07	H
286.08	-56.93	-13.10	-70.03	-13.00	-57.03	H
347.19	-58.74	-13.54	-72.28	-13.00	-59.28	H
473.29	-60.86	-9.17	-70.04	-13.00	-57.04	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:** EDGE 850 / TX / CH 190**Test Date:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-56.49	-12.79	-69.28	-13.00	-56.28	V
58.13	-53.75	-16.20	-69.95	-13.00	-56.95	V
196.84	-54.83	-14.56	-69.38	-13.00	-56.38	V
273.47	-56.28	-12.58	-68.86	-13.00	-55.86	V
473.29	-59.46	-9.25	-68.71	-13.00	-55.71	V
497.54	-61.56	-8.73	-70.29	-13.00	-57.29	V
180.35	-49.59	-14.26	-63.85	-13.00	-50.85	H
273.47	-56.25	-13.57	-69.82	-13.00	-56.82	H
334.58	-59.30	-13.91	-73.21	-13.00	-60.21	H
378.23	-61.56	-12.13	-73.70	-13.00	-60.70	H
473.29	-60.43	-9.17	-69.61	-13.00	-56.61	H
484.93	-60.96	-8.92	-69.88	-13.00	-56.88	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-55.36	-12.79	-68.15	-13.00	-55.15	V
72.68	-53.78	-16.72	-70.50	-13.00	-57.50	V
195.87	-55.11	-14.67	-69.78	-13.00	-56.78	V
279.29	-54.55	-12.18	-66.72	-13.00	-53.72	V
473.29	-59.71	-9.25	-68.96	-13.00	-55.96	V
484.93	-60.60	-8.91	-69.51	-13.00	-56.51	V
176.47	-50.34	-14.07	-64.41	-13.00	-51.41	H
273.47	-57.24	-13.57	-70.81	-13.00	-57.81	H
286.08	-57.45	-13.10	-70.55	-13.00	-57.55	H
347.19	-57.84	-13.54	-71.37	-13.00	-58.37	H
473.29	-59.50	-9.17	-68.68	-13.00	-55.68	H
484.93	-62.49	-8.92	-71.41	-13.00	-58.41	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
41.64	-56.69	-12.72	-69.41	-13.00	-56.41	V
73.65	-52.38	-17.12	-69.50	-13.00	-56.50	V
197.81	-54.90	-14.44	-69.34	-13.00	-56.34	V
260.86	-53.73	-14.25	-67.98	-13.00	-54.98	V
473.29	-62.01	-9.25	-71.26	-13.00	-58.26	V
484.93	-61.73	-8.91	-70.64	-13.00	-57.64	V
176.47	-49.23	-14.07	-63.30	-13.00	-50.30	H
243.40	-51.58	-13.99	-65.57	-13.00	-52.57	H
273.47	-54.55	-13.57	-68.13	-13.00	-55.13	H
341.37	-56.77	-13.75	-70.52	-13.00	-57.52	H
469.41	-56.75	-9.30	-66.05	-13.00	-53.05	H
814.73	-64.60	-4.92	-69.52	-13.00	-56.52	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-56.47	-12.92	-69.39	-13.00	-56.39	V
195.87	-54.48	-14.67	-69.15	-13.00	-56.15	V
249.22	-54.11	-14.72	-68.83	-13.00	-55.83	V
267.65	-54.44	-13.19	-67.62	-13.00	-54.62	V
473.29	-59.70	-9.25	-68.95	-13.00	-55.95	V
484.93	-60.50	-8.91	-69.41	-13.00	-56.41	V
175.50	-49.93	-14.02	-63.95	-13.00	-50.95	H
273.47	-57.63	-13.57	-71.21	-13.00	-58.21	H
286.08	-58.12	-13.10	-71.22	-13.00	-58.22	H
473.29	-61.41	-9.17	-70.58	-13.00	-57.58	H
518.88	-52.92	-8.56	-61.48	-13.00	-48.48	H
859.35	-58.57	-4.43	-63.00	-13.00	-50.00	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
41.64	-57.38	-12.72	-70.10	-13.00	-57.10	V
57.16	-54.45	-16.26	-70.71	-13.00	-57.71	V
206.54	-54.25	-15.71	-69.96	-13.00	-56.96	V
273.47	-53.60	-12.58	-66.18	-13.00	-53.18	V
473.29	-59.63	-9.25	-68.88	-13.00	-55.88	V
484.93	-60.20	-8.91	-69.11	-13.00	-56.11	V
176.47	-50.65	-14.07	-64.73	-13.00	-51.73	H
273.47	-56.44	-13.57	-70.01	-13.00	-57.01	H
353.01	-58.55	-13.33	-71.87	-13.00	-58.87	H
473.29	-61.43	-9.17	-70.60	-13.00	-57.60	H
568.35	-63.03	-7.82	-70.85	-13.00	-57.85	H
903.97	-54.35	-3.75	-58.10	-13.00	-45.10	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-57.11	-12.79	-69.90	-13.00	-56.90	V
56.19	-51.62	-16.33	-67.95	-13.00	-54.95	V
76.56	-51.13	-18.32	-69.45	-13.00	-56.45	V
116.33	-59.69	-14.58	-74.27	-13.00	-61.27	V
183.26	-54.72	-15.31	-70.03	-13.00	-57.03	V
275.41	-62.29	-12.45	-74.73	-13.00	-61.73	V
41.64	-63.26	-11.68	-74.94	-13.00	-61.94	H
70.74	-55.13	-18.11	-73.24	-13.00	-60.24	H
88.20	-52.71	-21.24	-73.94	-13.00	-60.94	H
132.82	-58.53	-14.26	-72.79	-13.00	-59.79	H
180.35	-49.80	-14.26	-64.06	-13.00	-51.06	H
475.23	-61.81	-9.11	-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:** WCDMA Band II / TX / CH 9400**Test Date:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
43.58	-56.23	-12.85	-69.08	-13.00	-56.08	V
57.16	-52.66	-16.26	-68.92	-13.00	-55.92	V
69.77	-54.07	-15.63	-69.70	-13.00	-56.70	V
127.97	-62.34	-12.93	-75.27	-13.00	-62.27	V
197.81	-55.70	-14.44	-70.14	-13.00	-57.14	V
283.17	-62.39	-12.11	-74.50	-13.00	-61.50	V
44.55	-64.39	-11.72	-76.12	-13.00	-63.12	H
74.62	-55.28	-19.47	-74.75	-13.00	-61.75	H
148.34	-58.90	-14.00	-72.90	-13.00	-59.90	H
179.38	-50.72	-14.23	-64.95	-13.00	-51.95	H
278.32	-62.95	-13.20	-76.15	-13.00	-63.15	H
471.35	-62.00	-9.24	-71.23	-13.00	-58.23	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-56.49	-12.92	-69.41	-13.00	-56.41	V
56.19	-51.90	-16.33	-68.23	-13.00	-55.23	V
77.53	-52.10	-18.72	-70.82	-13.00	-57.82	V
194.90	-55.33	-14.79	-70.12	-13.00	-57.12	V
280.26	-62.81	-12.13	-74.94	-13.00	-61.94	V
346.22	-63.46	-13.43	-76.89	-13.00	-63.89	V
41.64	-64.11	-11.68	-75.79	-13.00	-62.79	H
69.77	-56.09	-17.82	-73.91	-13.00	-60.91	H
147.37	-58.14	-14.08	-72.22	-13.00	-59.22	H
180.35	-49.93	-14.26	-64.20	-13.00	-51.20	H
274.44	-62.24	-13.50	-75.74	-13.00	-62.74	H
471.35	-62.72	-9.24	-71.96	-13.00	-58.96	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-55.78	-12.79	-68.57	-13.00	-55.57	V
61.04	-55.56	-16.02	-71.58	-13.00	-58.58	V
75.59	-55.33	-17.92	-73.25	-13.00	-60.25	V
128.94	-62.16	-12.83	-74.99	-13.00	-61.99	V
176.47	-55.07	-15.04	-70.11	-13.00	-57.11	V
276.38	-61.65	-12.38	-74.03	-13.00	-61.03	V
41.64	-62.34	-11.68	-74.02	-13.00	-61.02	H
75.59	-53.20	-19.81	-73.01	-13.00	-60.01	H
147.37	-57.16	-14.08	-71.24	-13.00	-58.24	H
176.47	-49.62	-14.07	-63.69	-13.00	-50.69	H
280.26	-60.38	-13.07	-73.45	-13.00	-60.45	H
370.47	-58.81	-12.53	-71.34	-13.00	-58.34	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
43.58	-54.75	-12.85	-67.60	-13.00	-54.60	V
56.19	-51.70	-16.33	-68.03	-13.00	-55.03	V
75.59	-50.39	-17.92	-68.31	-13.00	-55.31	V
183.26	-54.26	-15.31	-69.57	-13.00	-56.57	V
257.95	-56.20	-14.47	-70.67	-13.00	-57.67	V
280.26	-61.26	-12.13	-73.39	-13.00	-60.39	V
44.55	-62.81	-11.72	-74.53	-13.00	-61.53	H
73.65	-52.80	-19.13	-71.93	-13.00	-58.93	H
147.37	-57.13	-14.08	-71.22	-13.00	-58.22	H
176.47	-49.59	-14.07	-63.66	-13.00	-50.66	H
278.32	-60.03	-13.20	-73.23	-13.00	-60.23	H
345.25	-61.94	-13.61	-75.55	-13.00	-62.55	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
42.61	-55.23	-12.79	-68.02	-13.00	-55.02	V
56.19	-51.41	-16.33	-67.73	-13.00	-54.73	V
70.74	-52.41	-15.92	-68.34	-13.00	-55.34	V
183.26	-53.97	-15.31	-69.28	-13.00	-56.28	V
276.38	-60.50	-12.38	-72.88	-13.00	-59.88	V
420.91	-65.16	-10.79	-75.95	-13.00	-62.95	V
76.56	-52.46	-20.15	-72.61	-13.00	-59.61	H
97.90	-54.80	-18.67	-73.47	-13.00	-60.47	H
147.37	-57.05	-14.08	-71.13	-13.00	-58.13	H
176.47	-49.19	-14.07	-63.27	-13.00	-50.27	H
280.26	-60.35	-13.07	-73.43	-13.00	-60.43	H
563.50	-65.50	-7.80	-73.30	-13.00	-60.30	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 II /  
TX / CH 9262**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 18, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-57.07	-12.92	-69.99	-13.00	-56.99	V
56.19	-54.09	-16.33	-70.42	-13.00	-57.42	V
73.65	-55.29	-17.12	-72.42	-13.00	-59.42	V
181.32	-52.52	-15.29	-67.81	-13.00	-54.81	V
282.20	-63.64	-12.12	-75.75	-13.00	-62.75	V
379.20	-64.79	-13.03	-77.82	-13.00	-64.82	V
43.58	-63.15	-11.71	-74.86	-13.00	-61.86	H
74.62	-54.04	-19.47	-73.51	-13.00	-60.51	H
98.87	-55.69	-18.35	-74.04	-13.00	-61.04	H
148.34	-57.52	-14.00	-71.52	-13.00	-58.52	H
178.41	-50.16	-14.18	-64.33	-13.00	-51.33	H
280.26	-60.78	-13.07	-73.85	-13.00	-60.85	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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 18, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
43.58	-57.49	-12.85	-70.35	-13.00	-57.35	V
74.62	-52.62	-17.52	-70.14	-13.00	-57.14	V
194.90	-51.77	-14.79	-66.55	-13.00	-53.55	V
242.43	-57.86	-14.40	-72.26	-13.00	-59.26	V
286.08	-63.21	-12.09	-75.30	-13.00	-62.30	V
474.26	-65.50	-9.21	-74.71	-13.00	-61.71	V
42.61	-63.96	-11.70	-75.65	-13.00	-62.65	H
69.77	-55.17	-17.82	-72.99	-13.00	-59.99	H
97.90	-54.58	-18.67	-73.24	-13.00	-60.24	H
148.34	-57.83	-14.00	-71.83	-13.00	-58.83	H
177.44	-50.69	-14.12	-64.82	-13.00	-51.82	H
275.41	-60.45	-13.42	-73.88	-13.00	-60.88	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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 18, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
40.67	-57.41	-12.66	-70.06	-13.00	-57.06	V
57.16	-55.91	-16.26	-72.18	-13.00	-59.18	V
77.53	-52.28	-18.72	-71.00	-13.00	-58.00	V
193.93	-51.74	-14.90	-66.65	-13.00	-53.65	V
279.29	-62.83	-12.18	-75.01	-13.00	-62.01	V
471.35	-66.62	-9.33	-75.95	-13.00	-62.95	V
74.62	-53.68	-19.47	-73.15	-13.00	-60.15	H
97.90	-54.73	-18.67	-73.39	-13.00	-60.39	H
148.34	-57.55	-14.00	-71.55	-13.00	-58.55	H
159.01	-52.86	-14.38	-67.24	-13.00	-54.24	H
179.38	-49.92	-14.23	-64.15	-13.00	-51.15	H
278.32	-60.74	-13.20	-73.94	-13.00	-60.94	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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 18, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
43.58	-55.37	-12.85	-68.23	-13.00	-55.23	V
56.19	-52.33	-16.33	-68.65	-13.00	-55.65	V
77.53	-51.17	-18.72	-69.90	-13.00	-56.90	V
151.25	-60.34	-13.22	-73.56	-13.00	-60.56	V
181.32	-51.13	-15.29	-66.42	-13.00	-53.42	V
283.17	-60.94	-12.11	-73.05	-13.00	-60.05	V
42.61	-62.81	-11.70	-74.50	-13.00	-61.50	H
72.68	-54.59	-18.79	-73.37	-13.00	-60.37	H
96.93	-54.38	-18.98	-73.36	-13.00	-60.36	H
149.31	-57.54	-13.92	-71.46	-13.00	-58.46	H
180.35	-50.08	-14.26	-64.34	-13.00	-51.34	H
281.23	-60.88	-13.08	-73.95	-13.00	-60.95	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-54.39	-12.92	-67.31	-13.00	-54.31	V
56.19	-51.14	-16.33	-67.47	-13.00	-54.47	V
74.62	-51.82	-17.52	-69.35	-13.00	-56.35	V
180.35	-50.89	-15.28	-66.17	-13.00	-53.17	V
194.90	-50.32	-14.79	-65.10	-13.00	-52.10	V
232.73	-51.07	-14.74	-65.81	-13.00	-52.81	V
40.67	-62.86	-11.67	-74.53	-13.00	-61.53	H
73.65	-53.09	-19.13	-72.22	-13.00	-59.22	H
99.84	-54.80	-18.04	-72.84	-13.00	-59.84	H
149.31	-58.04	-13.92	-71.96	-13.00	-58.96	H
179.38	-49.78	-14.23	-64.01	-13.00	-51.01	H
280.26	-59.34	-13.07	-72.41	-13.00	-59.41	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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 18, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
41.64	-54.83	-12.72	-67.55	-13.00	-54.55	V
57.16	-51.39	-16.26	-67.66	-13.00	-54.66	V
75.59	-52.07	-17.92	-70.00	-13.00	-57.00	V
199.75	-51.44	-14.21	-65.65	-13.00	-52.65	V
280.26	-60.64	-12.13	-72.77	-13.00	-59.77	V
436.43	-63.78	-10.37	-74.15	-13.00	-61.15	V
41.64	-62.38	-11.68	-74.07	-13.00	-61.07	H
71.71	-53.89	-18.45	-72.34	-13.00	-59.34	H
99.84	-54.33	-18.04	-72.37	-13.00	-59.37	H
147.37	-56.73	-14.08	-70.81	-13.00	-57.81	H
176.47	-49.63	-14.07	-63.71	-13.00	-50.71	H
278.32	-59.48	-13.20	-72.68	-13.00	-59.68	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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 20, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-56.29	-12.92	-69.21	-13.00	-56.21	V
56.19	-52.45	-16.33	-68.78	-13.00	-55.78	V
76.56	-49.74	-18.32	-68.07	-13.00	-55.07	V
192.96	-55.45	-15.02	-70.47	-13.00	-57.47	V
277.35	-62.09	-12.31	-74.41	-13.00	-61.41	V
472.32	-66.23	-9.29	-75.52	-13.00	-62.52	V
41.64	-62.69	-11.68	-74.37	-13.00	-61.37	H
75.59	-53.90	-19.81	-73.70	-13.00	-60.70	H
116.33	-60.92	-14.83	-75.75	-13.00	-62.75	H
148.34	-59.01	-14.00	-73.01	-13.00	-60.01	H
176.47	-51.08	-14.07	-65.15	-13.00	-52.15	H
279.29	-62.04	-13.12	-75.17	-13.00	-62.17	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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 20, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
43.58	-56.67	-12.85	-69.52	-13.00	-56.52	V
56.19	-52.64	-16.33	-68.97	-13.00	-55.97	V
76.56	-50.16	-18.32	-68.49	-13.00	-55.49	V
196.84	-55.61	-14.56	-70.17	-13.00	-57.17	V
280.26	-62.83	-12.13	-74.95	-13.00	-61.95	V
471.35	-65.28	-9.33	-74.60	-13.00	-61.60	V
41.64	-63.07	-11.68	-74.75	-13.00	-61.75	H
65.89	-56.65	-17.33	-73.98	-13.00	-60.98	H
118.27	-61.24	-14.40	-75.64	-13.00	-62.64	H
147.37	-59.51	-14.08	-73.59	-13.00	-60.59	H
176.47	-51.35	-14.07	-65.42	-13.00	-52.42	H
274.44	-61.78	-13.50	-75.28	-13.00	-62.28	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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 20, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
43.58	-55.87	-12.85	-68.72	-13.00	-55.72	V
56.19	-52.91	-16.33	-69.24	-13.00	-56.24	V
76.56	-50.18	-18.32	-68.50	-13.00	-55.50	V
173.56	-56.40	-14.84	-71.23	-13.00	-58.23	V
265.71	-58.88	-13.49	-72.37	-13.00	-59.37	V
474.26	-63.81	-9.21	-73.02	-13.00	-60.02	V
44.55	-62.85	-11.72	-74.57	-13.00	-61.57	H
62.98	-56.34	-16.96	-73.30	-13.00	-60.30	H
128.94	-57.13	-14.08	-71.21	-13.00	-58.21	H
177.44	-51.16	-14.12	-65.29	-13.00	-52.29	H
277.35	-62.61	-13.27	-75.88	-13.00	-62.88	H
472.32	-66.50	-9.21	-75.71	-13.00	-62.71	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:** October 20, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-54.29	-12.92	-67.21	-13.00	-54.21	V
56.19	-52.36	-16.33	-68.69	-13.00	-55.69	V
76.56	-48.91	-18.32	-67.23	-13.00	-54.23	V
162.89	-55.55	-14.37	-69.92	-13.00	-56.92	V
280.26	-60.23	-12.13	-72.36	-13.00	-59.36	V
541.19	-66.58	-8.23	-74.81	-13.00	-61.81	V
76.56	-51.70	-20.15	-71.84	-13.00	-58.84	H
115.36	-59.01	-15.05	-74.05	-13.00	-61.05	H
148.34	-57.57	-14.00	-71.57	-13.00	-58.57	H
176.47	-50.02	-14.07	-64.09	-13.00	-51.09	H
280.26	-60.83	-13.07	-73.90	-13.00	-60.90	H
828.31	-67.30	-4.78	-72.09	-13.00	-59.09	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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 20, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-52.63	-12.92	-65.55	-13.00	-52.55	V
56.19	-50.71	-16.33	-67.04	-13.00	-54.04	V
76.56	-47.25	-18.32	-65.57	-13.00	-52.57	V
174.53	-52.40	-14.90	-67.31	-13.00	-54.31	V
275.41	-59.14	-12.45	-71.59	-13.00	-58.59	V
334.58	-59.30	-13.61	-72.91	-13.00	-59.91	V
62.01	-54.89	-16.84	-71.73	-13.00	-58.73	H
76.56	-51.01	-20.15	-71.16	-13.00	-58.16	H
95.96	-54.57	-19.29	-73.86	-13.00	-60.86	H
147.37	-57.49	-14.08	-71.58	-13.00	-58.58	H
176.47	-49.75	-14.07	-63.82	-13.00	-50.82	H
274.44	-59.27	-13.50	-72.76	-13.00	-59.76	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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 20, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
44.55	-53.07	-12.92	-65.99	-13.00	-52.99	V
56.19	-50.02	-16.33	-66.35	-13.00	-53.35	V
76.56	-46.64	-18.32	-64.97	-13.00	-51.97	V
196.84	-52.75	-14.56	-67.31	-13.00	-54.31	V
279.29	-59.18	-12.18	-71.35	-13.00	-58.35	V
340.40	-59.70	-13.61	-73.30	-13.00	-60.30	V
74.62	-49.82	-19.47	-69.29	-13.00	-56.29	H
96.93	-52.40	-18.98	-71.38	-13.00	-58.38	H
147.37	-55.72	-14.08	-69.80	-13.00	-56.80	H
175.50	-47.72	-14.02	-61.74	-13.00	-48.74	H
273.47	-57.56	-13.57	-71.14	-13.00	-58.14	H
399.57	-60.54	-11.72	-72.26	-13.00	-59.26	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1651.00	-46.57	1.61	-44.95	-13.00	-31.95	V
2470.00	-57.26	4.41	-52.86	-13.00	-39.86	V
4122.00	-60.35	8.62	-51.73	-13.00	-38.73	V
4570.00	-61.16	9.40	-51.76	-13.00	-38.76	V
7188.00	-61.87	15.77	-46.10	-13.00	-33.10	V
N/A						
1651.00	-47.98	1.42	-46.56	-13.00	-33.56	H
2477.00	-57.82	4.48	-53.34	-13.00	-40.34	H
4122.00	-58.21	8.40	-49.81	-13.00	-36.81	H
6649.00	-61.02	13.60	-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:** GSM 850 / TX / CH 190**Test Date:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1672.00	-49.10	1.63	-47.47	-13.00	-34.47	V
2512.00	-55.95	4.62	-51.33	-13.00	-38.33	V
7321.00	-61.89	16.29	-45.60	-13.00	-32.60	V
N/A						
1672.00	-51.02	1.40	-49.62	-13.00	-36.62	H
2512.00	-54.24	4.69	-49.55	-13.00	-36.55	H
4185.00	-59.80	8.49	-51.31	-13.00	-38.31	H
4682.00	-61.51	9.40	-52.11	-13.00	-39.11	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1700.00	-45.37	1.64	-43.72	-13.00	-30.72	V
2547.00	-54.56	4.76	-49.80	-13.00	-36.80	V
N/A						
1700.00	-49.49	1.38	-48.11	-13.00	-35.11	H
2547.00	-51.92	4.82	-47.10	-13.00	-34.10	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:** GPRS 850 / TX / CH 128**Test Date:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1651.00	-45.15	1.61	-43.54	-13.00	-30.54	V
2470.00	-59.24	4.41	-54.84	-13.00	-41.84	V
2911.00	-60.36	6.21	-54.14	-13.00	-41.14	V
4122.00	-60.42	8.62	-51.81	-13.00	-38.81	V
N/A						
1651.00	-49.21	1.42	-47.79	-13.00	-34.79	H
2470.00	-58.83	4.43	-54.40	-13.00	-41.40	H
4122.00	-61.48	8.40	-53.08	-13.00	-40.08	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1672.00	-42.06	1.63	-40.43	-13.00	-27.43	V
2512.00	-59.31	4.62	-54.69	-13.00	-41.69	V
4185.00	-61.67	8.72	-52.95	-13.00	-39.95	V
N/A						
1672.00	-46.90	1.40	-45.50	-13.00	-32.50	H
2512.00	-54.91	4.69	-50.22	-13.00	-37.22	H
4185.00	-61.26	8.49	-52.77	-13.00	-39.77	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:** GPRS 850 / TX / CH 251**Test Date:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1700.00	-52.20	1.64	-50.55	-13.00	-37.55	V
2547.00	-57.62	4.76	-52.86	-13.00	-39.86	V
5277.00	-62.50	10.35	-52.15	-13.00	-39.15	V
N/A						
1700.00	-49.76	1.38	-48.38	-13.00	-35.38	H
2547.00	-51.56	4.82	-46.74	-13.00	-33.74	H
4521.00	-61.66	9.02	-52.64	-13.00	-39.64	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5550.00	-51.75	10.32	-41.42	-13.00	-28.42	V
N/A						
5550.00	-54.57	10.12	-44.45	-13.00	-31.45	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5641.00	-58.35	10.40	-47.94	-13.00	-34.94	V
N/A						
5641.00	-58.55	10.23	-48.33	-13.00	-35.33	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5732.00	-60.20	10.48	-49.72	-13.00	-36.72	V
N/A						
5732.00	-60.73	10.33	-50.41	-13.00	-37.41	H
7797.00	-61.85	17.67	-44.18	-13.00	-31.18	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5550.00	-59.29	10.32	-48.96	-13.00	-35.96	V
N/A						
3520.00	-62.18	9.30	-52.88	-13.00	-39.88	H
5550.00	-60.94	10.12	-50.81	-13.00	-37.81	H
7839.00	-61.98	17.78	-44.20	-13.00	-31.20	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:** GPRS 1900 / TX / CH 661**Test Date:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3520.00	-62.16	9.52	-52.63	-13.00	-39.63	V
5641.00	-59.69	10.40	-49.28	-13.00	-36.28	V
N/A						
3590.00	-61.77	9.14	-52.63	-13.00	-39.63	H
5641.00	-61.21	10.23	-50.99	-13.00	-37.99	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2603.00	-60.83	4.98	-55.85	-13.00	-42.85	V
5732.00	-59.87	10.48	-49.38	-13.00	-36.38	V
N/A						
4227.00	-62.50	8.56	-53.94	-13.00	-40.94	H
5732.00	-61.44	10.33	-51.11	-13.00	-38.11	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:** EDGE 850 / TX / CH 128**Test Date:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1651.00	-56.10	1.61	-54.49	-13.00	-41.49	V
2470.00	-53.51	4.41	-49.10	-13.00	-36.10	V
6593.00	-60.44	13.48	-46.96	-13.00	-33.96	V
N/A						
1651.00	-50.60	1.42	-49.19	-13.00	-36.19	H
2470.00	-53.32	4.43	-48.89	-13.00	-35.89	H
4122.00	-58.98	8.40	-50.59	-13.00	-37.59	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1672.00	-53.92	1.63	-52.29	-13.00	-39.29	V
2512.00	-54.79	4.62	-50.18	-13.00	-37.18	V
N/A						
1679.00	-53.66	1.40	-52.26	-13.00	-39.26	H
2512.00	-54.02	4.69	-49.33	-13.00	-36.33	H
7377.00	-61.37	16.43	-44.94	-13.00	-31.94	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1700.00	-56.82	1.64	-55.18	-13.00	-42.18	V
2547.00	-53.15	4.76	-48.39	-13.00	-35.39	V
N/A						
1700.00	-50.97	1.38	-49.59	-13.00	-36.59	H
2547.00	-53.41	4.82	-48.58	-13.00	-35.58	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:** EDGE 1900 / TX / CH 512**Test Date:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5550.00	-50.14	10.32	-39.82	-13.00	-26.82	V
N/A						
5550.00	-57.64	10.12	-47.51	-13.00	-34.51	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3478.00	-61.01	9.44	-51.57	-13.00	-38.57	V
5641.00	-54.39	10.40	-43.99	-13.00	-30.99	V
N/A						
5641.00	-59.09	10.23	-48.86	-13.00	-35.86	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5732.00	-52.32	10.48	-41.84	-13.00	-28.84	V
N/A						
3268.00	-59.92	8.07	-51.86	-13.00	-38.86	H
5732.00	-58.98	10.33	-48.65	-13.00	-35.65	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:** WCDMA Band II / TX / CH 9262**Test Date:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5158.00	-61.73	10.38	-51.35	-13.00	-38.35	V
N/A						
3457.00	-61.35	9.11	-52.24	-13.00	-39.24	H
3709.00	-60.06	8.87	-51.19	-13.00	-38.19	H
6831.00	-60.77	14.39	-46.38	-13.00	-33.38	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:** WCDMA Band II / TX / CH 9400**Test Date:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2715.00	-59.47	5.43	-54.04	-13.00	-41.04	V
4612.00	-60.94	9.50	-51.44	-13.00	-38.44	V
7244.00	-61.24	15.99	-45.25	-13.00	-32.25	V
N/A						
3912.00	-61.21	8.41	-52.80	-13.00	-39.80	H
7804.00	-62.37	17.69	-44.69	-13.00	-31.69	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 9538**Test Date:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2400.00	-59.60	4.02	-55.58	-13.00	-42.58	V
6635.00	-60.95	13.64	-47.31	-13.00	-34.31	V
N/A						
3205.00	-59.85	7.72	-52.13	-13.00	-39.13	H
4731.00	-60.28	9.51	-50.77	-13.00	-37.77	H
6859.00	-60.75	14.51	-46.24	-13.00	-33.24	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2316.00	-60.65	3.56	-57.09	-13.00	-44.09	V
3590.00	-61.92	9.36	-52.55	-13.00	-39.55	V
4815.00	-62.78	9.99	-52.79	-13.00	-39.79	V
N/A						
3198.00	-61.13	7.68	-53.45	-13.00	-40.45	H
5018.00	-62.82	10.14	-52.68	-13.00	-39.68	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2967.00	-60.70	6.44	-54.26	-13.00	-41.26	V
6145.00	-62.95	11.42	-51.54	-13.00	-38.54	V
N/A						
3373.00	-61.81	8.65	-53.17	-13.00	-40.17	H
5284.00	-61.81	10.10	-51.71	-13.00	-38.71	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
4360.00	-61.47	9.00	-52.47	-13.00	-39.47	V
5291.00	-61.94	10.34	-51.60	-13.00	-38.60	V
6649.00	-61.40	13.69	-47.70	-13.00	-34.70	V
N/A						
3590.00	-61.40	9.14	-52.26	-13.00	-39.26	H
5669.00	-62.86	10.26	-52.61	-13.00	-39.61	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1602.00	-59.80	1.58	-58.21	-13.00	-45.21	V
5711.00	-62.65	10.47	-52.19	-13.00	-39.19	V
N/A						
2834.00	-60.30	5.94	-54.36	-13.00	-41.36	H
3254.00	-60.37	7.99	-52.38	-13.00	-39.38	H
6243.00	-61.26	11.75	-49.51	-13.00	-36.51	H
7181.00	-61.92	15.75	-46.17	-13.00	-33.17	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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 18, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3618.00	-61.21	9.30	-51.91	-13.00	-38.91	V
4458.00	-61.23	9.16	-52.07	-13.00	-39.07	V
7195.00	-61.81	15.80	-46.01	-13.00	-33.01	V
N/A						
4164.00	-61.44	8.46	-52.98	-13.00	-39.98	H
4920.00	-61.76	9.95	-51.80	-13.00	-38.80	H
6341.00	-61.66	12.21	-49.45	-13.00	-36.45	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3506.00	-60.75	9.56	-51.19	-13.00	-38.19	V
5543.00	-62.22	10.32	-51.90	-13.00	-38.90	V
N/A						
3646.00	-59.74	9.02	-50.73	-13.00	-37.73	H
7328.00	-61.14	16.26	-44.88	-13.00	-31.88	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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 18, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3716.00	-61.60	9.07	-52.53	-13.00	-39.53	V
5403.00	-62.51	10.31	-52.20	-13.00	-39.20	V
7146.00	-62.55	15.61	-46.94	-13.00	-33.94	V
N/A						
4759.00	-61.76	9.58	-52.19	-13.00	-39.19	H
6859.00	-62.09	14.51	-47.58	-13.00	-34.58	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 V /  
TX / CH 4182**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 18, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2694.00	-60.68	5.35	-55.33	-13.00	-42.33	V
3226.00	-61.15	7.93	-53.22	-13.00	-40.22	V
4262.00	-61.66	8.84	-52.82	-13.00	-39.82	V
N/A						
1966.00	-60.45	1.19	-59.27	-13.00	-46.27	H
2477.00	-60.42	4.48	-55.94	-13.00	-42.94	H
2967.00	-61.63	6.46	-55.17	-13.00	-42.17	H
5809.00	-63.68	10.41	-53.27	-13.00	-40.27	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:** October 18, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3513.00	-61.83	9.54	-52.29	-13.00	-39.29	V
3604.00	-61.93	9.33	-52.60	-13.00	-39.60	V
N/A						
5200.00	-62.73	10.11	-52.62	-13.00	-39.62	H
6824.00	-62.96	14.36	-48.60	-13.00	-35.60	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:** October 20, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3324.00	-61.48	8.51	-52.97	-13.00	-39.97	V
5326.00	-62.52	10.33	-52.19	-13.00	-39.19	V
N/A						
2953.00	-60.99	6.41	-54.58	-13.00	-41.58	H
5109.00	-62.48	10.12	-52.36	-13.00	-39.36	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:** October 20, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2540.00	-59.59	4.73	-54.86	-13.00	-41.86	V
2988.00	-60.83	6.52	-54.31	-13.00	-41.31	V
4332.00	-61.99	8.96	-53.03	-13.00	-40.03	V
N/A						
2764.00	-60.63	5.67	-54.96	-13.00	-41.96	H
5543.00	-62.97	10.12	-52.86	-13.00	-39.86	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:** October 20, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2260.00	-59.28	3.25	-56.03	-13.00	-43.03	V
5753.00	-62.67	10.50	-52.17	-13.00	-39.17	V
N/A						
3737.00	-61.42	8.81	-52.61	-13.00	-39.61	H
5088.00	-61.32	10.13	-51.19	-13.00	-38.19	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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 20, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1616.00	-60.39	1.59	-58.80	-13.00	-45.80	V
3184.00	-61.75	7.67	-54.07	-13.00	-41.07	V
5767.00	-64.59	10.51	-54.07	-13.00	-41.07	V
N/A						
1658.00	-59.61	1.41	-58.20	-13.00	-45.20	H
3569.00	-61.75	9.19	-52.56	-13.00	-39.56	H
7566.00	-63.02	17.04	-45.98	-13.00	-32.98	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:** October 20, 2010**Temperature:** 25°C**Tested by:** David Lee**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1420.00	-60.78	1.39	-59.39	-13.00	-46.39	V
3541.00	-61.36	9.48	-51.89	-13.00	-38.89	V
5284.00	-62.64	10.34	-52.29	-13.00	-39.29	V
N/A						
3828.00	-62.35	8.60	-53.75	-13.00	-40.75	H
7195.00	-62.30	15.80	-46.50	-13.00	-33.50	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**Temperature:** 25°C**Humidity:** 50 % RH**Test Date:** October 20, 2010**Tested by:** David Lee**Polarity:** Ver. / Hor.

Frequency (MHz)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3611.00	-61.77	9.31	-52.45	-13.00	-39.45	V
3828.00	-62.15	8.82	-53.33	-13.00	-40.33	V
7790.00	-62.94	17.79	-45.15	-13.00	-32.15	V
N/A						
1686.00	-60.45	1.39	-59.06	-13.00	-46.06	H
5039.00	-62.98	10.13	-52.84	-13.00	-39.84	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.



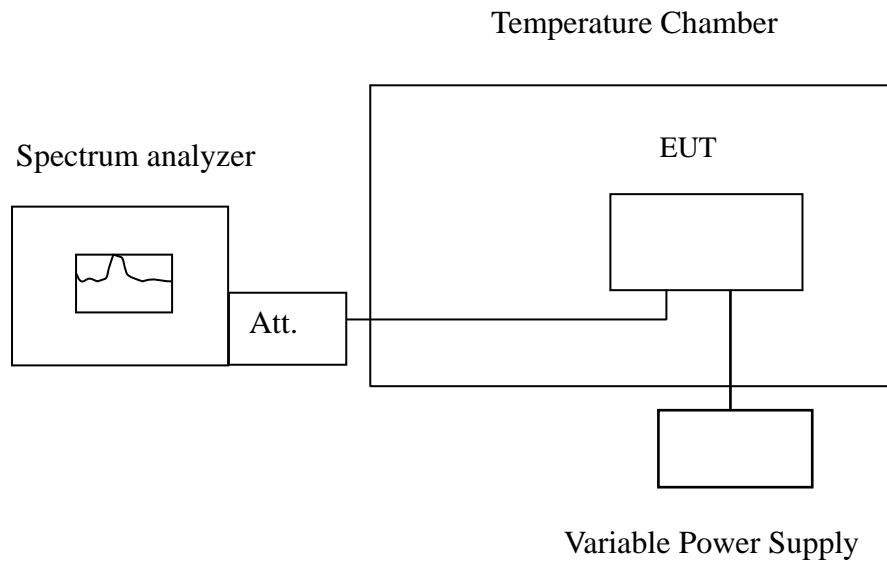
## 7.7 FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

### 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: $\pm 2.5$ ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	836600002	10	2090
	40	836600003	11	
	30	836600012	20	
	20	836599992	0	
	10	836600015	23	
	0	836600006	14	
	-10	836600012	20	
	-20	836600021	29	
	-30	836600005	13	

<b>Reference Frequency: GSM Mid Channel 1880 MHz @ 20°C</b>				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	1880000003	2	4700
	40	1880000000	-1	
	30	1879999999	-2	
	20	1880000001	0	
	10	1879999995	-6	
	0	1880000005	4	
	-10	1880000008	7	
	-20	1879999989	-12	
	-30	1879999988	-13	



Reference Frequency: GPRS Mid Channel 836.6 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	836599987	-14	2090
	40	836599989	-12	
	30	836599995	-6	
	20	836600001	0	
	10	836600005	4	
	0	836600008	7	
	-10	836600002	1	
	-20	836600015	14	
	-30	836600021	20	

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	1879999991	-4	4700
	40	1880000005	10	
	30	1879999994	-1	
	20	1879999995	0	
	10	1879999998	3	
	0	1879999990	-5	
	-10	1879999988	-7	
	-20	1879999982	-13	
	-30	1880000010	15	





Reference Frequency: EDGE Mid Channel 836.6 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	836599997	-24	2090
	40	836599998	-23	
	30	836599995	-26	
	20	836600021	0	
	10	836599984	-37	
	0	836599975	-46	
	-10	836599987	-34	
	-20	836599998	-23	
	-30	836599980	-41	

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	1879999979	-37	4700
	40	1879999974	-42	
	30	1879999982	-34	
	20	1880000016	0	
	10	1879999980	-36	
	0	1879999999	-17	
	-10	1879999974	-42	
	-20	1879999977	-39	
	-30	1879999975	-41	



Reference Frequency: WCDMA Band II Mid Channel 1880 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	1880000005	7	4700
	40	1880000002	4	
	30	1880000001	3	
	20	1879999998	0	
	10	1880000003	5	
	0	1880000024	26	
	-10	1880000026	28	
	-20	1880000021	23	
	-30	1880000018	20	

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)
3.7	50	836600003	12	2090
	40	836600002	11	
	30	836600021	30	
	20	836599991	0	
	10	836600006	15	
	0	836600011	20	
	-10	836600021	30	
	-20	836600023	32	
	-30	836600013	22	



Reference Frequency: WCDMA / HSDPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	1879999999	-19	4700
	40	1879999998	-20	
	30	1879999990	-28	
	20	1880000018	0	
	10	1879999988	-30	
	0	1879999985	-33	
	-10	1879999986	-32	
	-20	1879999987	-31	
	-30	1879999984	-34	

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)
3.7	50	836599999	-10	2090
	40	836600000	-9	
	30	836599998	-11	
	20	836600009	0	
	10	836599989	-20	
	0	836599990	-19	
	-10	836599992	-17	
	-20	836599991	-18	
	-30	836599996	-13	



Reference Frequency: WCDMA / HSUPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	1880000003	11	4700
	40	1880000005	13	
	30	1880000007	15	
	20	1879999992	0	
	10	1880000001	9	
	0	1880000008	16	
	-10	1880000004	12	
	-20	1880000006	14	
	-30	1880000003	11	

Reference Frequency: WCDMA / HSUPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	50	836600003	8	2090
	40	836600002	7	
	30	836600001	6	
	20	836599995	0	
	10	836600011	16	
	0	836600015	20	
	-10	836600016	21	
	-20	836600018	23	
	-30	836600010	15	

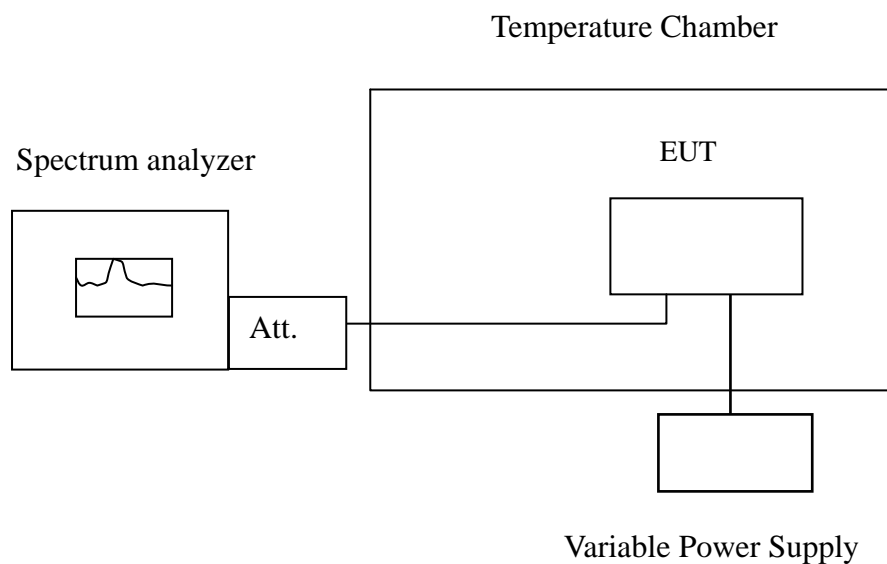


## 7.8 FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

### 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)
4.255	20	836599998	6	2090
3.7		836599992	0	
3.145		836599982	-10	
8.9END		836599913	-79	

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)
4.255	20	1879999995	-6	4700
3.7		1880000001	0	
3.145		1879999994	-7	
3END		1879999911	-90	



Reference Frequency: GPRS Mid Channel 836.6 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	836599982	-19	2090
3.7		836600001	0	
3.145		836600000	-1	
3END		836600067	66	

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	1879999999	4	4700
3.7		1879999995	0	
3.145		1879999992	-3	
3END		1879999903	-92	



Reference Frequency: EDGE Mid Channel 836.6 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	836600012	-9	2090
3.7		836600021	0	
3.145		836600015	-6	
3END		836600108	87	

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	1880000011	-5	4700
3.7		1880000016	0	
3.145		1880000028	12	
3END		1880000083	67	





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)
4.255	20	1879999995	-3	4700
3.7		1879999998	0	
3.145		1879999994	-4	
3END		1879999936	-62	

Reference Frequency: WCDMA Band V Mid Channel 836.4 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	836599997	6	2090
3.7		836599991	0	
3.145		836599988	-3	
3END		836599932	-59	



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)
4.255	20	1880000017	-1	4700
3.7		1880000018	0	
3.145		1880000010	-8	
3END		1880000069	51	

Reference Frequency: WCDMA HSDPA Band V Mid Channel 836.4 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	836600004	-5	2090
3.7		836600009	0	
3.145		836600006	-3	
3END		836600073	64	



Reference Frequency: WCDMA HSUPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	1879999990	-2	4700
3.7		1879999992	0	
3.145		1879999989	-3	
3END		1879999909	-83	

Reference Frequency: WCDMA HSUPA Band V Mid Channel 836.4 MHz @ 20°C				
Limit: $\pm 2.5$ ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.255	20	836599993	-2	2090
3.7		836599995	0	
3.145		836599991	-4	
3END		836599941	-54	



## **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:** October 7, 2010  
**Temperature:** 26°C      **Tested by:** Tom Tsai  
**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
0.1594	38.67	26.29	9.80	48.47	36.09	65.49	55.50	-17.02	-19.41	L1
0.2017	33.61	20.87	9.67	43.28	30.54	63.54	53.54	-20.26	-23.00	L1
0.2434	28.12	21.68	9.68	37.80	31.36	61.98	51.98	-24.18	-20.62	L1
0.2809	27.05	21.99	9.68	36.73	31.67	60.79	50.79	-24.06	-19.12	L1
10.3186	24.68	10.39	9.91	34.59	20.30	60.00	50.00	-25.41	-29.70	L1
19.9199	25.26	8.41	9.95	35.21	18.36	60.00	50.00	-24.79	-31.64	L1
0.1599	35.99	25.02	9.61	45.60	34.63	65.46	55.47	-19.86	-20.84	L2
0.2007	30.91	19.49	9.66	40.57	29.15	63.58	53.58	-23.01	-24.43	L2
0.2399	27.29	22.49	9.67	36.96	32.16	62.10	52.10	-25.14	-19.94	L2
0.2813	25.94	21.73	9.68	35.62	31.41	60.77	50.78	-25.15	-19.37	L2
13.1381	18.51	6.64	9.94	28.45	16.58	60.00	50.00	-31.55	-33.42	L2
19.0621	23.83	7.11	10.04	33.87	17.15	60.00	50.00	-26.13	-32.85	L2

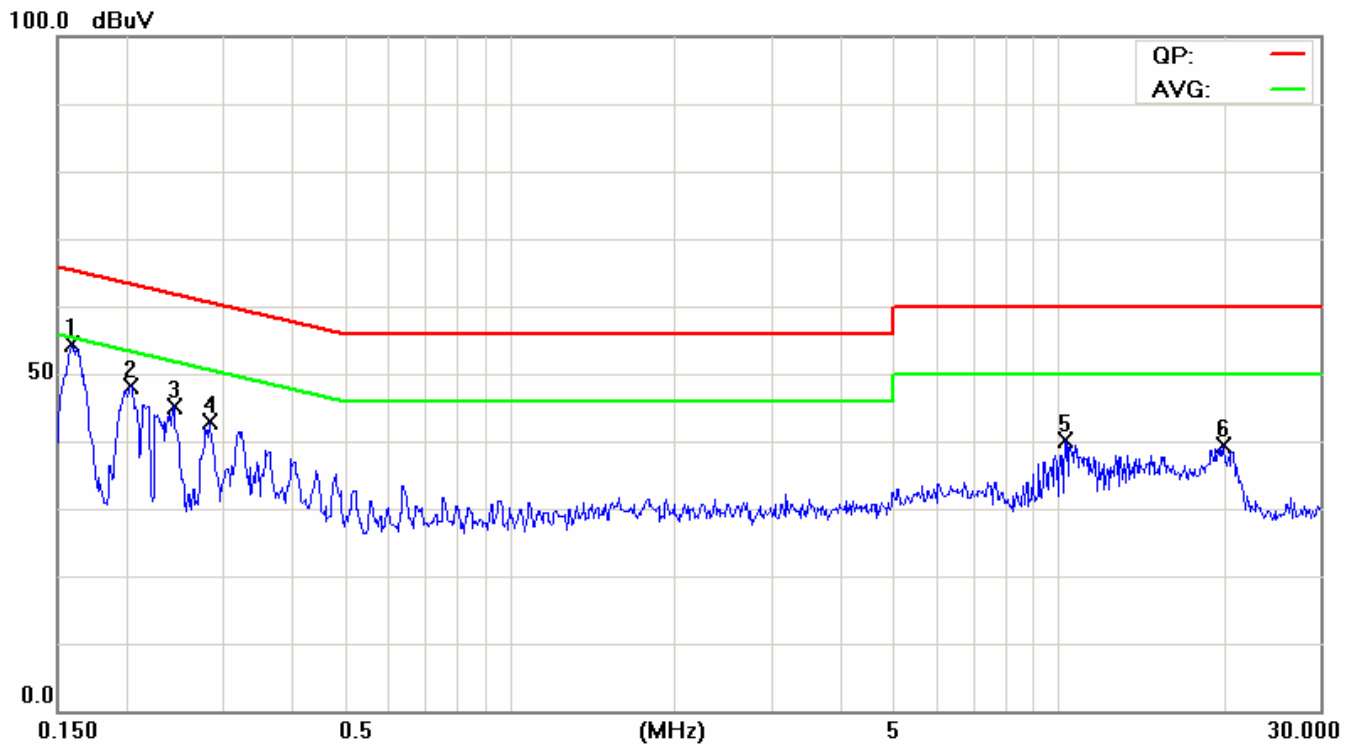
**Remark:**

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.

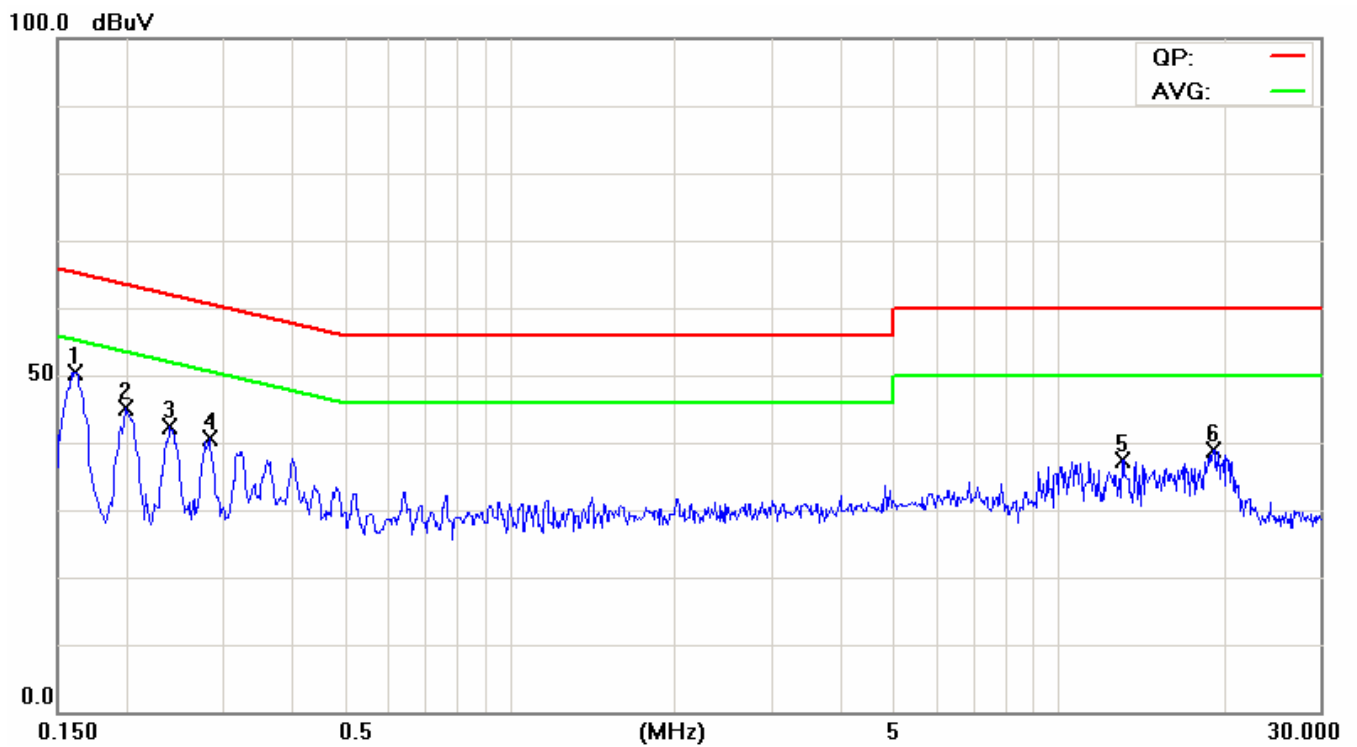


## Test Plots

### Conducted emissions (Line 1)



### Conducted emissions (Line 2)





## APPENDIX I

### RADIO FREQUENCY EXPOSURE

#### LIMIT

##### EUT Specification

EUT	Smart Handheld
Frequency band (Operating)	<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: GSM / GPRS / EDGE 850: 824 ~ 849 MHz
Device category	<input checked="" type="checkbox"/> Portable (<20cm separation) <input type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure ( $S = 5\text{mW/cm}^2$ ) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure ( $S=1\text{mW/cm}^2$ )
Antenna diversity	<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
Max. output power	ERP: 31.25 dBm (1333.52mW)
Antenna gain (Max)	-1.62 dBi(Numeric gain: 0.68)
Evaluation applied	<input type="checkbox"/> MPE Evaluation <input checked="" type="checkbox"/> SAR Evaluation* <input type="checkbox"/> N/A

##### **Remark:**

1. The maximum output power is 31.25 dBm (1333.52mW) at 848.80MHz (with 0.68 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  $1.0\text{ mW/cm}^2$  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/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: .32.72 dBm (1870.68mW)
<b>Antenna gain (Max)</b>	0.25dBi (Numeric gain: 1.06)
<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 32.72 dBm (1870.68mW) at 1880.00MHz (with 1.06 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.