



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

TEST REPORT

For

IPC

Model: AR-V5403FLAT-LTE

Trade Name: Acrosser

Issued to

**Acrosser Technology Co., LTD.
10F., No. 12, Lane 609, Sec. 5, Chongsin Rd., Sanchong Dist.,
New Taipei City 241, Taiwan, R.O.C.**

Issued by

**Compliance Certification Services Inc.
No.11, Wu-Gong 6th Rd., Wugu Industrial Park,
New Taipei City 248, Taiwan (R.O.C.)
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service@ccsrf.com
Issued Date: September 30, 2012**



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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	September 30, 2012	Initial Issue	ALL	Angel Cheng



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1. TEST RESULT CERTIFICATION

Applicant: Acrosser Technology Co., LTD.
10F., No. 12, Lane 609, Sec. 5, Chongsin Rd., Sanchong Dist.,
New Taipei City 241, Taiwan, R.O.C.

Equipment Under Test: IPC

Trade Name: Acrosser

Model Number: AR-V5403FLAT-LTE

Date of Test: September 17 ~ 18, 2012

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

We hereby certify that:

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

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

Approved by:

Reviewed by:

Miller Lee
Section Manager
Compliance Certification Services Inc.

Gina Lo
Section Manager
Compliance Certification Services Inc.



2. EUT DESCRIPTION

Product	IPC
Trade Name	Acrosser
Model Number	AR-V5403FLAT-LTE
Model Discrepancy	N/A
Received Date	September 17, 2012
Power Supply	Powered by DC 30V
Frequency Range	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
Transmit Power (ERP & EIRP Power)	GPRS 850: 26.47 dBm GPRS 1900: 23.00 dBm EDGE 850: 26.99 dBm EDGE 1900: 23.49 dBm WCDMA Band II: 18.60 dBm HSDPA Band II: 19.05 dBm HSUPA Band II: 19.19 dBm WCDMA Band V: 20.16 dBm HSDPA Band V: 19.55 dBm HSUPA Band V: 19.59 dBm
Modulation Technique	GMSK
Cellular Phone Protocol	GSM: GSMK GPRS: GSMK EDGE: 8PSK WCDMA: Quadrature Phase Shift Keying (QPSK) with Root-raised cosine pulse shaping filters (roll off = 0.22)



Type of Emission	GPRS 850: 244KGXW--- GPRS 1900: 245KGXW--- EDGE 850: 244KG7W--- EDGE 1900: 249KG7W--- WCDMA Band II: 4M15F9W--- WCDMA Band V: 4M14F9W--- WCDMA HSDPA Band II: 4M14F9W--- WCDMA HSDPA Band V: 4M14F9W--- WCDMA HSUPA Band II: 4M15F9W--- WCDMA HSUPA Band V: 4M15F9W---
Antenna Gain	GSM / GPRS / EDGE 850: 2 dBi GSM / GPRS / EDGE 1900: 5 dBi WCDMA band II: 5 dBi WCDMA band V: 5 dBi
Antenna Type	Multiband 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: **ZJD-ARV5403FLLTE** 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: AR-V5403FLAT-LTE) 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, which worst case was in normal link mode only.



4. INSTRUMENT CALIBRATION

4.1 MEASURING INSTRUMENT CALIBRATION

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

4.2 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	03/21/2013
Power Meter	Anritsu	ML2495A	1012009	06/05/2013
Power Sensor	Anritsu	MA2411A	0917072	06/05/2013
Temp. / Humidity Chamber	Terchy	MHG-150LF	930619	10/18/2013

Wugu 966 Chamber A				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	US42510268	11/15/2012
EMI Test Receiver	R&S	ESCI	100064	03/01/2013
Pre-Amplifier	Mini-Circuits	ZFL-1000LN	SF350700823	01/13/2013
Pre-Amplifier	MITEQ	AFS44-00102650-42-10P-44	1415367	11/20/2012
Bilog Antenna	Sunol Sciences	JB3	A030105	10/03/2012
Bilog Antenna	Sunol Sciences	JB3	A030205	10/03/2012
Horn Antenna	EMCO	3117	00055165	02/14/2013
Horn Antenna	EMCO	3117	00055167	01/29/2013
Horn Antenna	EMCO	3116	00026370	10/12/2012
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	12/23/2012
Test S/W	EZ-EMC (CCS-3A1RE)			



4.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
Powerline Conducted Emission	N/A
3M Semi Anechoic Chamber / 30M~200M	+/- 4.0138
3M Semi Anechoic Chamber / 200M~1000M	+/- 3.9483
3M Semi Anechoic Chamber / 1G~8G	+/- 2.5975
3M Semi Anechoic Chamber / 8G~18G	+/- 2.6112
3M Semi Anechoic Chamber / 18G~26G	+/- 2.7389
3M Semi Anechoic Chamber / 26G~40G	+/- 2.9683

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, Wu-Gong 6th Rd., Wugu Industrial Park, New Taipei City 248, Taiwan (R.O.C.)

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

☐ No.81-1, Lane 210, Bade 2nd Rd., Lujhu Township, Taoyuan County 33841, TAIWAN, R.O.C.

Tel: 886-3-324-0332 / Fax: 886-3-324-5235

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

5.2 EQUIPMENT




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

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

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

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

**5.3 TABLE OF ACCREDITATIONS AND LISTINGS**

Country	Agency	Scope of Accreditation	Logo
USA	FCC	3M Semi Anechoic Chamber (FCC MRA: TW1039) to perform FCC Part 15 measurements	 FCC MRA: TW1039
Taiwan	TAF	LP0002, RTTE01, FCC Method-47 CFR Part 15 Subpart C, D, E, RSS-210, RSS-310 IDA TS SRD, AS/NZS 4268, AS/NZS 4771, TS 12.1 & 12.2, ETSI EN 300 440-1, ETSI EN 300 440-2, ETSI EN 300 328, ETSI EN 300 220-1, ETSI EN 300 220-2, ETSI EN 301 893, ETSI EN 301 489-1/3/7/17 FCC OET Bulletin 65 + Supplement C, EN 50360, EN 50361, EN 50371, RSS 102, EN 50383, EN 50385, EN 50392, IEC 62209, CNS 14958-1, CNS 14959 FCC Method -47 CFR Part 15 Subpart B IEC / EN 61000-3-2, IEC / EN 61000-3-3, IEC / EN 61000-4-2/3/4/5/6/8/11	
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	Series No.	FCC ID	Data Cable	Power Cord
1	LCD Monitor	DELL	3008WFP	CN-0XK290-7161 8-846-169L	FCC DoC	Unshielded, 1.8m	Shielded, 1.8m
2	USB Mouse	DELL	MO56UO	408031121	FCC DoC	Shielded, 1.8m	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.



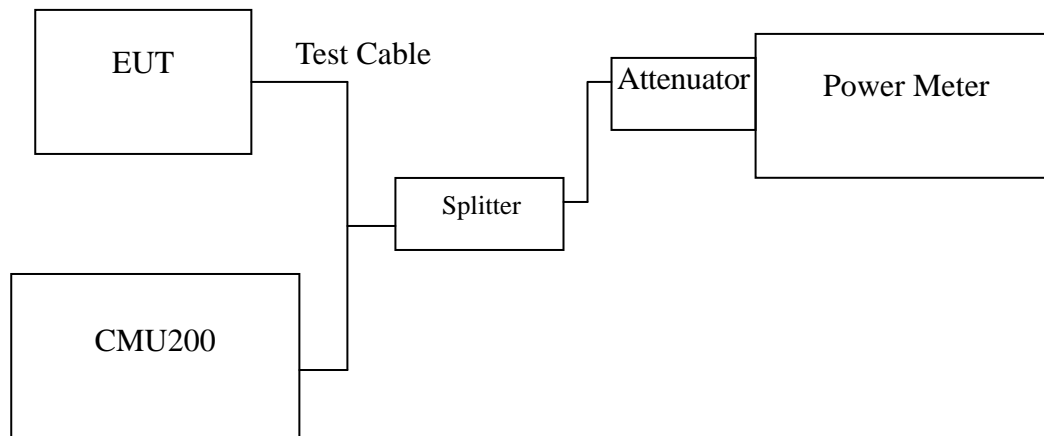
7. FCC PART 22 & 24 REQUIREMENTS

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
GPRS 850	128	824.20	32.34	1.71396
	190	836.60	32.45	1.75792
	251	848.80	*32.59	1.81552
EDGE 850	128	824.20	30.73	1.18304
	190	836.60	*30.81	1.20504
	251	848.80	30.67	1.16681

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
GPRS 1900	512	1850.20	*27.50	0.56234
	661	1880.00	27.00	0.50119
	810	1909.80	27.00	0.50119
EDGE 1900	512	1850.20	25.40	0.34674
	661	1880.00	26.00	0.39811
	810	1909.80	*26.20	0.41687

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	*26.02	0.39994
	9400	1880.00	25.87	0.38637
	9538	1907.60	25.38	0.34514
WCDMA (BAND V)	4132	826.40	26.24	0.42073
	4182	836.40	*26.48	0.44463
	4233	846.60	26.13	0.41020

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
WCDMA / HSDPA (BAND II)	9262	1852.40	25.69	0.37068
	9400	1880.00	*25.79	0.37931
	9538	1907.60	25.05	0.31989
WCDMA / HSDPA (BAND V)	4132	826.40	*26.07	0.40458
	4182	836.40	25.76	0.37670
	4233	846.60	25.81	0.38107

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
WCDMA / HSUPA (BAND II)	9262	1852.40	25.08	0.32211
	9400	1880.00	*25.53	0.35727
	9538	1907.60	25.05	0.31989
WCDMA / HSUPA (BAND V)	4132	826.40	*25.98	0.39628
	4182	836.40	25.60	0.36308
	4233	846.60	25.51	0.35563

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

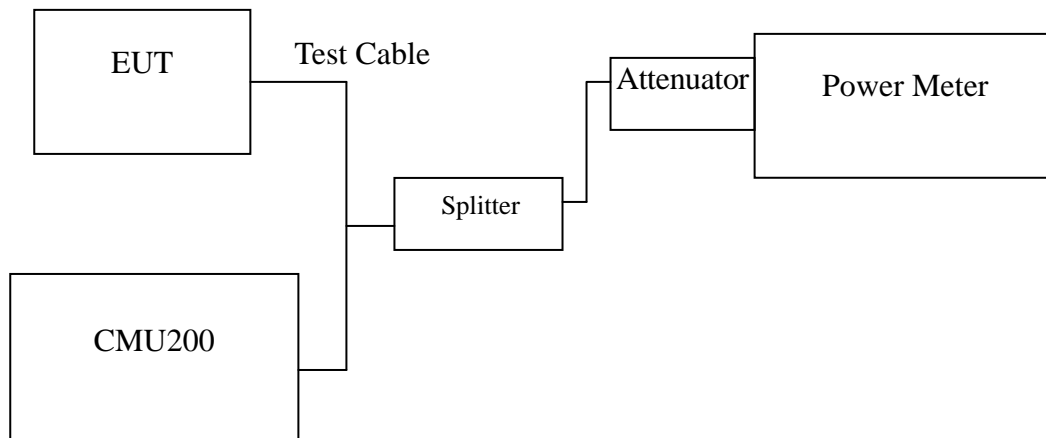


7.2 AVERAGE POWER

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 Data**

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
GPRS 850	128	824.20	29.33	0.85698
	190	836.60	29.44	0.87896
	251	848.80	29.58	0.90776
EDGE 850	128	824.20	27.72	0.59152
	190	836.60	27.80	0.60252
	251	848.80	27.66	0.58340

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
GPRS 1900	512	1850.20	24.49	0.28117
	661	1880.00	23.99	0.25059
	810	1909.80	23.99	0.25059
EDGE 1900	512	1850.20	22.39	0.17337
	661	1880.00	22.99	0.19905
	810	1909.80	23.19	0.20843

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	22.65	0.18408
	9400	1880.00	22.28	0.16904
	9538	1907.60	22.48	0.17701
WCDMA (BAND V)	4132	826.40	22.94	0.19679
	4182	836.40	23.11	0.20464
	4233	846.60	22.91	0.19543

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
WCDMA / HSDPA (BAND II)	9262	1852.40	22.33	0.17100
	9400	1880.00	22.19	0.16558
	9538	1907.60	22.39	0.17338
WCDMA / HSDPA (BAND V)	4132	826.40	22.41	0.17418
	4182	836.40	22.41	0.17418
	4233	846.60	22.54	0.17947

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
WCDMA / HSUPA (BAND II)	9262	1852.40	22.29	0.16943
	9400	1880.00	22.16	0.16444
	9538	1907.60	22.19	0.16558
WCDMA / HSUPA (BAND V)	4132	826.40	22.40	0.17378
	4182	836.40	22.39	0.17338
	4233	846.60	22.43	0.17498

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



7.3 ERP & EIRP MEASUREMENT

LIMIT

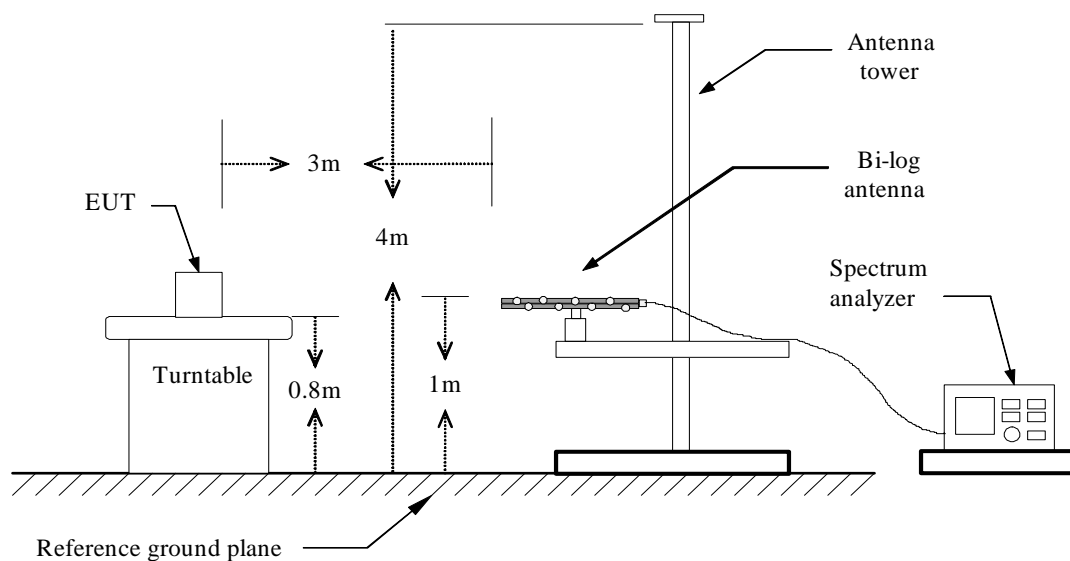
According to FCC §2.1046

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

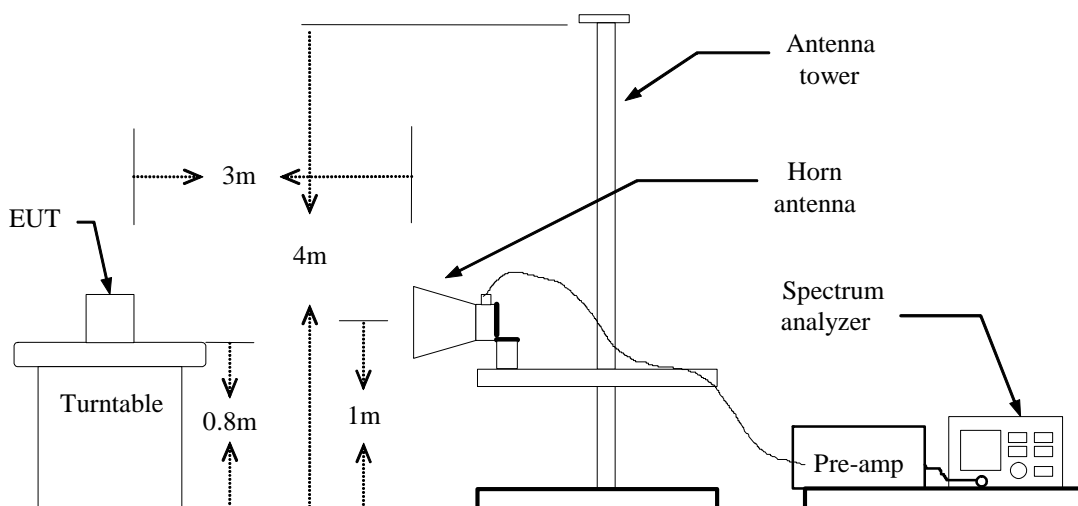
FCC 24.232(b): The equivalent Isotropic Radiated Power (EIRP) must not exceed 2 Watts.

Test Configuration

Below 1 GHz

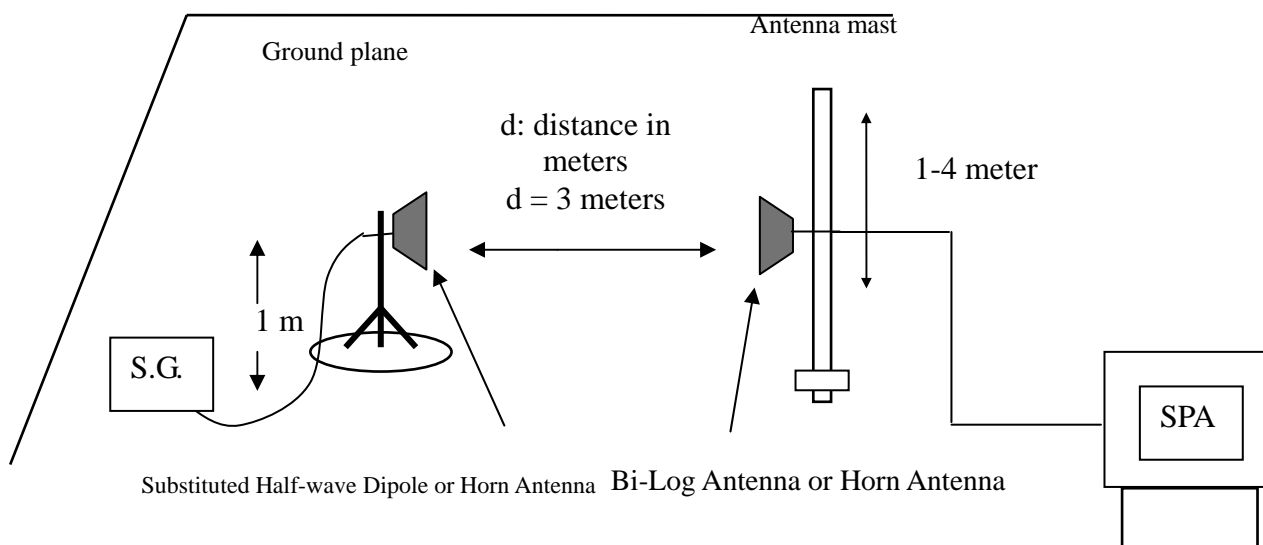


Above 1 GHz





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:

$$\text{ERP} = \text{S.G. output (dBm)} + \text{Antenna Gain (dBi)} - \text{Cable (dB)} - 2.15$$

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

TEST RESULTS

No non-compliance noted.

**GPRS 850 TEST DATA**

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.20	V	23.18	3.39	6.24	26.03	38.45	-12.42
	824.20	H	22.52	3.39	6.24	25.37	38.45	-13.08
190	836.60	V	23.5	3.4	6.37	*26.47	38.45	-11.98
	836.60	H	20.78	3.4	6.36	23.74	38.45	-14.71
251	848.80	V	23.38	3.4	6.4	26.38	38.45	-12.07
	848.80	H	21.27	3.4	6.4	24.27	38.45	-14.18

GPRS 1900 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.20	V	20.63	5.37	5.67	20.93	33.00	-12.07
	1850.20	H	21.22	5.37	5.67	21.52	33.00	-11.48
661	1880.00	V	20.16	5.42	5.62	20.36	33.00	-12.64
	1880.00	H	22.8	5.42	5.62	*23.00	33.00	-10.00
810	1909.80	V	20.48	5.37	5.67	20.78	33.00	-12.22
	1909.80	H	21.22	5.37	5.67	21.52	33.00	-11.48

EDGE 850 Test Data

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.20	V	24.14	3.39	6.24	*26.99	38.45	-11.46
	824.20	H	20.59	3.39	6.24	23.44	38.45	-15.01
190	836.60	V	23.16	3.4	6.37	26.13	38.45	-12.32
	836.60	H	22.84	3.4	6.37	25.81	38.45	-12.64
251	848.80	V	23.83	3.4	6.4	26.83	38.45	-11.62
	848.80	H	20.46	3.4	6.4	23.46	38.45	-14.99

EDGE 1900 Test Data

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.20	V	22.13	5.37	5.67	22.43	33.00	-10.57
	1850.20	H	19.01	5.37	5.67	19.31	33.00	-13.69
661	1880.00	V	23.29	5.42	5.62	*23.49	33.00	-9.51
	1880.00	H	19.97	5.42	5.62	20.17	33.00	-12.83
810	1909.80	V	22.15	5.48	5.56	22.23	33.00	-10.77
	1909.80	H	20.45	5.48	5.56	20.53	33.00	-12.47

**WCDMA Test Data (BAND II)**

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
9262	1852.40	V	16.68	5.37	5.66	16.97	33.00	-16.03
	1852.40	H	17.82	5.37	5.66	18.11	33.00	-14.89
9400	1880.00	V	16.25	5.42	5.62	16.45	33.00	-16.55
	1880.00	H	18.4	5.42	5.62	*18.60	33.00	-14.40
9538	1907.60	V	15.62	5.47	5.57	15.72	33.00	-17.28
	1907.60	H	18.45	5.47	5.57	18.55	33.00	-14.45

WCDMA Test Data (BAND V)

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	826.40	V	16.17	3.39	6.25	19.03	38.45	-19.42
	826.40	H	17.3	3.39	6.25	*20.16	38.45	-18.29
4182	836.40	V	16.34	3.4	6.37	19.31	38.45	-19.14
	836.40	H	14.62	3.4	6.36	17.58	38.45	-20.87
4233	846.60	V	16.32	3.4	6.4	19.32	38.45	-19.13
	846.60	H	13.6	3.4	6.4	16.60	38.45	-21.85

WCDMA / HSDPA BAND II Test Data

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
9262	1852.40	V	17.22	5.38	5.66	17.50	33.00	-15.50
	1852.40	H	18.25	5.38	5.66	18.53	33.00	-14.47
9400	1880.00	V	17.08	5.42	5.62	17.28	33.00	-15.72
	1880.00	H	18.85	5.42	5.62	*19.05	33.00	-13.95
9538	1907.60	V	15.51	5.47	5.57	15.61	33.00	-17.39
	1907.60	H	15.72	5.47	5.57	15.82	33.00	-17.18

WCDMA / HSDPA BAND V Test Data

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	826.40	V	16.64	3.39	6.25	19.50	38.45	-18.95
	826.40	H	15.3	3.39	6.25	18.16	38.45	-20.29
4182	836.40	V	16.58	3.4	6.37	*19.55	38.45	-18.90
	836.40	H	12.88	3.4	6.35	15.83	38.45	-22.62
4233	846.60	V	16.53	3.4	6.4	19.53	38.45	-18.92
	846.60	H	12.19	3.4	6.4	15.19	38.45	-23.26

**WCDMA / HSUPA BAND II Test Data**

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
9262	1852.40	V	17	5.38	5.66	17.28	33.00	-15.72
	1852.40	H	18.19	5.37	5.67	18.49	33.00	-14.51
9400	1880.00	V	15.68	5.47	5.57	15.78	33.00	-17.22
	1880.00	H	19.09	5.47	5.57	*19.19	33.00	-13.81
9538	1907.60	V	16.86	5.42	5.62	17.06	33.00	-15.94
	1907.60	H	18.95	5.42	5.62	19.15	33.00	-13.85

WCDMA / HSUPA BAND V Test Data

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	826.40	V	16.73	3.39	6.25	*19.59	38.45	-18.86
	826.40	H	15.03	3.39	6.25	17.89	38.45	-20.56
4182	836.40	V	16.59	3.4	6.37	19.56	38.45	-18.89
	836.40	H	12.59	3.4	6.36	15.55	38.45	-22.90
4233	846.60	V	16.3	3.4	6.4	19.30	38.45	-19.15
	846.60	H	12.05	3.4	6.4	15.05	38.45	-23.40

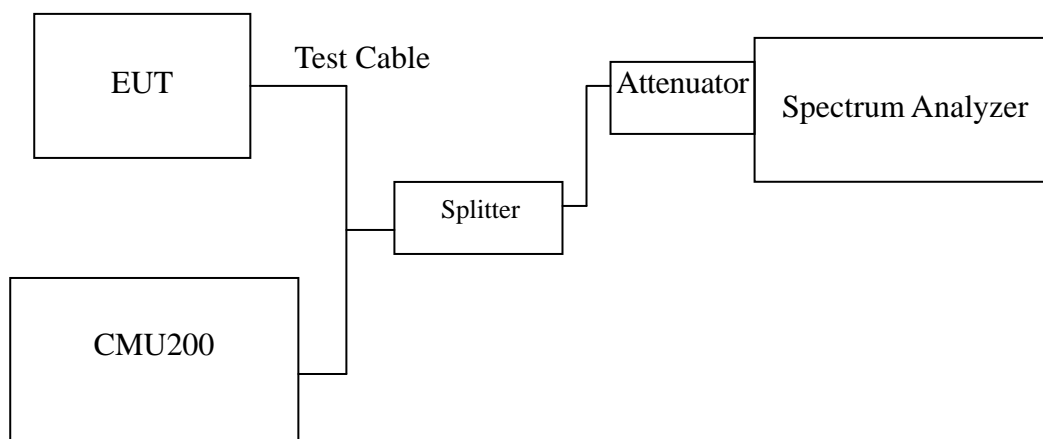


7.4 OCCUPIED BANDWIDTH MEASUREMENT

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)
GPRS 850	128	824.20	244.0243
	190	836.60	240.4730
	251	848.80	239.1140
EDGE 850	128	824.20	243.2863
	190	836.60	244.1385
	251	848.80	243.7612

Test Mode	CH	Frequency (MHz)	99% Bandwidth (kHz or MHz)
GPRS 1900	512	1850.20	241.5806
	661	1880.00	241.5151
	810	1909.80	245.6512
EDGE 1900	512	1850.20	239.8638
	661	1880.00	246.1334
	810	1909.80	249.3256

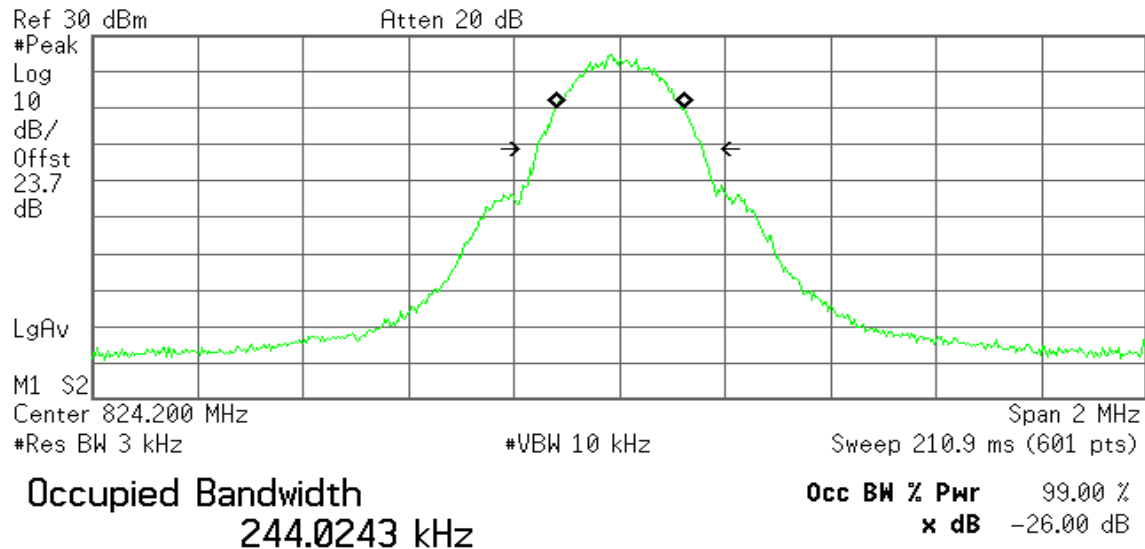


Test Mode	CH	Frequency (MHz)	99% Bandwidth (MHz)
WCDMA (Band II)	9262	1852.40	4.1500
	9400	1880.00	4.1409
	9538	1907.60	4.1593
WCDMA (Band V)	4132	826.40	4.1121
	4182	836.40	4.1226
	4233	846.60	4.1431
WCDMA / HSDPA (BAND II)	9262	1852.40	4.1483
	9400	1880.00	4.1313
	9538	1907.60	4.1345
WCDMA / HSDPA (BAND V)	4132	826.40	4.1498
	4182	836.40	4.1281
	4233	846.60	4.1449
WCDMA / HSUPA (BAND II)	9262	1852.40	4.1322
	9400	1880.00	4.1506
	9538	1907.60	4.1301
WCDMA / HSUPA (BAND V)	4132	826.40	4.1560
	4182	836.40	4.1478
	4233	846.60	4.1530

**Test Plot****GPRS 850 (CH Low)**

* Agilent

R T

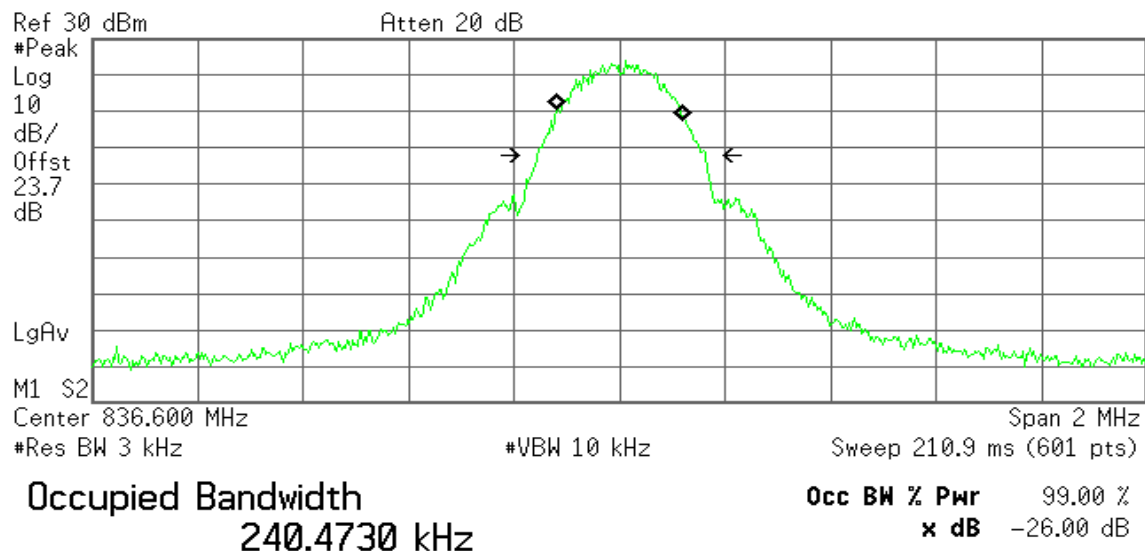


Transmit Freq Error 642.863 Hz
x dB Bandwidth 315.721 kHz

GPRS 850 (CH Mid)

* Agilent

R T



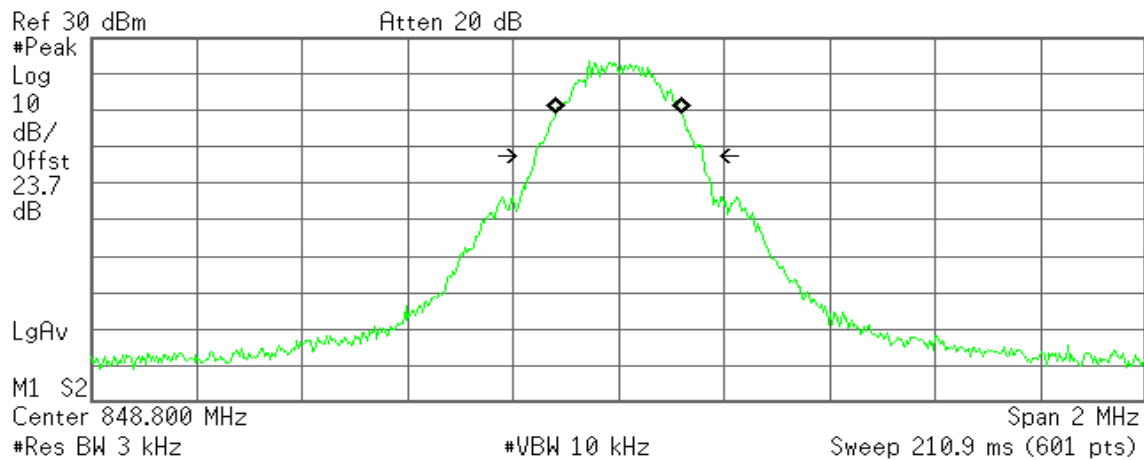
Transmit Freq Error -223.867 Hz
x dB Bandwidth 320.115 kHz



GPRS 850(CH High)

Agilent

R T



Occupied Bandwidth
239.1140 kHz

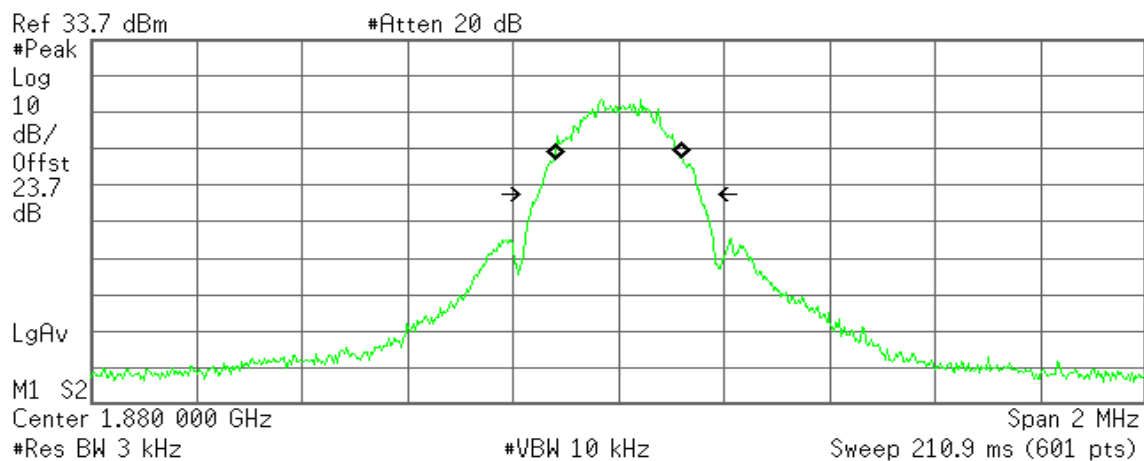
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -93.986 Hz
x dB Bandwidth 319.486 kHz

GPRS 1900 (CH Low)

Agilent

R T



Occupied Bandwidth
241.5806 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

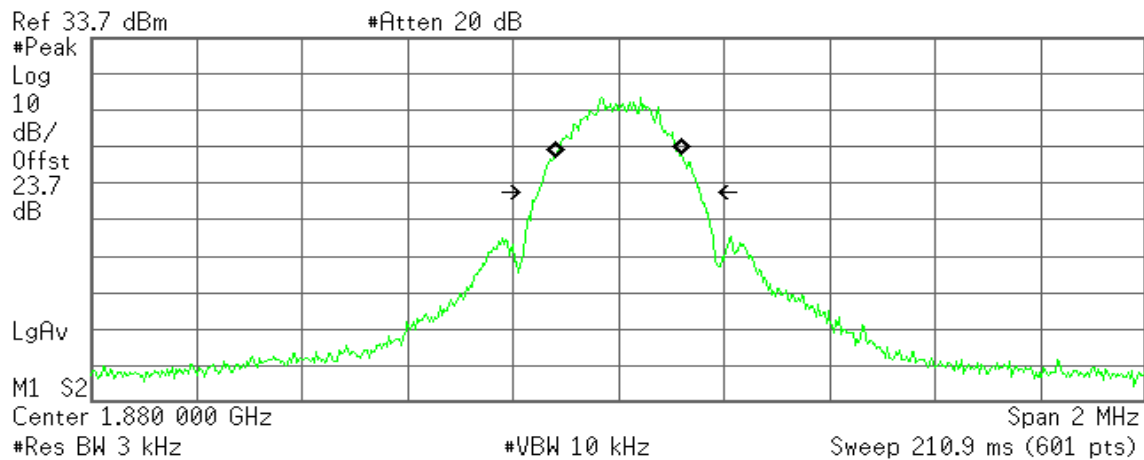
Transmit Freq Error 248.692 Hz
x dB Bandwidth 307.810 kHz



GPRS 1900 (CH Mid)

Agilent

R T



Occupied Bandwidth
241.5151 kHz

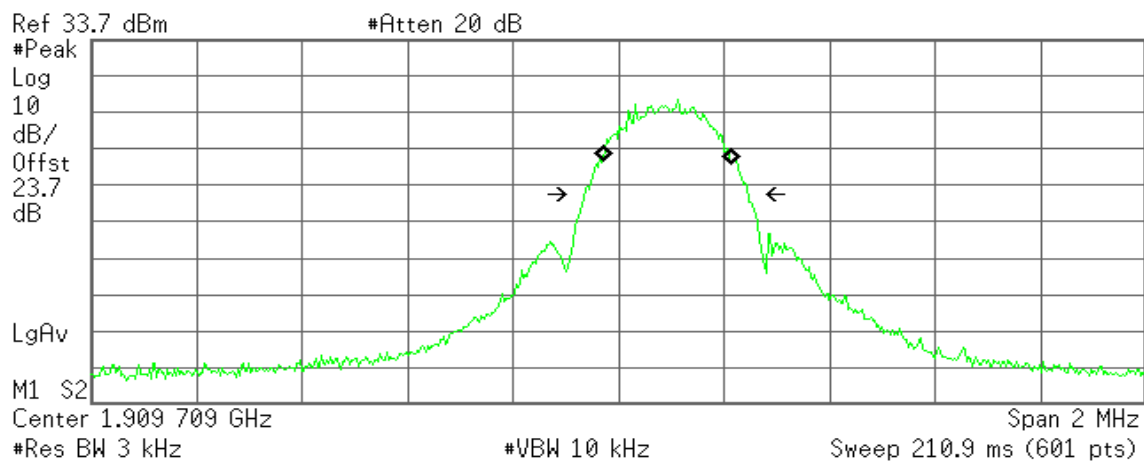
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -441.169 Hz
x dB Bandwidth 307.810 kHz

GPRS 1900 (CH High)

Agilent

R T



Occupied Bandwidth
245.6512 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

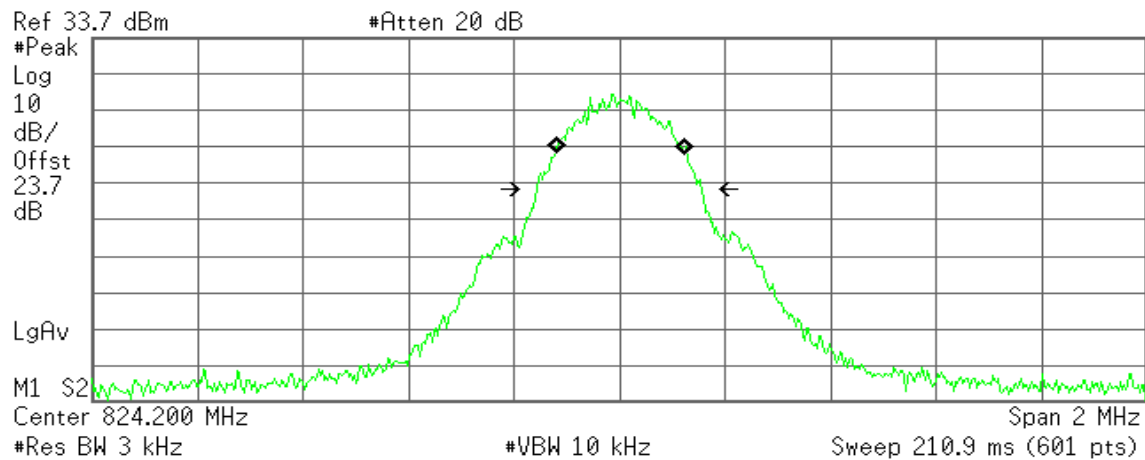
Transmit Freq Error 91.293 kHz
x dB Bandwidth 311.302 kHz



EDGE 850 (CH Low)

Agilent

R T



Occupied Bandwidth
243.2863 kHz

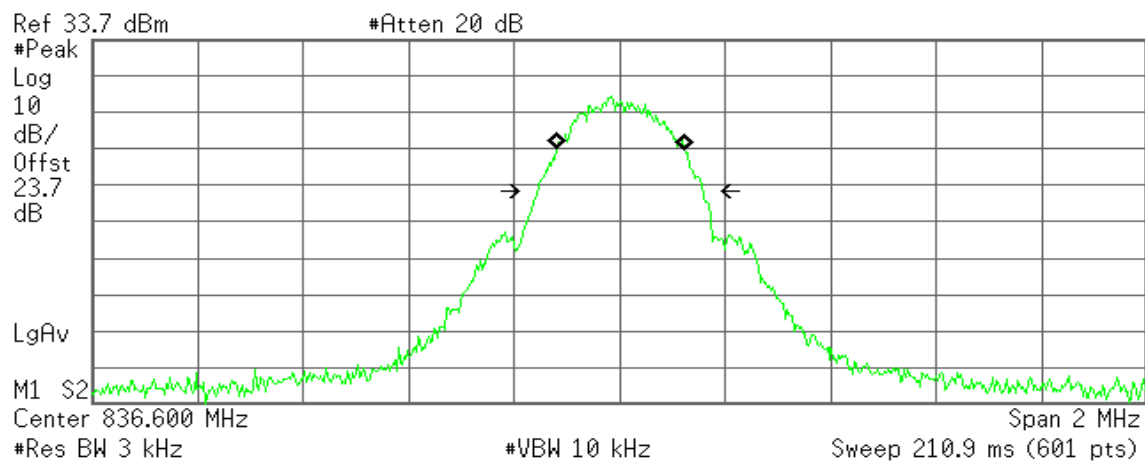
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 943.297 Hz
x dB Bandwidth 312.699 kHz

EDGE 850 (CH Mid)

Agilent

R T



Occupied Bandwidth
244.1385 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

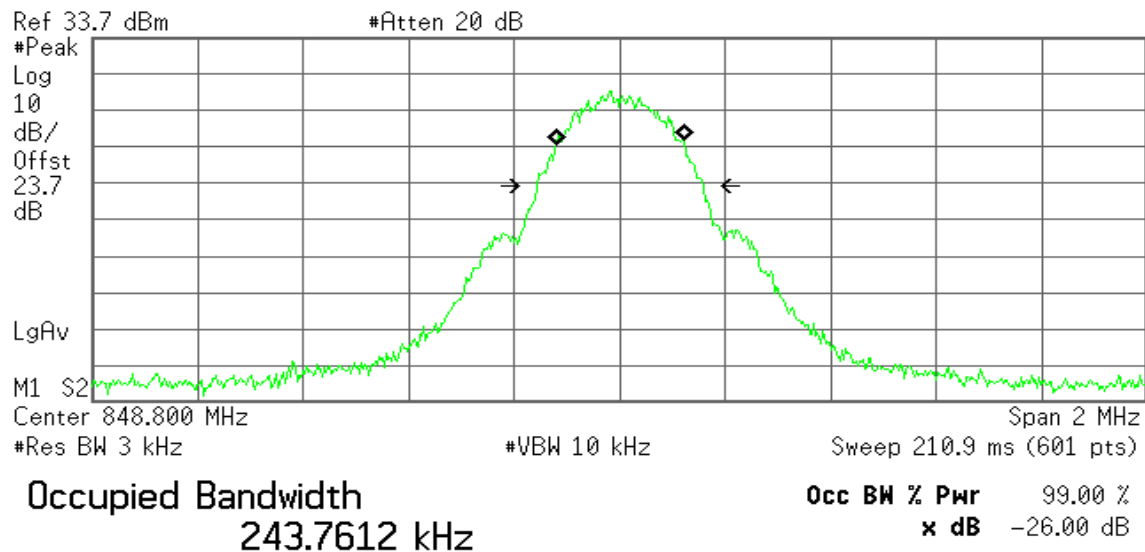
Transmit Freq Error 1.839 kHz
x dB Bandwidth 314.679 kHz



EDGE 850 (CH High)

Agilent

R T

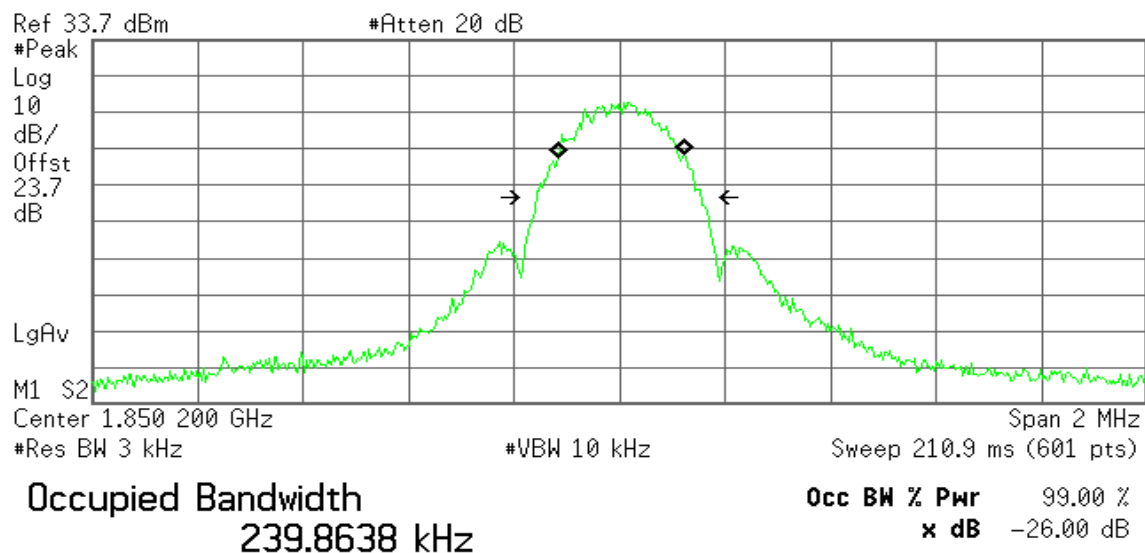


Transmit Freq Error 967.868 Hz
x dB Bandwidth 316.176 kHz

EDGE 1900 (CH Low)

Agilent

R T



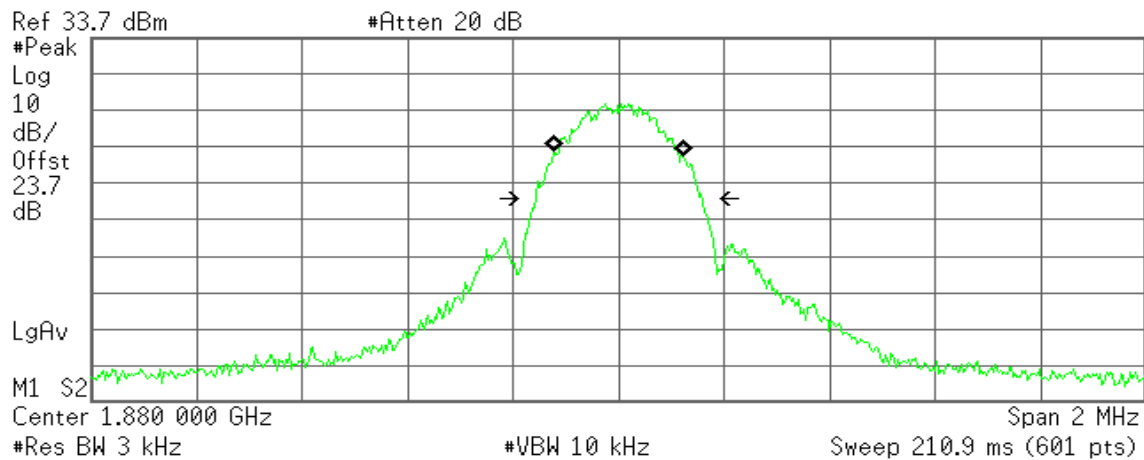
Transmit Freq Error 1.966 kHz
x dB Bandwidth 313.698 kHz



EDGE 1900 (CH Mid)

Agilent

R T



Occupied Bandwidth
246.1334 kHz

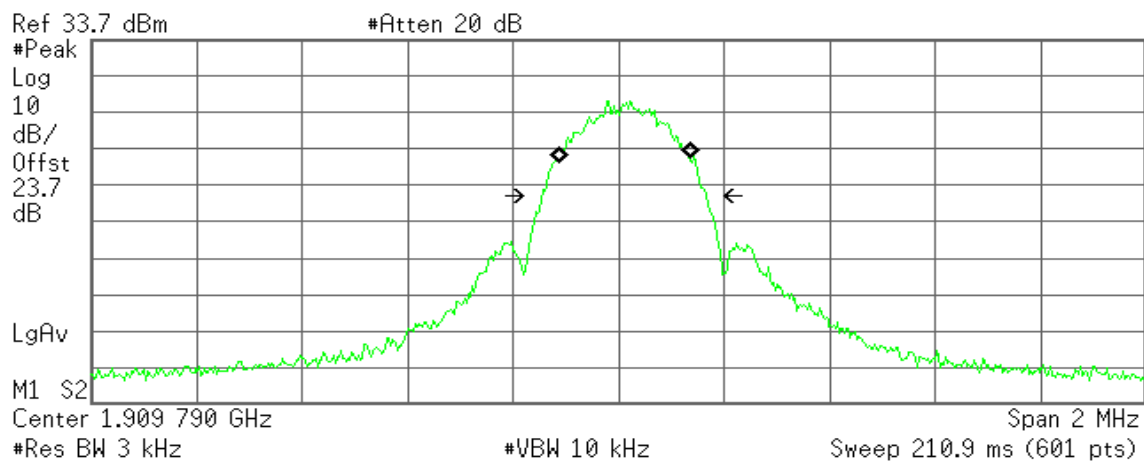
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -404.286 Hz
x dB Bandwidth 316.453 kHz

EDGE 1900 (CH High)

Agilent

R T



Occupied Bandwidth
249.3256 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

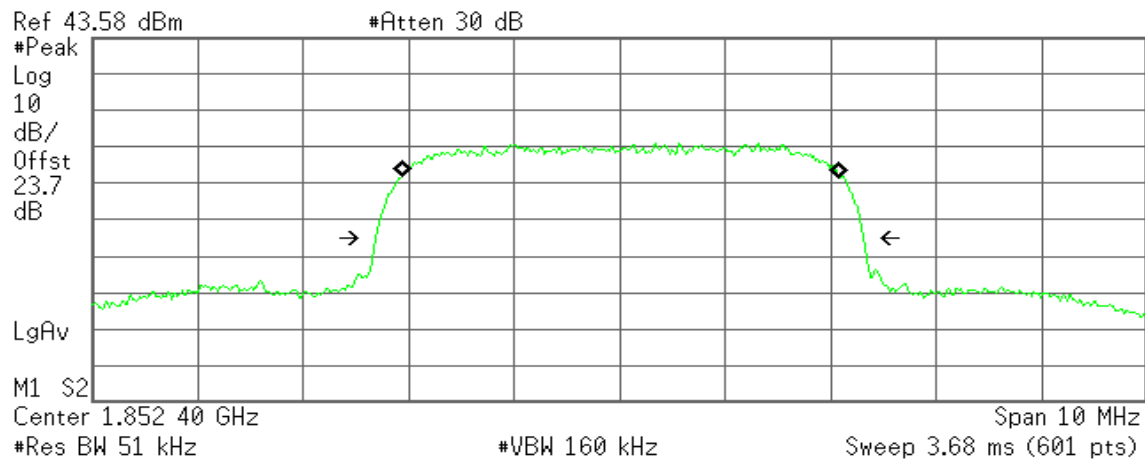
Transmit Freq Error 10.367 kHz
x dB Bandwidth 311.976 kHz



WCDMA Band II (CH Low)

Agilent

R T



Occupied Bandwidth
4.1500 MHz

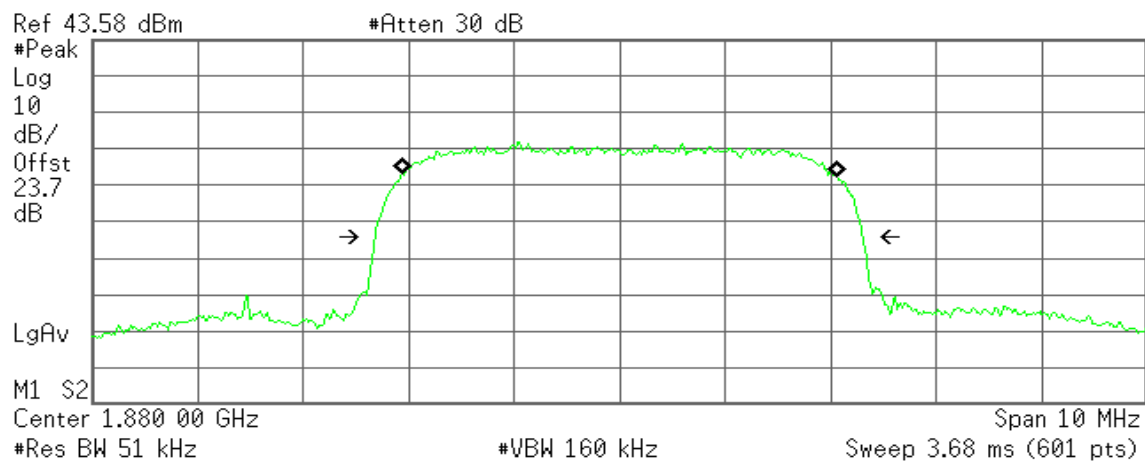
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 14.220 kHz
x dB Bandwidth 4.632 MHz

WCDMA Band II (CH Mid)

Agilent

R T



Occupied Bandwidth
4.1409 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

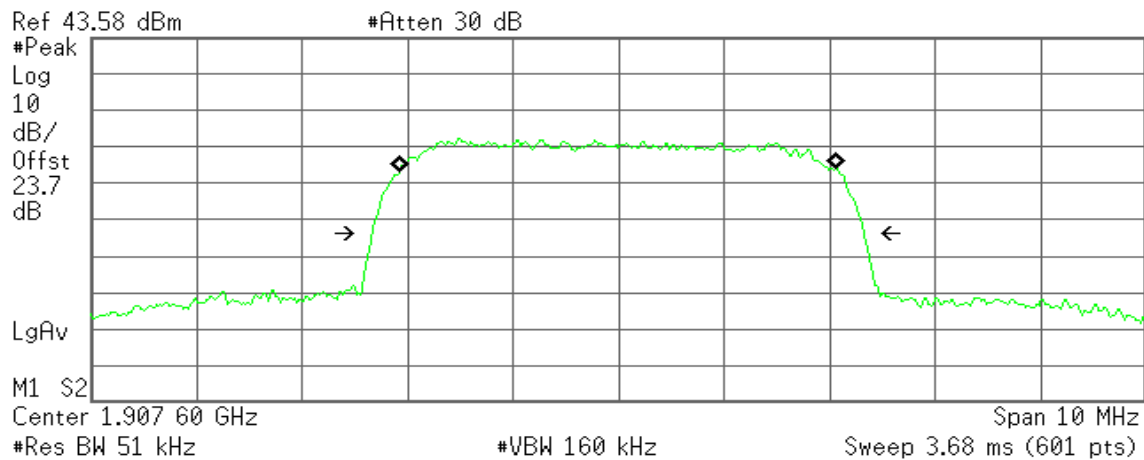
Transmit Freq Error -644.843 Hz
x dB Bandwidth 4.635 MHz



WCDMA Band II (CH High)

Agilent

R T



Occupied Bandwidth
4.1593 MHz

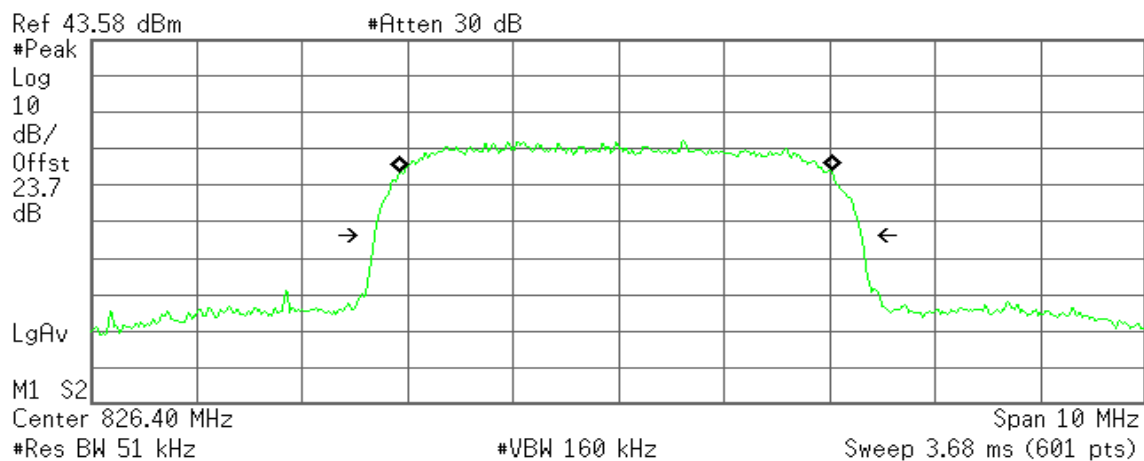
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -4.736 kHz
x dB Bandwidth 4.674 MHz

WCDMA Band V (CH Low)

Agilent

R T



Occupied Bandwidth
4.1121 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

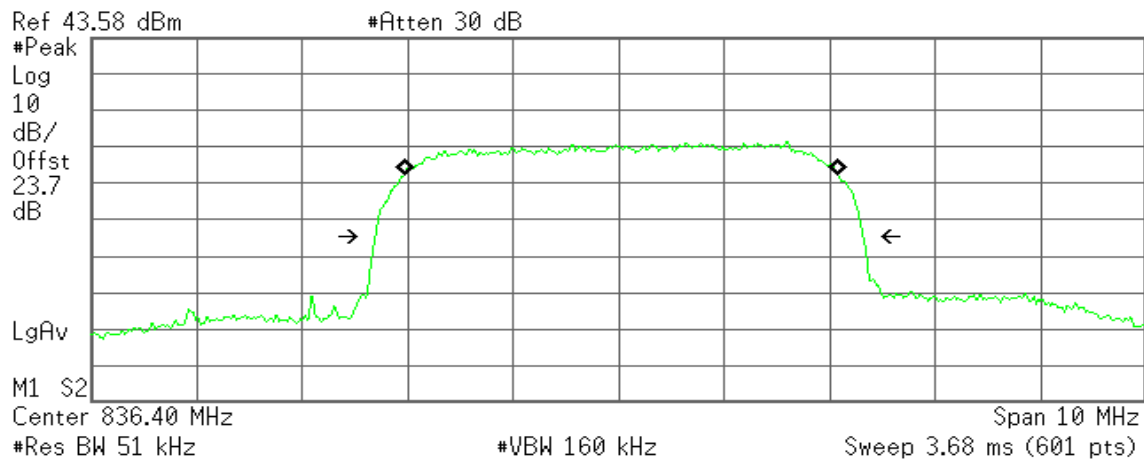
Transmit Freq Error -25.999 kHz
x dB Bandwidth 4.625 MHz



WCDMA Band V (CH Mid)

Agilent

R T



Occupied Bandwidth
4.1226 MHz

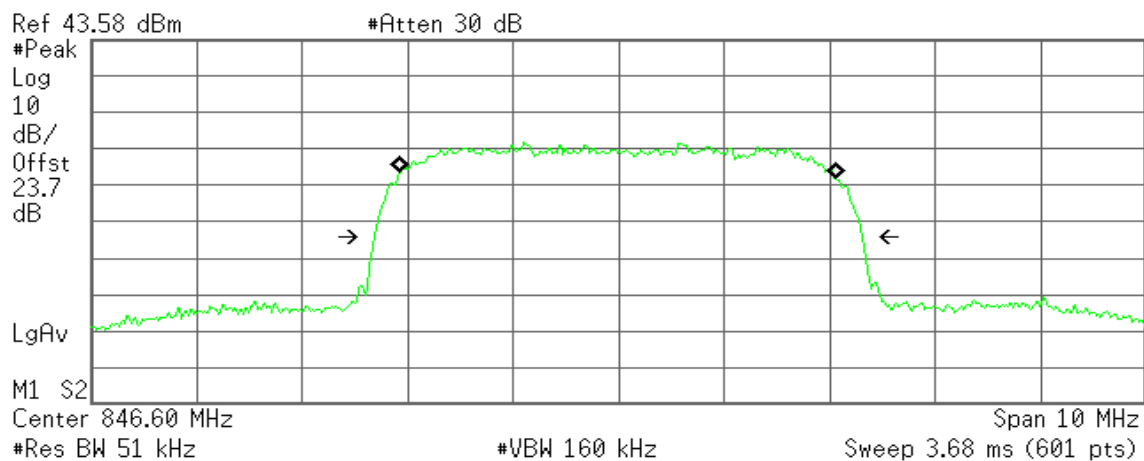
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 20.355 kHz
x dB Bandwidth 4.638 MHz

WCDMA Band V (CH High)

Agilent

R T



Occupied Bandwidth
4.1431 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

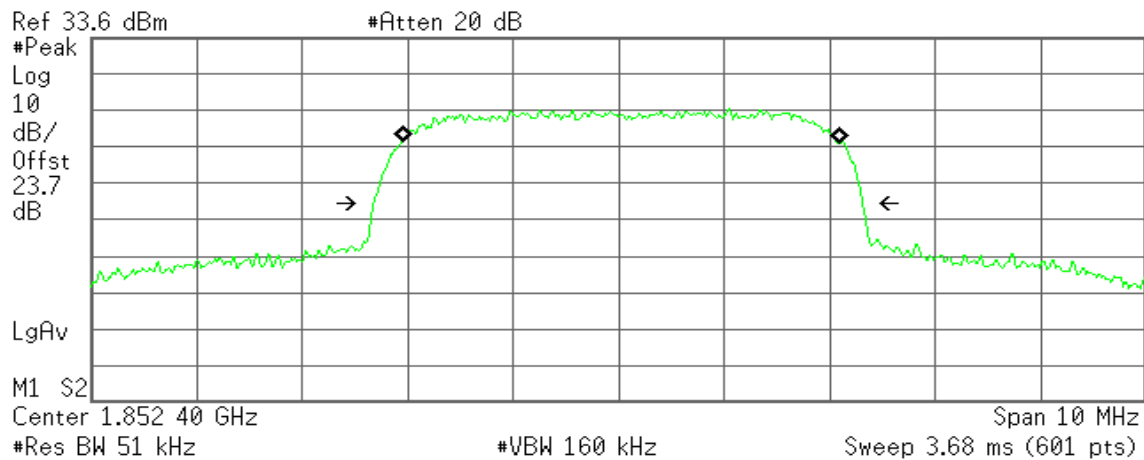
Transmit Freq Error -10.860 kHz
x dB Bandwidth 4.639 MHz



WCDMA / HSDPA Band II (CH Low)

Agilent

R T



Occupied Bandwidth
4.1483 MHz

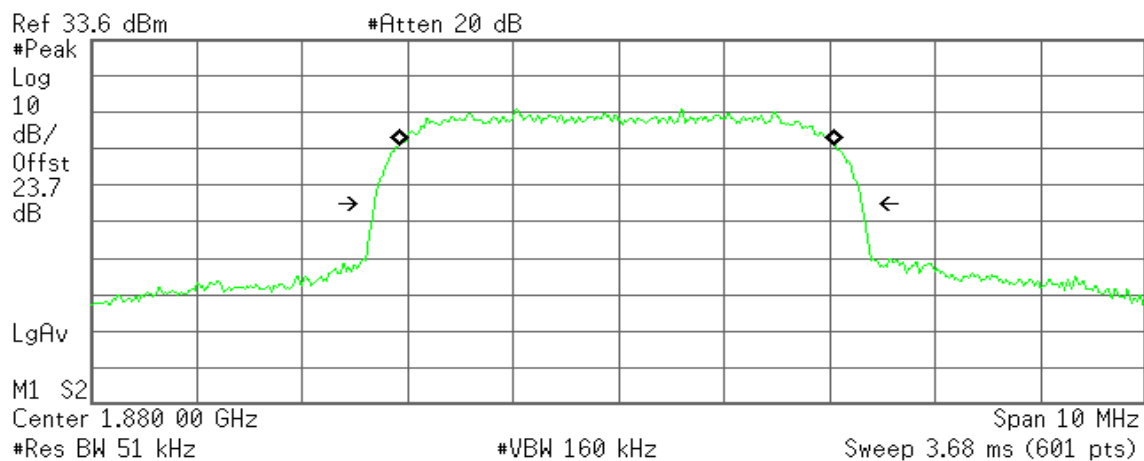
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 18.292 kHz
x dB Bandwidth 4.646 MHz

WCDMA / HSDPA Band II (CH Mid)

Agilent

R T



Occupied Bandwidth
4.1313 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

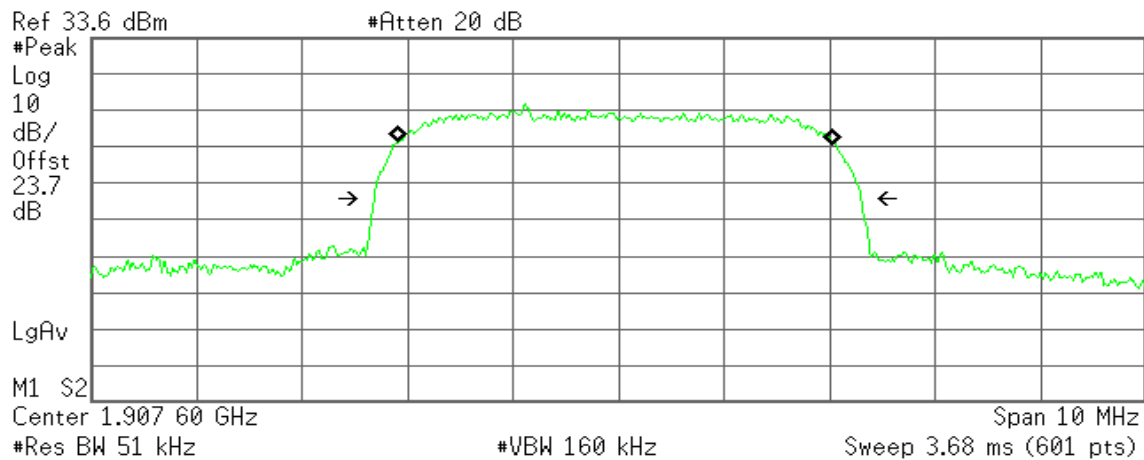
Transmit Freq Error -11.949 kHz
x dB Bandwidth 4.634 MHz



WCDMA / HSDPA Band II (CH High)

Agilent

R T



Occupied Bandwidth
4.1345 MHz

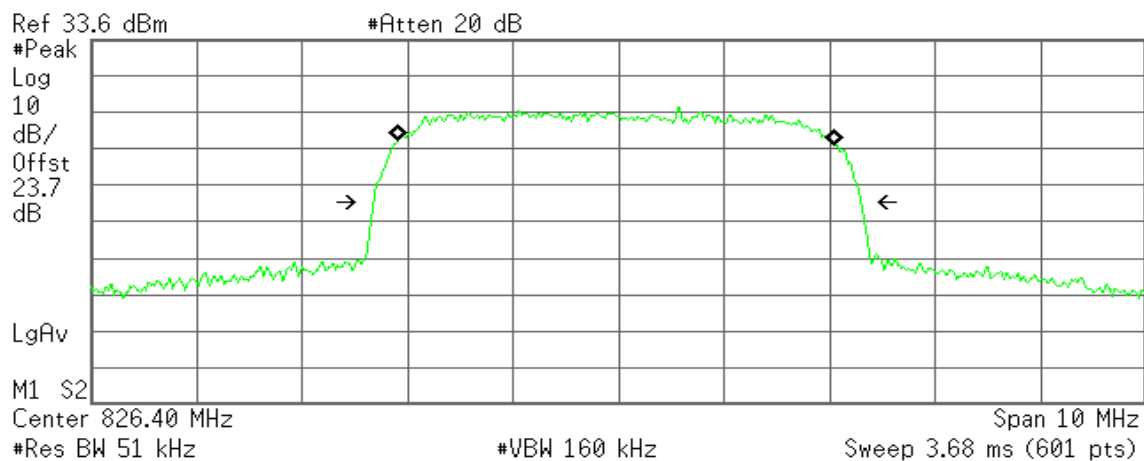
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -27.316 kHz
x dB Bandwidth 4.632 MHz

WCDMA / HSDPA Band V (CH Low)

Agilent

R T



Occupied Bandwidth
4.1498 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

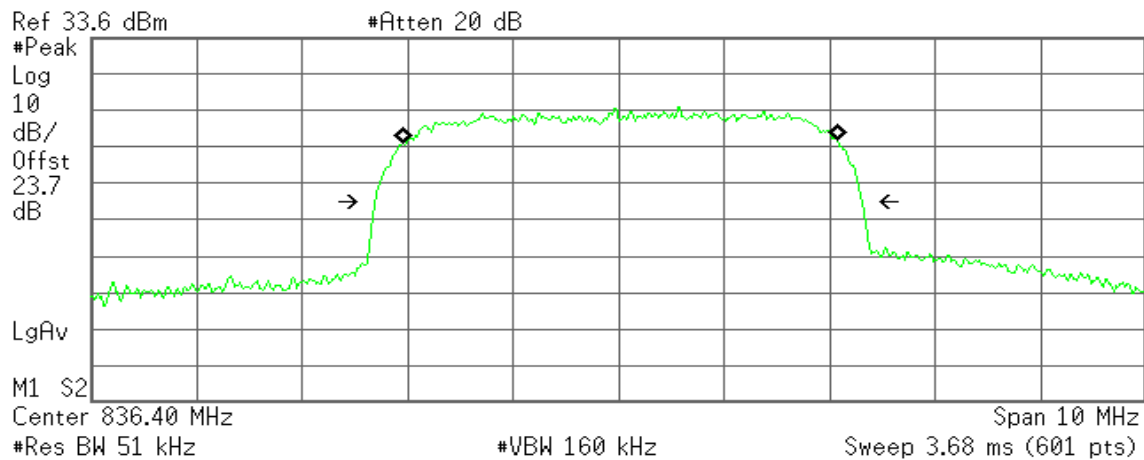
Transmit Freq Error -17.864 kHz
x dB Bandwidth 4.634 MHz



WCDMA / HSDPA Band V (CH Mid)

Agilent

R T



Occupied Bandwidth
4.1281 MHz

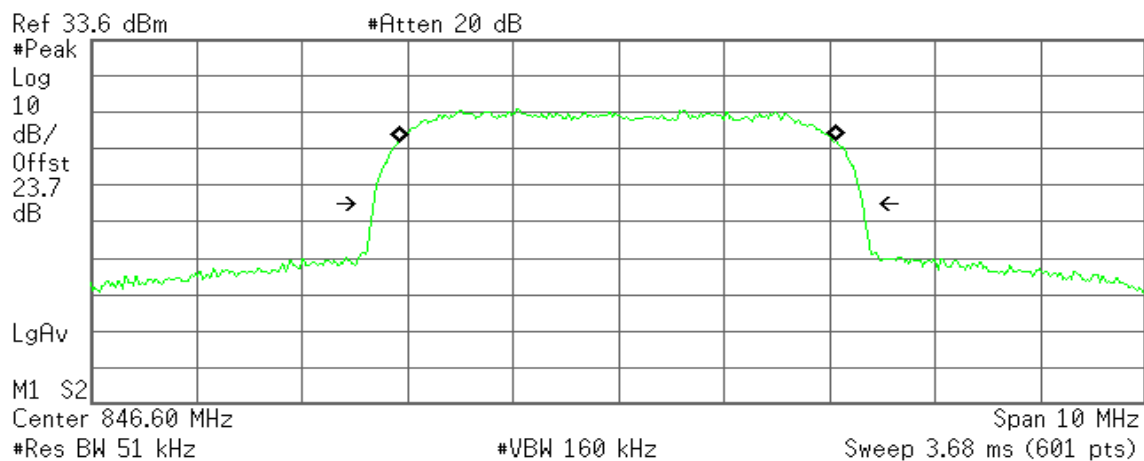
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 15.483 kHz
x dB Bandwidth 4.626 MHz

WCDMA / HSDPA Band V (CH High)

Agilent

R T



Occupied Bandwidth
4.1449 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

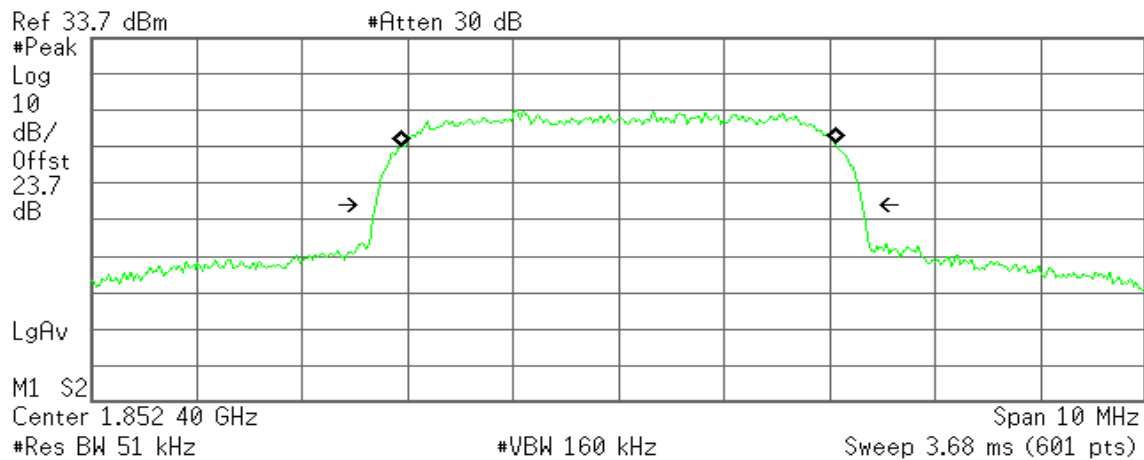
Transmit Freq Error -6.652 kHz
x dB Bandwidth 4.645 MHz



WCDMA / HSUPA Band II (CH Low)

Agilent

R T



Occupied Bandwidth
4.1322 MHz

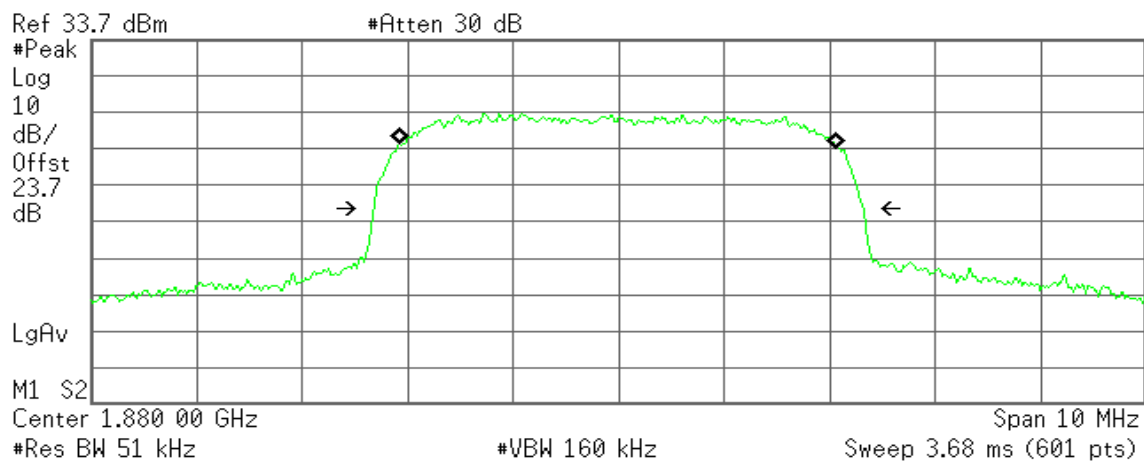
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 3.624 kHz
x dB Bandwidth 4.624 MHz

WCDMA / HSUPA Band II (CH Mid)

Agilent

R T



Occupied Bandwidth
4.1506 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

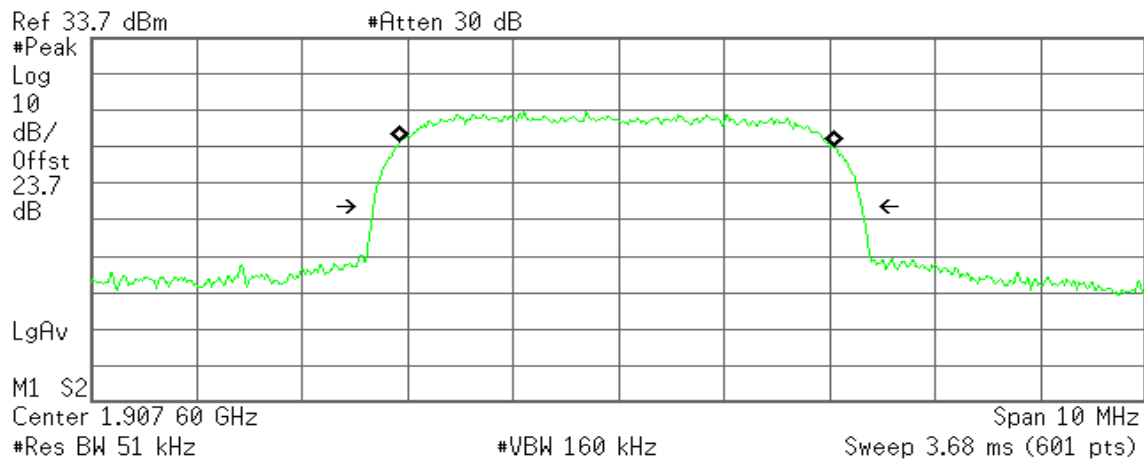
Transmit Freq Error -4.107 kHz
x dB Bandwidth 4.651 MHz



WCDMA / HSUPA Band II (CH High)

Agilent

R T



Occupied Bandwidth
4.1301 MHz

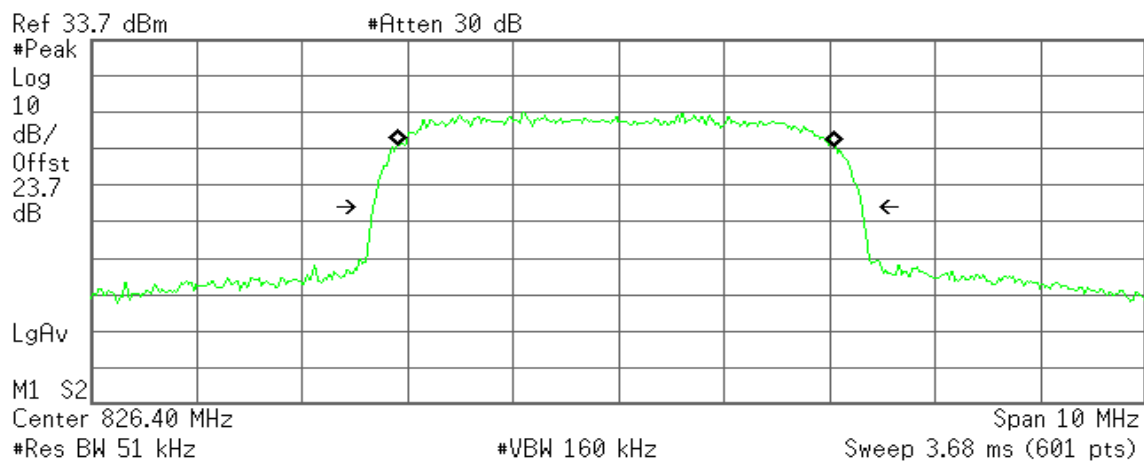
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -22.025 kHz
x dB Bandwidth 4.643 MHz

WCDMA / HSUPA Band V (CH Low).

Agilent

R T



Occupied Bandwidth
4.1560 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

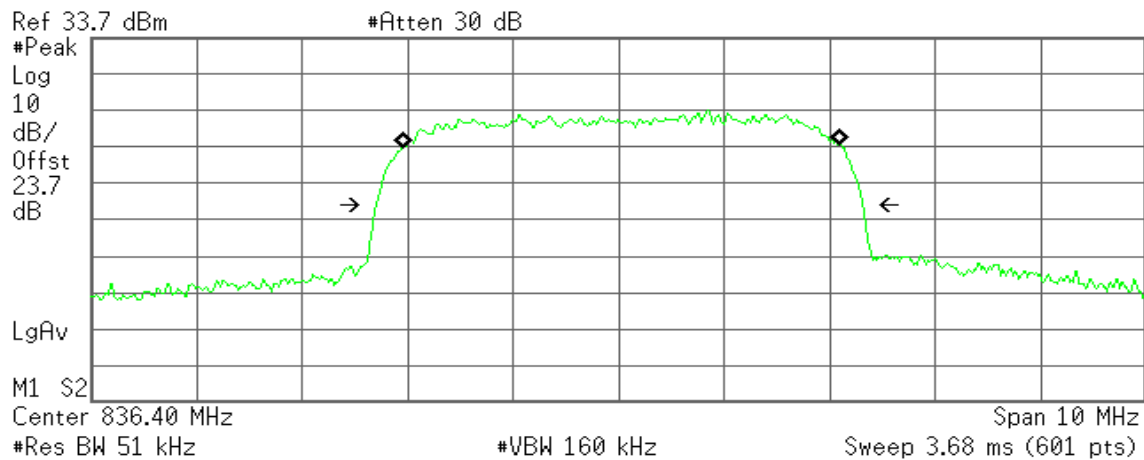
Transmit Freq Error -22.252 kHz
x dB Bandwidth 4.640 MHz



WCDMA / HSUPA Band V (CH Mid)

Agilent

R T



Occupied Bandwidth
4.1478 MHz

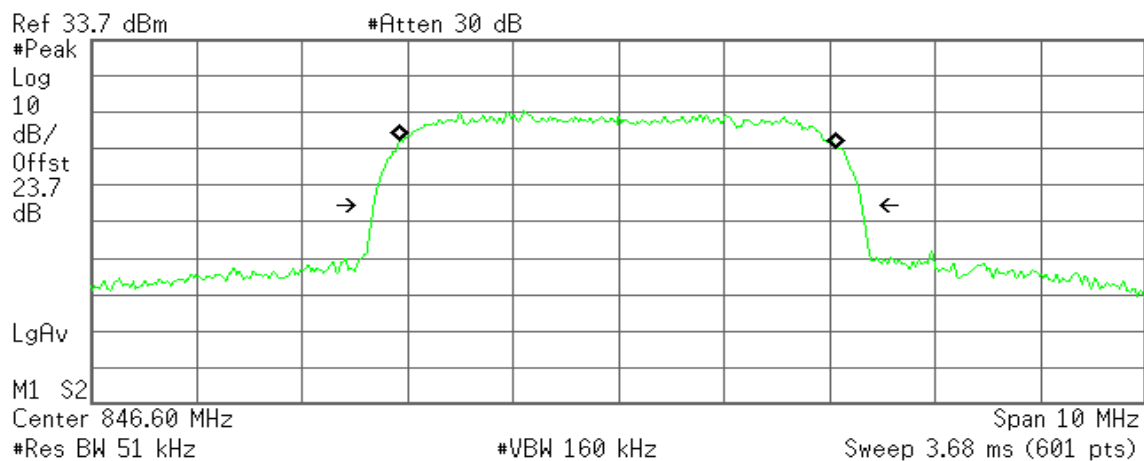
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 21.368 kHz
x dB Bandwidth 4.619 MHz

WCDMA / HSUPA Band V (CH Mid)

Agilent

R T



Occupied Bandwidth
4.1530 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -7.323 kHz
x dB Bandwidth 4.636 MHz



7.5 OUT OF BAND EMISSION AT ANTENNA TERMINALS

LIMIT

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

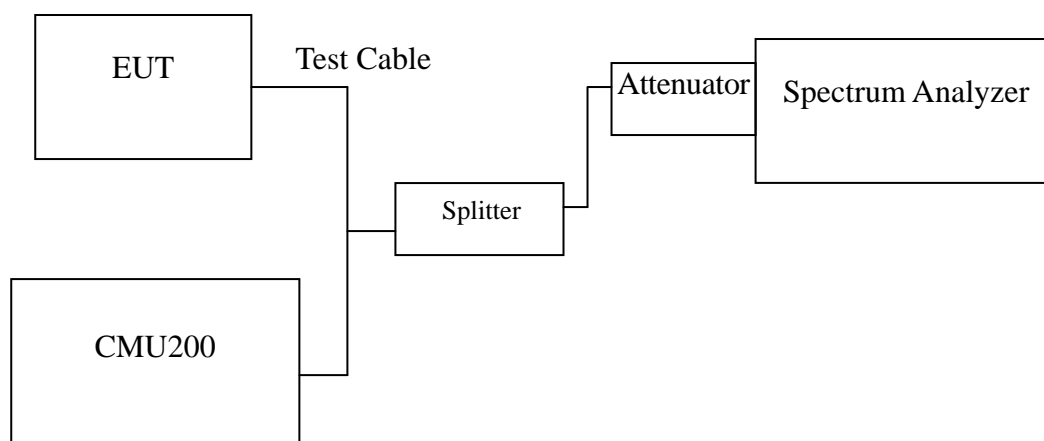
Out of Band Emissions: The mean power of emission must be attenuated below the mean power of the non-modulated carrier (P) on any frequency twice or more than twice the fundamental frequency by at least $43 + 10 \log P$ dB.

Mobile Emissions in Base Frequency Range: The mean power of any emissions appearing in the base station frequency range from cellular mobile transmitters operated must be attenuated to a level not exceed -80 dBm at the transmit antenna connector.

Band Edge Requirements: In the 1MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1% of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the Out of band Emission

Test Configuration

Out of band emission at antenna terminals:



TEST PROCEDURE

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

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

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

TEST RESULTS

No non-compliance noted.

**Test Data**

Mode	CH	Location	Description
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
GPRS 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

Mode	CH	Location	Description
GPRS 850	128	Figure 10-1	Band Edge emissions
	251	Figure 10-2	Band Edge emissions

Mode	CH	Location	Description
GPRS 1900	512	Figure 11-1	Band Edge emissions
	810	Figure 11-2	Band Edge emissions

Mode	CH	Location	Description
EDGE 850	128	Figure 12-1	Conducted spurious emissions, 30MHz - 20GHz
	190	Figure 12-2	Conducted spurious emissions, 30MHz - 20GHz
	251	Figure 12-3	Conducted spurious emissions, 30MHz - 20GHz
EDGE 1900	512	Figure 13-1	Conducted spurious emissions, 30MHz - 20GHz
	661	Figure 13-2	Conducted spurious emissions, 30MHz - 20GHz
	810	Figure 13-3	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 14-1	Conducted spurious emissions, 30MHz - 20GHz
	9400	Figure 14-2	Conducted spurious emissions, 30MHz - 20GHz
	9538	Figure 14-3	Conducted spurious emissions, 30MHz - 20GHz
WCDMA (Band V)	4132	Figure 15-1	Conducted spurious emissions, 30MHz - 20GHz
	4182	Figure 15-2	Conducted spurious emissions, 30MHz - 20GHz
	4233	Figure 15-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
WCDMA (Band II)	9262	Figure 16-1	Band Edge emissions
	9538	Figure 16-2	Band Edge emissions
WCDMA (Band V)	4132	Figure 17-1	Band Edge emissions
	4233	Figure 17-2	Band Edge emissions

Mode	CH	Location	Description
HSDPA WCDMA (Band II)	9262	Figure 18-1	Conducted spurious emissions, 30MHz - 20GHz
	9400	Figure 18-2	Conducted spurious emissions, 30MHz - 20GHz
	9538	Figure 18-3	Conducted spurious emissions, 30MHz - 20GHz
HSDPA WCDMA (Band V)	4132	Figure 19-1	Conducted spurious emissions, 30MHz - 20GHz
	4182	Figure 19-2	Conducted spurious emissions, 30MHz - 20GHz
	4233	Figure 19-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
HSDPA WCDMA (Band II)	9262	Figure 20-1	Band Edge emissions
	9538	Figure 20-2	Band Edge emissions
HSDPA WCDMA (Band V)	4132	Figure 21-1	Band Edge emissions
	4233	Figure 21-2	Band Edge emissions



Mode	CH	Location	Description
HSUPA WCDMA (Band II)	9262	Figure 22-1	Conducted spurious emissions, 30MHz - 20GHz
	9400	Figure 22-2	Conducted spurious emissions, 30MHz - 20GHz
	9538	Figure 22-3	Conducted spurious emissions, 30MHz - 20GHz
HSUPA WCDMA (Band V)	4132	Figure 23-1	Conducted spurious emissions, 30MHz - 20GHz
	4182	Figure 23-2	Conducted spurious emissions, 30MHz - 20GHz
	4233	Figure 23-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
HSUPA WCDMA (Band II)	9262	Figure 24-1	Band Edge emissions
	9538	Figure 24-2	Band Edge emissions
HSUPA WCDMA (Band V)	4132	Figure 25-1	Band Edge emissions
	4233	Figure 25-2	Band Edge emissions



Test Plot

GPRS 850

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

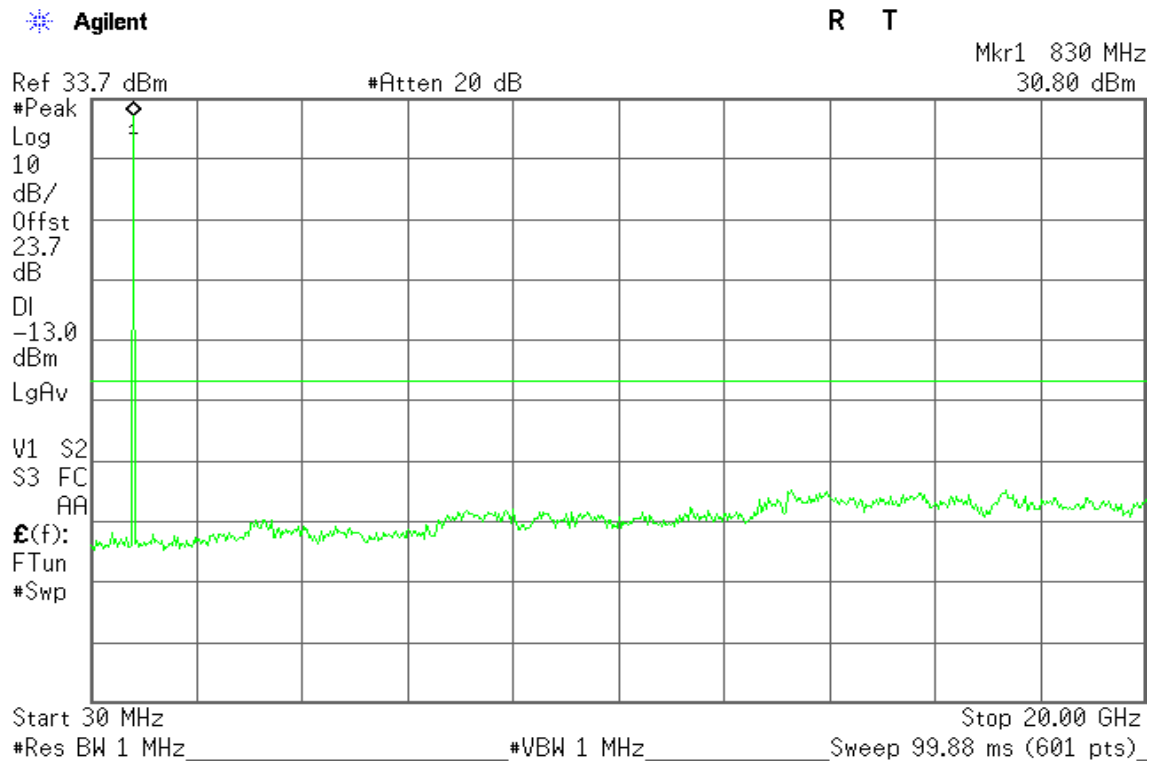


Figure 8-2: Out of Band emission at antenna terminals – GPRS CH Mid

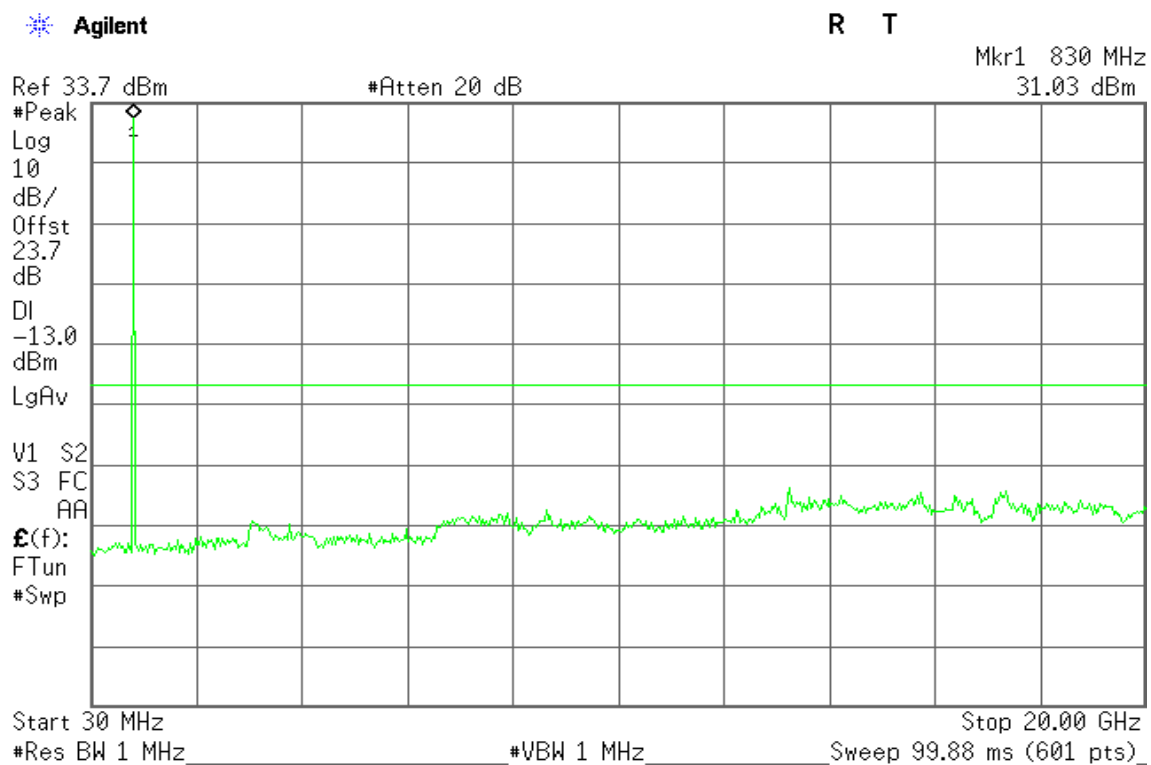
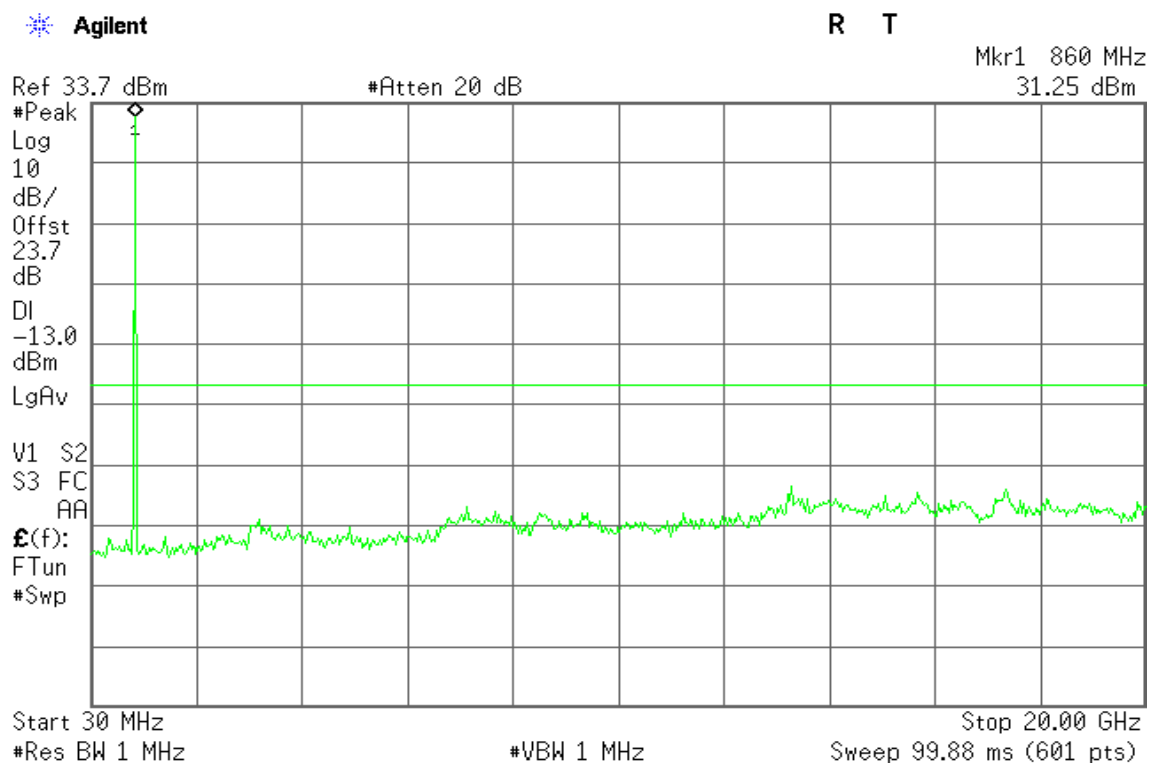




Figure 8-3: Out of Band emission at antenna terminals – GPRS CH High



GPRS 1900

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

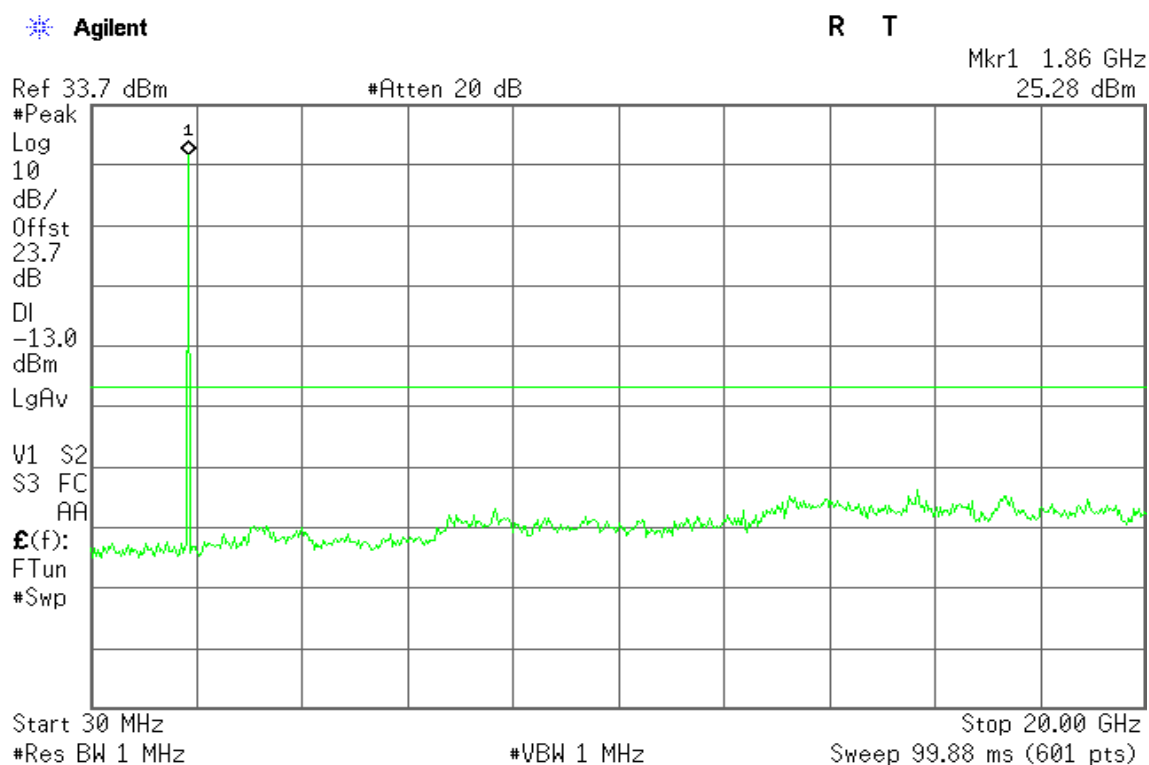




Figure 9-2: Out of Band emission at antenna terminals – GSM CH Mid

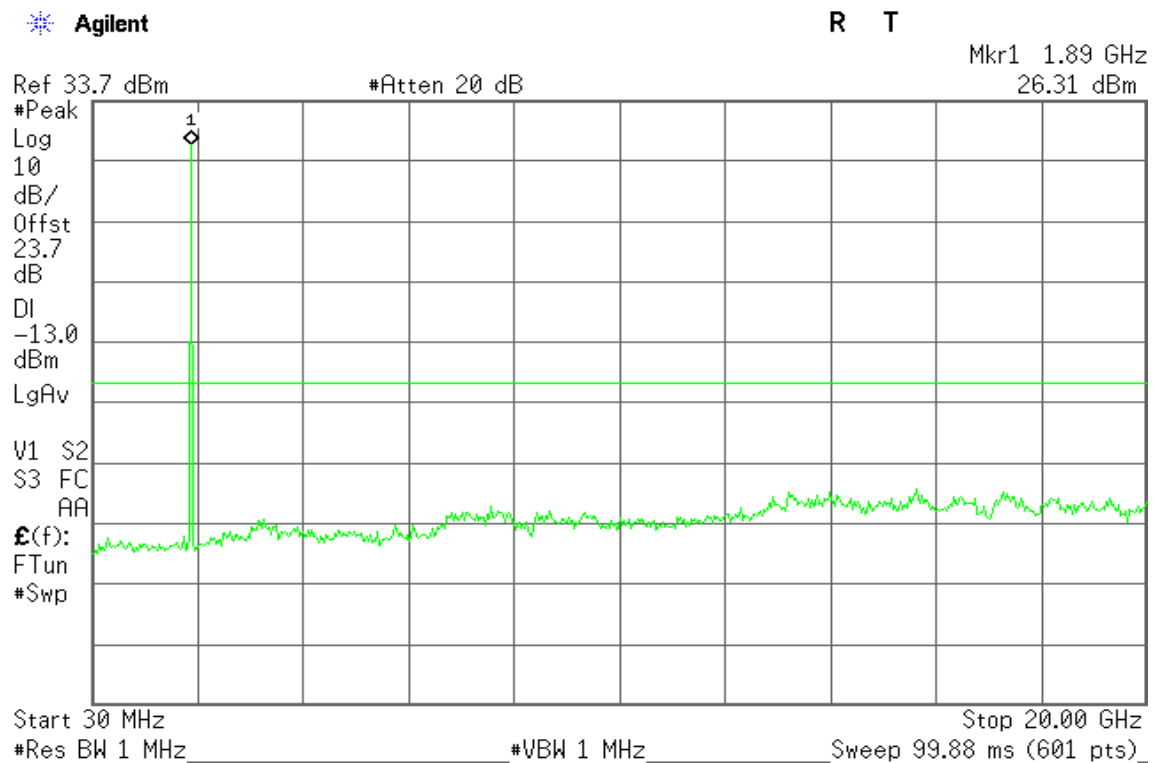
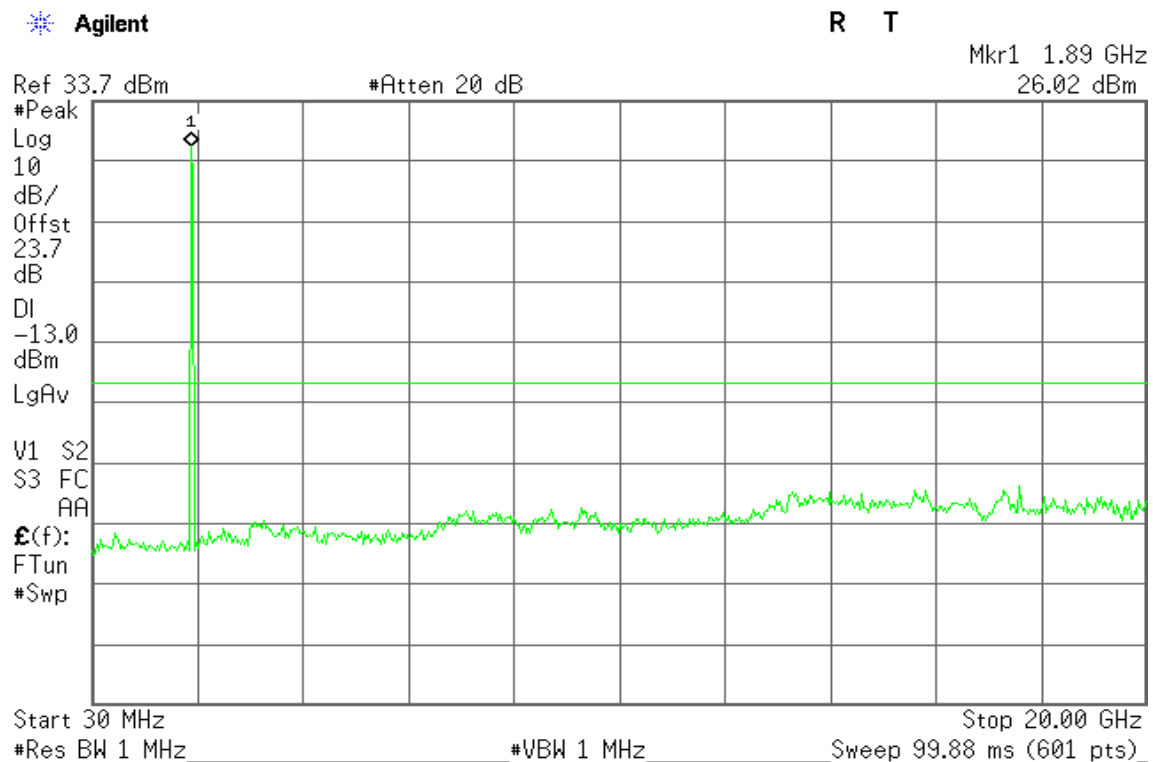


Figure 9-3: Out of Band emission at antenna terminals – GSM CH High





GPRS 850

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

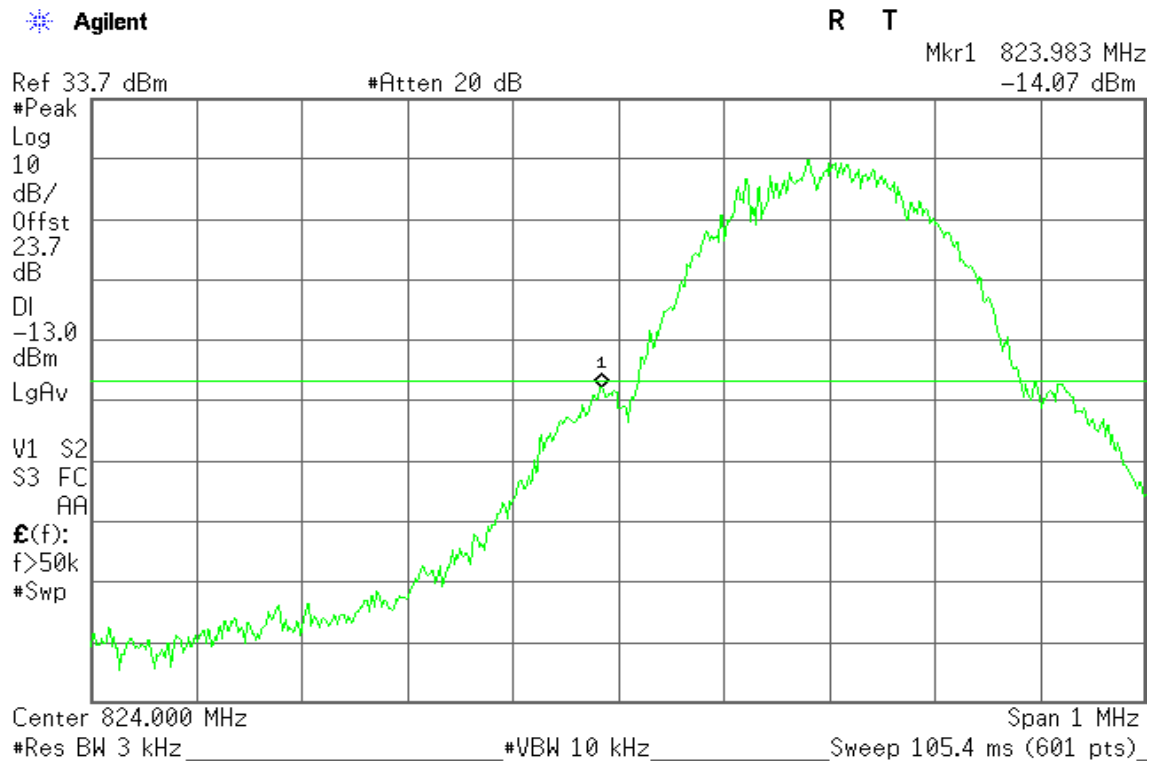
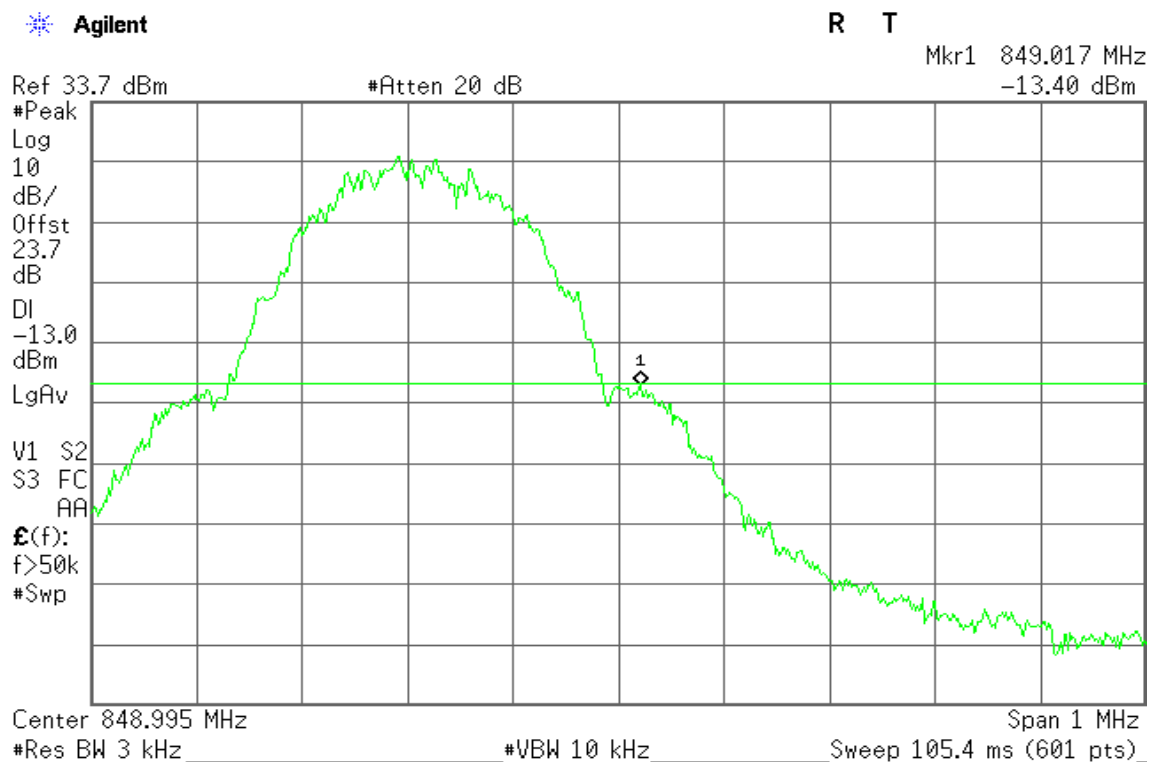


Figure 10-2: Band Edge emissions –GPRS CH High





GPRS 1900

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

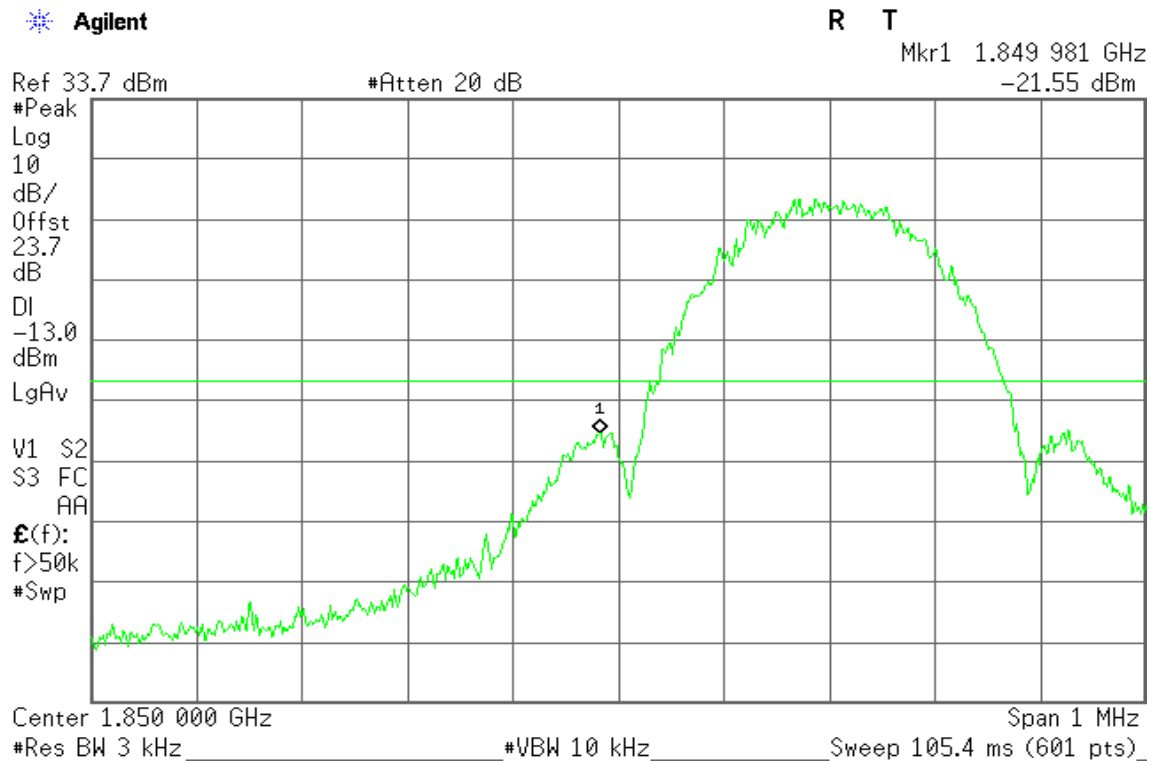
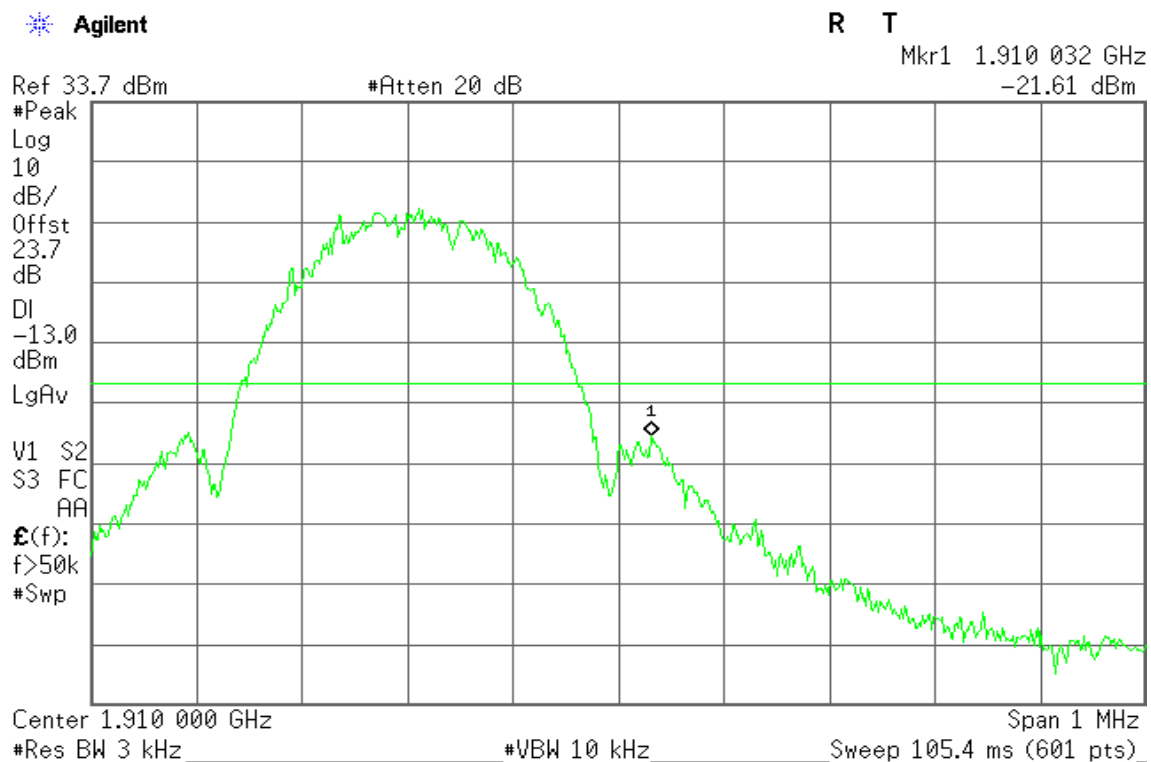


Figure 11-2: Band Edge emissions – GPRS CH High





EDGE 850

Figure 12-1: Out of Band emission at antenna terminals –EDGE CH Low

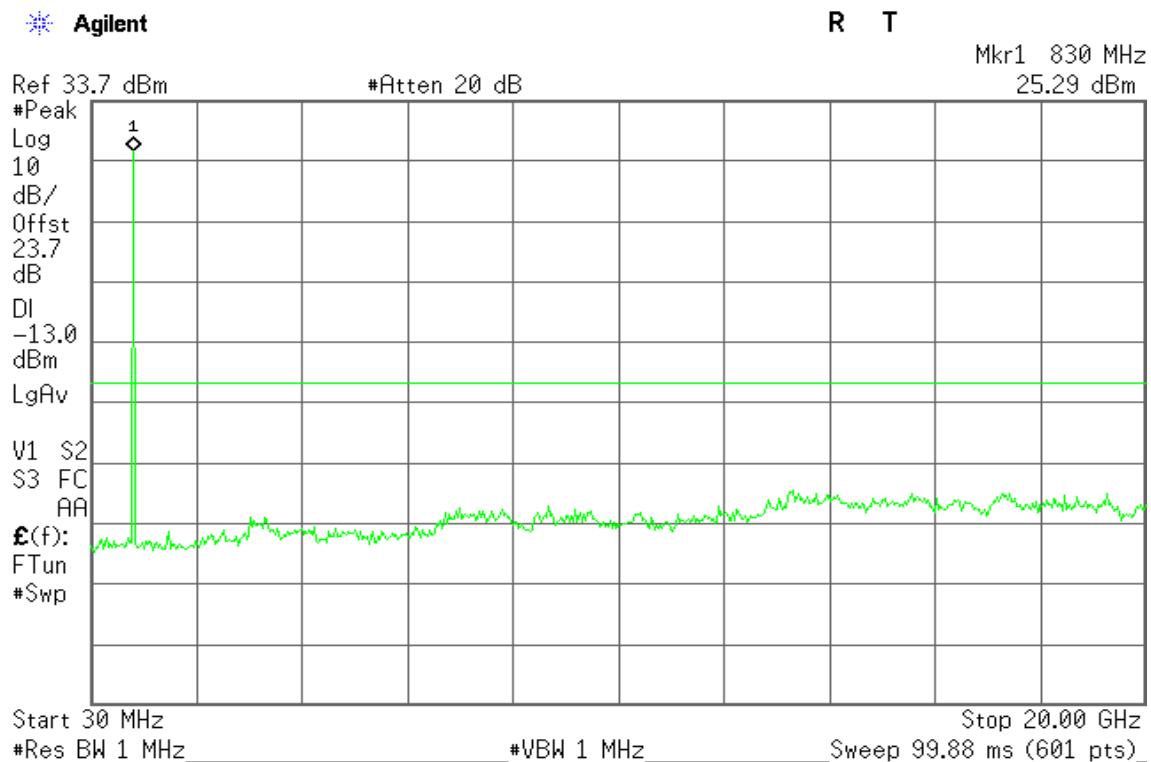


Figure 12-2: Out of Band emission at antenna terminals –EDGE CH Mid

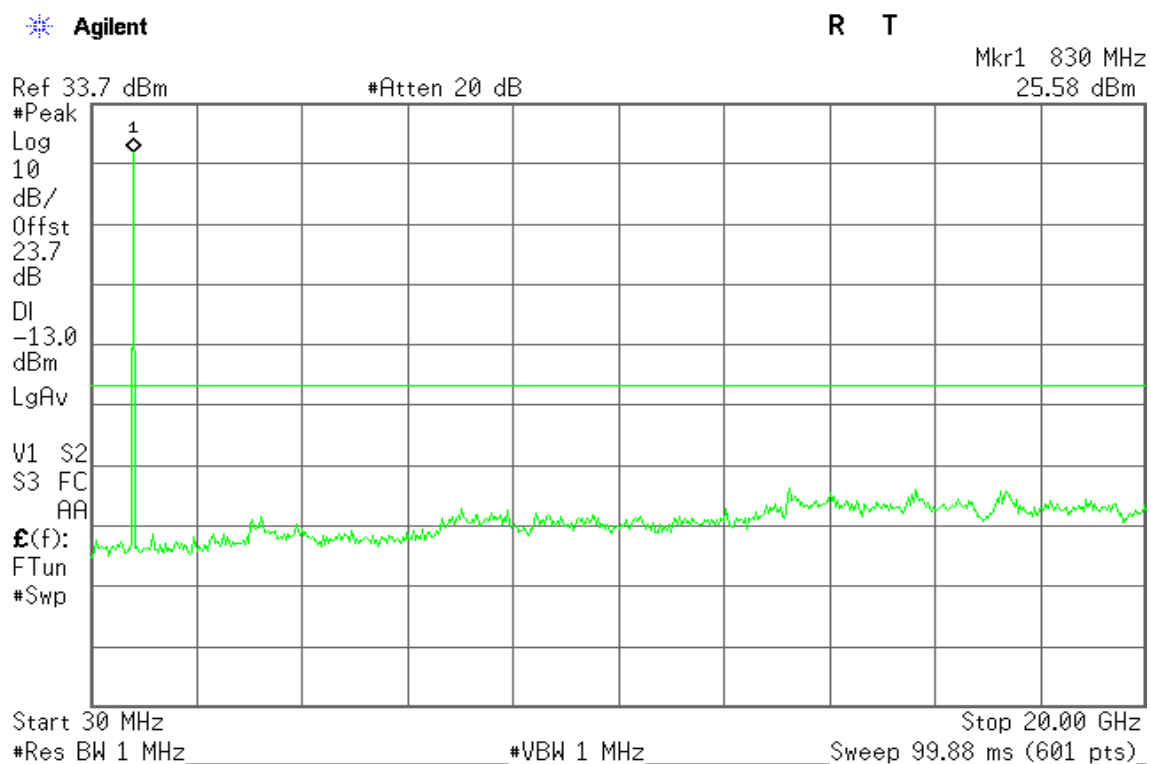
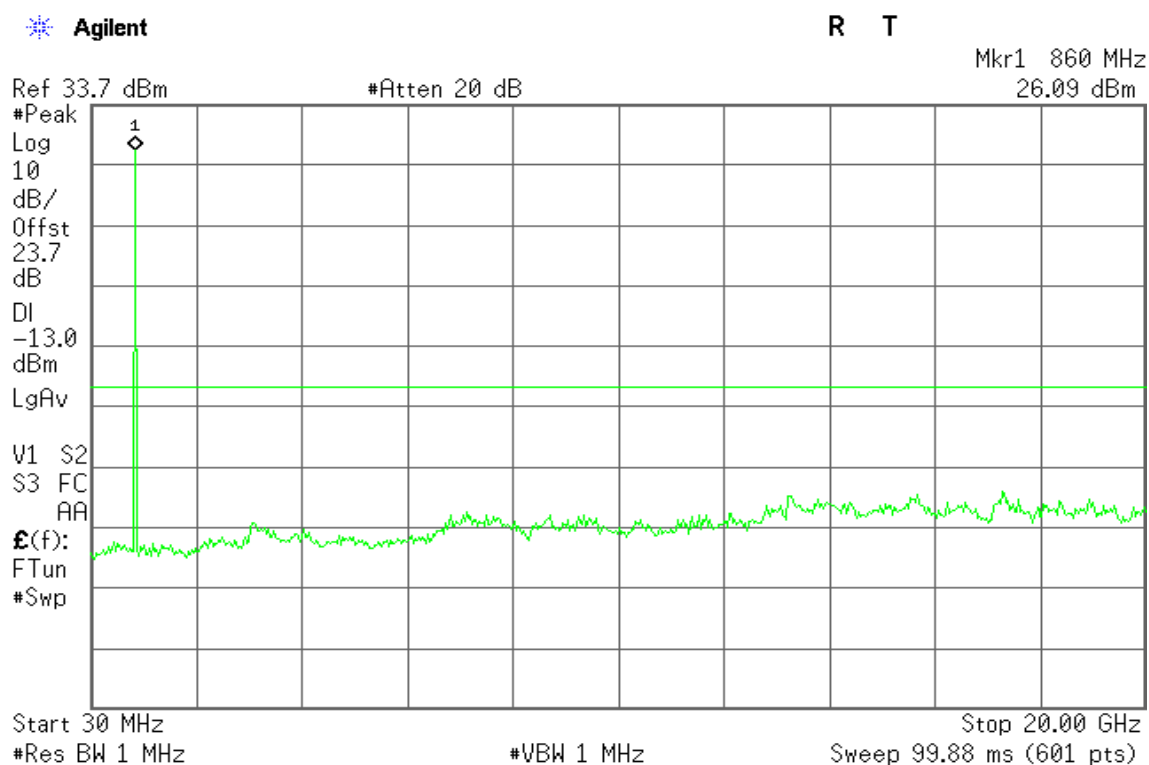




Figure 12-3: Out of Band emission at antenna terminals –EDGE CH High



EDGE 1900

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

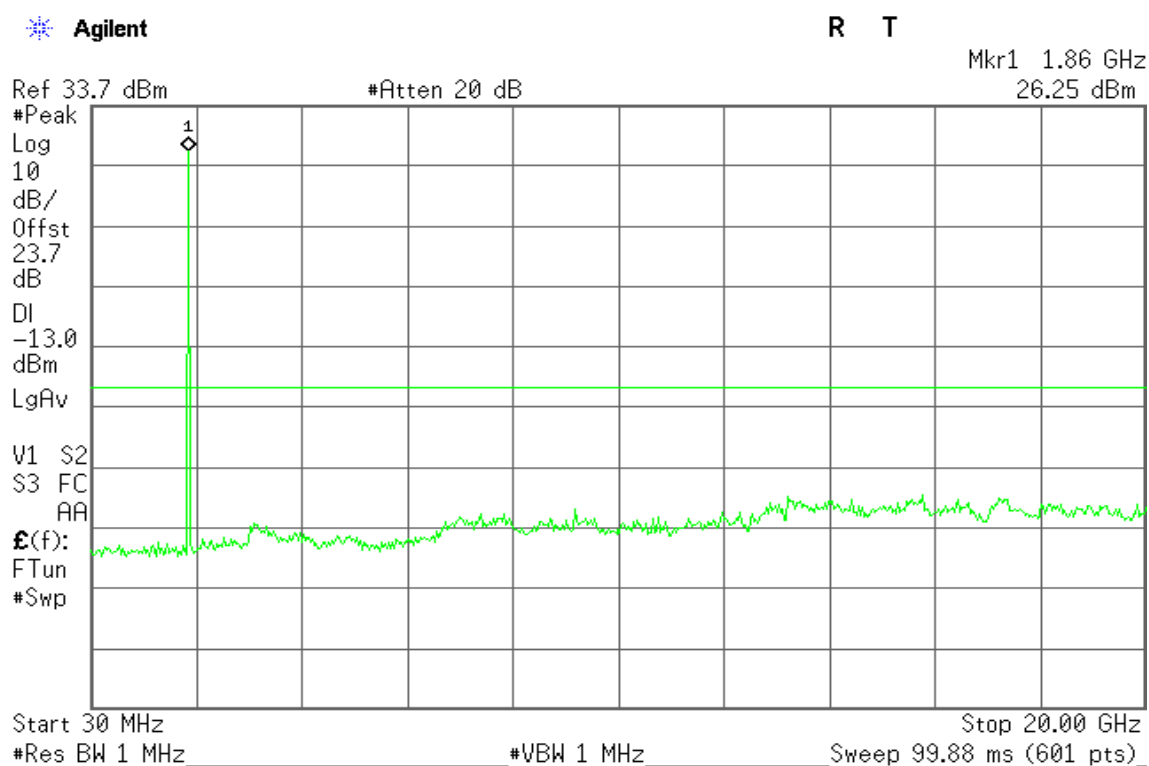




Figure 13-2: Out of Band emission at antenna terminals –EDGE CH Mid

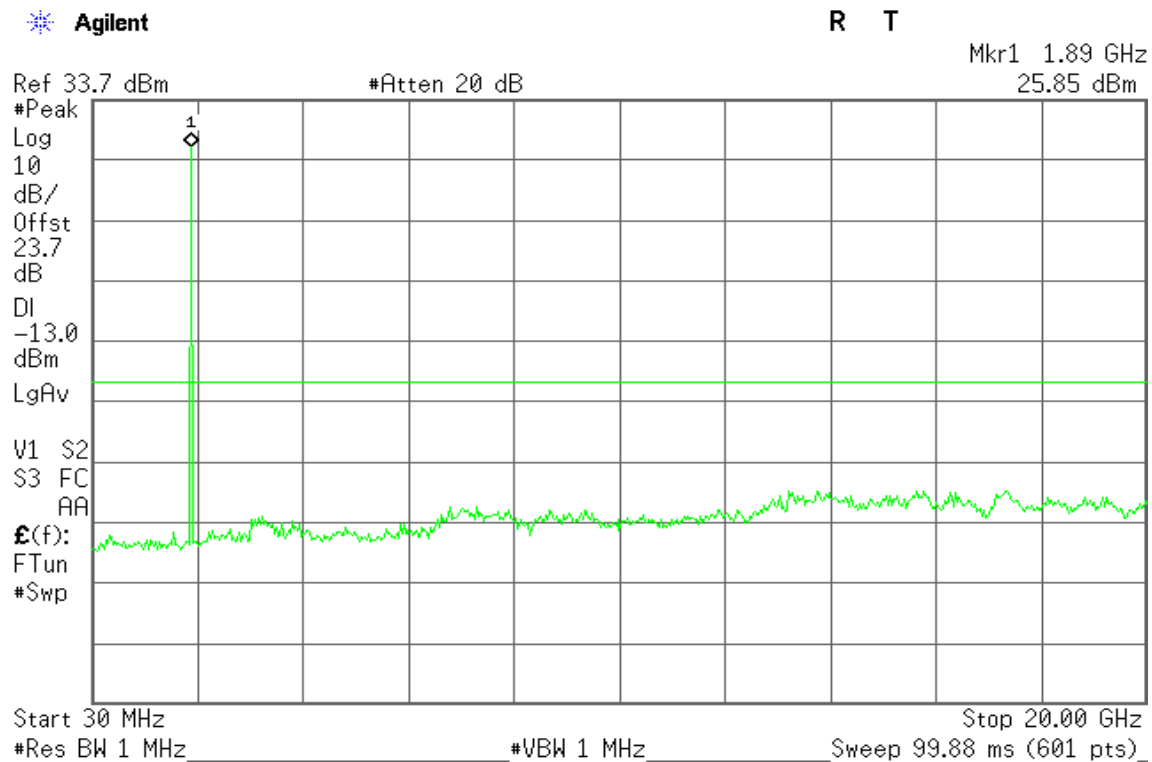
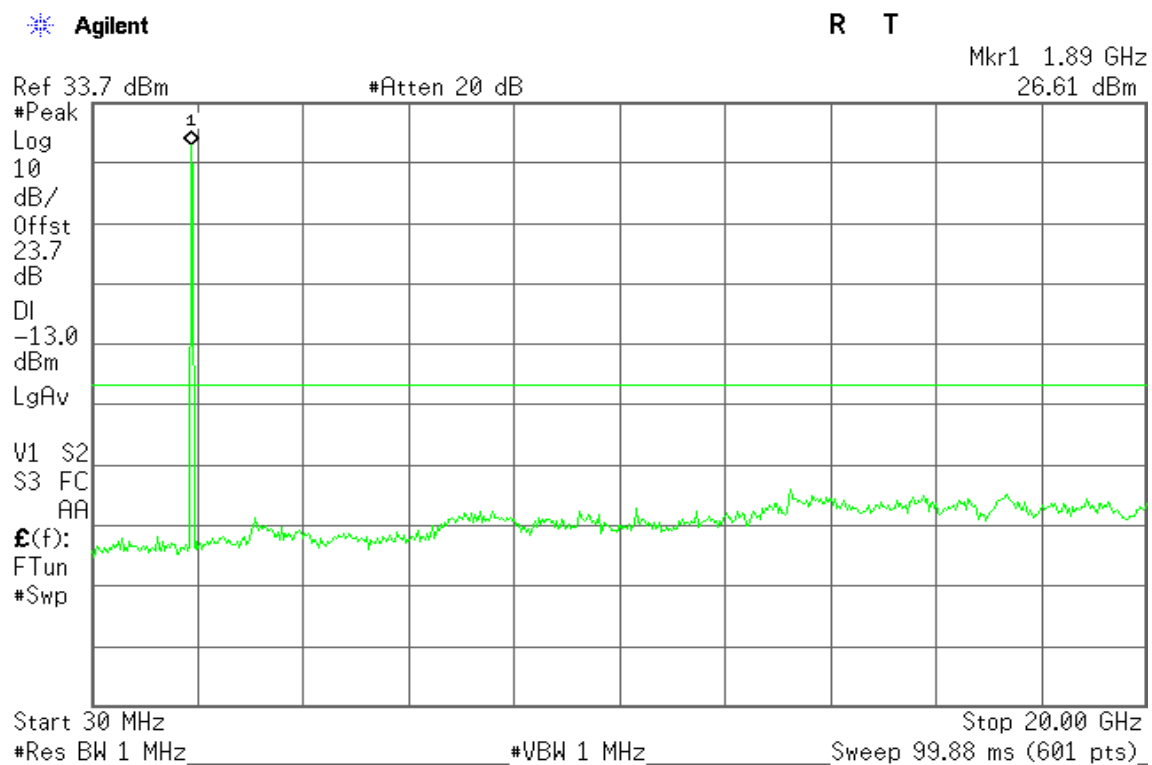


Figure 13-3: Out of Band emission at antenna terminals –EDGE CH High





EDGE 850

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

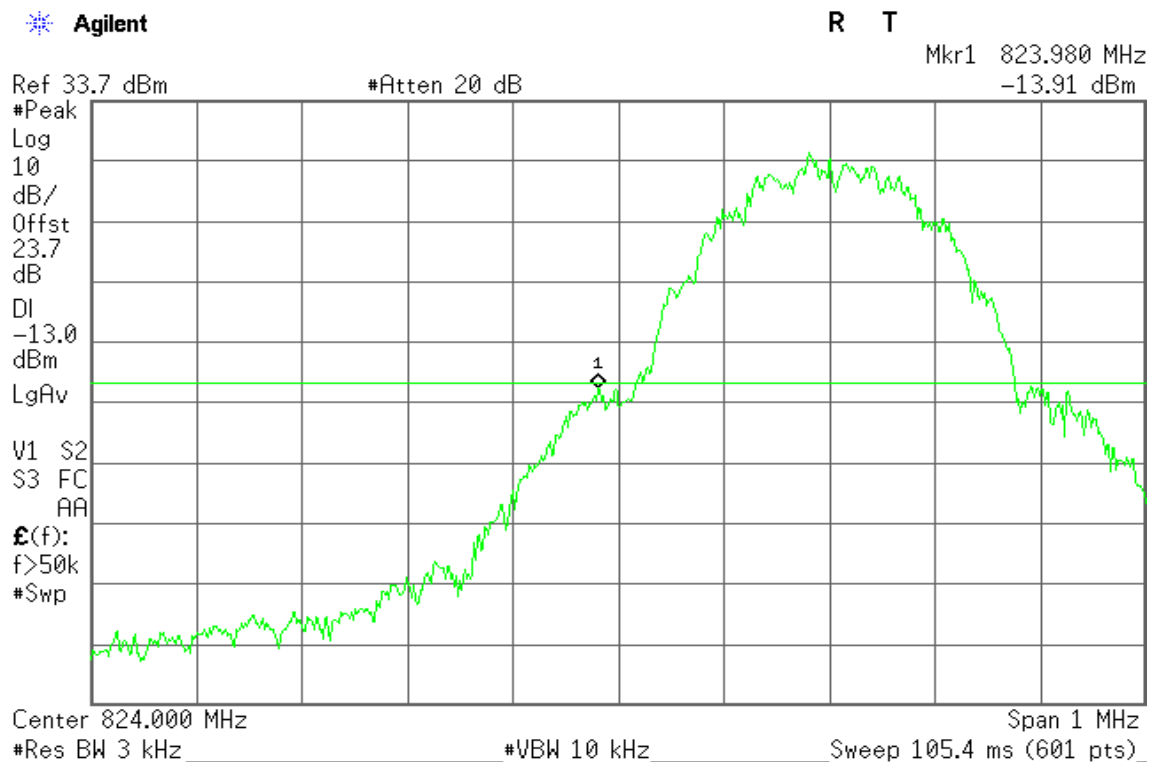
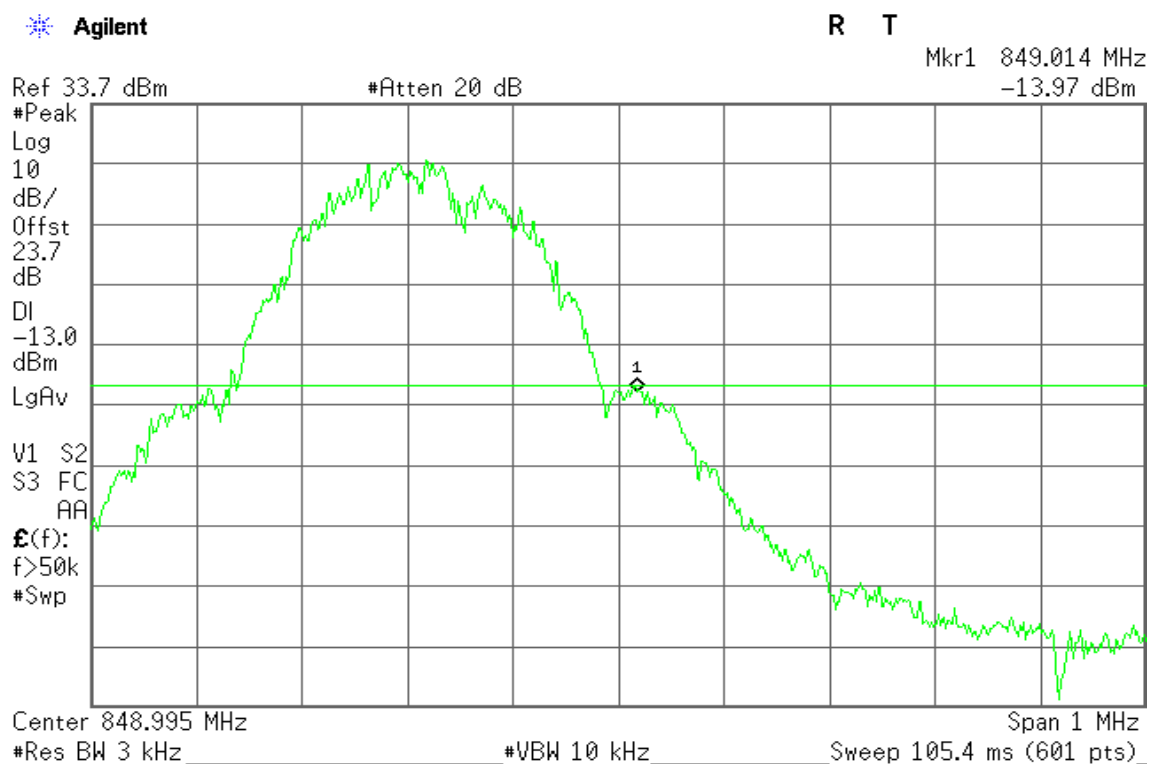


Figure 17-2: Band Edge emissions – EDGE CH High





EDGE 1900

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

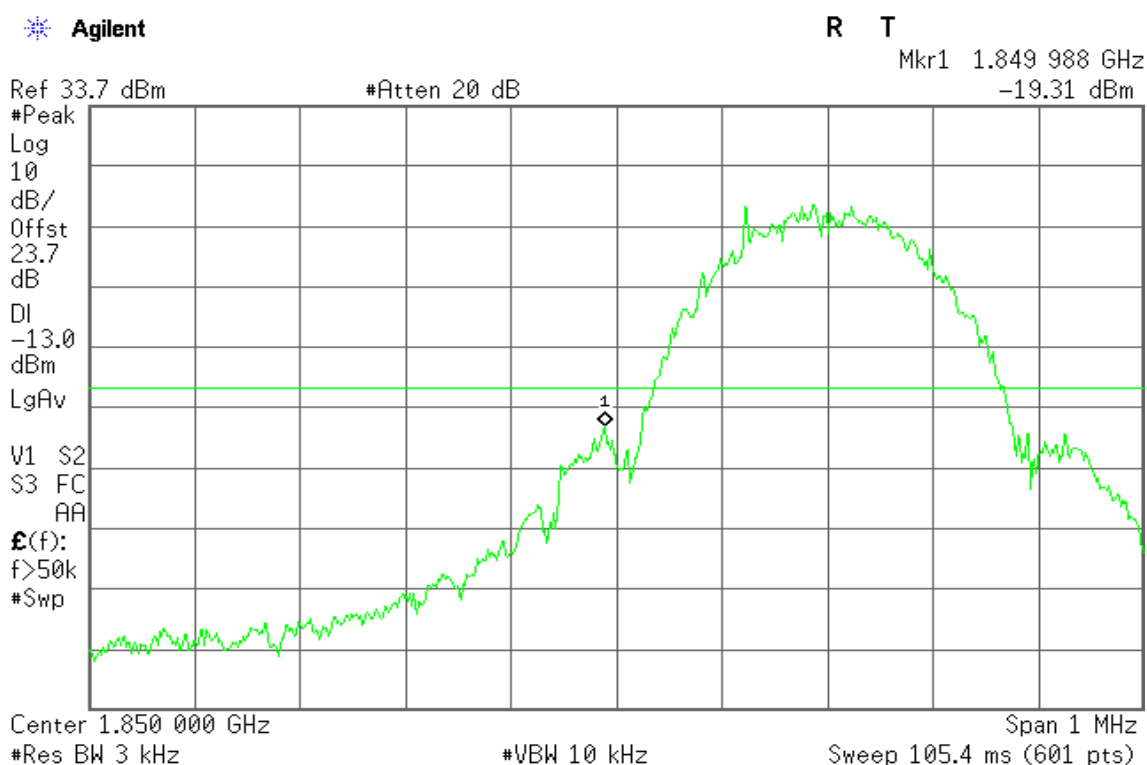
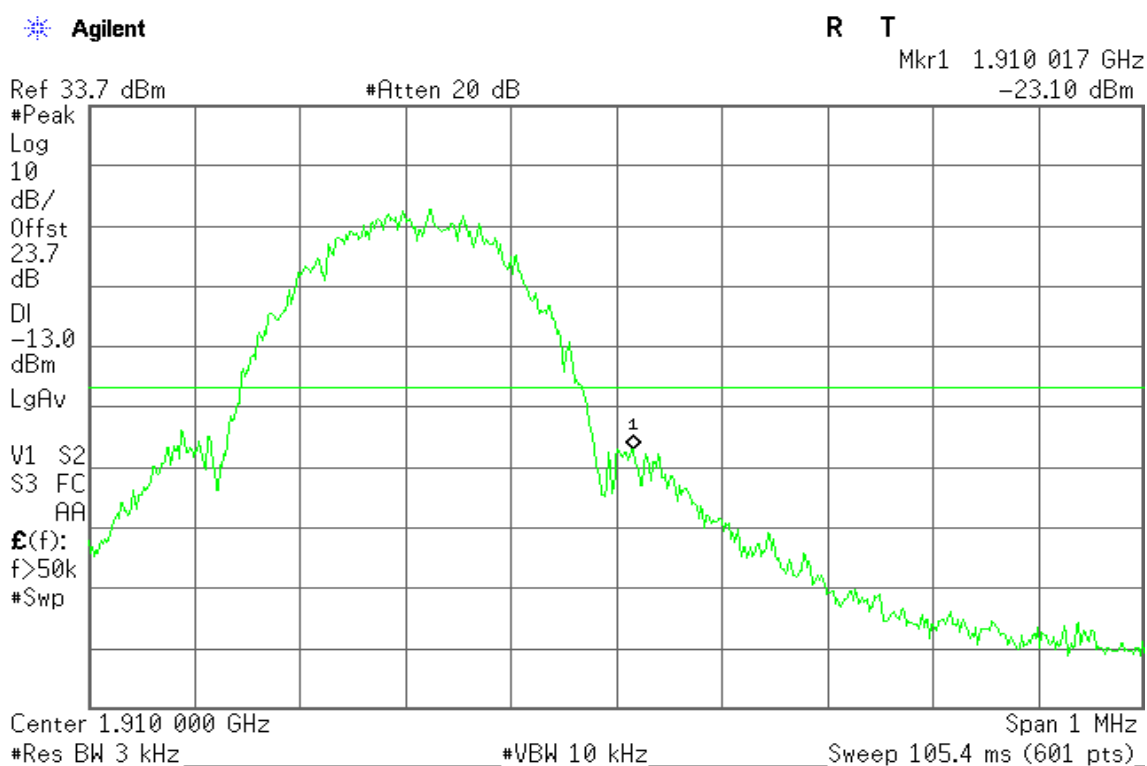


Figure 18-2: Band Edge emissions – EDGE CH High





WCDMA Band II

Figure 14-1: Out of Band emission at antenna terminals – WCDMA CH Low

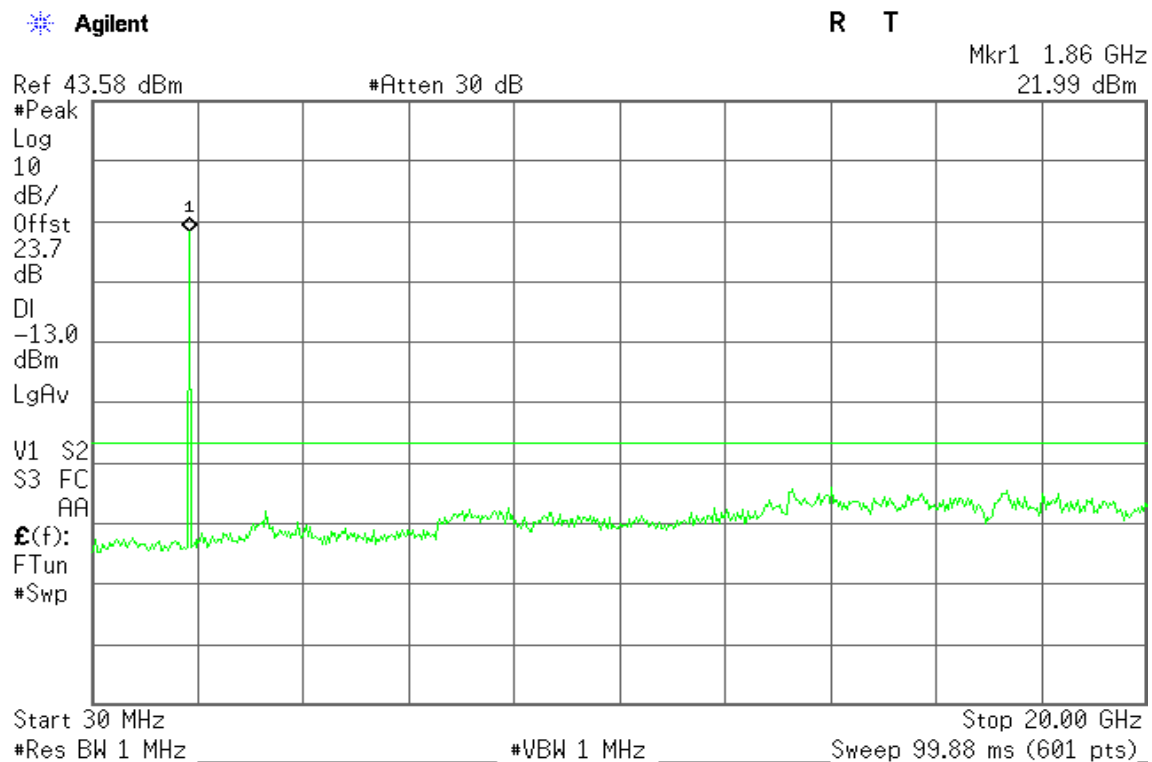


Figure 14-2: Out of Band emission at antenna terminals – WCDMA CH Mid

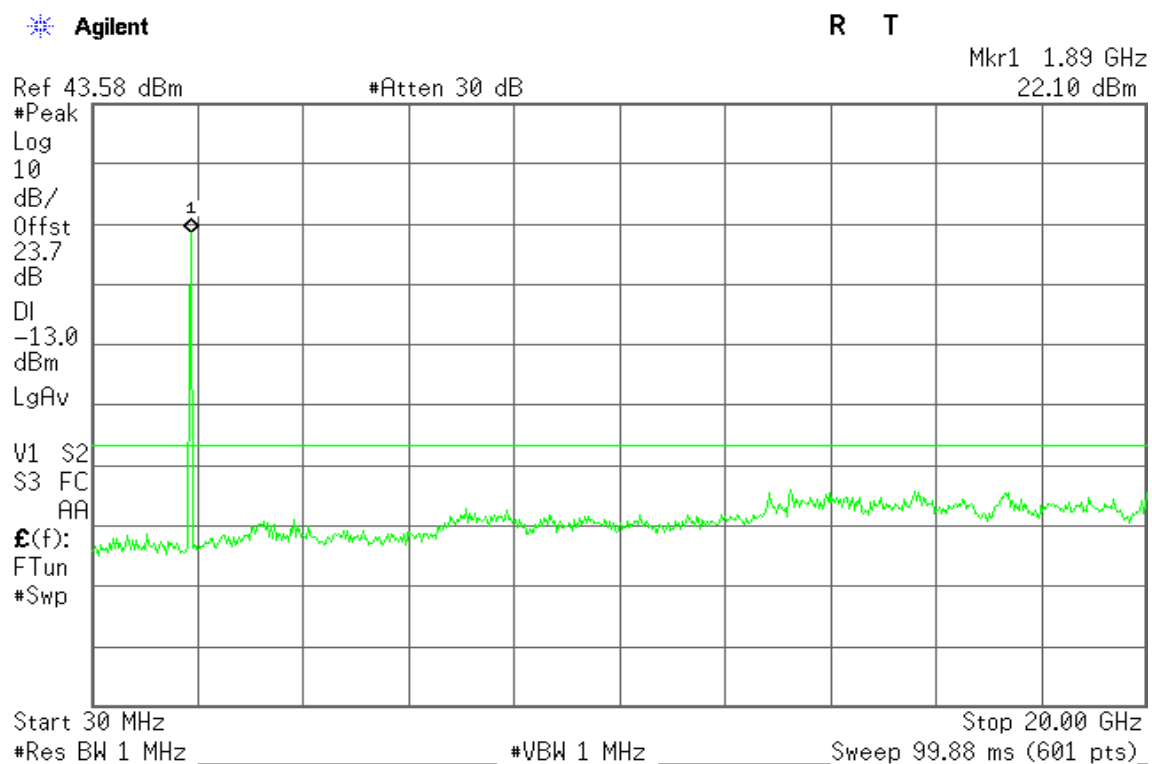
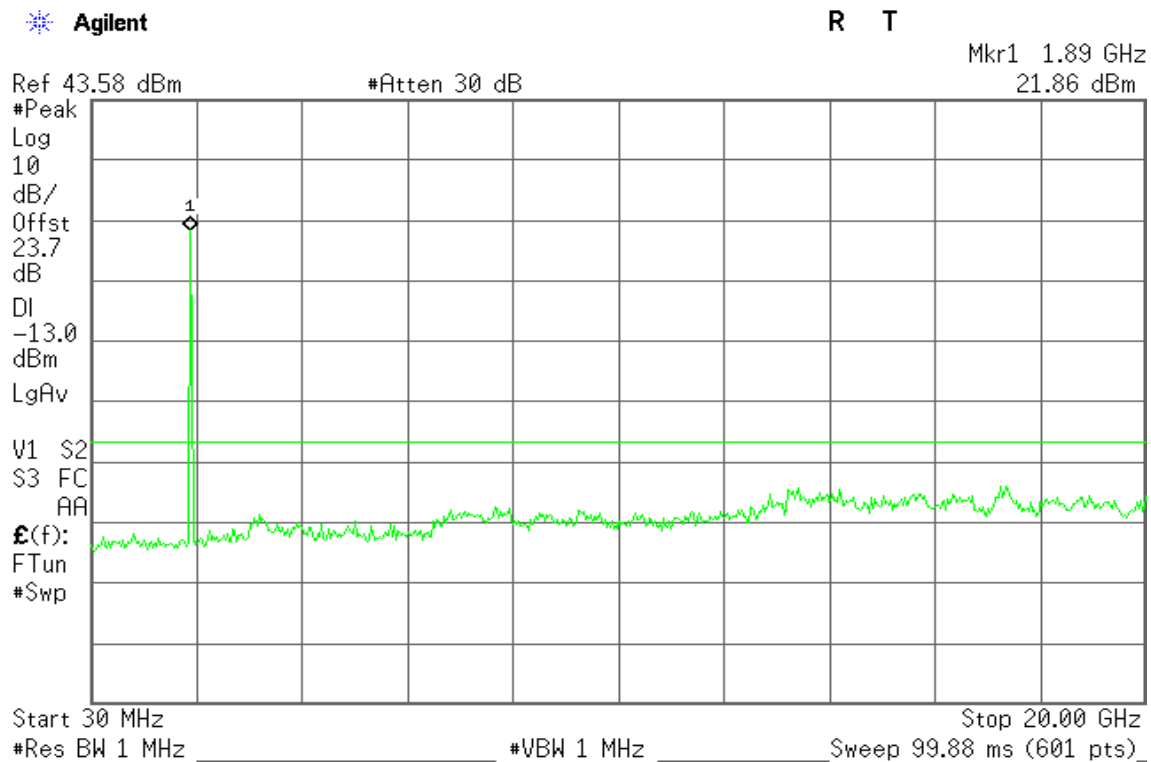




Figure 14-3: Out of Band emission at antenna terminals – WCDMA CH High



WCDMA Band V

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

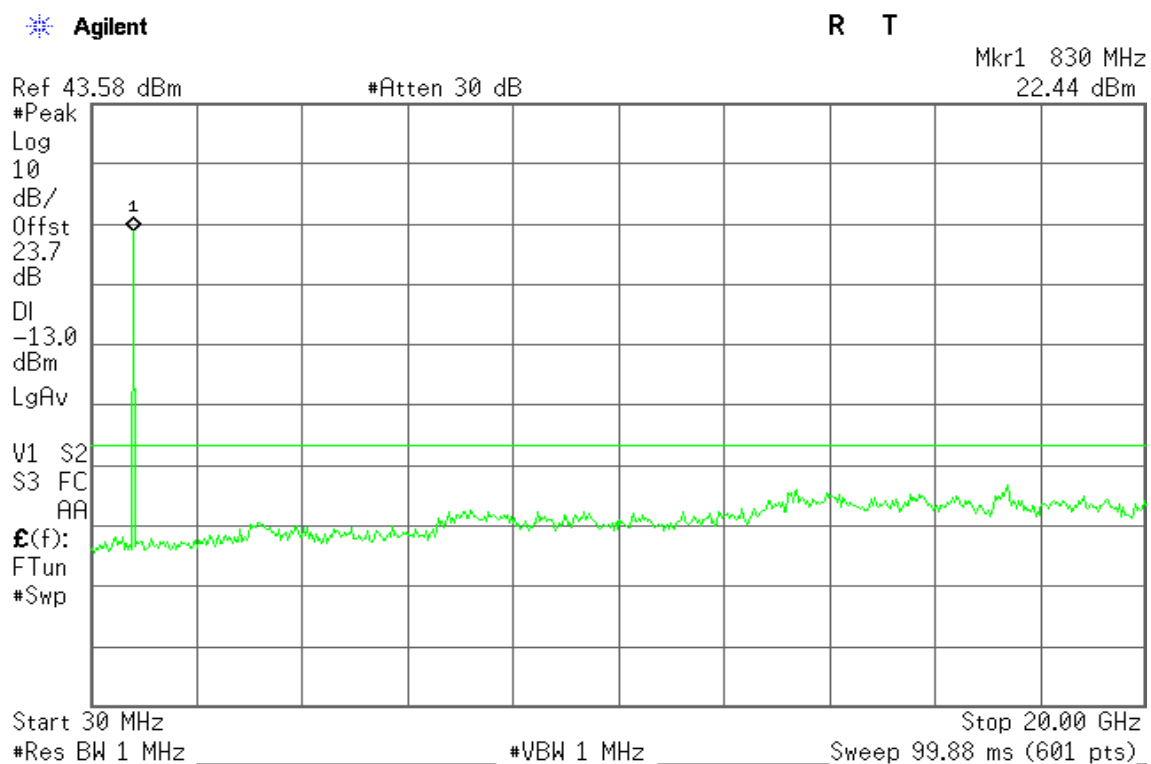




Figure 15-2: Out of Band emission at antenna terminals – WCDMA CH Mid

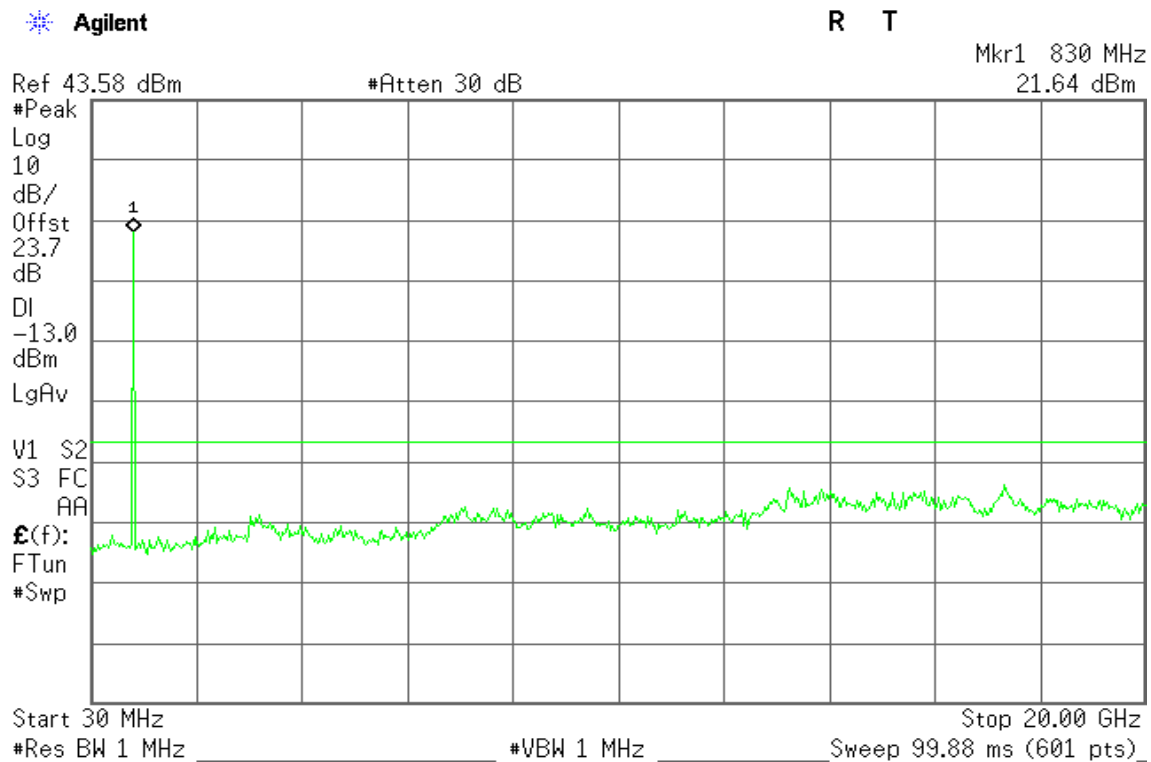
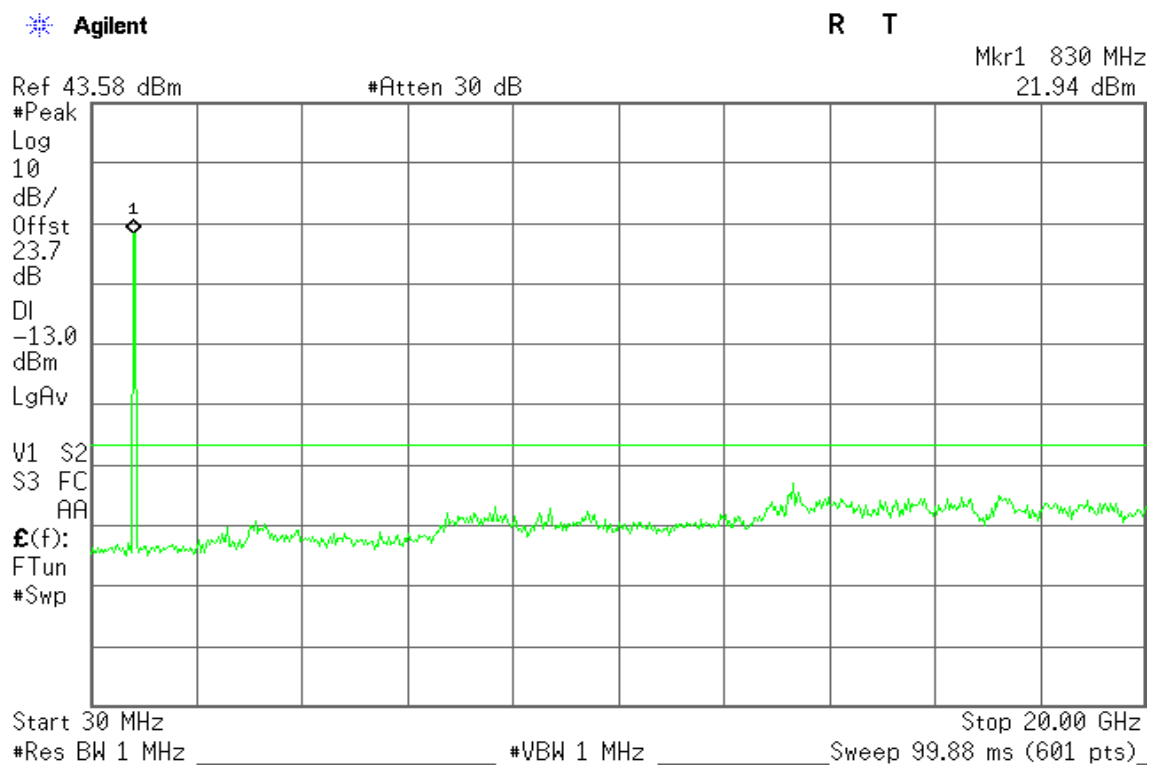


Figure 15-3: Out of Band emission at antenna terminals – WCDMA CH High





WCDMA Band II

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

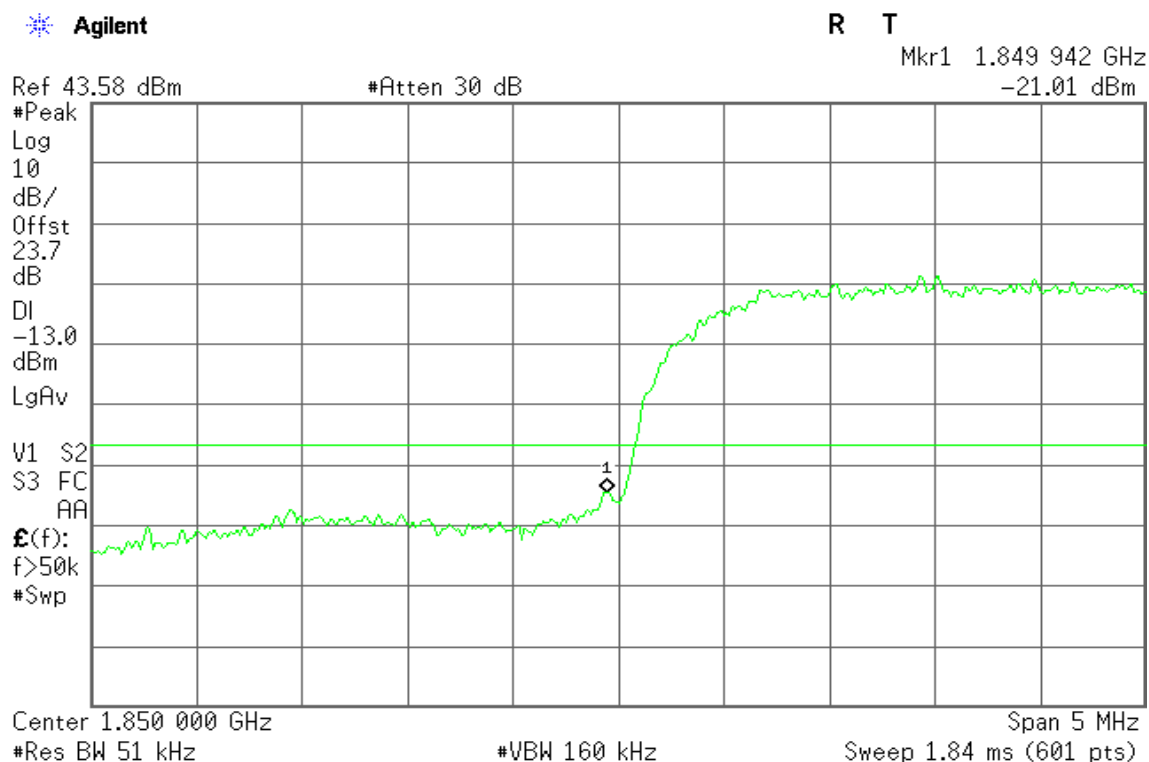
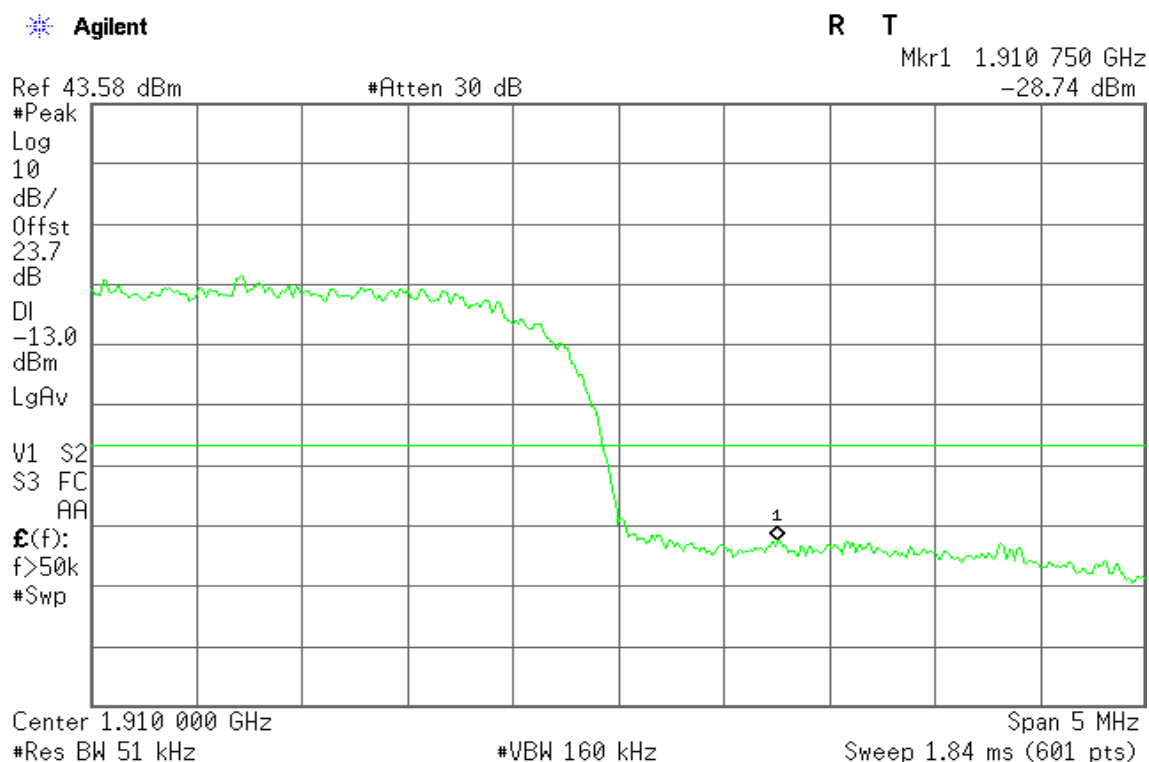


Figure 16-2: Band Edge emissions –WCDMA CH High





WCDMA Band V

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

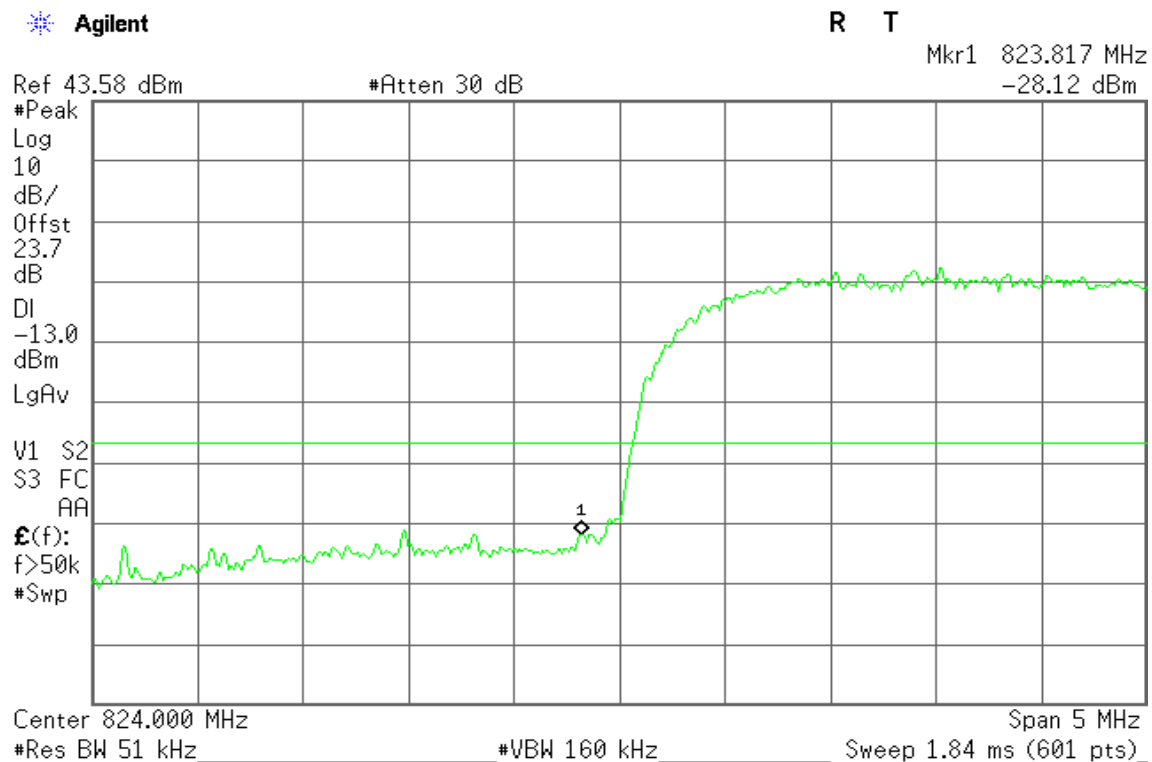
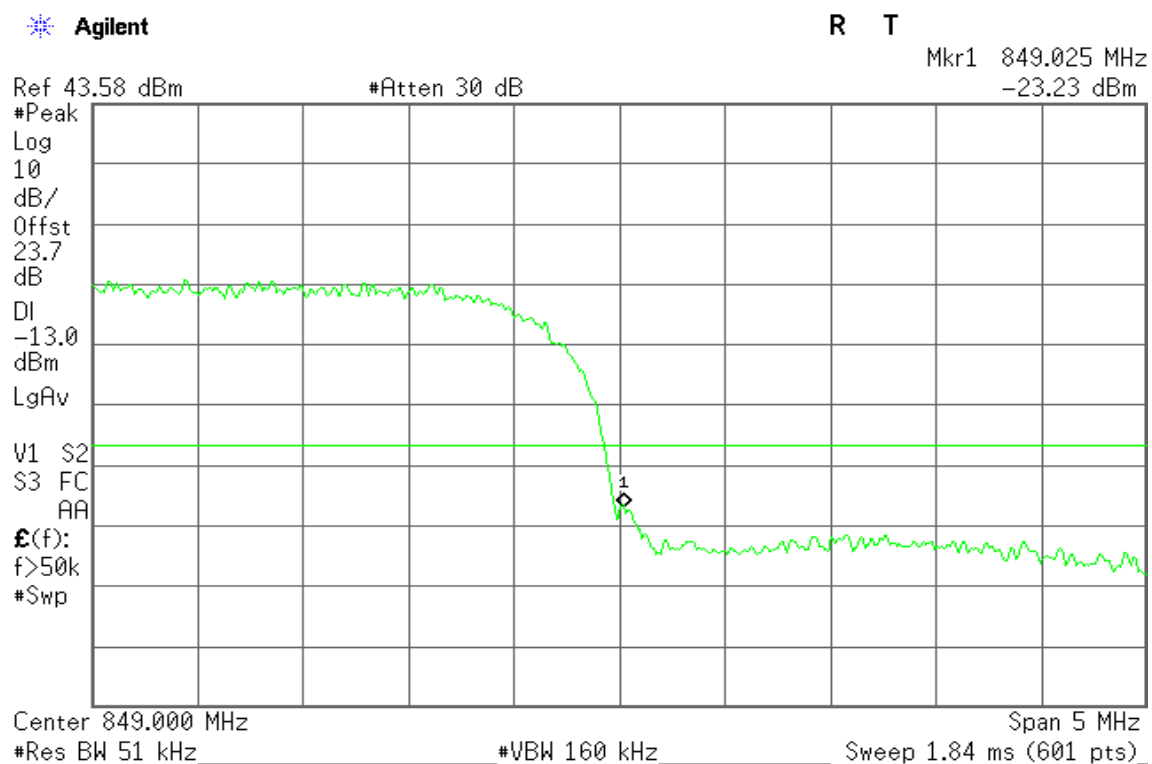


Figure 17-2: Band Edge emissions –WCDMA CH High





WCDMA / HSDPA Band II

Figure 18-1: Out of Band emission at antenna terminals – HSDPA CH Low

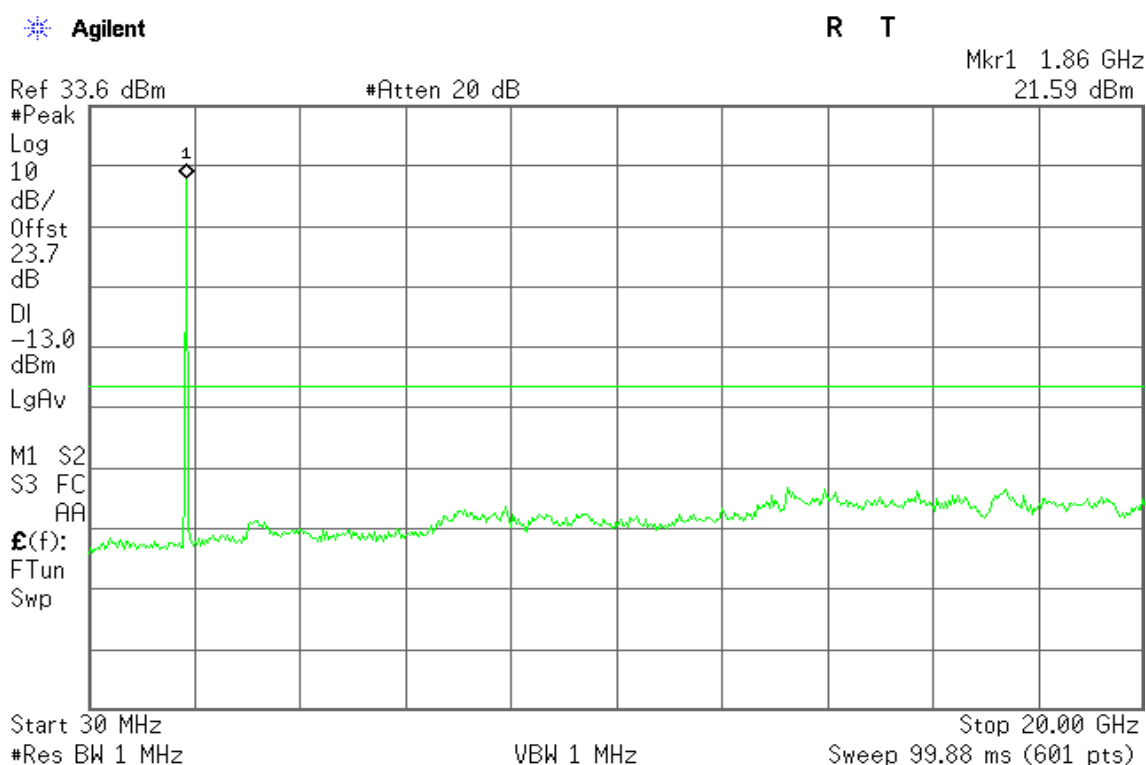


Figure 18-2: Out of Band emission at antenna terminals – HSDPA CH Mid

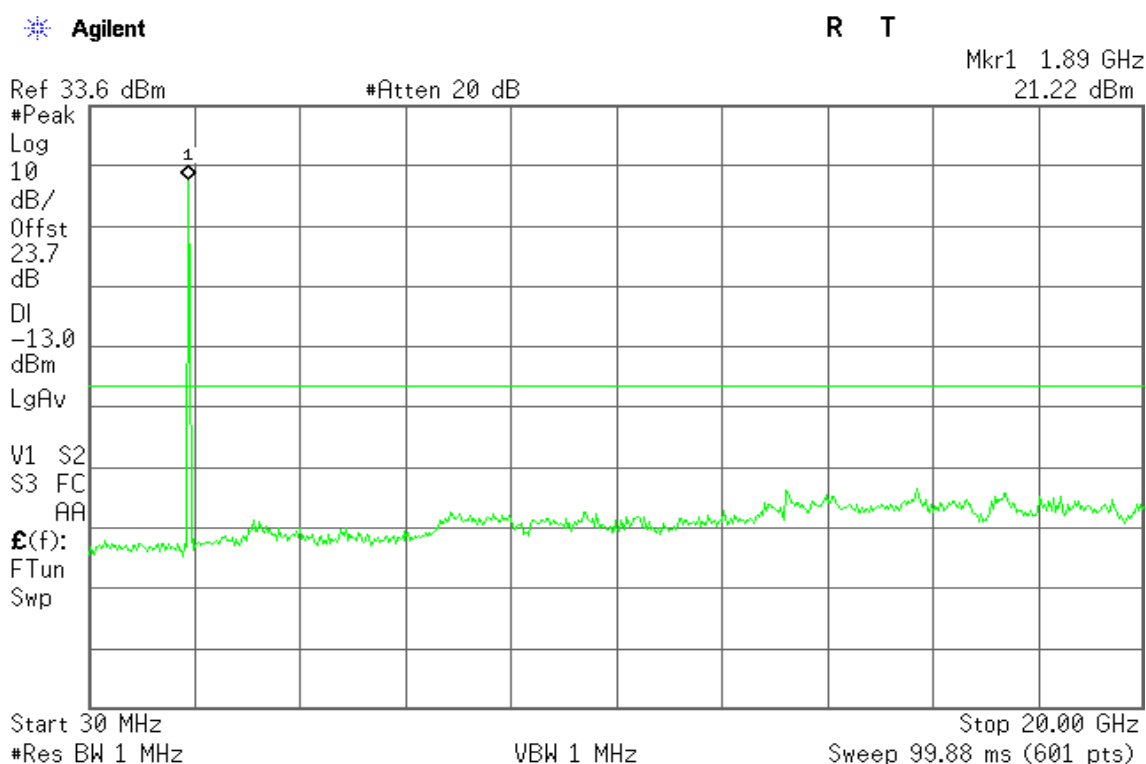
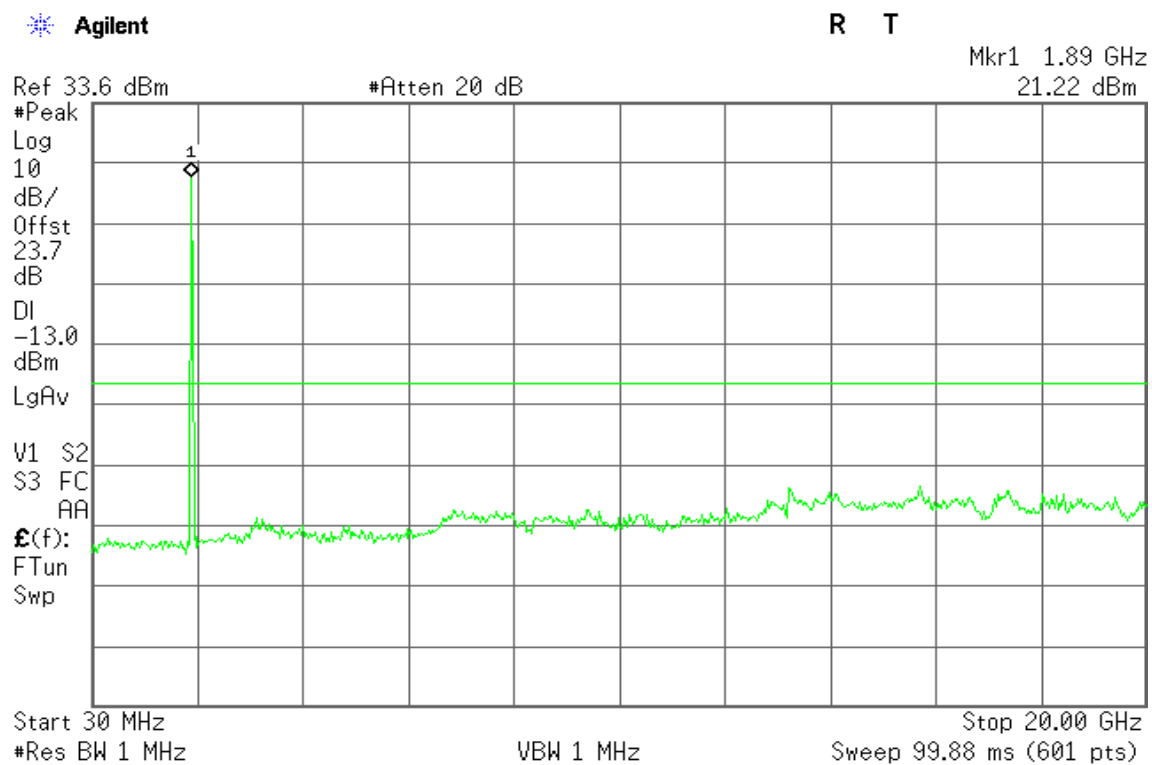




Figure 18-3: Out of Band emission at antenna terminals – HSDPA CH High



WCDMA / HSDPA Band V

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

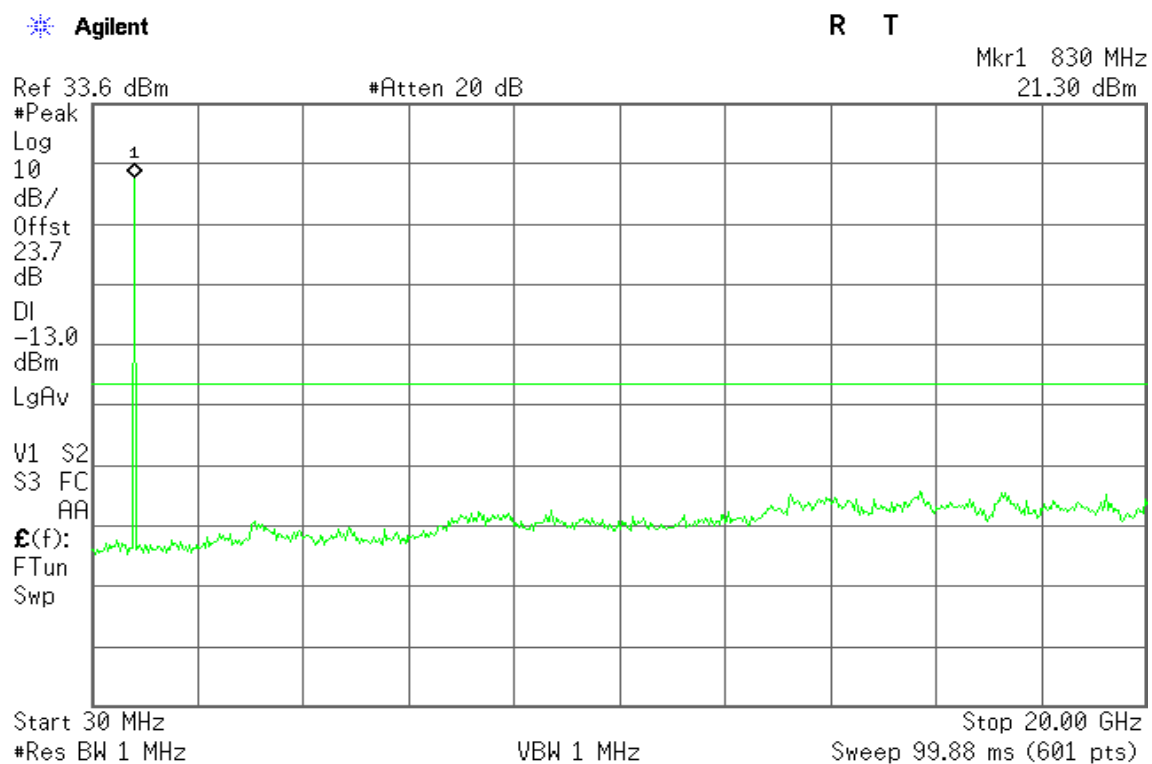




Figure 19-2: Out of Band emission at antenna terminals – HSDPA CH Mid

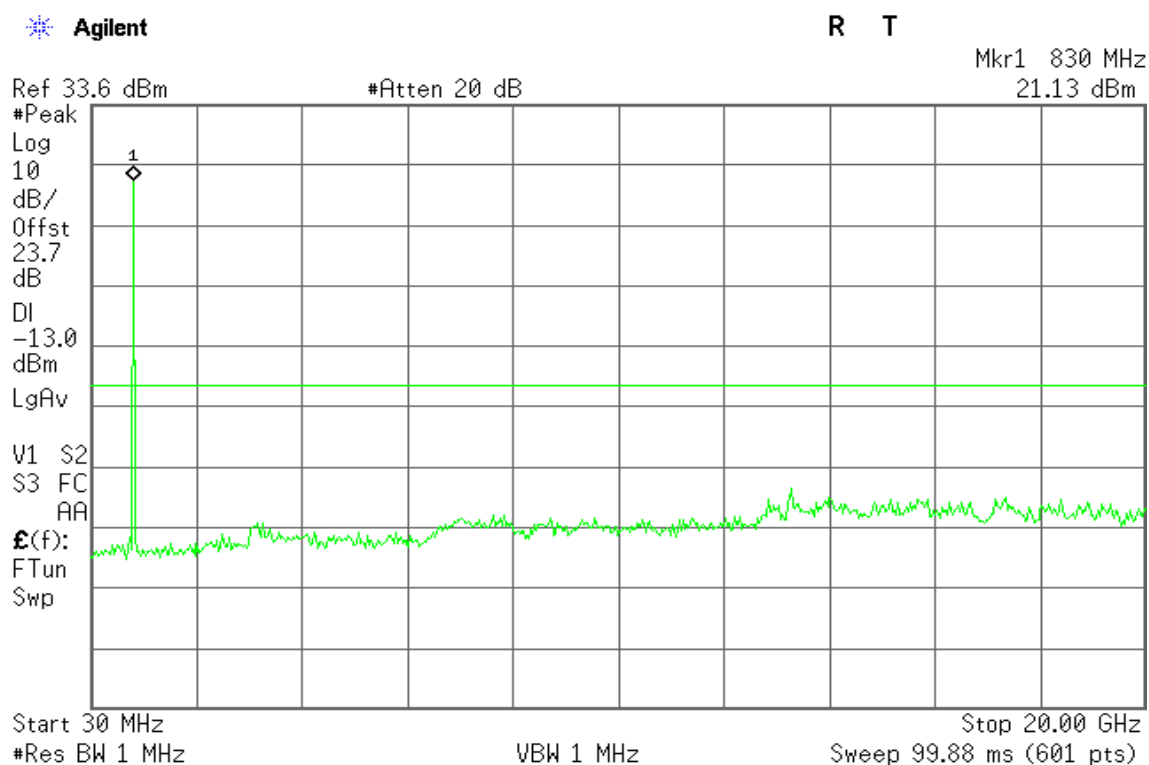
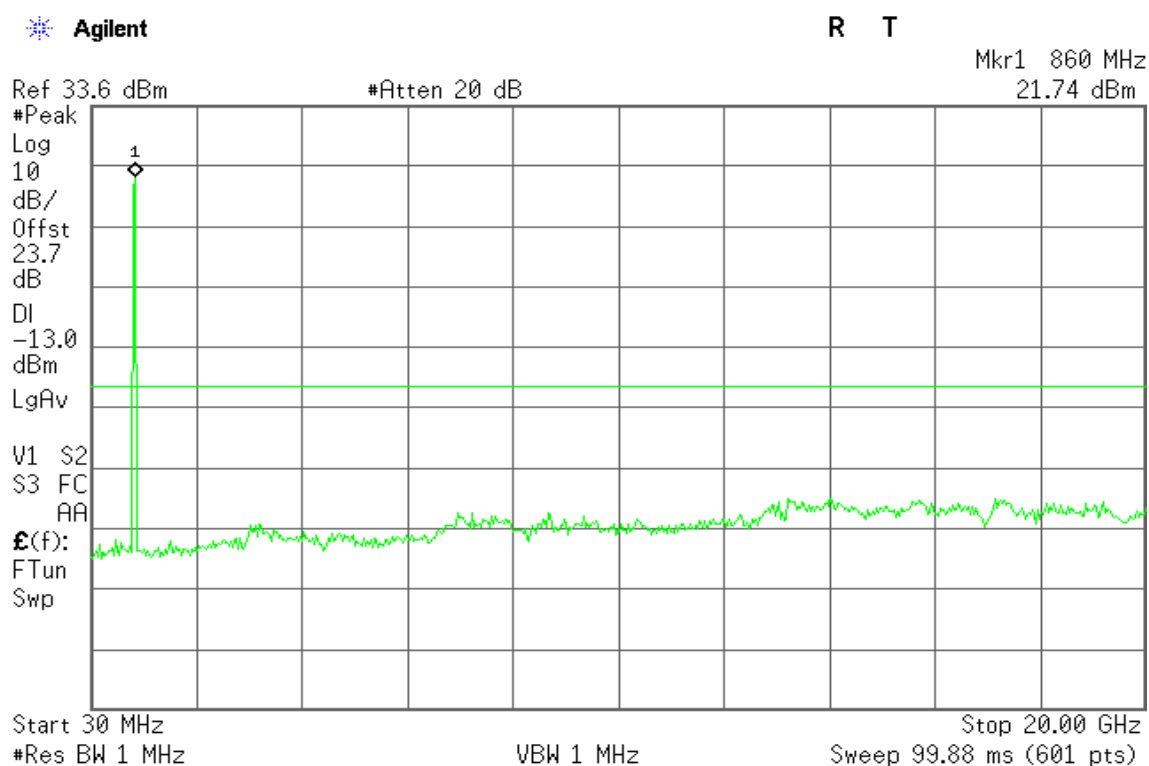


Figure 19-3: Out of Band emission at antenna terminals – HSDPA CH High





WCDMA / HSDPA Band II

Figure 20-1: Band Edge emissions – HSDPA CH Low

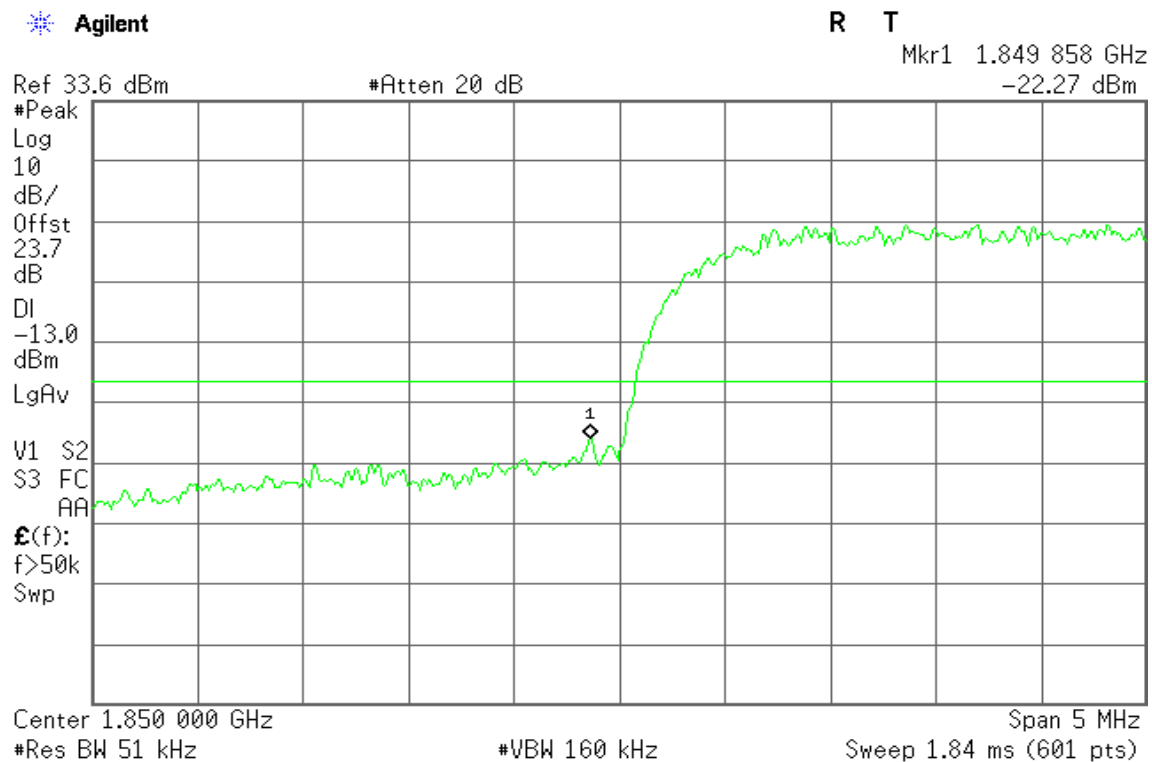
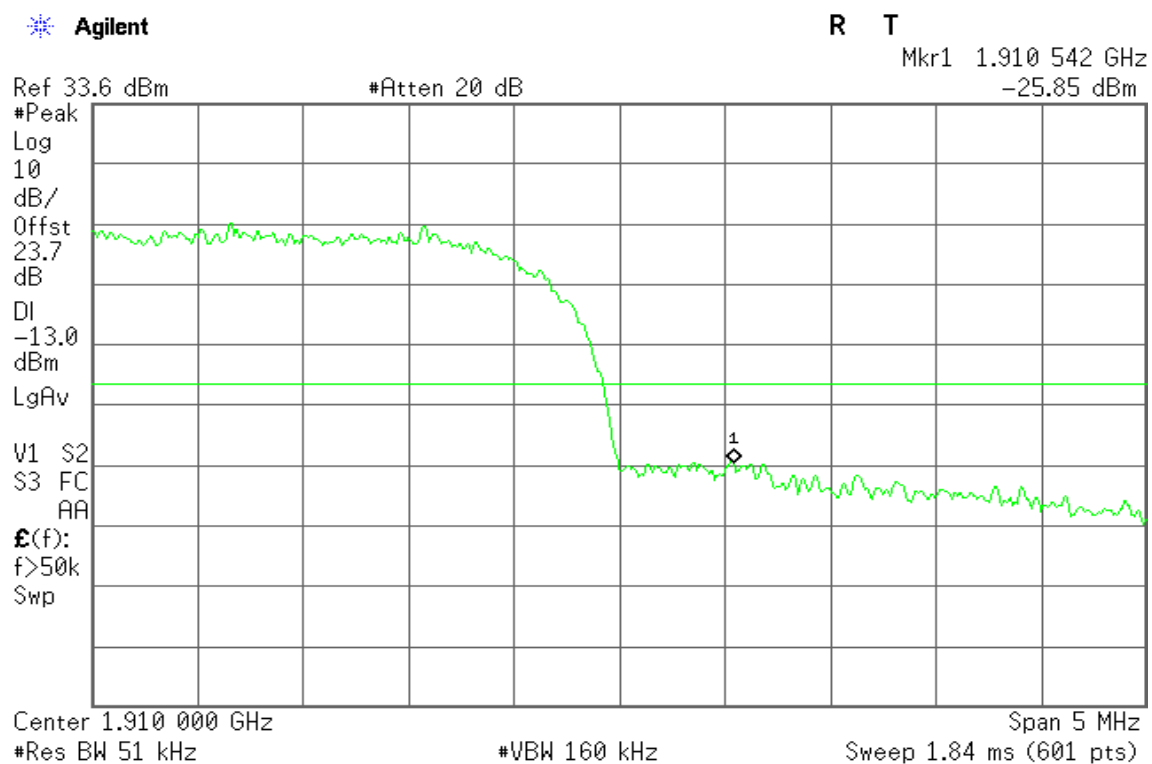


Figure 20-2: Band Edge emissions – HSDPA CH High





WCDMA / HSDPA Band V

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

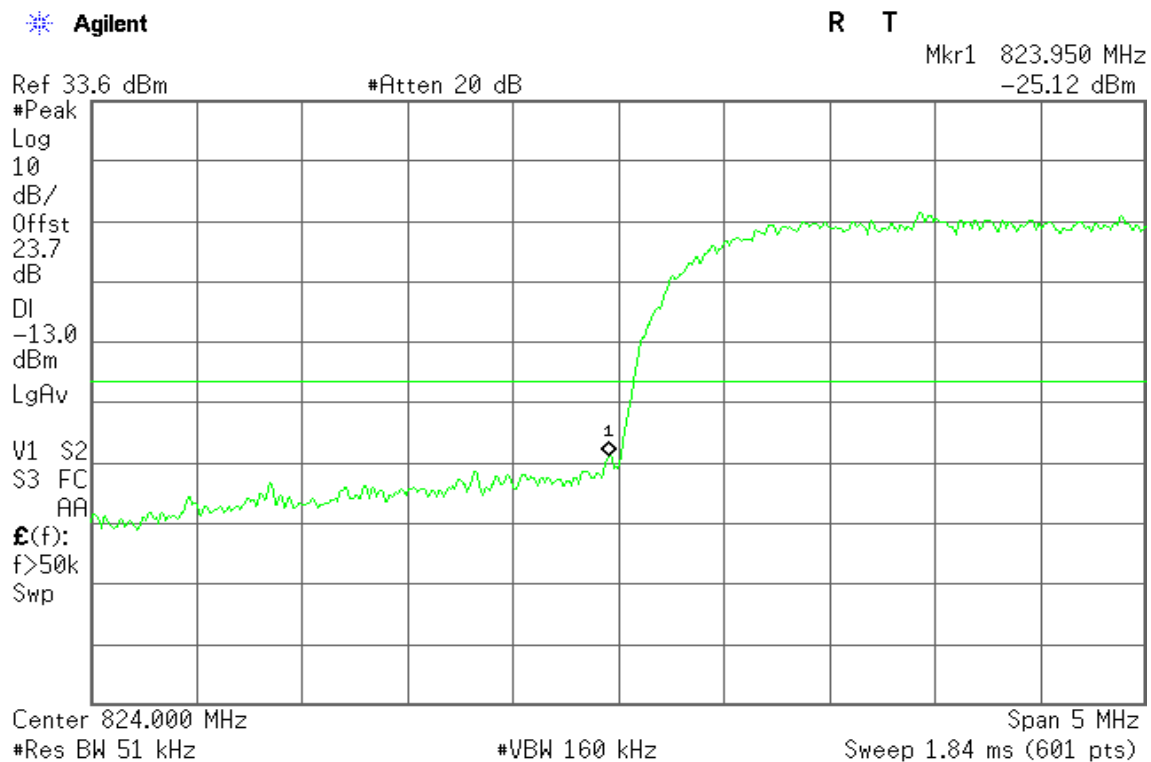
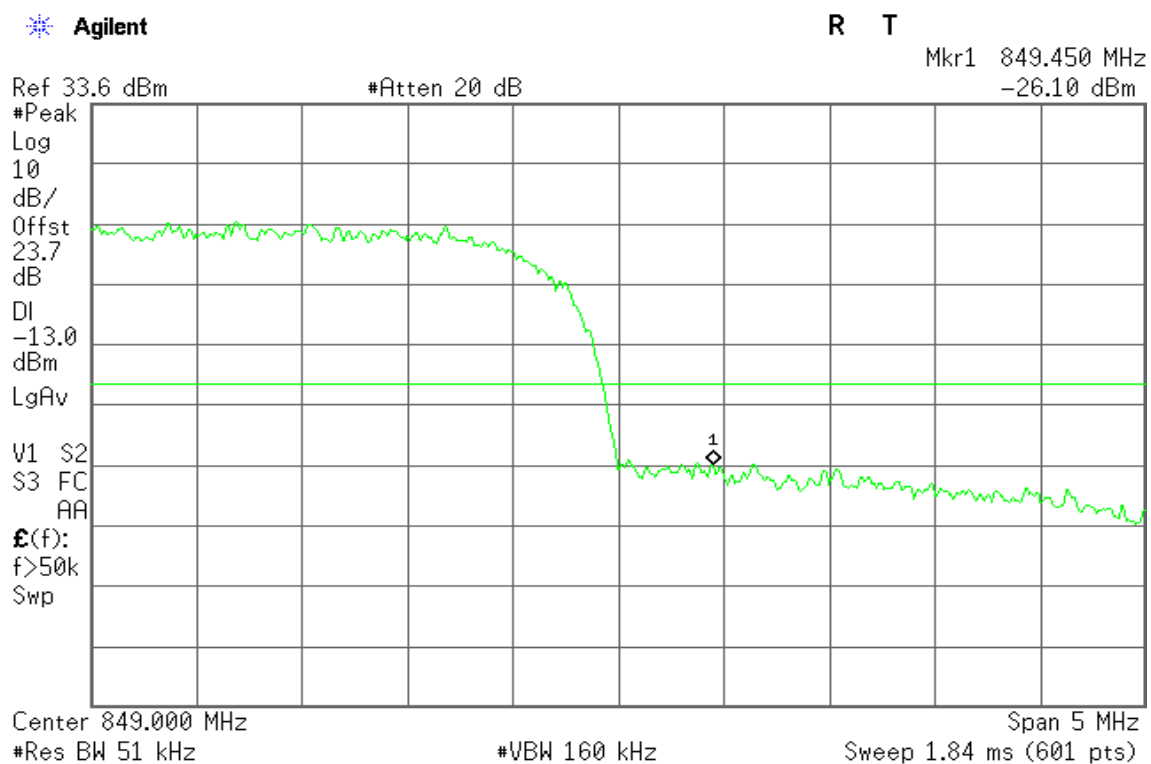


Figure 21-2: Band Edge emissions – HSDPA CH High





WCDMA / HSUPA Band II

Figure 22-1: Out of Band emission at antenna terminals – HSUPA CH Low

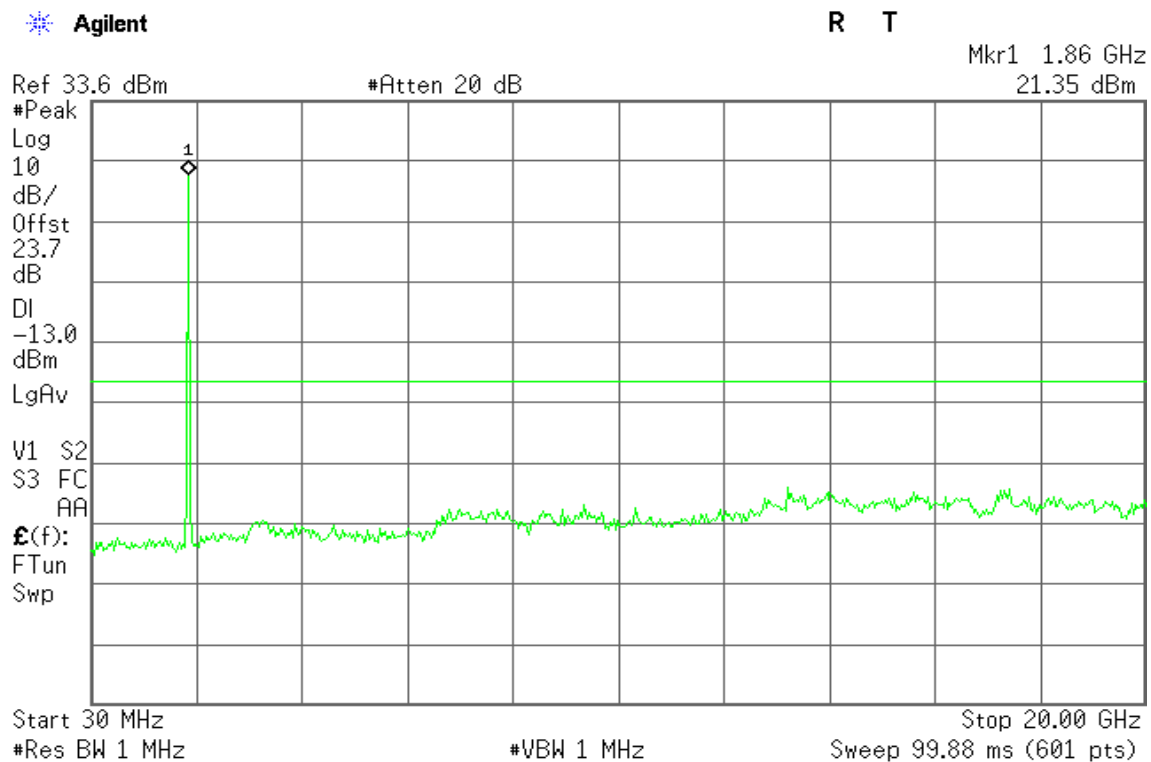


Figure 22-2: Out of Band emission at antenna terminals – HSUPA CH Mid

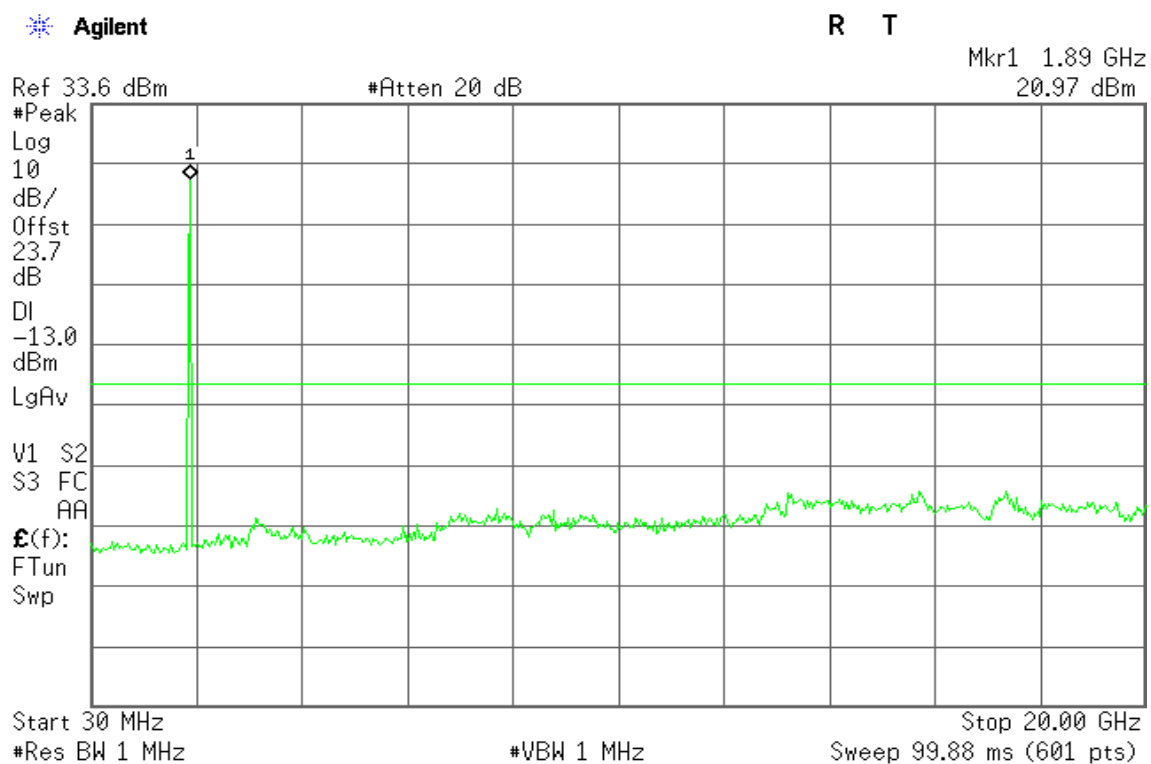
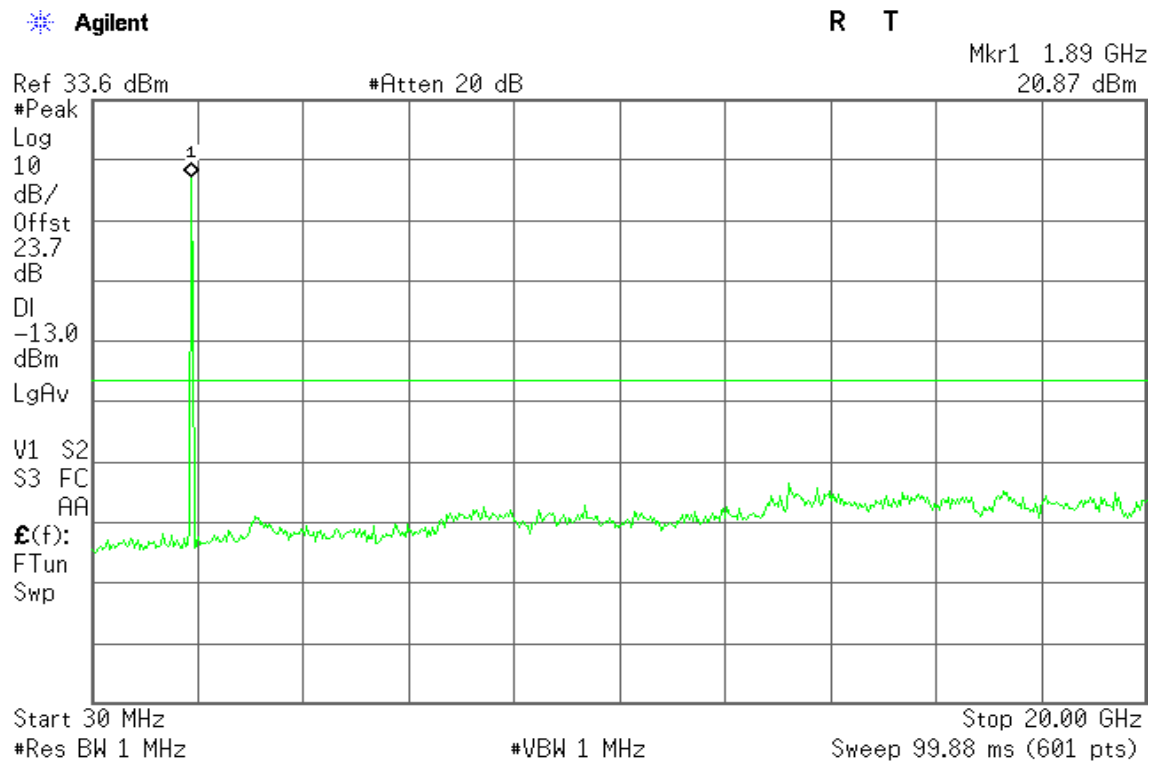




Figure 22-3: Out of Band emission at antenna terminals – HSUPA CH High



HSUPA / WCDMA Band V

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

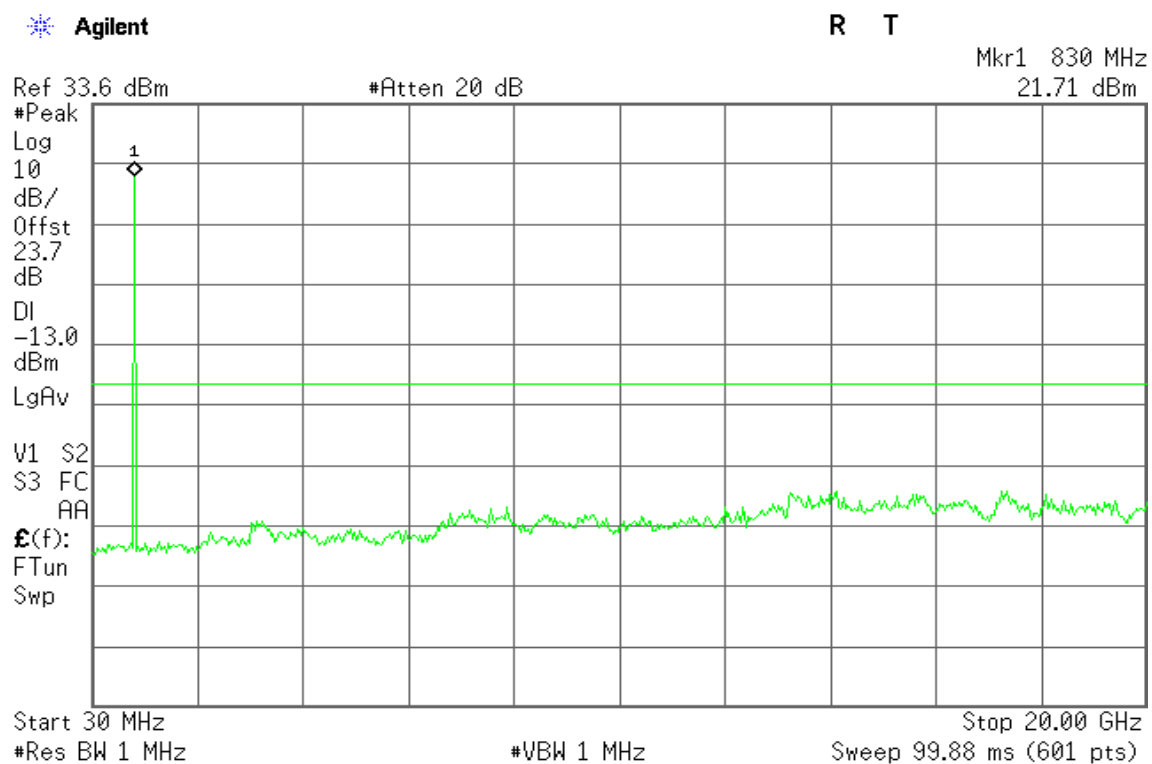




Figure 23-2: Out of Band emission at antenna terminals – HSUPA CH Mid

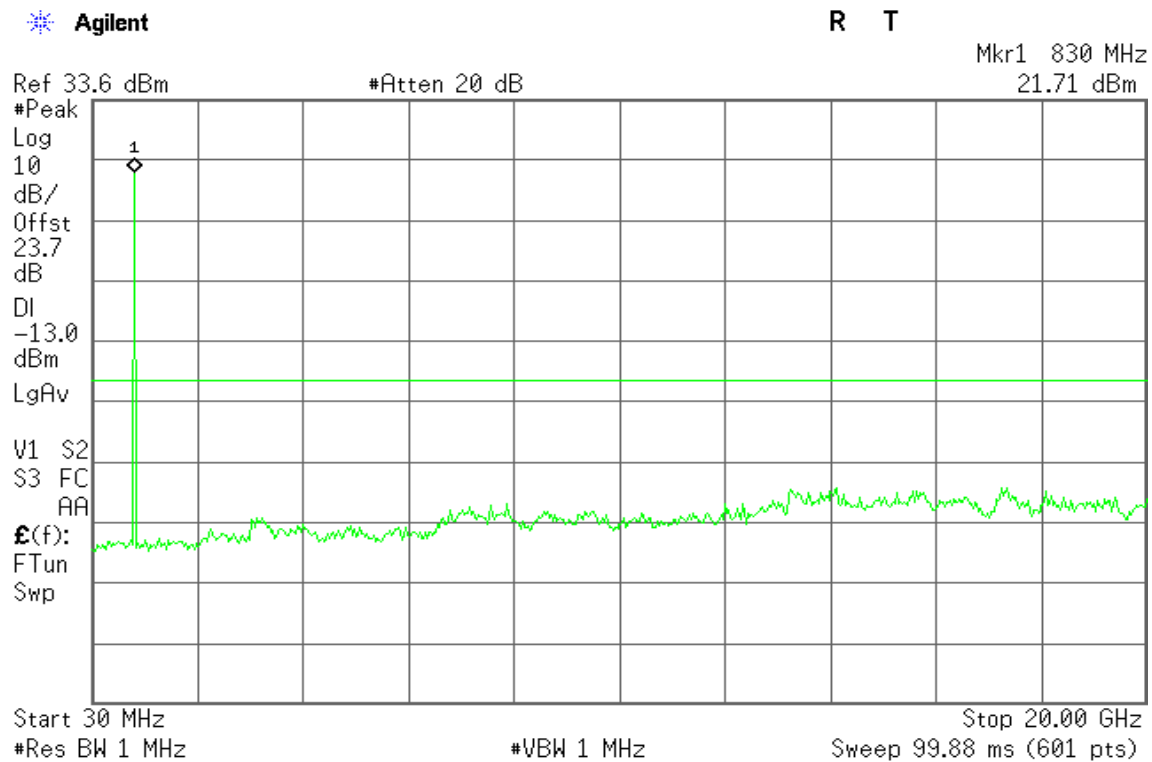
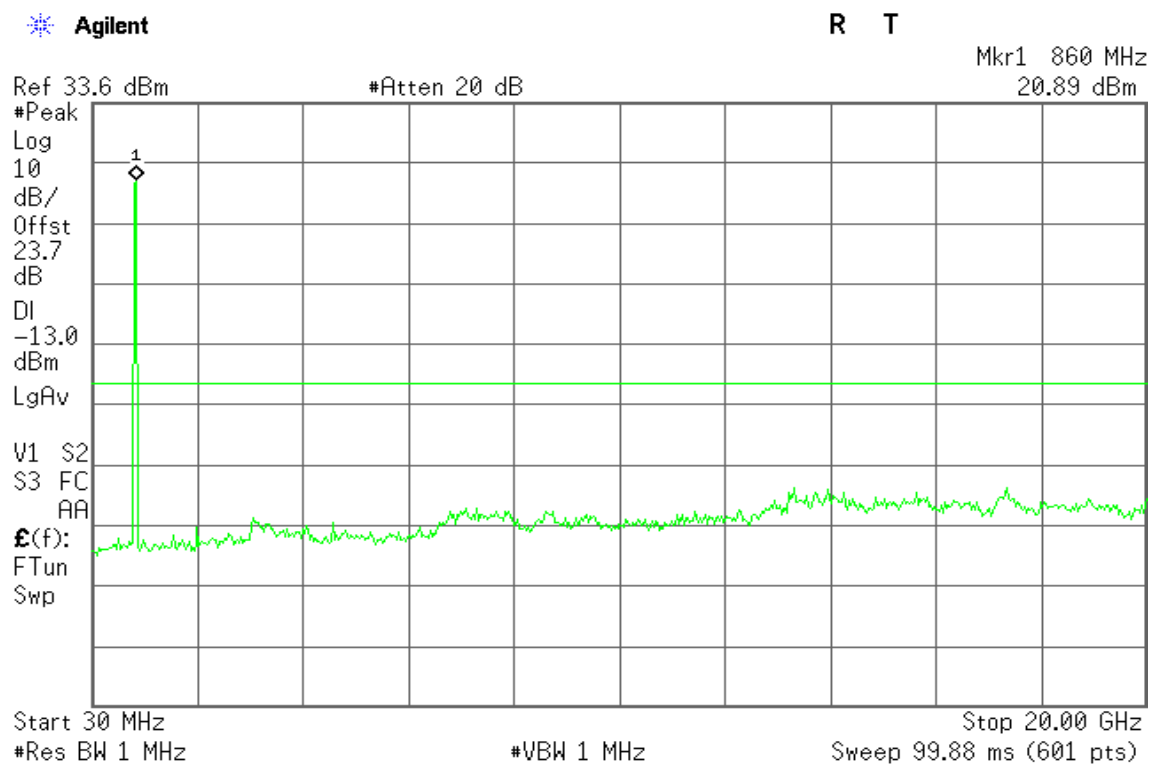


Figure 23-3: Out of Band emission at antenna terminals – HSUPA CH High





WCDMA / HSUPA Band II

Figure 24-1: Band Edge emissions – HSUPA CH Low

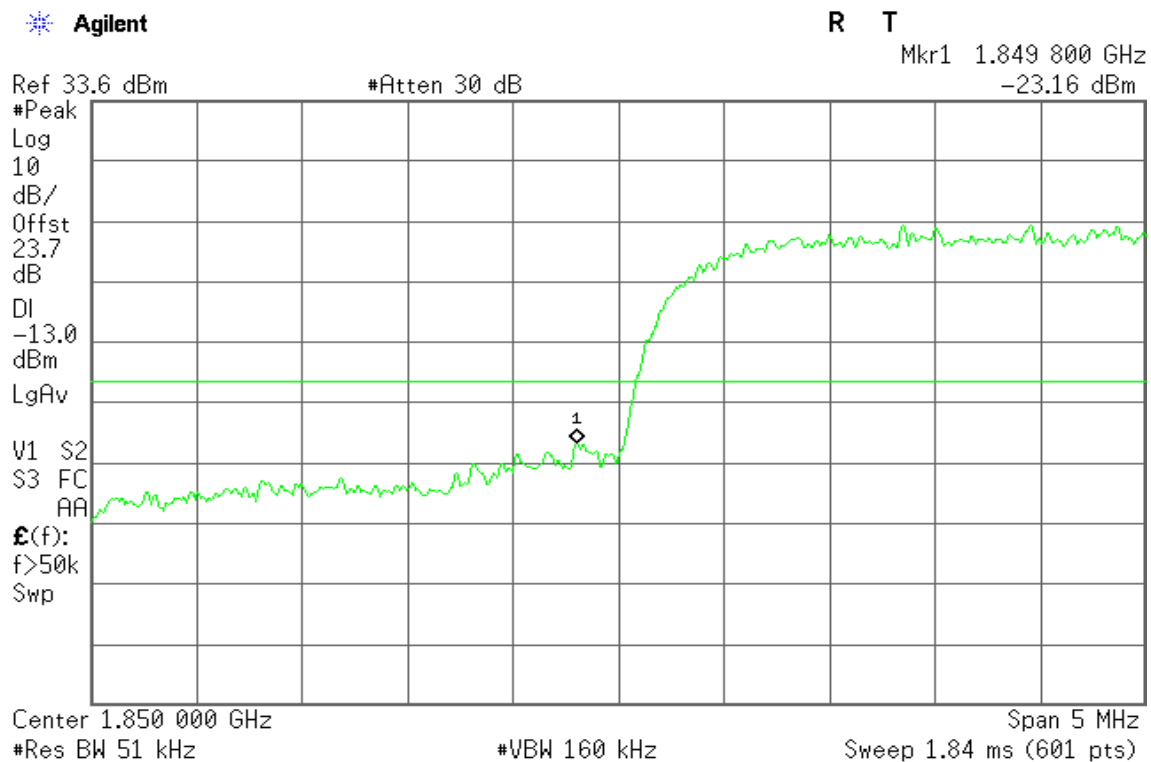
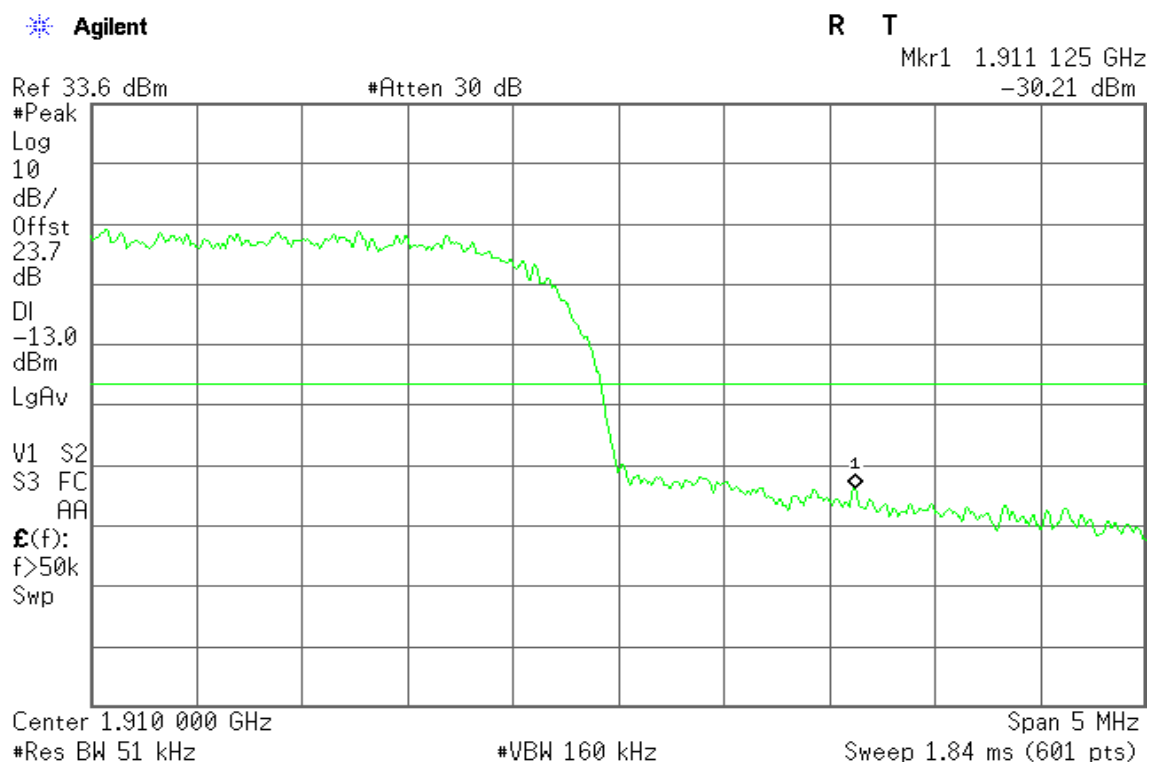


Figure 24-2: Band Edge emissions – HSUPA CH High





WCDMA / HSUPA Band V

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

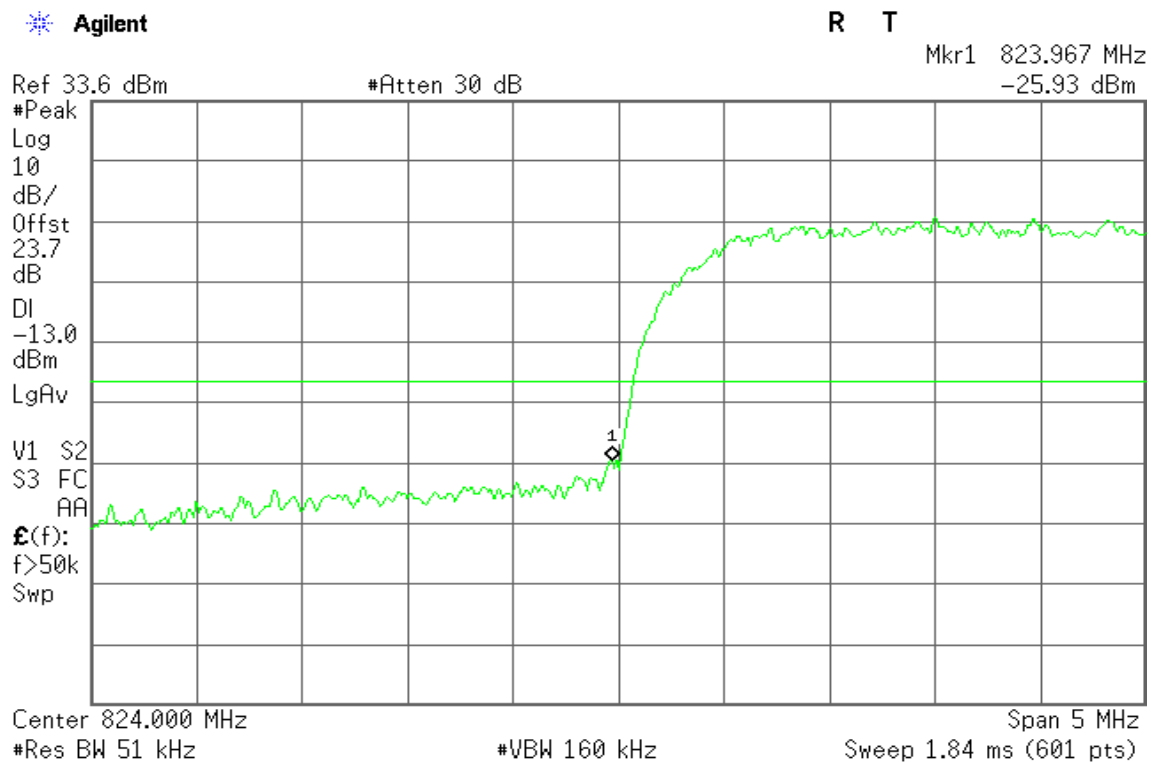
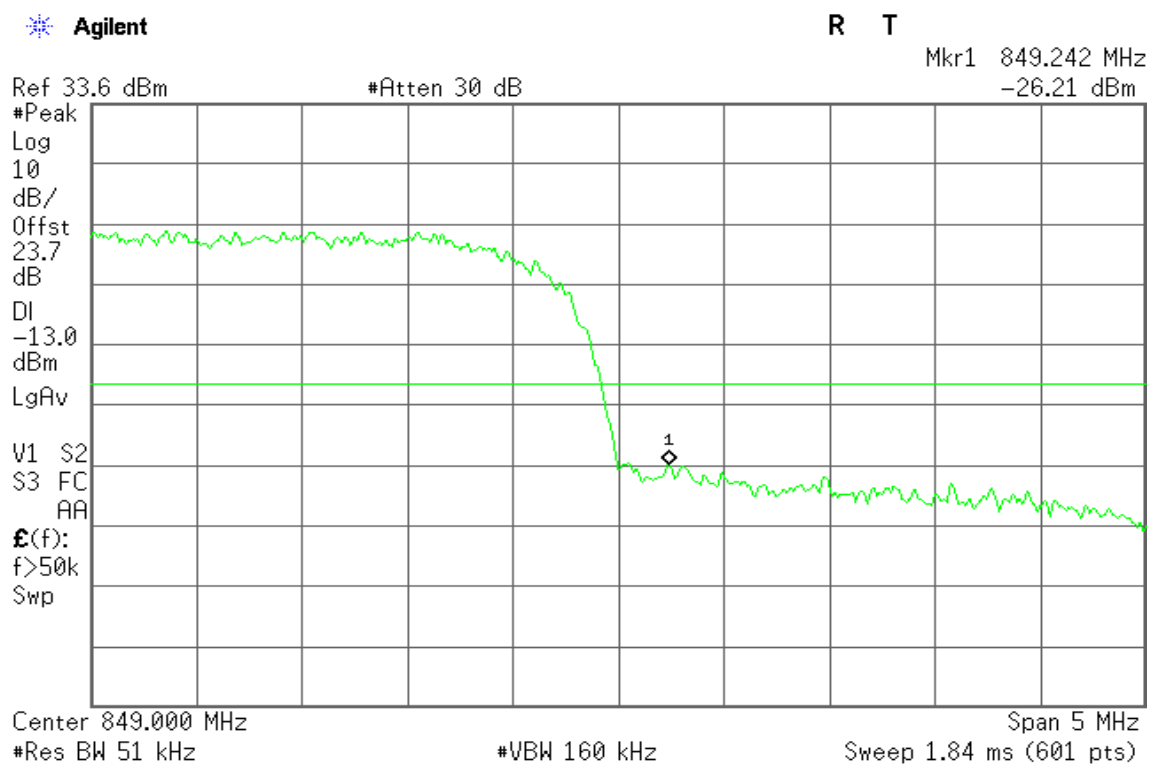


Figure 25-2: Band Edge emissions – HSUPA CH High





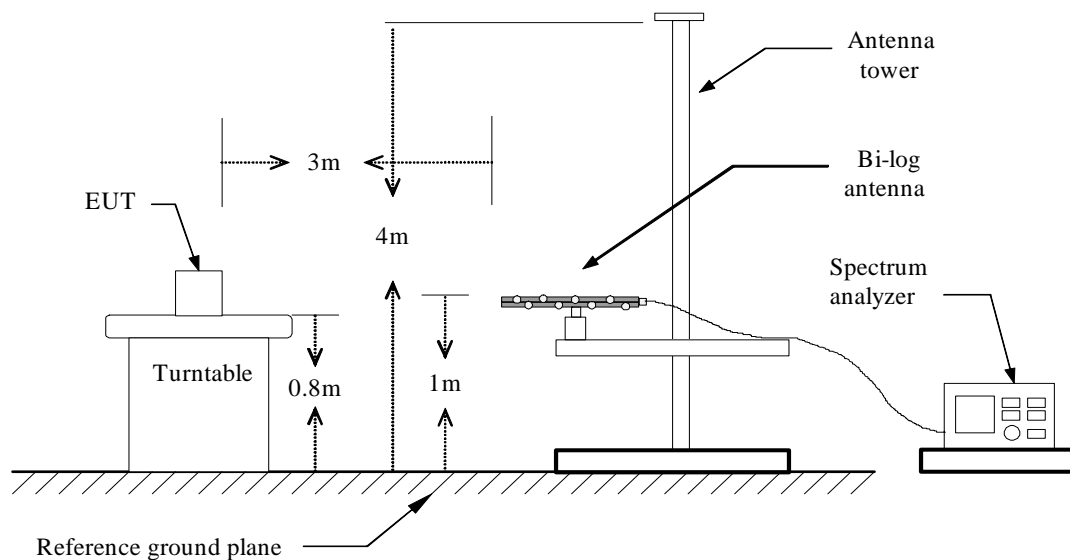
7.6 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

LIMIT

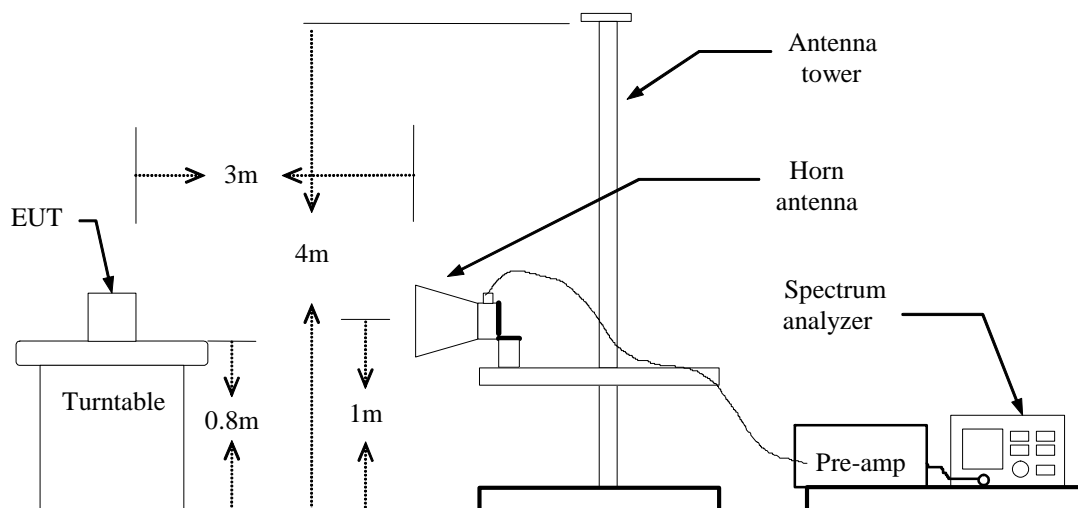
According to FCC §2.1053

Test Configuration

Below 1 GHz

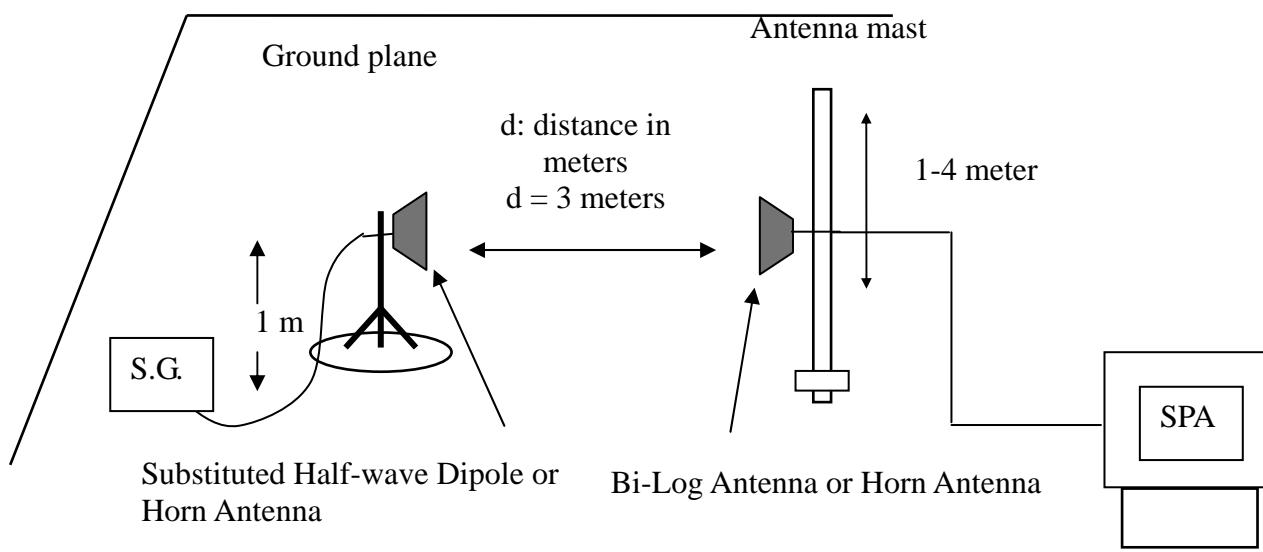


Above 1 GHz





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:** GPRS 850 / TX / CH 128**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
85.7750	-58.26	1.08	0.56	-58.78	-13.00	-45.78	V
136.7000	-63.4	1.38	-0.61	-65.39	-13.00	-52.39	V
226.4250	-73.39	1.78	5.37	-69.80	-13.00	-56.80	V
277.3500	-75.32	2	5.25	-72.07	-13.00	-59.07	V
384.0500	-80.6	2.31	5.99	-76.92	-13.00	-63.92	V
408.3000	-79.81	2.44	5.92	-76.33	-13.00	-63.33	V
88.2000	-52.71	1.09	0.84	-52.96	-13.00	-39.96	H
141.5500	-58.58	1.4	-0.1	-60.08	-13.00	-47.08	H
226.4250	-64.55	1.78	5.37	-60.96	-13.00	-47.96	H
277.3500	-70.9	2	5.25	-67.65	-13.00	-54.65	H
364.6500	-73.17	2.28	5.75	-69.70	-13.00	-56.70	H
454.3750	-76.99	2.59	5.79	-73.79	-13.00	-60.79	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
71.2250	-55.01	0.97	-1.7	-57.68	-13.00	-44.68	V
136.7000	-62.99	1.38	-0.61	-64.98	-13.00	-51.98	V
226.4250	-72.95	1.78	5.37	-69.36	-13.00	-56.36	V
277.3500	-75.94	2	5.25	-72.69	-13.00	-59.69	V
391.3250	-79.47	2.32	6	-75.79	-13.00	-62.79	V
418.0000	-78.91	2.46	5.83	-75.54	-13.00	-62.54	V
88.2000	-51.99	1.09	0.84	-52.24	-13.00	-39.24	H
136.7000	-58.53	1.38	-0.61	-60.52	-13.00	-47.52	H
226.4250	-64.79	1.78	5.37	-61.20	-13.00	-48.20	H
371.9250	-73.1	2.3	5.85	-69.55	-13.00	-56.55	H
454.3750	-77.49	2.59	5.79	-74.29	-13.00	-61.29	H
641.1000	-77.68	3.01	6.12	-74.57	-13.00	-61.57	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
54.2500	-54.4	0.83	-3.66	-58.89	-13.00	-45.89	V
136.7000	-63.09	1.38	-0.61	-65.08	-13.00	-52.08	V
226.4250	-73.12	1.78	5.37	-69.53	-13.00	-56.53	V
277.3500	-75.4	2	5.25	-72.15	-13.00	-59.15	V
398.6000	-78.9	2.38	5.98	-75.30	-13.00	-62.30	V
645.9500	-82.01	3.02	6.21	-78.82	-13.00	-65.82	V
88.2000	-49.41	1.09	0.84	-49.66	-13.00	-36.66	H
151.2500	-59	1.43	0.8	-59.63	-13.00	-46.63	H
226.4250	-64.03	1.78	5.37	-60.44	-13.00	-47.44	H
277.3500	-70.84	2	5.25	-67.59	-13.00	-54.59	H
393.7500	-75.26	2.34	5.99	-71.61	-13.00	-58.61	H
454.3750	-75.96	2.59	5.79	-72.76	-13.00	-59.76	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 1900 / TX / CH 512**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
85.7750	-56.35	1.08	0.56	-56.87	-13.00	-43.87	V
136.7000	-62.24	1.38	-0.61	-64.23	-13.00	-51.23	V
226.4250	-71.7	1.78	5.37	-68.11	-13.00	-55.11	V
277.3500	-74.64	2	5.25	-71.39	-13.00	-58.39	V
408.3000	-79.06	2.44	5.92	-75.58	-13.00	-62.58	V
801.1500	-77.69	3.33	6.55	-74.47	-13.00	-61.47	V
88.2000	-52.39	1.09	0.84	-52.64	-13.00	-39.64	H
136.7000	-57.1	1.38	-0.61	-59.09	-13.00	-46.09	H
228.8500	-63.1	1.79	5.38	-59.51	-13.00	-46.51	H
277.3500	-70.45	2	5.25	-67.20	-13.00	-54.20	H
398.6000	-74.9	2.38	5.98	-71.30	-13.00	-58.30	H
801.1500	-72.03	3.33	6.55	-68.81	-13.00	-55.81	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
73.6500	-56.38	0.99	-1.28	-58.65	-13.00	-45.65	V
136.7000	-61.87	1.38	-0.61	-63.86	-13.00	-50.86	V
226.4250	-73.04	1.78	5.37	-69.45	-13.00	-56.45	V
277.3500	-75.61	2	5.25	-72.36	-13.00	-59.36	V
398.6000	-79.34	2.38	5.98	-75.74	-13.00	-62.74	V
801.1500	-77.96	3.33	6.55	-74.74	-13.00	-61.74	V
88.2000	-51.81	1.09	0.84	-52.06	-13.00	-39.06	H
136.7000	-57.5	1.38	-0.61	-59.49	-13.00	-46.49	H
187.6250	-64.55	1.62	3.9	-62.27	-13.00	-49.27	H
226.4250	-63.15	1.78	5.37	-59.56	-13.00	-46.56	H
277.3500	-70.29	2	5.25	-67.04	-13.00	-54.04	H
801.1500	-71.72	3.33	6.55	-68.50	-13.00	-55.50	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
85.7750	-55.87	1.08	0.56	-56.39	-13.00	-43.39	V
136.7000	-62.37	1.38	-0.61	-64.36	-13.00	-51.36	V
226.4250	-72.62	1.78	5.37	-69.03	-13.00	-56.03	V
277.3500	-75.28	2	5.25	-72.03	-13.00	-59.03	V
398.6000	-78.8	2.38	5.98	-75.20	-13.00	-62.20	V
803.5750	-76.41	3.33	6.46	-73.28	-13.00	-60.28	V
85.7750	-48.99	1.08	0.56	-49.51	-13.00	-36.51	H
136.7000	-57.88	1.38	-0.61	-59.87	-13.00	-46.87	H
228.8500	-63.11	1.79	5.38	-59.52	-13.00	-46.52	H
277.3500	-70.5	2	5.25	-67.25	-13.00	-54.25	H
454.3750	-76.62	2.59	5.79	-73.42	-13.00	-60.42	H
801.1500	-72.67	3.33	6.55	-69.45	-13.00	-56.45	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
51.8250	-51.84	0.82	-4.37	-57.03	-13.00	-44.03	V
88.2000	-59.94	1.09	0.84	-60.19	-13.00	-47.19	V
136.7000	-62.9	1.38	-0.61	-64.89	-13.00	-51.89	V
226.4250	-72.9	1.78	5.37	-69.31	-13.00	-56.31	V
253.1000	-73.47	1.86	5.67	-69.66	-13.00	-56.66	V
420.4250	-78.33	2.46	5.8	-74.99	-13.00	-61.99	V
34.8500	-30.85	0.68	-17.5	-49.03	-13.00	-36.03	H
88.2000	-52.81	1.09	0.84	-53.06	-13.00	-40.06	H
107.6000	-54.71	1.19	-1.39	-57.29	-13.00	-44.29	H
226.4250	-67.35	1.78	5.37	-63.76	-13.00	-50.76	H
270.0750	-72.5	1.98	5.1	-69.38	-13.00	-56.38	H
381.6250	-73.85	2.31	5.99	-70.17	-13.00	-57.17	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:** EDGE 850 / TX / CH 190**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
51.8250	-49.92	0.82	-4.37	-55.11	-13.00	-42.11	V
88.2000	-59.5	1.09	0.84	-59.75	-13.00	-46.75	V
136.7000	-62.4	1.38	-0.61	-64.39	-13.00	-51.39	V
228.8500	-72.71	1.79	5.38	-69.12	-13.00	-56.12	V
393.7500	-78.21	2.34	5.99	-74.56	-13.00	-61.56	V
420.4250	-78.09	2.46	5.8	-74.75	-13.00	-61.75	V
34.8500	-30.58	0.68	-17.5	-48.76	-13.00	-35.76	H
88.2000	-52.73	1.09	0.84	-52.98	-13.00	-39.98	H
136.7000	-55.22	1.38	-0.61	-57.21	-13.00	-44.21	H
177.9250	-64.74	1.6	3.36	-62.98	-13.00	-49.98	H
262.8000	-73.26	1.93	5.46	-69.73	-13.00	-56.73	H
381.6250	-73.21	2.31	5.99	-69.53	-13.00	-56.53	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
51.8250	-49.05	0.82	-4.37	-54.24	-13.00	-41.24	V
88.2000	-58.92	1.09	0.84	-59.17	-13.00	-46.17	V
136.7000	-62.04	1.38	-0.61	-64.03	-13.00	-51.03	V
180.3500	-72.87	1.61	3.62	-70.86	-13.00	-57.86	V
250.6750	-71.57	1.84	5.7	-67.71	-13.00	-54.71	V
393.7500	-78.2	2.34	5.99	-74.55	-13.00	-61.55	V
88.2000	-49.84	1.09	0.84	-50.09	-13.00	-37.09	H
107.6000	-53.43	1.19	-1.39	-56.01	-13.00	-43.01	H
180.3500	-62.79	1.61	3.62	-60.78	-13.00	-47.78	H
226.4250	-64.69	1.78	5.37	-61.10	-13.00	-48.10	H
272.5000	-73.82	1.99	5.15	-70.66	-13.00	-57.66	H
398.6000	-73.04	2.38	5.98	-69.44	-13.00	-56.44	H

Remark:

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

**Operation Mode:** EDGE 1900 / TX / CH 512**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
51.8250	-52.05	0.82	-4.37	-57.24	-13.00	-44.24	V
136.7000	-62.28	1.38	-0.61	-64.27	-13.00	-51.27	V
226.4250	-73.16	1.78	5.37	-69.57	-13.00	-56.57	V
393.7500	-79.07	2.34	5.99	-75.42	-13.00	-62.42	V
803.5750	-79.01	3.33	6.46	-75.88	-13.00	-62.88	V
929.6750	-75.26	3.6	6.41	-72.45	-13.00	-59.45	V
51.8250	-53.11	0.82	-4.37	-58.30	-13.00	-45.30	H
88.2000	-51.4	1.09	0.84	-51.65	-13.00	-38.65	H
153.6750	-57.55	1.45	0.98	-58.02	-13.00	-45.02	H
226.4250	-66.9	1.78	5.37	-63.31	-13.00	-50.31	H
381.6250	-74.99	2.31	5.99	-71.31	-13.00	-58.31	H
767.2000	-71.79	3.26	6.37	-68.68	-13.00	-55.68	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:** EDGE 1900 / TX / CH 661**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
51.8250	-52.57	0.82	-4.37	-57.76	-13.00	-44.76	V
88.2000	-60.61	1.09	0.84	-60.86	-13.00	-47.86	V
136.7000	-63.08	1.38	-0.61	-65.07	-13.00	-52.07	V
226.4250	-73.49	1.78	5.37	-69.90	-13.00	-56.90	V
250.6750	-74.14	1.84	5.7	-70.28	-13.00	-57.28	V
393.7500	-78.47	2.34	5.99	-74.82	-13.00	-61.82	V
51.8250	-53.05	0.82	-4.37	-58.24	-13.00	-45.24	H
88.2000	-52.45	1.09	0.84	-52.70	-13.00	-39.70	H
153.6750	-58.42	1.45	0.98	-58.89	-13.00	-45.89	H
226.4250	-66.72	1.78	5.37	-63.13	-13.00	-50.13	H
393.7500	-75.1	2.34	5.99	-71.45	-13.00	-58.45	H
767.2000	-72.23	3.26	6.37	-69.12	-13.00	-56.12	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
34.8500	-38.29	0.68	-17.5	-56.47	-13.00	-43.47	V
88.2000	-61.68	1.09	0.84	-61.93	-13.00	-48.93	V
136.7000	-63.13	1.38	-0.61	-65.12	-13.00	-52.12	V
226.4250	-73.59	1.78	5.37	-70.00	-13.00	-57.00	V
420.4250	-78.72	2.46	5.8	-75.38	-13.00	-62.38	V
645.9500	-81.57	3.02	6.21	-78.38	-13.00	-65.38	V
88.2000	-51.74	1.09	0.84	-51.99	-13.00	-38.99	H
107.6000	-55.75	1.19	-1.39	-58.33	-13.00	-45.33	H
136.7000	-56.9	1.38	-0.61	-58.89	-13.00	-45.89	H
226.4250	-67.8	1.78	5.37	-64.21	-13.00	-51.21	H
393.7500	-75.14	2.34	5.99	-71.49	-13.00	-58.49	H
767.2000	-72.25	3.26	6.37	-69.14	-13.00	-56.14	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:** WCDMA Band II / TX / CH 9262**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
73.6500	-54.86	0.99	-1.28	-57.13	-13.00	-44.13	V
136.7000	-61.67	1.38	-0.61	-63.66	-13.00	-50.66	V
226.4250	-71.89	1.78	5.37	-68.30	-13.00	-55.30	V
388.9000	-78.02	2.32	6	-74.34	-13.00	-61.34	V
561.0750	-82.13	2.85	6	-78.98	-13.00	-65.98	V
803.5750	-77.21	3.33	6.46	-74.08	-13.00	-61.08	V
83.3500	-52.44	1.07	0.28	-53.23	-13.00	-40.23	H
136.7000	-56.98	1.38	-0.61	-58.97	-13.00	-45.97	H
194.9000	-63.09	1.63	3.47	-61.25	-13.00	-48.25	H
228.8500	-63.52	1.79	5.38	-59.93	-13.00	-46.93	H
371.9250	-73.45	2.3	5.85	-69.90	-13.00	-56.90	H
454.3750	-74.84	2.59	5.79	-71.64	-13.00	-58.64	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
71.2250	-54.33	0.97	-1.7	-57.00	-13.00	-44.00	V
136.7000	-62.54	1.38	-0.61	-64.53	-13.00	-51.53	V
226.4250	-71.89	1.78	5.37	-68.30	-13.00	-55.30	V
277.3500	-74.24	2	5.25	-70.99	-13.00	-57.99	V
398.6000	-79.01	2.38	5.98	-75.41	-13.00	-62.41	V
602.3000	-79.52	2.91	6.38	-76.05	-13.00	-63.05	V
85.7750	-51.33	1.08	0.56	-51.85	-13.00	-38.85	H
141.5500	-57.11	1.4	-0.1	-58.61	-13.00	-45.61	H
228.8500	-63.88	1.79	5.38	-60.29	-13.00	-47.29	H
277.3500	-70.74	2	5.25	-67.49	-13.00	-54.49	H
362.2250	-72.56	2.28	5.73	-69.11	-13.00	-56.11	H
672.6250	-72.19	3.07	6.35	-68.91	-13.00	-55.91	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
85.7750	-56.68	1.08	0.56	-57.20	-13.00	-44.20	V
136.7000	-62.86	1.38	-0.61	-64.85	-13.00	-51.85	V
226.4250	-72.46	1.78	5.37	-68.87	-13.00	-55.87	V
277.3500	-75.56	2	5.25	-72.31	-13.00	-59.31	V
418.0000	-78.75	2.46	5.83	-75.38	-13.00	-62.38	V
767.2000	-78.98	3.26	6.37	-75.87	-13.00	-62.87	V
85.7750	-49.06	1.08	0.56	-49.58	-13.00	-36.58	H
136.7000	-57.69	1.38	-0.61	-59.68	-13.00	-46.68	H
226.4250	-63.98	1.78	5.37	-60.39	-13.00	-47.39	H
376.7750	-73.01	2.31	5.93	-69.39	-13.00	-56.39	H
803.5750	-73.18	3.33	6.46	-70.05	-13.00	-57.05	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
71.2250	-53.06	0.97	-1.7	-55.73	-13.00	-42.73	V
136.7000	-62.82	1.38	-0.61	-64.81	-13.00	-51.81	V
226.4250	-73.21	1.78	5.37	-69.62	-13.00	-56.62	V
277.3500	-75.59	2	5.25	-72.34	-13.00	-59.34	V
403.4500	-79.56	2.41	5.96	-76.01	-13.00	-63.01	V
827.8250	-66.02	3.39	6.28	-63.13	-13.00	-50.13	V
88.2000	-52.8	1.09	0.84	-53.05	-13.00	-40.05	H
136.7000	-58.15	1.38	-0.61	-60.14	-13.00	-47.14	H
228.8500	-64.64	1.79	5.38	-61.05	-13.00	-48.05	H
364.6500	-73.66	2.28	5.75	-70.19	-13.00	-57.19	H
454.3750	-76.33	2.59	5.79	-73.13	-13.00	-60.13	H
825.4000	-64.84	3.39	6.25	-61.98	-13.00	-48.98	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
73.6500	-56.02	0.99	-1.28	-58.29	-13.00	-45.29	V
136.7000	-62.96	1.38	-0.61	-64.95	-13.00	-51.95	V
226.4250	-72.93	1.78	5.37	-69.34	-13.00	-56.34	V
277.3500	-74.55	2	5.25	-71.30	-13.00	-58.30	V
403.4500	-78.88	2.41	5.96	-75.33	-13.00	-62.33	V
835.1000	-76.49	3.4	6.35	-73.54	-13.00	-60.54	V
83.3500	-52.38	1.07	0.28	-53.17	-13.00	-40.17	H
136.7000	-57.99	1.38	-0.61	-59.98	-13.00	-46.98	H
228.8500	-64.82	1.79	5.38	-61.23	-13.00	-48.23	H
359.8000	-74.85	2.27	5.7	-71.42	-13.00	-58.42	H
403.4500	-74.3	2.41	5.96	-70.75	-13.00	-57.75	H
835.1000	-73.34	3.4	6.35	-70.39	-13.00	-57.39	H

Remark:

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

**Operation Mode:** WCDMA Band V / TX / CH 4233**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
80.9250	-54.22	1.05	-0.01	-55.28	-13.00	-42.28	V
240.9750	-66.45	1.81	5.34	-62.92	-13.00	-49.92	V
313.7250	-65.2	2.15	5.75	-61.60	-13.00	-48.60	V
362.2250	-68.5	2.28	5.73	-65.05	-13.00	-52.05	V
456.8000	-65.75	2.6	5.84	-62.51	-13.00	-49.51	V
602.3000	-72.6	2.91	6.38	-69.13	-13.00	-56.13	V
80.9250	-52.46	1.05	-0.01	-53.52	-13.00	-40.52	H
170.6500	-57.12	1.57	2.59	-56.10	-13.00	-43.10	H
410.7250	-61.3	2.45	5.9	-57.85	-13.00	-44.85	H
456.8000	-58.07	2.6	5.84	-54.83	-13.00	-41.83	H
505.3000	-60.1	2.69	5.95	-56.84	-13.00	-43.84	H
602.3000	-66.14	2.91	6.38	-62.67	-13.00	-49.67	H

Remark:

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

**Operation Mode:** WCDMA / HSDPA Band II /
TX / CH 9262**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
71.2250	-55.99	0.97	-1.7	-58.66	-13.00	-45.66	V
136.7000	-62.98	1.38	-0.61	-64.97	-13.00	-51.97	V
226.4250	-73.48	1.78	5.37	-69.89	-13.00	-56.89	V
306.4500	-78.27	2.12	5.73	-74.66	-13.00	-61.66	V
408.3000	-79.74	2.44	5.92	-76.26	-13.00	-63.26	V
498.0250	-81.51	2.69	5.88	-78.32	-13.00	-65.32	V
85.7750	-50.73	1.08	0.56	-51.25	-13.00	-38.25	H
187.6250	-63.47	1.62	3.9	-61.19	-13.00	-48.19	H
226.4250	-66.01	1.78	5.37	-62.42	-13.00	-49.42	H
277.3500	-70.56	2	5.25	-67.31	-13.00	-54.31	H
374.3500	-72.23	2.31	5.89	-68.65	-13.00	-55.65	H
803.5750	-72.89	3.33	6.46	-69.76	-13.00	-56.76	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 / HSDPA Band II /
TX / CH 9400**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
73.6500	-53.91	0.99	-1.28	-56.18	-13.00	-43.18	V
136.7000	-62.65	1.38	-0.61	-64.64	-13.00	-51.64	V
226.4250	-72.61	1.78	5.37	-69.02	-13.00	-56.02	V
277.3500	-74.14	2	5.25	-70.89	-13.00	-57.89	V
403.4500	-78.74	2.41	5.96	-75.19	-13.00	-62.19	V
767.2000	-77.75	3.26	6.37	-74.64	-13.00	-61.64	V
88.2000	-53.29	1.09	0.84	-53.54	-13.00	-40.54	H
136.7000	-57.15	1.38	-0.61	-59.14	-13.00	-46.14	H
187.6250	-64.31	1.62	3.9	-62.03	-13.00	-49.03	H
226.4250	-65.69	1.78	5.37	-62.10	-13.00	-49.10	H
277.3500	-70.95	2	5.25	-67.70	-13.00	-54.70	H
371.9250	-74.6	2.3	5.85	-71.05	-13.00	-58.05	H

Remark:

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

**Operation Mode:** WCDMA / HSDPA Band II /
TX / CH 9538**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
71.2250	-53.53	0.97	-1.7	-56.20	-13.00	-43.20	V
136.7000	-63.24	1.38	-0.61	-65.23	-13.00	-52.23	V
226.4250	-73.02	1.78	5.37	-69.43	-13.00	-56.43	V
277.3500	-74.06	2	5.25	-70.81	-13.00	-57.81	V
403.4500	-79.45	2.41	5.96	-75.90	-13.00	-62.90	V
801.1500	-77.57	3.33	6.55	-74.35	-13.00	-61.35	V
85.7750	-51.08	1.08	0.56	-51.60	-13.00	-38.60	H
136.7000	-58.54	1.38	-0.61	-60.53	-13.00	-47.53	H
194.9000	-63.95	1.63	3.47	-62.11	-13.00	-49.11	H
226.4250	-65.24	1.78	5.37	-61.65	-13.00	-48.65	H
277.3500	-70.6	2	5.25	-67.35	-13.00	-54.35	H
398.6000	-75.18	2.38	5.98	-71.58	-13.00	-58.58	H

Remark:

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

**Operation Mode:** WCDMA / HSDPA Band V /
TX / CH 4132**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
71.2250	-52.89	0.97	-1.7	-55.56	-13.00	-42.56	V
136.7000	-61.94	1.38	-0.61	-63.93	-13.00	-50.93	V
226.4250	-72.13	1.78	5.37	-68.54	-13.00	-55.54	V
277.3500	-75.05	2	5.25	-71.80	-13.00	-58.80	V
408.3000	-77.76	2.44	5.92	-74.28	-13.00	-61.28	V
553.8000	-81.63	2.82	6.13	-78.32	-13.00	-65.32	V
85.7750	-47.88	1.08	0.56	-48.40	-13.00	-35.40	H
151.2500	-56.1	1.43	0.8	-56.73	-13.00	-43.73	H
194.9000	-60.38	1.63	3.47	-58.54	-13.00	-45.54	H
277.3500	-67.07	2	5.25	-63.82	-13.00	-50.82	H
403.4500	-70.59	2.41	5.96	-67.04	-13.00	-54.04	H
454.3750	-74.01	2.59	5.79	-70.81	-13.00	-57.81	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
80.9250	-54.78	1.05	-0.01	-55.84	-13.00	-42.84	V
136.7000	-61.91	1.38	-0.61	-63.90	-13.00	-50.90	V
226.4250	-72.19	1.78	5.37	-68.60	-13.00	-55.60	V
277.3500	-74.88	2	5.25	-71.63	-13.00	-58.63	V
398.6000	-78.01	2.38	5.98	-74.41	-13.00	-61.41	V
471.3500	-82.73	2.62	5.74	-79.61	-13.00	-66.61	V
83.3500	-52.86	1.07	0.28	-53.65	-13.00	-40.65	H
136.7000	-58.66	1.38	-0.61	-60.65	-13.00	-47.65	H
226.4250	-66.46	1.78	5.37	-62.87	-13.00	-49.87	H
277.3500	-69.93	2	5.25	-66.68	-13.00	-53.68	H
388.9000	-74.23	2.32	6	-70.55	-13.00	-57.55	H
420.4250	-74.24	2.46	5.8	-70.90	-13.00	-57.90	H

Remark:

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

**Operation Mode:** WCDMA / HSDPA Band V /
TX / CH 4233**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
73.6500	-56.57	0.99	-1.28	-58.84	-13.00	-45.84	V
136.7000	-63.4	1.38	-0.61	-65.39	-13.00	-52.39	V
226.4250	-73.28	1.78	5.37	-69.69	-13.00	-56.69	V
277.3500	-75.75	2	5.25	-72.50	-13.00	-59.50	V
420.4250	-78.81	2.46	5.8	-75.47	-13.00	-62.47	V
N/A							
85.7750	-52.27	1.08	0.56	-52.79	-13.00	-39.79	H
136.7000	-58.95	1.38	-0.61	-60.94	-13.00	-47.94	H
194.9000	-63.15	1.63	3.47	-61.31	-13.00	-48.31	H
226.4250	-66.91	1.78	5.37	-63.32	-13.00	-50.32	H
277.3500	-69.84	2	5.25	-66.59	-13.00	-53.59	H
393.7500	-74.9	2.34	5.99	-71.25	-13.00	-58.25	H

Remark:

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

**Operation Mode:** WCDMA / HSUPA Band II /
TX / CH 9262**Test Date:** September 18, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
71.2250	-55.79	0.97	-1.7	-58.46	-13.00	-45.46	V
136.7000	-63.32	1.38	-0.61	-65.31	-13.00	-52.31	V
226.4250	-73.8	1.78	5.37	-70.21	-13.00	-57.21	V
277.3500	-76.95	2	5.25	-73.70	-13.00	-60.70	V
420.4250	-79.49	2.46	5.8	-76.15	-13.00	-63.15	V
803.5750	-77.98	3.33	6.46	-74.85	-13.00	-61.85	V
88.2000	-52.64	1.09	0.84	-52.89	-13.00	-39.89	H
136.7000	-58	1.38	-0.61	-59.99	-13.00	-46.99	H
187.6250	-64.74	1.62	3.9	-62.46	-13.00	-49.46	H
228.8500	-66.26	1.79	5.38	-62.67	-13.00	-49.67	H
371.9250	-74.99	2.3	5.85	-71.44	-13.00	-58.44	H
803.5750	-72.16	3.33	6.46	-69.03	-13.00	-56.03	H

Remark:

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

**Operation Mode:** WCDMA / HSUPA Band II /
TX / CH 9400**Test Date:** September 18, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
71.2250	-54.31	0.97	-1.7	-56.98	-13.00	-43.98	V
136.7000	-62.89	1.38	-0.61	-64.88	-13.00	-51.88	V
226.4250	-73.65	1.78	5.37	-70.06	-13.00	-57.06	V
277.3500	-76.43	2	5.25	-73.18	-13.00	-60.18	V
403.4500	-79.43	2.41	5.96	-75.88	-13.00	-62.88	V
767.2000	-76.33	3.26	6.37	-73.22	-13.00	-60.22	V
85.7750	-48.86	1.08	0.56	-49.38	-13.00	-36.38	H
151.2500	-59.92	1.43	0.8	-60.55	-13.00	-47.55	H
226.4250	-65.45	1.78	5.37	-61.86	-13.00	-48.86	H
277.3500	-70.05	2	5.25	-66.80	-13.00	-53.80	H
405.8750	-75.19	2.42	5.94	-71.67	-13.00	-58.67	H
803.5750	-72.51	3.33	6.46	-69.38	-13.00	-56.38	H

Remark:

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



Operation Mode: WCDMA / HSUPA Band II /
TX / CH 9538

Test Date: September 18, 2012

Temperature: 25°C

Tested by: David Shu

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
71.2250	-54.67	0.97	-1.7	-57.34	-13.00	-44.34	V
136.7000	-62.36	1.38	-0.61	-64.35	-13.00	-51.35	V
226.4250	-73.07	1.78	5.37	-69.48	-13.00	-56.48	V
277.3500	-75.62	2	5.25	-72.37	-13.00	-59.37	V
408.3000	-80.1	2.44	5.92	-76.62	-13.00	-63.62	V
551.3750	-82.9	2.81	6.17	-79.54	-13.00	-66.54	V
85.7750	-51.83	1.08	0.56	-52.35	-13.00	-39.35	H
136.7000	-58.35	1.38	-0.61	-60.34	-13.00	-47.34	H
226.4250	-65.49	1.78	5.37	-61.90	-13.00	-48.90	H
277.3500	-70.84	2	5.25	-67.59	-13.00	-54.59	H
371.9250	-73.42	2.3	5.85	-69.87	-13.00	-56.87	H
427.7000	-76.09	2.48	5.8	-72.77	-13.00	-59.77	H

Remark:

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



Operation Mode: WCDMA / HSUPA Band V /
TX / CH 4132

Temperature: 25°C

Humidity: 50 % RH

Test Date: September 18, 2012

Tested by: David Shu

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
71.2250	-54.96	0.97	-1.7	-57.63	-13.00	-44.63	V
136.7000	-63.82	1.38	-0.61	-65.81	-13.00	-52.81	V
226.4250	-74.11	1.78	5.37	-70.52	-13.00	-57.52	V
277.3500	-76.22	2	5.25	-72.97	-13.00	-59.97	V
408.3000	-80.72	2.44	5.92	-77.24	-13.00	-64.24	V
565.9250	-83.33	2.86	6.05	-80.14	-13.00	-67.14	V
34.8500	-27.7	0.68	-17.5	-45.88	-13.00	-32.88	H
85.7750	-52.92	1.08	0.56	-53.44	-13.00	-40.44	H
136.7000	-57.7	1.38	-0.61	-59.69	-13.00	-46.69	H
194.9000	-64.16	1.63	3.47	-62.32	-13.00	-49.32	H
221.5750	-67.08	1.77	5.34	-63.51	-13.00	-50.51	H
418.0000	-75.3	2.46	5.83	-71.93	-13.00	-58.93	H

Remark:

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

**Operation Mode:** WCDMA / HSUPA Band V /
TX / CH 4182**Test Date:** September 18, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
83.3500	-56.69	1.07	0.28	-57.48	-13.00	-44.48	V
136.7000	-63.53	1.38	-0.61	-65.52	-13.00	-52.52	V
226.4250	-74.63	1.78	5.37	-71.04	-13.00	-58.04	V
277.3500	-75.71	2	5.25	-72.46	-13.00	-59.46	V
403.4500	-79.35	2.41	5.96	-75.80	-13.00	-62.80	V
701.7250	-81.66	3.12	6.38	-78.40	-13.00	-65.40	V
88.2000	-55.02	1.09	0.84	-55.27	-13.00	-42.27	H
136.7000	-59.85	1.38	-0.61	-61.84	-13.00	-48.84	H
187.6250	-64.99	1.62	3.9	-62.71	-13.00	-49.71	H
221.5750	-67.31	1.77	5.34	-63.74	-13.00	-50.74	H
277.3500	-72.35	2	5.25	-69.10	-13.00	-56.10	H
391.3250	-75.9	2.32	6	-72.22	-13.00	-59.22	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: September 18, 2012

Tested by: David Shu

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
73.6500	-55.48	0.99	-1.28	-57.75	-13.00	-44.75	V
136.7000	-64.14	1.38	-0.61	-66.13	-13.00	-53.13	V
226.4250	-73.67	1.78	5.37	-70.08	-13.00	-57.08	V
277.3500	-76.19	2	5.25	-72.94	-13.00	-59.94	V
403.4500	-77.86	2.41	5.96	-74.31	-13.00	-61.31	V
587.7500	-82.37	2.89	6.15	-79.11	-13.00	-66.11	V
85.7750	-51.1	1.08	0.56	-51.62	-13.00	-38.62	H
151.2500	-60.97	1.43	0.8	-61.60	-13.00	-48.60	H
194.9000	-64.16	1.63	3.47	-62.32	-13.00	-49.32	H
277.3500	-71.21	2	5.25	-67.96	-13.00	-54.96	H
374.3500	-75.1	2.31	5.89	-71.52	-13.00	-58.52	H
454.3750	-78.22	2.59	5.79	-75.02	-13.00	-62.02	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.

**Above 1GHz****Operation Mode:** GPRS 850 / TX / CH 128**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1647.500	-32.6	5.04	6.03	-31.61	-13.00	-18.61	V
4132.500	-40.67	8.47	9.51	-39.63	-13.00	-26.63	V
4955.000	-39.31	9.34	10.53	-38.12	-13.00	-25.12	V
N/A							
1647.500	-36.45	5.04	6.03	-35.46	-13.00	-22.46	H
4132.500	-43.04	8.47	9.51	-42.00	-13.00	-29.00	H
4955.000	-41.91	9.34	10.53	-40.72	-13.00	-27.72	H
N/A							

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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1682.500	-20.74	5.09	5.97	-19.86	-13.00	-6.86	V
2522.500	-43.01	6.38	6.16	-43.23	-13.00	-30.23	V
3345.000	-43.71	7.51	8.44	-42.78	-13.00	-29.78	V
4185.000	-41.5	8.49	9.55	-40.44	-13.00	-27.44	V
N/A							
1682.500	-31.61	5.09	5.97	-30.73	-13.00	-17.73	H
2522.500	-35.3	6.38	6.16	-35.52	-13.00	-22.52	H
3345.000	-34.56	7.51	8.44	-33.63	-13.00	-20.63	H
4185.000	-43.95	8.49	9.55	-42.89	-13.00	-29.89	H
N/A							

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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1700.000	-31	5.11	5.94	-30.17	-13.00	-17.17	V
2557.500	-43.15	6.43	6.25	-43.33	-13.00	-30.33	V
4255.000	-43.44	8.55	9.6	-42.39	-13.00	-29.39	V
5095.000	-41.95	9.45	10.64	-40.76	-13.00	-27.76	V
N/A							
1700.000	-34.38	5.11	5.94	-33.55	-13.00	-20.55	H
2557.500	-40.45	6.43	6.25	-40.63	-13.00	-27.63	H
5095.000	-42.16	9.45	10.64	-40.97	-13.00	-27.97	H
N/A							

Remark:

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

**Operation Mode:** GPRS 1900 / TX / CH 512**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-50.84	4.87	6.29	-49.42	-13.00	-36.42	V
3712.500	-41.54	8.21	9.11	-40.64	-13.00	-27.64	V
5550.000	-39.61	10.06	10.81	-38.86	-13.00	-25.86	V
N/A							
3712.500	-39.56	8.21	9.11	-38.66	-13.00	-25.66	H
5550.000	-43.95	10.06	10.81	-43.20	-13.00	-30.20	H
7405.000	-39.69	12.1	12.55	-39.24	-13.00	-26.24	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:** GPRS 1900 / TX / CH 661**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3012.500	-54.72	7.03	7.44	-54.31	-13.00	-41.31	V
3765.000	-51.12	8.24	9.16	-50.20	-13.00	-37.20	V
N/A							
3765.000	-49.33	8.24	9.16	-48.41	-13.00	-35.41	H
4990.000	-53.09	9.39	10.58	-51.90	-13.00	-38.90	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 55 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-53.45	4.87	6.29	-52.03	-13.00	-39.03	V
3712.500	-43.88	8.21	9.11	-42.98	-13.00	-29.98	V
5550.000	-42.81	10.06	10.81	-42.06	-13.00	-29.06	V
N/A							
1507.500	-54.85	4.87	6.29	-53.43	-13.00	-40.43	H
3817.500	-43.65	8.28	9.22	-42.71	-13.00	-29.71	H
5742.500	-46.18	10.27	10.85	-45.60	-13.00	-32.60	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:** EDGE 850 / TX / CH 128**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1647.500	-34.26	5.04	6.03	-33.27	-13.00	-20.27	V
4132.500	-46.18	8.47	9.51	-45.14	-13.00	-32.14	V
4955.000	-38.07	9.34	10.53	-36.88	-13.00	-23.88	V
N/A							
1647.500	-33.85	5.04	6.03	-32.86	-13.00	-19.86	H
4132.500	-47.15	8.47	9.51	-46.11	-13.00	-33.11	H
4955.000	-43.69	9.34	10.53	-42.50	-13.00	-29.50	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:** EDGE 850 / TX / CH 190**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1682.500	-31.47	5.09	5.97	-30.59	-13.00	-17.59	V
4185.000	-44.01	8.49	9.55	-42.95	-13.00	-29.95	V
5025.000	-41.94	9.42	10.61	-40.75	-13.00	-27.75	V
N/A							
1682.500	-32.63	5.09	5.97	-31.75	-13.00	-18.75	H
2522.500	-45.11	6.38	6.16	-45.33	-13.00	-32.33	H
4185.000	-45.74	8.49	9.55	-44.68	-13.00	-31.68	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:** EDGE 850 / TX / CH 251**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1700.000	-30.13	5.11	5.94	-29.30	-13.00	-16.30	V
2557.500	-43.28	6.43	6.25	-43.46	-13.00	-30.46	V
5095.000	-38.56	9.45	10.64	-37.37	-13.00	-24.37	V
N/A							
1700.000	-33.58	5.11	5.94	-32.75	-13.00	-19.75	H
2557.500	-42.97	6.43	6.25	-43.15	-13.00	-30.15	H
5095.000	-41.86	9.45	10.64	-40.67	-13.00	-27.67	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-53.71	4.87	6.29	-52.29	-13.00	-39.29	V
3712.500	-37.18	8.21	9.11	-36.28	-13.00	-23.28	V
5550.000	-36.65	10.06	10.81	-35.90	-13.00	-22.90	V
7405.000	-35.48	12.1	12.55	-35.03	-13.00	-22.03	V
N/A							
1507.500	-53.91	4.87	6.29	-52.49	-13.00	-39.49	H
3712.500	-36.4	8.21	9.11	-35.50	-13.00	-22.50	H
5550.000	-36.07	10.06	10.81	-35.32	-13.00	-22.32	H
7405.000	-31.48	12.1	12.55	-31.03	-13.00	-18.03	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-53.02	4.87	6.29	-51.60	-13.00	-38.60	V
3765.000	-37.57	8.24	9.16	-36.65	-13.00	-23.65	V
5637.500	-39.7	10.18	10.83	-39.05	-13.00	-26.05	V
7527.500	-38.94	12.23	12.73	-38.44	-13.00	-25.44	V
N/A							
1507.500	-53.36	4.87	6.29	-51.94	-13.00	-38.94	H
3765.000	-39.85	8.24	9.16	-38.93	-13.00	-25.93	H
5637.500	-39.4	10.18	10.83	-38.75	-13.00	-25.75	H
7527.500	-35.67	12.23	12.73	-35.17	-13.00	-22.17	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:** EDGE 1900 / TX / CH 810**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-51.81	4.87	6.29	-50.39	-13.00	-37.39	V
3817.500	-38.67	8.28	9.22	-37.73	-13.00	-24.73	V
5742.500	-43.76	10.27	10.85	-43.18	-13.00	-30.18	V
N/A							
3817.500	-40.03	8.28	9.22	-39.09	-13.00	-26.09	H
5742.500	-41.16	10.27	10.85	-40.58	-13.00	-27.58	H
7650.000	-40.33	12.29	12.85	-39.77	-13.00	-26.77	H
N/A							

Remark:

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

**Operation Mode:** WCDMA Band II / TX / CH 9262**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-53.79	4.87	6.29	-52.37	-13.00	-39.37	V
3712.500	-49.98	8.21	9.11	-49.08	-13.00	-36.08	V
N/A							
1507.500	-55.63	4.87	6.29	-54.21	-13.00	-41.21	H
3712.500	-47.97	8.21	9.11	-47.07	-13.00	-34.07	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-54.73	4.87	6.29	-53.31	-13.00	-40.31	V
1892.500	-54.82	5.44	5.59	-54.67	-13.00	-41.67	V
5007.500	-52.57	9.41	10.6	-51.38	-13.00	-38.38	V
N/A							
1892.500	-51.49	5.44	5.59	-51.34	-13.00	-38.34	H
3765.000	-53.16	8.24	9.16	-52.24	-13.00	-39.24	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 II / TX / CH 9538**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-51.05	4.87	6.29	-49.63	-13.00	-36.63	V
3817.500	-45.73	8.28	9.22	-44.79	-13.00	-31.79	V
5007.500	-51.88	9.41	10.6	-50.69	-13.00	-37.69	V
N/A							
1507.500	-55.06	4.87	6.29	-53.64	-13.00	-40.64	H
3817.500	-47.25	8.28	9.22	-46.31	-13.00	-33.31	H
N/A							

Remark:

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

**Operation Mode:** WCDMA Band V / TX / CH 4132**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-52.17	4.87	6.29	-50.75	-13.00	-37.75	V
1665.000	-41.76	5.06	6	-40.82	-13.00	-27.82	V
1997.500	-53.91	5.71	5.4	-54.22	-13.00	-41.22	V
N/A							
1507.500	-55.83	4.87	6.29	-54.41	-13.00	-41.41	H
1665.000	-46.74	5.06	6	-45.80	-13.00	-32.80	H
2015.000	-56.46	5.73	5.42	-56.77	-13.00	-43.77	H
N/A							

Remark:

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

**Operation Mode:** WCDMA Band V / TX / CH 4182**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-54.46	4.87	6.29	-53.04	-13.00	-40.04	V
1682.500	-46.24	5.09	5.97	-45.36	-13.00	-32.36	V
1997.500	-54.06	5.71	5.4	-54.37	-13.00	-41.37	V
N/A							
1507.500	-56.72	4.87	6.29	-55.30	-13.00	-42.30	H
1682.500	-53.91	5.09	5.97	-53.03	-13.00	-40.03	H
1997.500	-55.53	5.71	5.4	-55.84	-13.00	-42.84	H
3782.500	-54.16	8.25	9.18	-53.23	-13.00	-40.23	H
N/A							

Remark:

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

**Operation Mode:** WCDMA Band V / TX / CH 4233**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-53.24	4.87	6.29	-51.82	-13.00	-38.82	V
1700.000	-40.12	5.11	5.94	-39.29	-13.00	-26.29	V
3397.500	-55.24	7.57	8.59	-54.22	-13.00	-41.22	V
N/A							
1507.500	-55.59	4.87	6.29	-54.17	-13.00	-41.17	H
1700.000	-44.04	5.11	5.94	-43.21	-13.00	-30.21	H
3397.500	-54.15	7.57	8.59	-53.13	-13.00	-40.13	H
N/A							

Remark:

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

**Operation Mode:** WCDMA / HSDPA Band II /
TX / CH 9262**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-53.36	4.87	6.29	-51.94	-13.00	-38.94	V
3712.500	-50.35	8.21	9.11	-49.45	-13.00	-36.45	V
N/A							
1507.500	-54.78	4.87	6.29	-53.36	-13.00	-40.36	H
3712.500	-48.74	8.21	9.11	-47.84	-13.00	-34.84	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.

**Operation Mode:** WCDMA / HSDPA Band II /
TX / CH 9400**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-53.01	4.87	6.29	-51.59	-13.00	-38.59	V
3765.000	-53.39	8.24	9.16	-52.47	-13.00	-39.47	V
N/A							
1507.500	-55.02	4.87	6.29	-53.60	-13.00	-40.60	H
3765.000	-50.5	8.24	9.16	-49.58	-13.00	-36.58	H
N/A							

Remark:

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

**Operation Mode:** WCDMA / HSDPA Band II /
TX / CH 9538**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-52.88	4.87	6.29	-51.46	-13.00	-38.46	V
3817.500	-49.46	8.28	9.22	-48.52	-13.00	-35.52	V
N/A							
1507.500	-54.61	4.87	6.29	-53.19	-13.00	-40.19	H
3817.500	-48.37	8.28	9.22	-47.43	-13.00	-34.43	H
N/A							

Remark:

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

**Operation Mode:** WCDMA / HSDPA Band V /
TX / CH 4132**Test Date:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-52.95	4.87	6.29	-51.53	-13.00	-38.53	V
1665.000	-42.23	5.06	6	-41.29	-13.00	-28.29	V
1997.500	-51.76	5.71	5.4	-52.07	-13.00	-39.07	V
N/A							
1507.500	-53.39	4.87	6.29	-51.97	-13.00	-38.97	H
1665.000	-46.53	5.06	6	-45.59	-13.00	-32.59	H
1997.500	-54.65	5.71	5.4	-54.96	-13.00	-41.96	H
N/A							

Remark:

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



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

Test Date: September 17, 2012

Temperature: 25°C

Tested by: David Shu

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-52.86	4.87	6.29	-51.44	-13.00	-38.44	V
1682.500	-41.47	5.09	5.97	-40.59	-13.00	-27.59	V
1997.500	-51.79	5.71	5.4	-52.10	-13.00	-39.10	V
N/A							
1507.500	-54.15	4.87	6.29	-52.73	-13.00	-39.73	H
1682.500	-47.78	5.09	5.97	-46.90	-13.00	-33.90	H
1997.500	-54.26	5.71	5.4	-54.57	-13.00	-41.57	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:** September 17, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-52.56	4.87	6.29	-51.14	-13.00	-38.14	V
1700.000	-40.02	5.11	5.94	-39.19	-13.00	-26.19	V
1997.500	-51.89	5.71	5.4	-52.20	-13.00	-39.20	V
N/A							
1332.500	-56.09	4.56	5.09	-55.56	-13.00	-42.56	H
1700.000	-45.89	5.11	5.94	-45.06	-13.00	-32.06	H
3397.500	-51.55	7.57	8.59	-50.53	-13.00	-37.53	H
N/A							

Remark:

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

**Operation Mode:** WCDMA / HSUPA Band II /
TX / CH 9262**Test Date:** September 18, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-51.1	4.87	6.29	-49.68	-13.00	-36.68	V
3712.500	-49.88	8.21	9.11	-48.98	-13.00	-35.98	V
N/A							
1507.500	-51.86	4.87	6.29	-50.44	-13.00	-37.44	H
3712.500	-45.03	8.21	9.11	-44.13	-13.00	-31.13	H
N/A							

Remark:

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

**Operation Mode:** WCDMA / HSUPA Band II /
TX / CH 9400**Test Date:** September 18, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-51.83	4.87	6.29	-50.41	-13.00	-37.41	V
3765.000	-52.56	8.24	9.16	-51.64	-13.00	-38.64	V
N/A							
1507.500	-53.7	4.87	6.29	-52.28	-13.00	-39.28	H
3765.000	-50.22	8.24	9.16	-49.30	-13.00	-36.30	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:** September 18, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-52.91	4.87	6.29	-51.49	-13.00	-38.49	V
3817.500	-51.35	8.28	9.22	-50.41	-13.00	-37.41	V
N/A							
1507.500	-54.41	4.87	6.29	-52.99	-13.00	-39.99	H
3817.500	-49.69	8.28	9.22	-48.75	-13.00	-35.75	H
N/A							

Remark:

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



Operation Mode: WCDMA / HSUPA Band V /
TX / CH 4132

Test Date: September 18, 2012

Temperature: 25°C

Tested by: David Shu

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-51.49	4.87	6.29	-50.07	-13.00	-37.07	V
1665.000	-41.34	5.06	6	-40.40	-13.00	-27.40	V
1997.500	-50.5	5.71	5.4	-50.81	-13.00	-37.81	V
N/A							
1507.500	-53.27	4.87	6.29	-51.85	-13.00	-38.85	H
1665.000	-44.67	5.06	6	-43.73	-13.00	-30.73	H
2015.000	-53.27	5.73	5.42	-53.58	-13.00	-40.58	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 / HSUPA Band V /
TX / CH 4182

Test Date: September 18, 2012

Temperature: 25°C

Tested by: David Shu

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-50.11	4.87	6.29	-48.69	-13.00	-35.69	V
1682.500	-39.07	5.09	5.97	-38.19	-13.00	-25.19	V
1997.500	-50.27	5.71	5.4	-50.58	-13.00	-37.58	V
N/A							
1507.500	-51.03	4.87	6.29	-49.61	-13.00	-36.61	H
1682.500	-43.98	5.09	5.97	-43.10	-13.00	-30.10	H
3345.000	-50.58	7.51	8.44	-49.65	-13.00	-36.65	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 / HSUPA Band V /
TX / CH 4233**Test Date:** September 18, 2012**Temperature:** 25°C**Tested by:** David Shu**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1507.500	-52.07	4.87	6.29	-50.65	-13.00	-37.65	V
1700.000	-39.62	5.11	5.94	-38.79	-13.00	-25.79	V
1997.500	-52.56	5.71	5.4	-52.87	-13.00	-39.87	V
N/A							
1507.500	-53.92	4.87	6.29	-52.50	-13.00	-39.50	H
1700.000	-45	5.11	5.94	-44.17	-13.00	-31.17	H
3397.500	-52.11	7.57	8.59	-51.09	-13.00	-38.09	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.



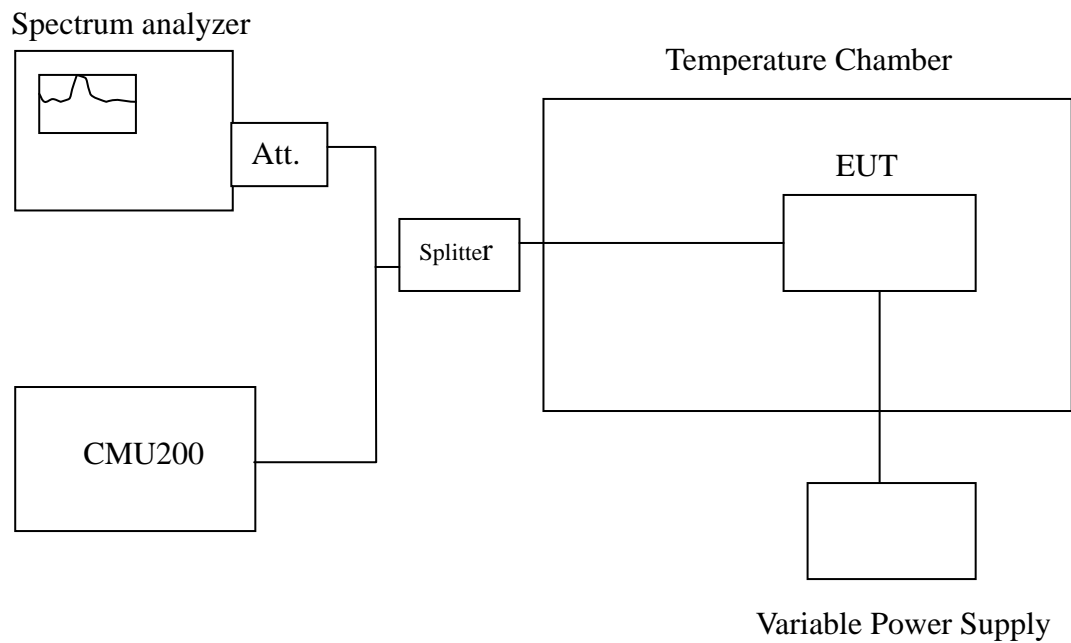
7.7 FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

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.

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)
30	50	836600001	10	2090
	40	836599998	7	
	30	836599998	7	
	20	836599991	0	
	10	836599986	-5	
	0	836599982	-9	
	-10	836599982	-9	
	-20	836599988	-3	
	-30	836599987	-4	

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)
30	50	1880000001	-1	4700
	40	1879999998	-4	
	30	1879999986	-16	
	20	1880000002	0	
	10	1879999983	-19	
	0	1879999985	-17	
	-10	1879999984	-18	
	-20	1879999981	-21	
	-30	1879999986	-16	



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)
30	50	836600001	10	2090
	40	836599986	-5	
	30	836599985	-6	
	20	836599991	0	
	10	836599983	-8	
	0	836599985	-6	
	-10	836599989	-2	
	-20	836599985	-6	
	-30	836599984	-7	

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)
30	50	1880000001	1	4700
	40	1880000016	16	
	30	1880000013	13	
	20	1880000000	0	
	10	1880000018	18	
	0	1880000019	19	
	-10	1880000011	11	
	-20	1880000024	24	
	-30	1880000007	7	



Reference Frequency: WCDMA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
30	50	1880000001	-9	4700
	40	1880000003	-7	
	30	1879999999	-11	
	20	1880000010	0	
	10	1879999994	-16	
	0	1880000007	-3	
	-10	1879999995	-15	
	-20	1880000001	-9	
	-30	1879999998	-12	

Reference Frequency: WCDMA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
30	50	836400000	-2	2090
	40	836399996	-6	
	30	836399999	-3	
	20	836400002	0	
	10	836399995	-7	
	0	836399996	-6	
	-10	836400000	-2	
	-20	836399998	-4	
	-30	836399999	-3	



Reference Frequency: WCDMA / HSDPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
30	50	1879999999	-1	4700
	40	1879999989	-11	
	30	1879999984	-16	
	20	1880000000	0	
	10	1879999992	-8	
	0	1880000004	4	
	-10	1879999997	-3	
	-20	1879999995	-5	
	-30	1879999992	-8	

Reference Frequency: WCDMA / HSDPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
30	50	836399986	-19	2090
	40	836399989	-16	
	30	836399988	-17	
	20	836400005	0	
	10	836400004	-1	
	0	836399985	-20	
	-10	836399994	-11	
	-20	836399988	-17	
	-30	836400000	-5	



Reference Frequency: WCDMA / HSUPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
30	50	1879999999	-3	4700
	40	1879999996	-6	
	30	1879999995	-7	
	20	1880000002	0	
	10	1879999999	-3	
	0	1879999995	-7	
	-10	1879999994	-8	
	-20	1879999992	-10	
	-30	1879999999	-3	

Reference Frequency: WCDMA / HSUPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
30	50	836400004	3	2090
	40	836400005	4	
	30	836399997	-4	
	20	836400001	0	
	10	836399998	-3	
	0	836399994	-7	
	-10	836400008	7	
	-20	836400009	8	
	-30	836399989	-12	



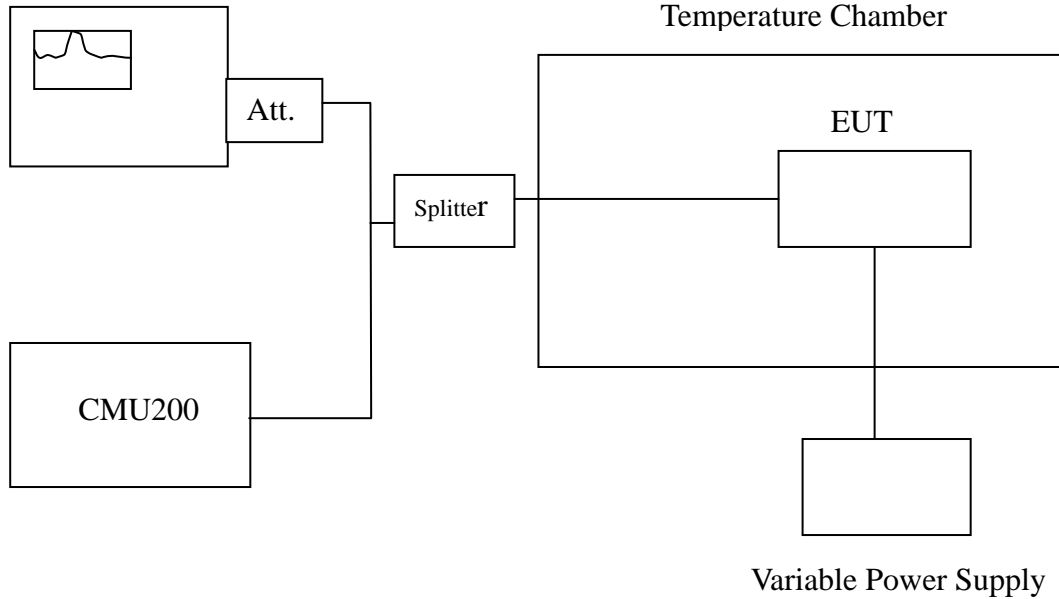
7.8 FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

LIMIT

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

Test Configuration

Spectrum analyzer



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: GPRS Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
32	20	836599980	-11	2090
30		836599991	0	
25.5		836599977	-14	
10		836599562	-429	

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)
32	20	1879999980	-22	4700
30		1880000002	0	
25.5		1880000004	2	
10		1880000007	5	



Reference Frequency: EDGE Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
32	20	836599980	-11	2090
30		836599991	0	
25.5		836599977	-14	
10		836599562	-429	

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)
32	20	1879999980	-20	4700
30		1880000000	0	
25.5		1879999977	-23	
10		1879999562	-438	



Reference Frequency: WCDMA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
32	20	1880000016	6	4700
30		1880000010	0	
25.5		1880000009	-1	
10		1879999943	-67	

Reference Frequency: WCDMA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
32	20	836400001	-1	2090
30		836400002	0	
25.5		836400003	1	
10		836400073	71	



Reference Frequency: WCDMA HSDPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
32	20	1879999996	-4	4700
30		1880000000	0	
25.5		1880000003	3	
10		1880000061	61	

Reference Frequency: WCDMA HSDPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
32	20	836400004	-1	2090
30		836400005	0	
25.5		836400000	-5	
10		836400083	78	



Reference Frequency: WCDMA HSUPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
32	20	1880000010	8	4700
30		1880000002	0	
25.5		1880000003	1	
10		1879999916	-86	

Reference Frequency: WCDMA HSUPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
32	20	836400002	1	2090
30		836400001	0	
25.5		836400004	3	
10		836400083	82	



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

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

Test Configuration

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

TEST PROCEDURE

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

TEST RESULTS

Not applicable, because EUT not connect to AC Main Source direct.