



**FCC 47 CFR PART 22 SUBPART H AND PART 24 SUBPART E
&
INDUSTRY CANADA RSS-132 & RSS-133**

TEST REPORT

For

2G,3G wireless module

Trade Name: Telit

Model: UL865-NAR, UL865-NAD

Issued to

TELIT COMMUNICATIONS S.P.A.

Via Stazione di Prosecco 5/b, 34010 SGONICO, TRIESTE - ITALY

Issued by

Compliance Certification Services Inc.

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Revision History

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1. TEST RESULT CERTIFICATION

Applicant: TELIT COMMUNICATIONS S.P.A.
Via Stazione di Prosecco 5/b, 34010 SGONICO, TRIESTE - ITALY

Manufacturer: TELIT COMMUNICATIONS S.P.A.
Via Stazione di Prosecco 5/b, 34010 SGONICO, TRIESTE - ITALY

Equipment Under Test: 2G,3G wireless module

Trade Name: Telit

Model Number: UL865-NAR, UL865-NAD

Date of Test: October 3 ~ 8, 2013

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
FCC 47 CFR PART 22 SUBPART H AND PART 24 SUBPART E & IC RSS-132 Issue 3: January 2013 and IC RSS-133 Issue 6: January 2013	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 and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC Rule FCC PART 22 Subpart H, PART 24 Subpart E, IC RSS-132 Issue 3 and IC RSS-133 Issue 6.

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.

Angel Cheng
Section Manager
Compliance Certification Services Inc.



2. EUT DESCRIPTION

Product	2G,3G wireless module		
Trade Name	Telit		
Model Number	UL865-NAR, UL865-NAD		
Model Discrepancy	Model	Difference on HW	Difference on FW
	UL865-NAR	Both products have the same PCB and the components.	Both product share the same FW with exception of the features related to Voice Calls that are disabled on the UL865-NAD
	UL865-NAD		
Received Date	September 30, 2013		
Power Supply	Powered from Host device. (DC 3.8V)		
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		
Modulation Technique	GMSK, 8PSK and QPSK		
Antenna Gain	2.14 dBi		
Antenna Type	1/4 l Mobile Antenna		
Multislot class	GPRS: Class 10 EGPRS: Class 10		

Remark: The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.



Mode	ERP Power (dBm)	ERP Power (w)	Type of Emission
GSM 850MHz	27.53	0.5662	319GXW
GPRS 850MHz	27.23	0.5284	319GXW
EDGE 850MHz	27.20	0.5248	319G7W
WCDMA Band V	18.68	0.0738	4M59F9W
WCDMA HSDPA Band V	18.56	0.0718	4M59F9W
WCDMA HSUPA Band V	18.56	0.0718	4M58F9W

Mode	ERP Power (dBm)	ERP Power (w)	Type of Emission
GSM 1900MHz	27.08	0.5105	320GXW
GPRS 1900MHz	27.18	0.5224	320GXW
EDGE 1900MHz	26.52	0.4487	320G7W
WCDMA Band II	22.41	0.1742	4M63F9W
WCDMA HSDPA Band II	22.40	0.1738	4M62F9W
WCDMA HSUPA Band II	22.35	0.1718	4M63F9W



3. TEST METHODOLOGY

Both conducted and radiated testing were performed according to the procedures document on chapter 13 of ANSI C63.4: 2009, TIA/EIA-603-C: 2004 and FCC CFR 47, Part 2 and Part 22 Subpart H & Part 24 Subpart E.

The tests documented in this report were performed in accordance with IC RSS-132, SPSR503, RSS-133, SPSR510 and ANSI C63.4 and TIA/EIA-603-C.

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: 2009. 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: 2009.



3.4 DESCRIPTION OF TEST MODES

The EUT (model: UL865-NAR) had been tested under operating condition.

EUT staying in continuous transmitting mode was programmed.

After verification, all tests carried out are with the worst-case test modes as shown below except radiated spurious emission below 1GHz which worst case was in normal link mode.

GSM / GPRS / EDGE 850MHz:

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

GSM / GPRS / EDGE 1900MHz:

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.

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



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	03/20/2014
Power Meter	Anritsu	ML2495A	1012009	06/04/2014
Power Sensor	Anritsu	MA2411A	0917072	06/04/2014

3M Semi Anechoic Chamber				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	US42510268	11/06/2013
EMI Test Receiver	R&S	ESCI	100064	02/17/2014
Pre-Amplifier	Mini-Circuits	ZFL-1000LN	SF350700823	01/12/2014
Bilog Antenna	Sunol Sciences	JB3	A030105	02/17/2014
Bilog Antenna	Sunol Sciences	JB3	A030205	10/01/2014
Horn Antenna	EMCO	3117	00055165	02/17/2014
Horn Antenna	EMCO	3117	00055167	01/28/2014
Horn Antenna	EMCO	3116	26370	01/07/2014
Loop Antenna	EMCO	6502	8905/2356	06/12/2014
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	12/22/2013
Test S/W	EZ-EMC (CCS-3A1RE)			



4.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
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

All measurement facilities used to collect the measurement data are located at

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

☒ No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, 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: 2009 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 LABORATORY ACCREDITATIONS AND LISTING

The test facilities used to perform radiated and conducted emissions tests are accredited by American Association for Laboratory Accreditation Program for the specific scope accreditation under Lab Code: 0824-01 to perform Electromagnetic Interference tests according to FCC Part 15 and CISPR 22 requirements. In addition, the test facilities are listed with Industry Canada, Certification and Engineering Bureau, IC 2324G-1 for 3M Semi Anechoic Chamber A, 2324G-2 for 3M Semi Anechoic Chamber B.



5.4 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	 Testing Laboratory 1309
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 II 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.	Test Kit	N/A	N/A	N/A	N/A	N/A	N/A
2.	8960 Series 10 Wireless Communication test set (Remote)	Agilent	E5515C	GB44051665	N/A	N/A	Unshielded, 1.8m

Remark:

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



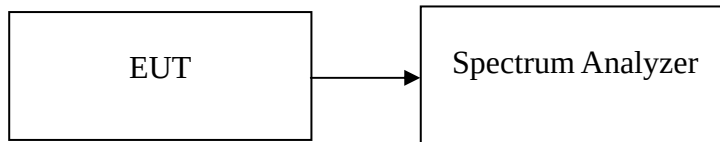
7. FCC PART 22 & 24 REQUIREMENTS & INDUSTRY CANADA RSS-132 & RSS-133

7.1 99% BANDWIDTH

LIMIT

None; for reporting purposes only.

Test Configuration



TEST PROCEDURE

The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth. The VBW is set to 3 times the RBW. The sweep time is coupled.

TEST RESULTS

No non-compliance noted.

**Test Data**

Test Mode	CH	Frequency (MHz)	Occupied Bandwidth (kHz)
GSM 850 (Class 12)	128	824.200	3.19.326
	190	836.400	318.611
	251	848.800	313.628
GPRS 850 (Class 12)	128	824.200	319.169
	190	836.400	319.476
	251	848.800	313.628
EDGE 850 (Class 12)	128	824.200	319.169
	190	836.570	319.164
	251	848.800	314.651
GSM 1900 (Class 12)	512	1850.210	320.320
	661	1880.000	317.887
	810	1909.823	308.743
GPRS 1900 (Class 12)	512	1850.210	320.320
	661	1880.000	318.724
	810	1909.823	309.616
EDGE 1900 (Class 12)	512	1850.173	320.320
	661	1880.000	318.724
	810	1909.800	321.421

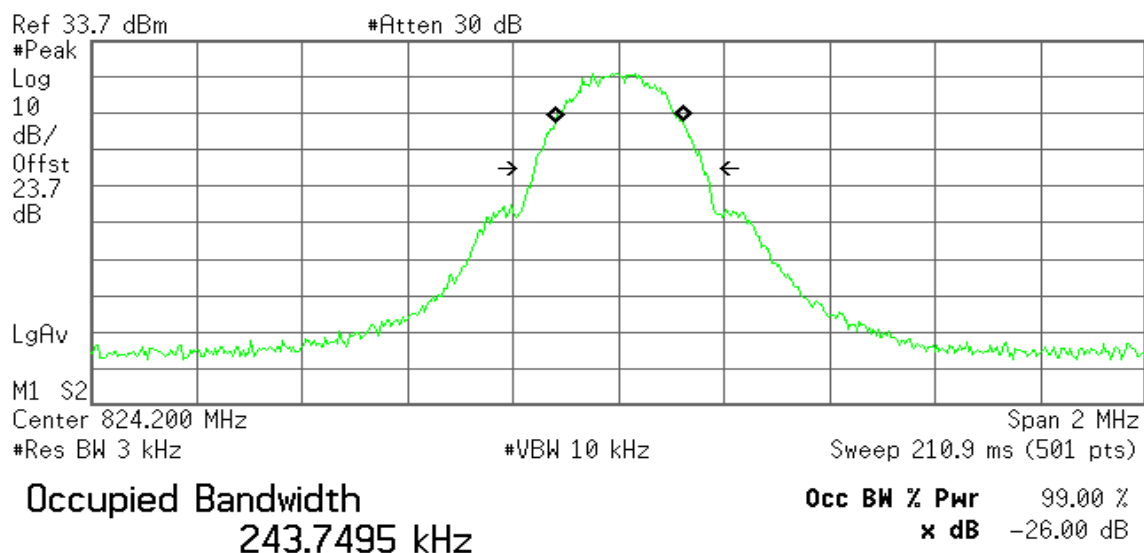


Test Mode	CH	Frequency (MHz)	Occupied Bandwidth (kHz)
WCDMA (Band II)	9262	1852.40	4.627
	9400	1880.00	4.613
	9538	1907.60	4.634
WCDMA (Band V)	4132	826.40	4.596
	4182	836.40	4.593
	4233	846.60	4.568
WCDMA / HSDPA (BAND II)	9262	1852.40	4.626
	9400	1880.00	4.615
	9538	1907.60	4.615
WCDMA / HSDPA (BAND V)	4132	826.40	4.589
	4182	836.40	4.561
	4233	846.60	4.591
WCDMA / HSUPA (BAND II)	9262	1852.40	4.626
	9400	1880.00	4.620
	9538	1907.60	4.634
WCDMA / HSUPA (BAND V)	4132	826.40	4.0451
	4182	836.40	4.0407
	4233	846.60	4.585

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

* Agilent 19:49:36 Oct 3, 2013

R T

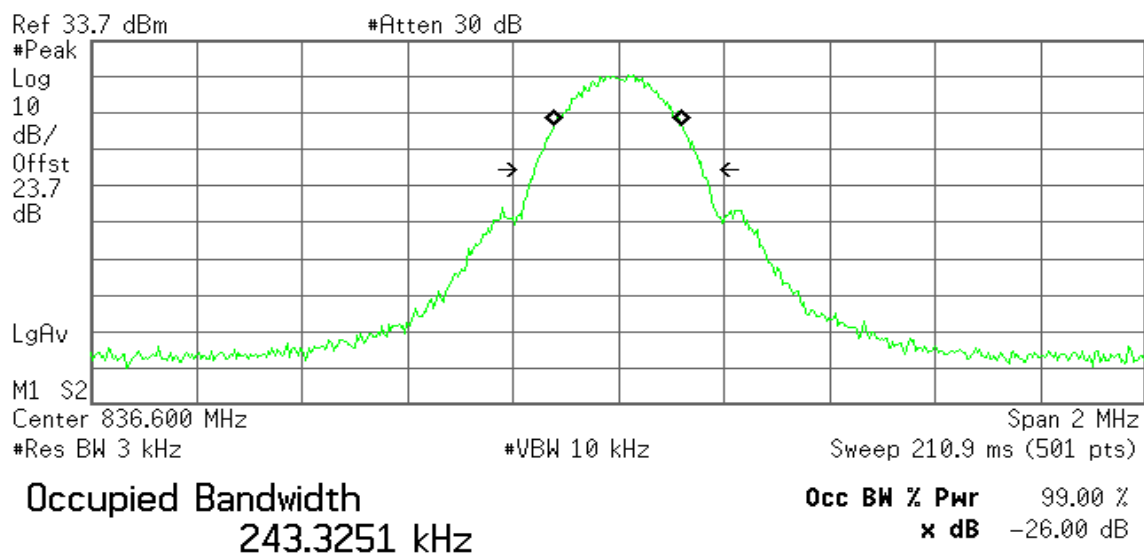


Transmit Freq Error 148.311 Hz
x dB Bandwidth 319.326 kHz

GSM 850 (CH Mid)

* Agilent 19:50:53 Oct 3, 2013

R T

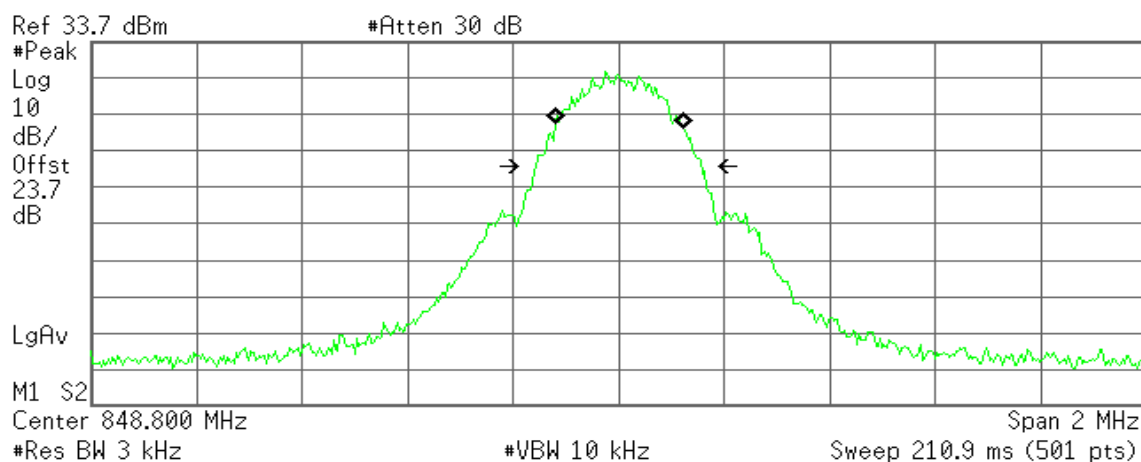


Transmit Freq Error -698.796 Hz
x dB Bandwidth 318.611 kHz

**GSM 850 (CH High)**

* Agilent 19:51:50 Oct 3, 2013

R T

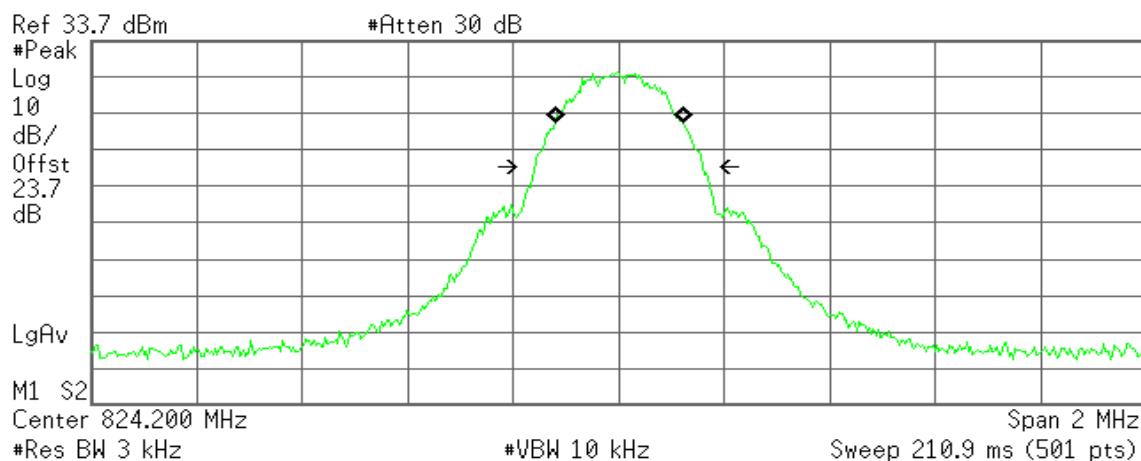


Transmit Freq Error 856.953 Hz
x dB Bandwidth 313.628 kHz

GPRS 850 (CH Low)

* Agilent 19:49:47 Oct 3, 2013

R T

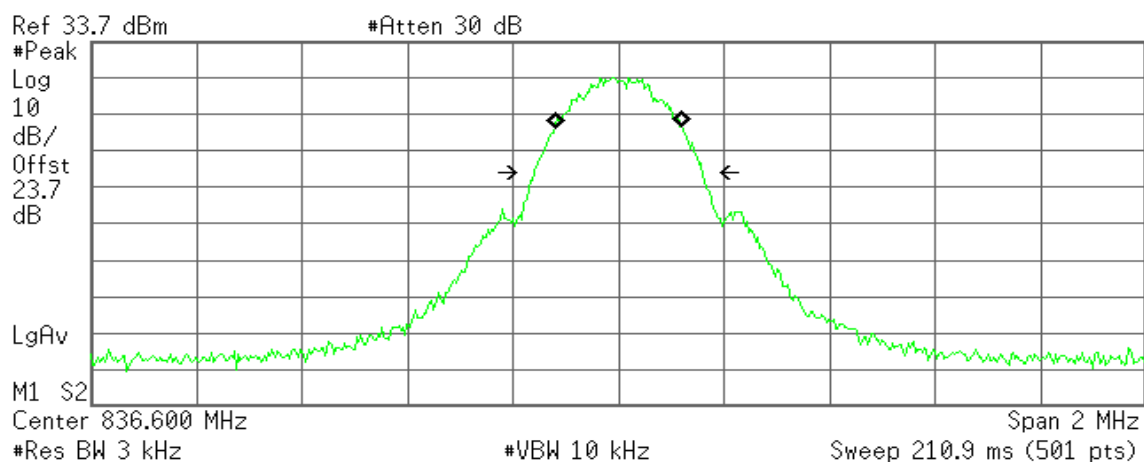


Transmit Freq Error 468.198 Hz
x dB Bandwidth 319.169 kHz

**GPRS 850 (CH Mid)**

* Agilent 19:50:42 Oct 3, 2013

R T



Occupied Bandwidth
243.1894 kHz

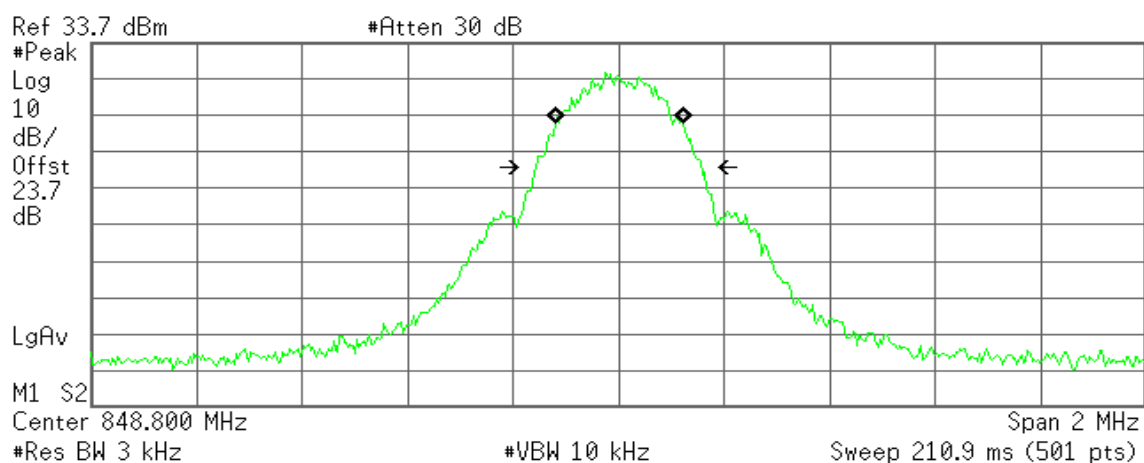
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 9.375 Hz
x dB Bandwidth 319.476 kHz

GPRS 850(CH High)

* Agilent 19:52:01 Oct 3, 2013

R T



Occupied Bandwidth
243.7566 kHz

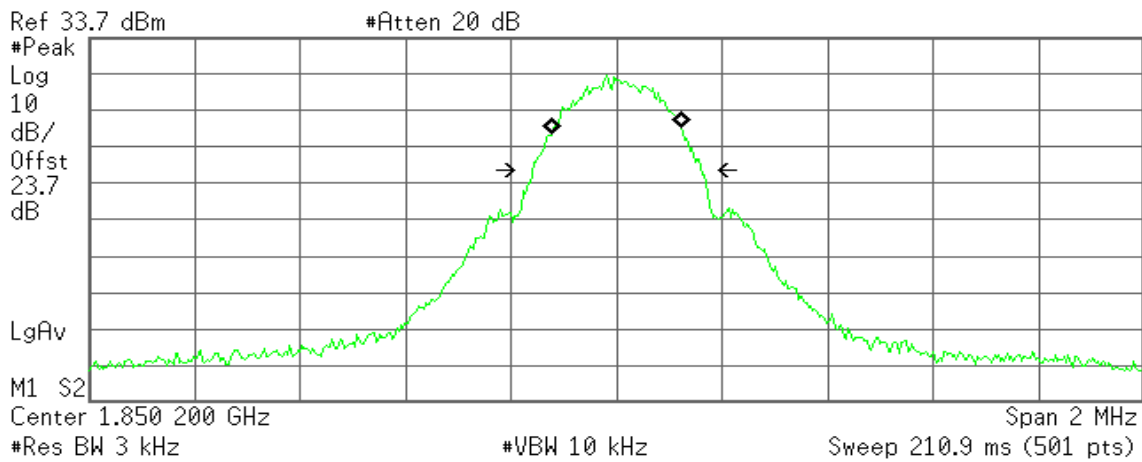
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 1.071 kHz
x dB Bandwidth 313.628 kHz

**GSM 1900 (CH Low)**

* Agilent 21:43:09 Oct 3, 2013

R T



Occupied Bandwidth
246.4957 kHz

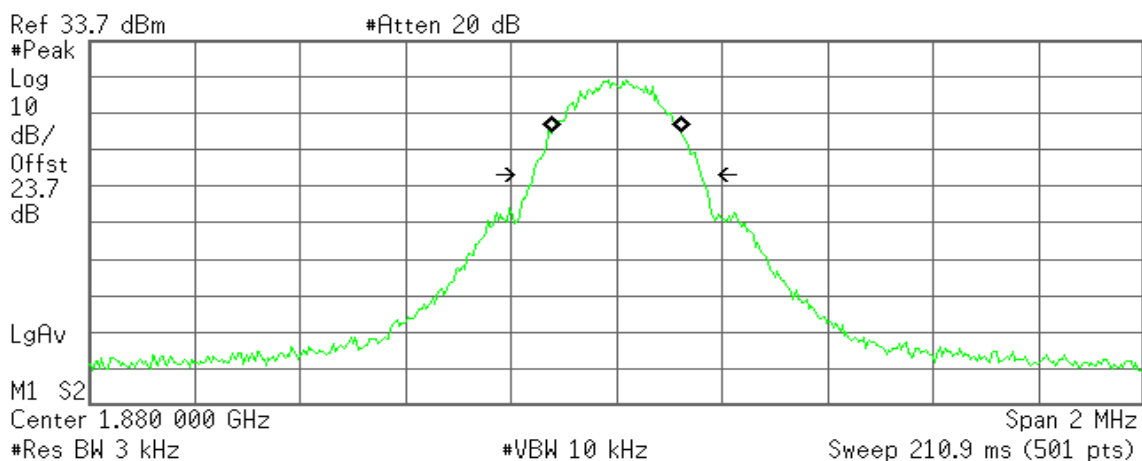
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 470.151 Hz
x dB Bandwidth 320.320 kHz

GSM 1900 (CH Mid)

* Agilent 21:45:01 Oct 3, 2013

R T



Occupied Bandwidth
245.1711 kHz

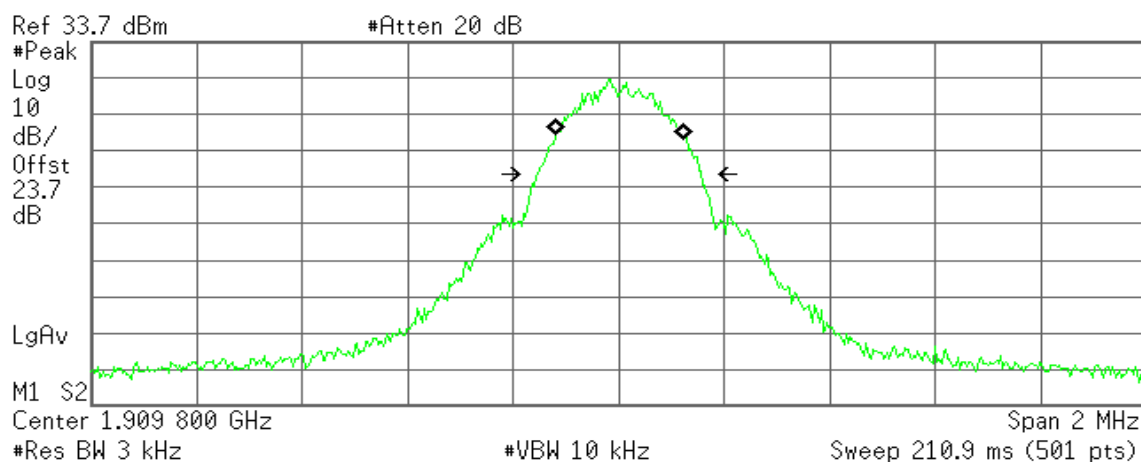
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -60.428 Hz
x dB Bandwidth 317.887 kHz

**GSM 1900 (CH High)**

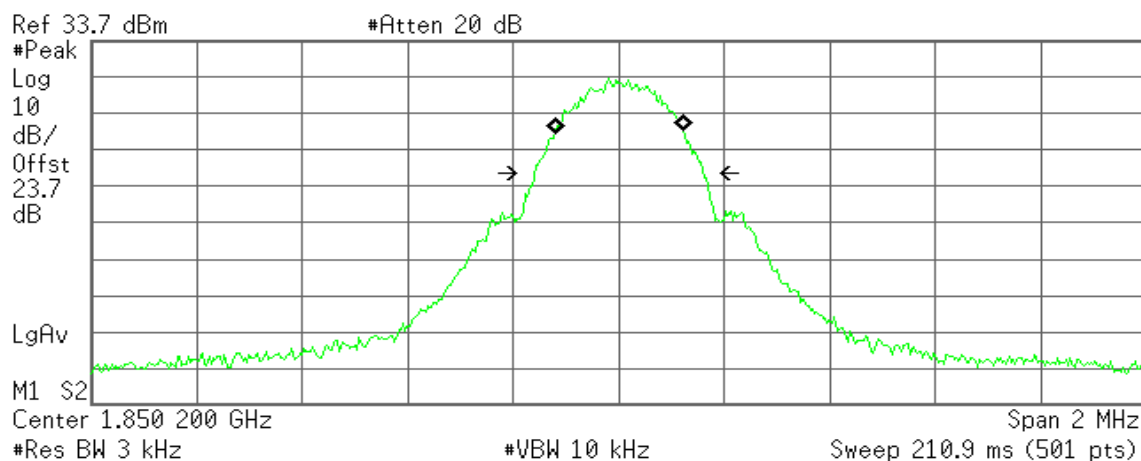
* Agilent 21:46:06 Oct 3, 2013

R T

**Occupied Bandwidth**
243.6136 kHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** 2.129 kHz
x dB Bandwidth 308.743 kHz**GPRS 1900 (CH Low)**

* Agilent 21:43:27 Oct 3, 2013

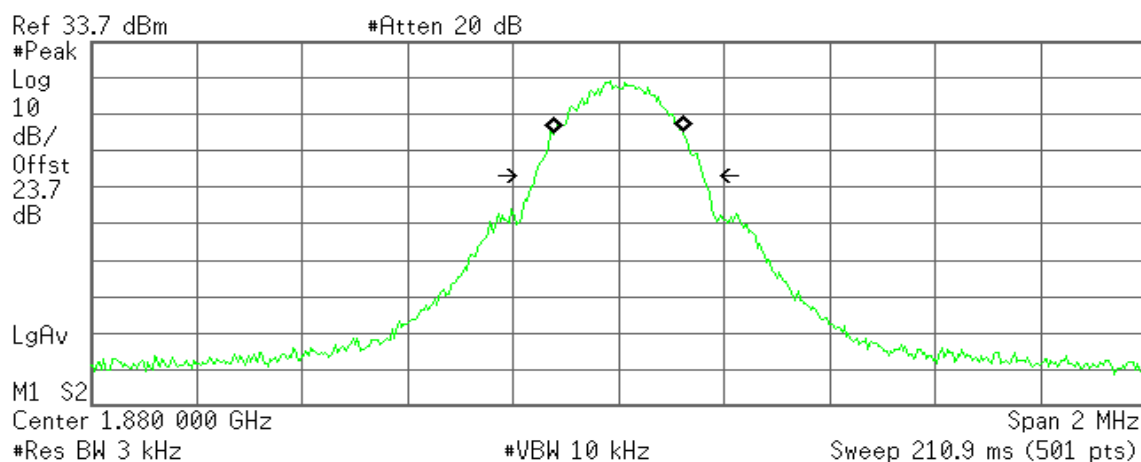
R T

**Occupied Bandwidth**
244.4572 kHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** 842.090 Hz
x dB Bandwidth 320.320 kHz

**GPRS 1900 (CH Mid)**

* Agilent 21:44:50 Oct 3, 2013

R T



Occupied Bandwidth
245.7000 kHz

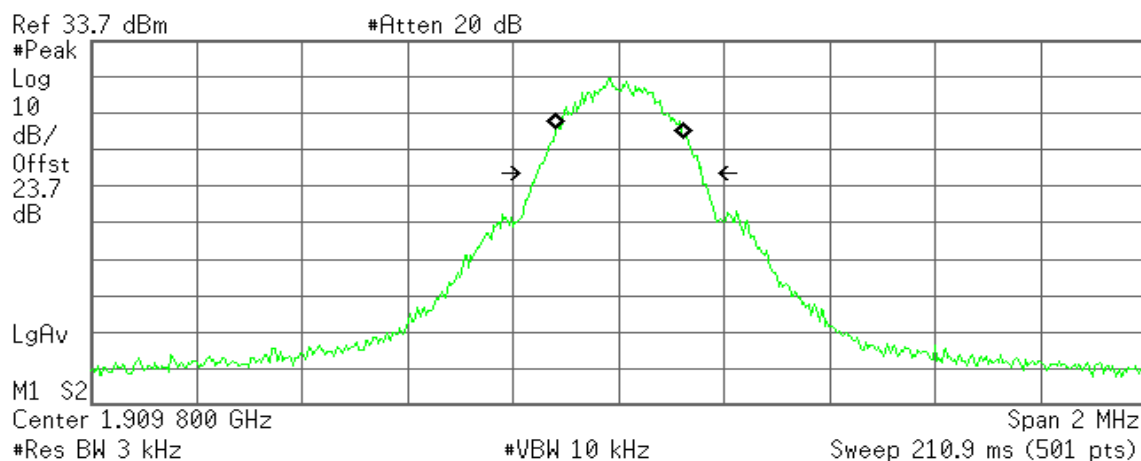
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -441.168 Hz
x dB Bandwidth 318.724 kHz

GPRS 1900 (CH High)

* Agilent 21:46:20 Oct 3, 2013

R T



Occupied Bandwidth
243.3485 kHz

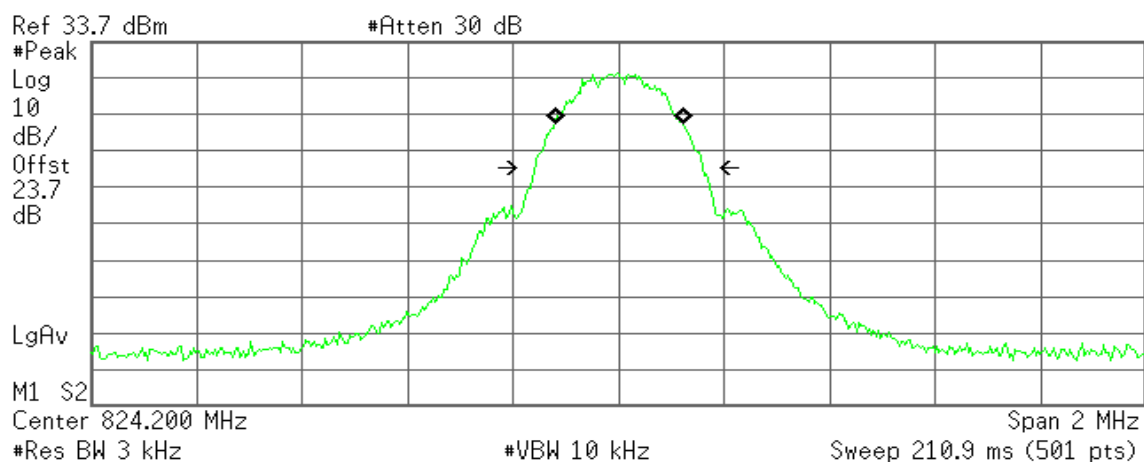
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 1.932 kHz
x dB Bandwidth 309.616 kHz

**EDGE 850 (CH Low)**

* Agilent 19:49:57 Oct 3, 2013

R T



Occupied Bandwidth
243.7629 kHz

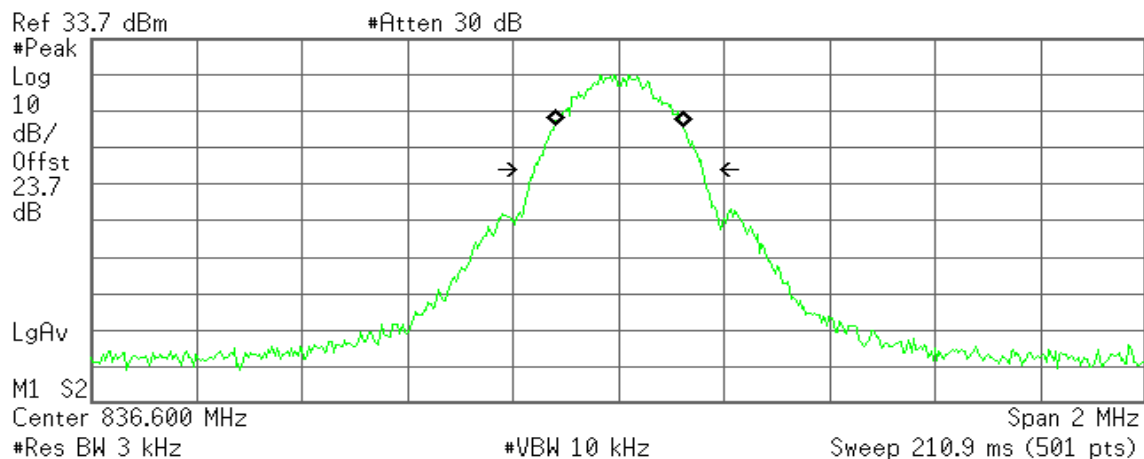
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 427.754 Hz
x dB Bandwidth 319.169 kHz

EDGE 850 (CH Mid)

* Agilent 19:50:28 Oct 3, 2013

R T



Occupied Bandwidth
244.2359 kHz

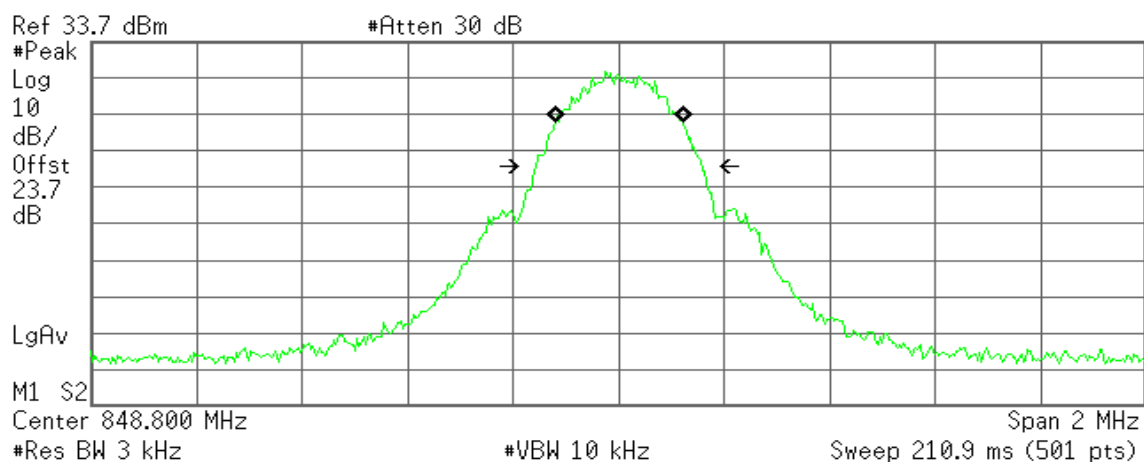
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 154.511 Hz
x dB Bandwidth 319.164 kHz

**EDGE 850 (CH High)**

* Agilent 19:52:14 Oct 3, 2013

R T



Occupied Bandwidth
244.1866 kHz

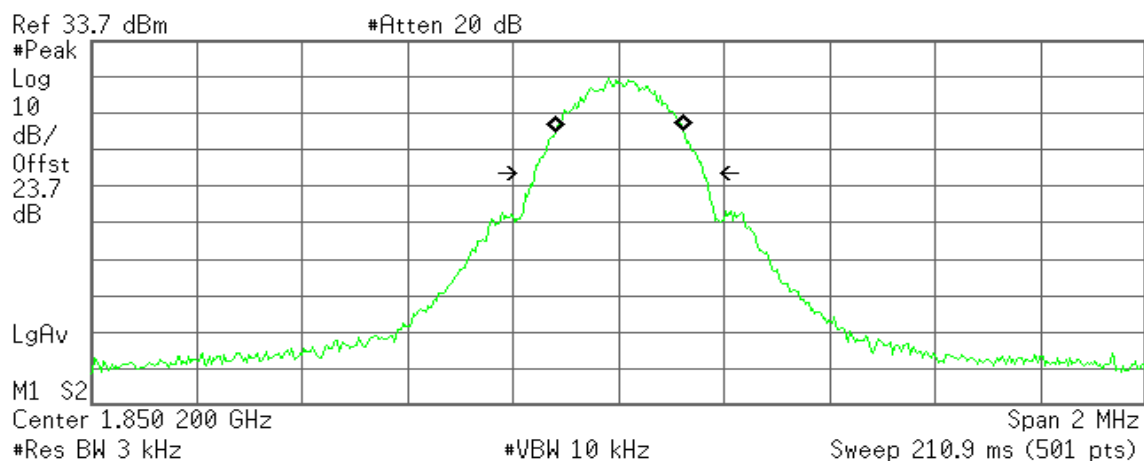
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 1.149 kHz
x dB Bandwidth 314.651 kHz

EDGE 1900 (CH Low)

* Agilent 21:43:38 Oct 3, 2013

R T



Occupied Bandwidth
244.7745 kHz

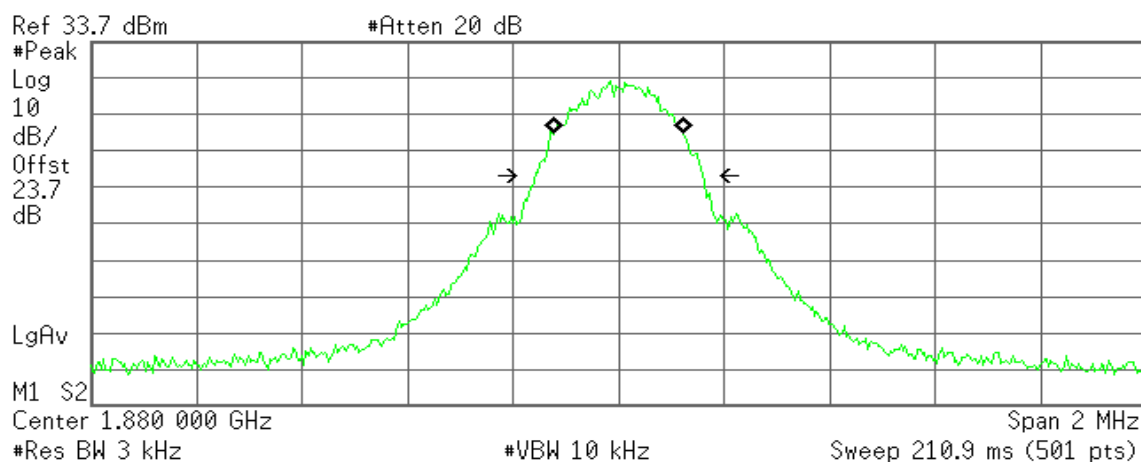
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 720.992 Hz
x dB Bandwidth 320.320 kHz

**EDGE 1900 (CH Mid)**

* Agilent 21:44:37 Oct 3, 2013

R T



Occupied Bandwidth
246.8992 kHz

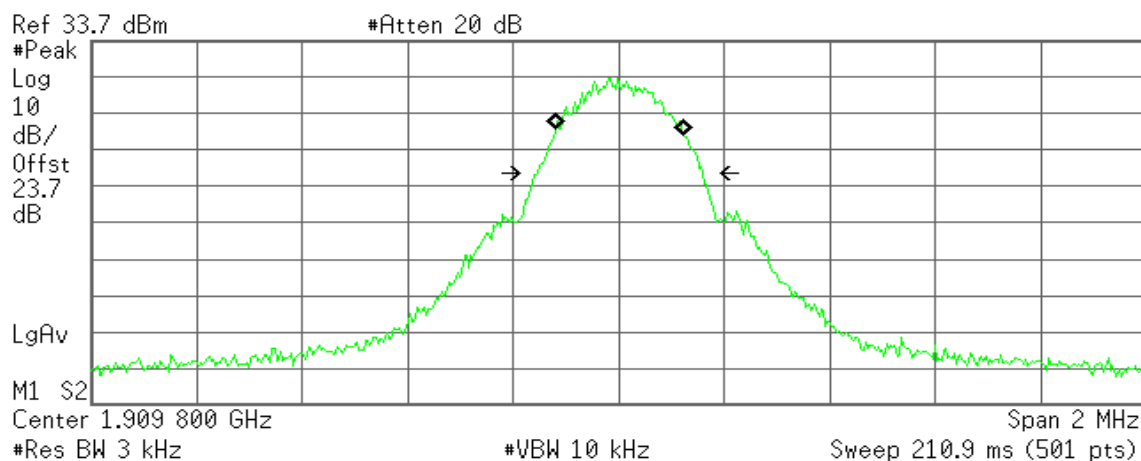
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -281.299 Hz
x dB Bandwidth 318.724 kHz

EDGE 1900 (CH High)

* Agilent 21:46:31 Oct 3, 2013

R T



Occupied Bandwidth
243.1246 kHz

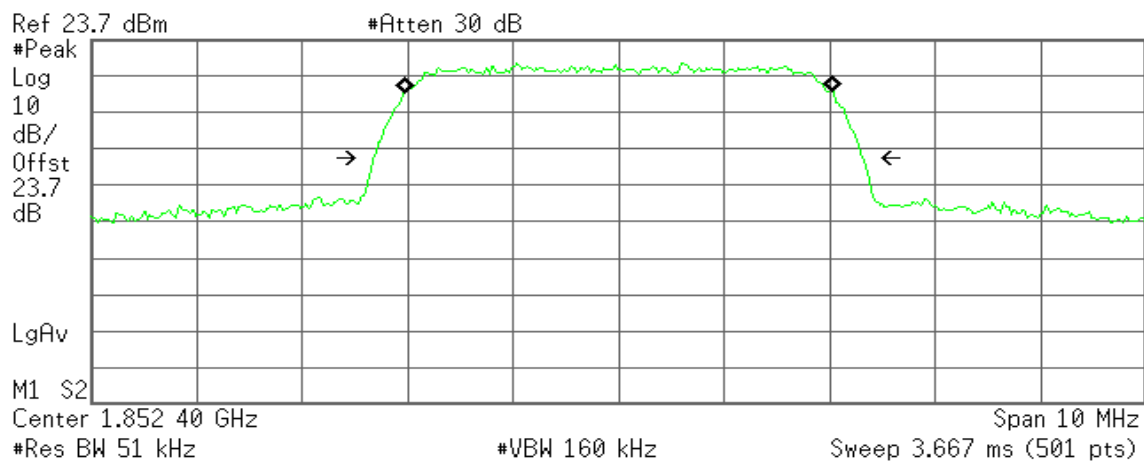
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 2.242 kHz
x dB Bandwidth 312.421 kHz

**WCDMA Band II (CH Low)**

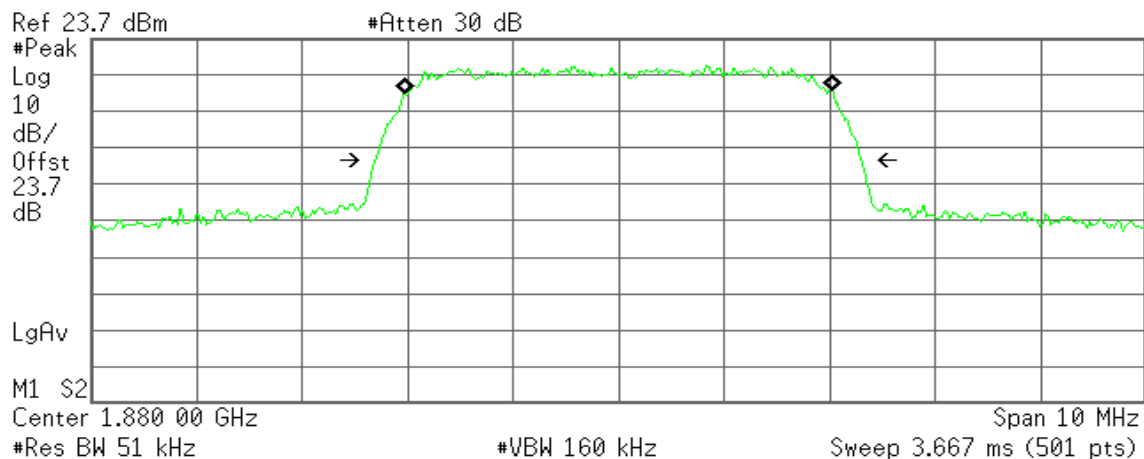
* Agilent 22:01:20 Oct 3, 2013

R T

**Occupied Bandwidth**
4.0520 MHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** 954.993 Hz
x dB Bandwidth 4.627 MHz**WCDMA Band II (CH Mid)**

* Agilent 22:01:43 Oct 3, 2013

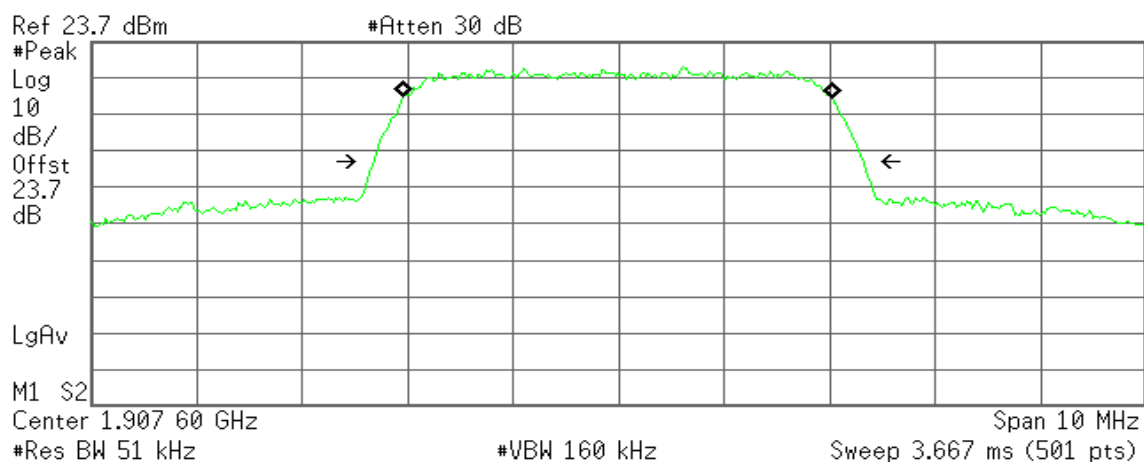
R T

**Occupied Bandwidth**
4.0495 MHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** -537.383 Hz
x dB Bandwidth 4.613 MHz

**WCDMA Band II (CH High)**

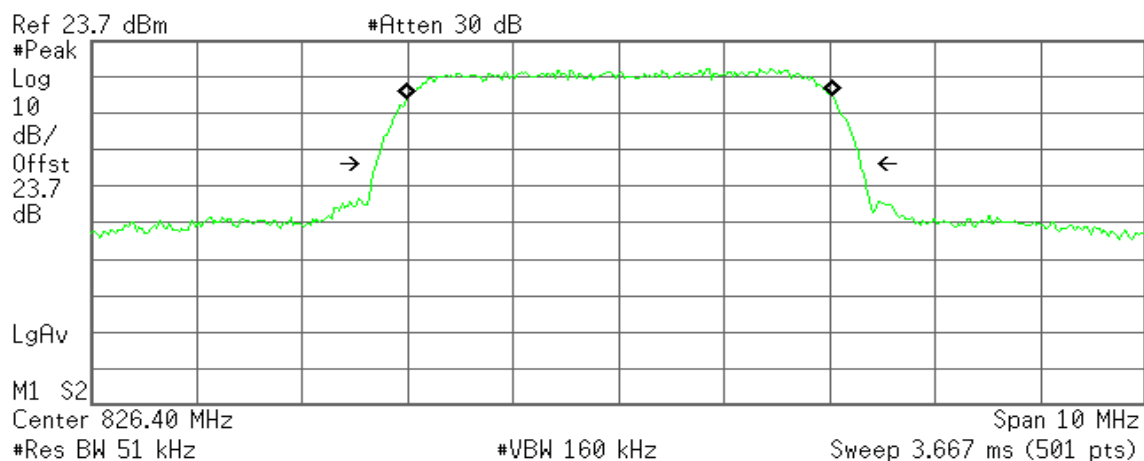
* Agilent 22:02:59 Oct 3, 2013

R T

**Occupied Bandwidth**
4.0576 MHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** -8.047 kHz
x dB Bandwidth 4.634 MHz**WCDMA Band V (CH Low)**

* Agilent 22:03:50 Oct 3, 2013

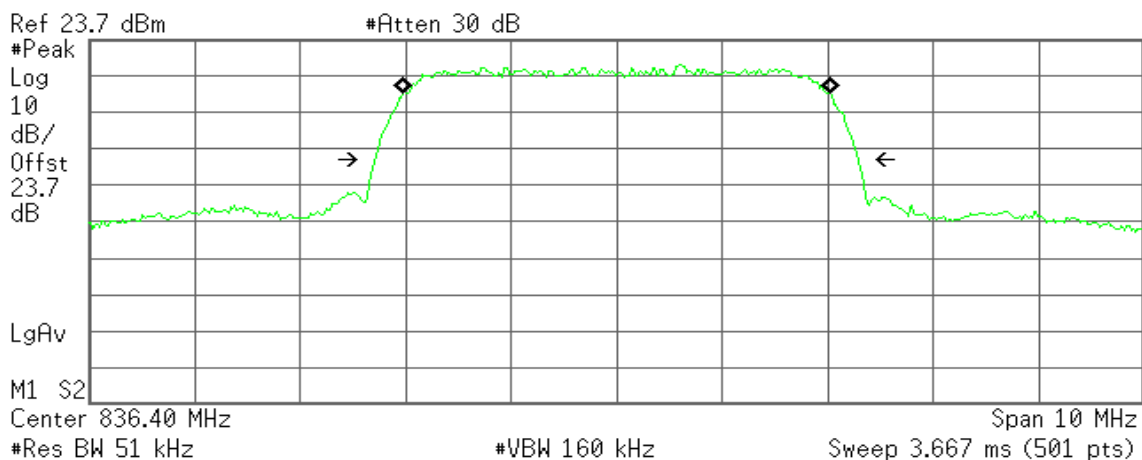
R T

**Occupied Bandwidth**
4.0325 MHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** 10.681 kHz
x dB Bandwidth 4.596 MHz

**WCDMA Band V (CH Mid)**

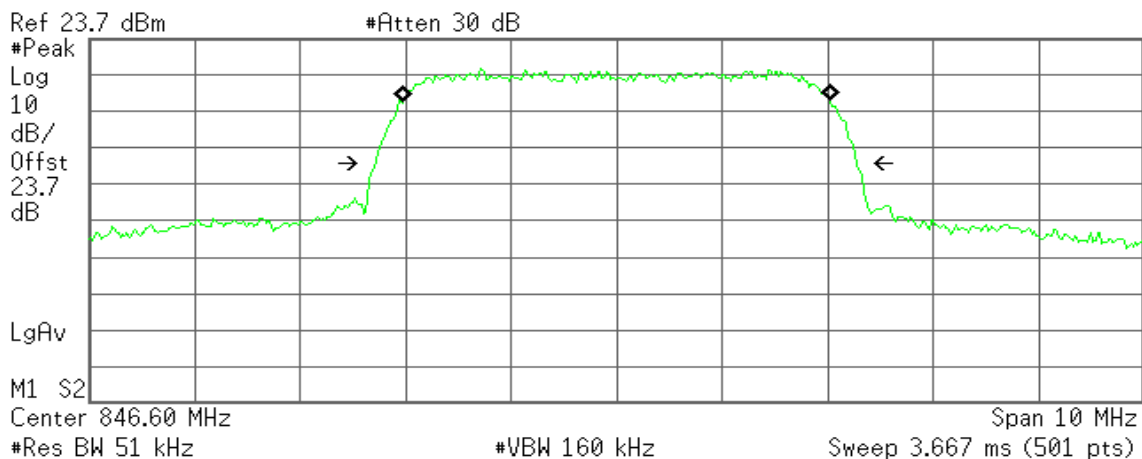
* Agilent 22:05:22 Oct 3, 2013

R T

**Occupied Bandwidth**
4.0507 MHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** -12.183 Hz
x dB Bandwidth 4.593 MHz**WCDMA Band V (CH High)**

* Agilent 22:05:44 Oct 3, 2013

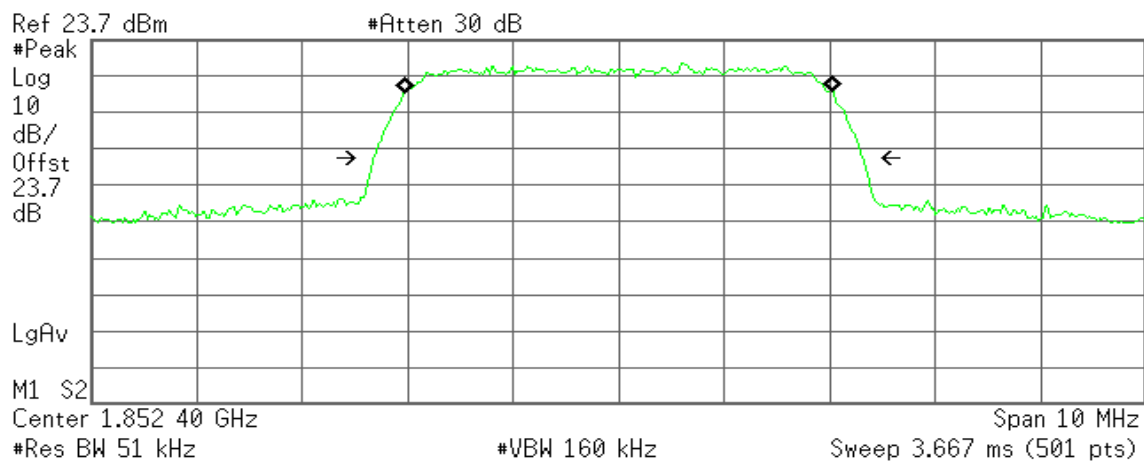
R T

**Occupied Bandwidth**
4.0394 MHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** -3.834 kHz
x dB Bandwidth 4.568 MHz

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

* Agilent 22:00:59 Oct 3, 2013

R T



Occupied Bandwidth
4.0578 MHz

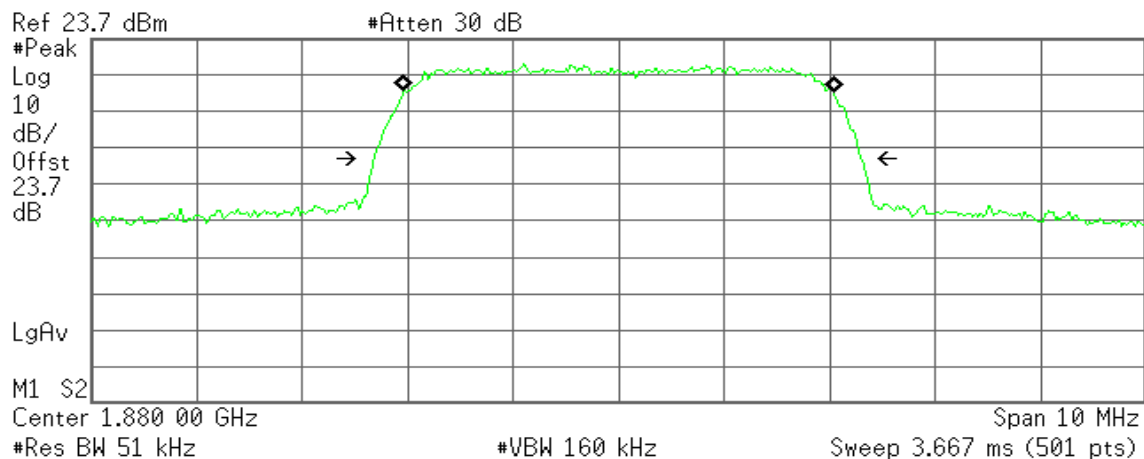
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 85.238 Hz
x dB Bandwidth 4.626 MHz

WCDMA / HSDPA Band II (CH Mid)

* Agilent 22:02:02 Oct 3, 2013

R T



Occupied Bandwidth
4.0631 MHz

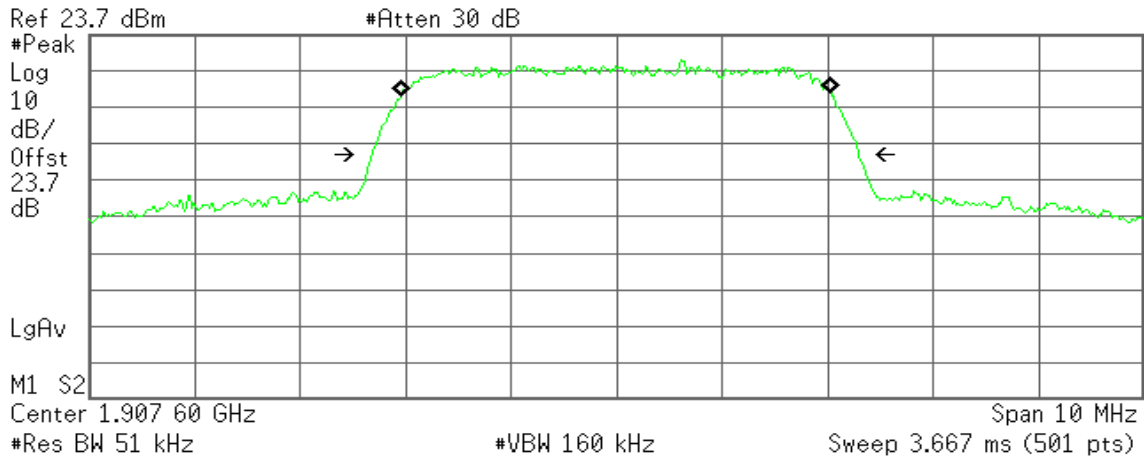
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 670.324 Hz
x dB Bandwidth 4.615 MHz

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

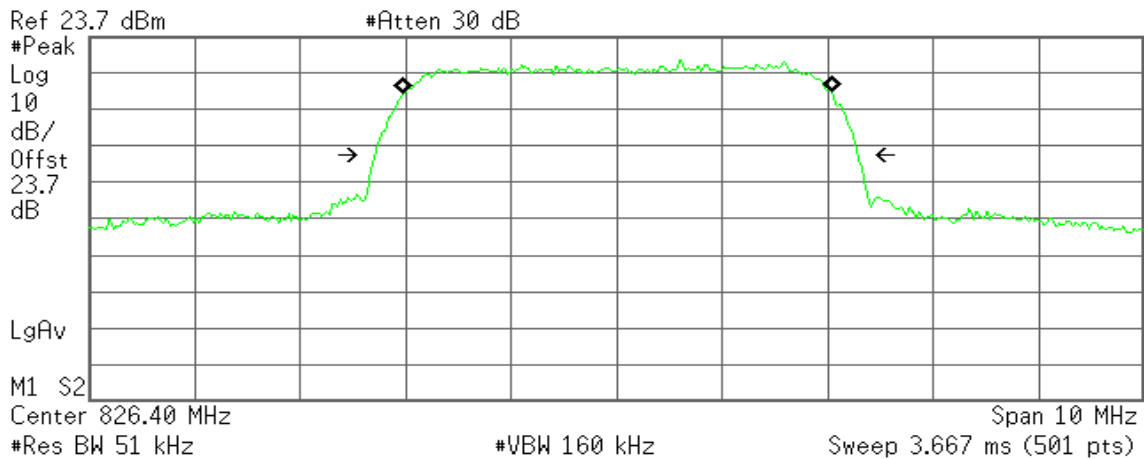
* Agilent 22:02:35 Oct 3, 2013

R T

**Occupied Bandwidth**
4.0661 MHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** -6.187 kHz
x dB Bandwidth 4.615 MHz**WCDMA / HSDPA Band V (CH Low)**

* Agilent 22:04:12 Oct 3, 2013

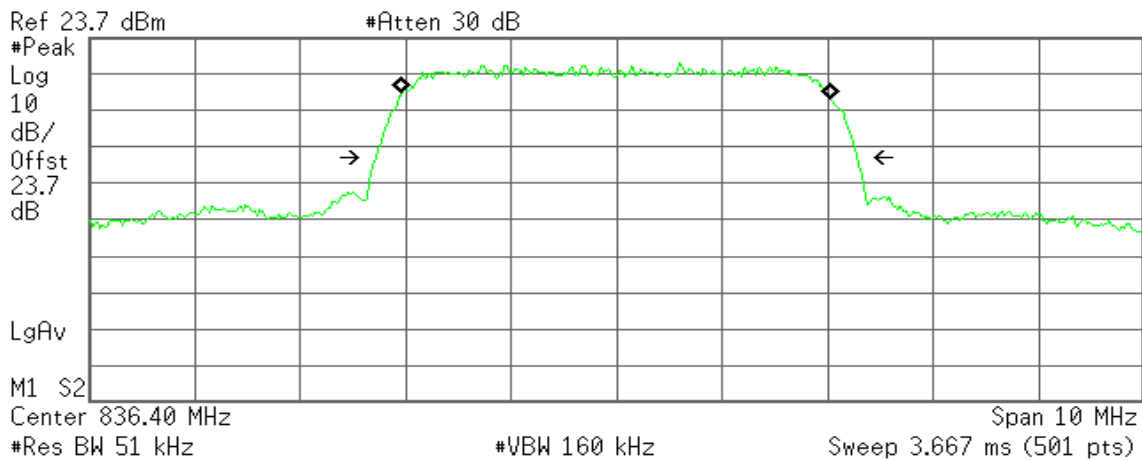
R T

**Occupied Bandwidth**
4.0448 MHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** 8.770 kHz
x dB Bandwidth 4.589 MHz

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

Agilent 22:04:56 Oct 3, 2013

R T

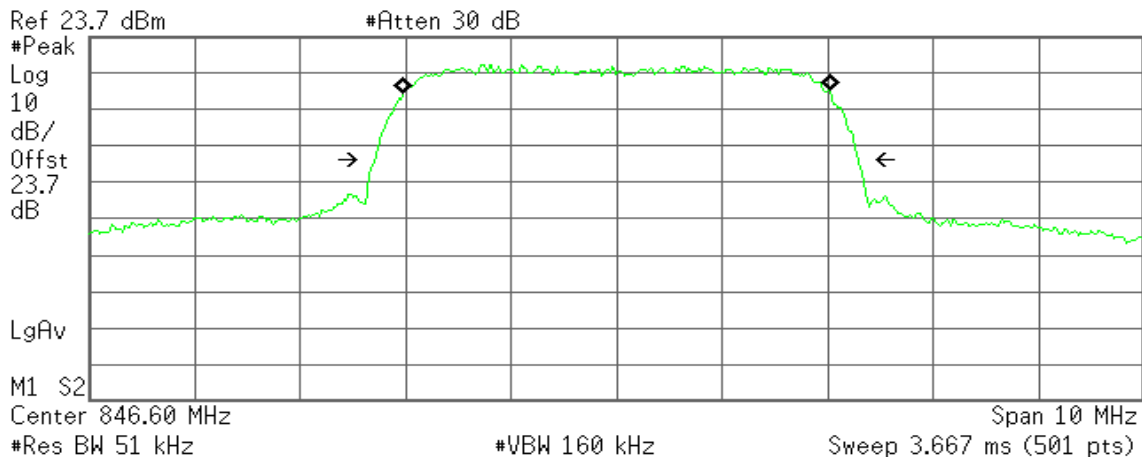


Transmit Freq Error -5.398 kHz
x dB Bandwidth 4.561 MHz

WCDMA / HSDPA Band V (CH High)

Agilent 22:06:09 Oct 3, 2013

R T

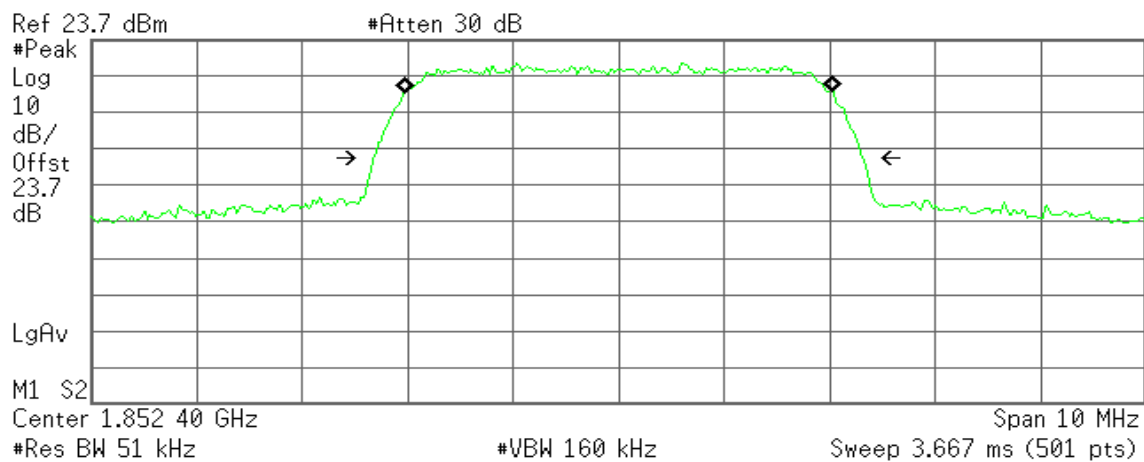


Transmit Freq Error -2.596 kHz
x dB Bandwidth 4.591 MHz

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

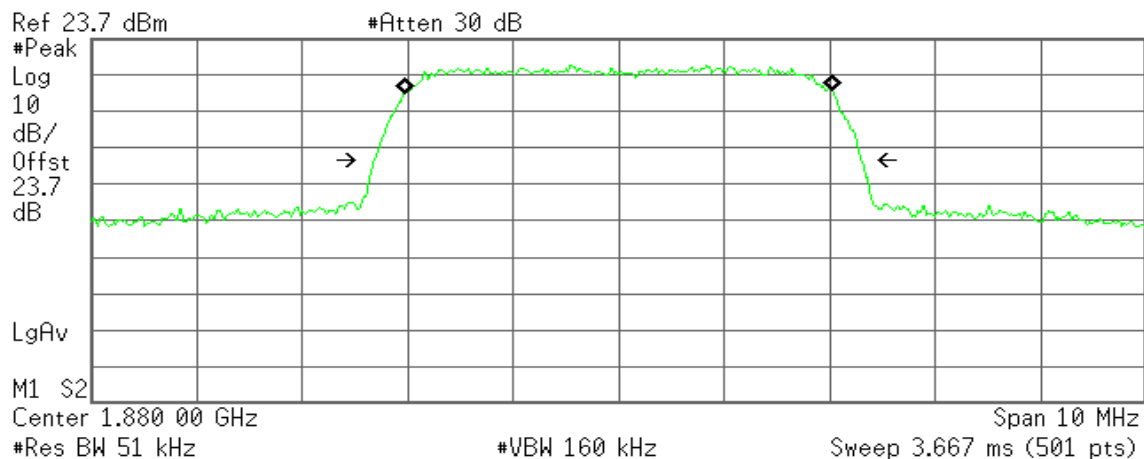
* Agilent 22:01:09 Oct 3, 2013

R T

**Occupied Bandwidth**
4.0547 MHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** 126.737 Hz
x dB Bandwidth 4.626 MHz**WCDMA / HSUPA Band II (CH Mid)**

* Agilent 22:01:53 Oct 3, 2013

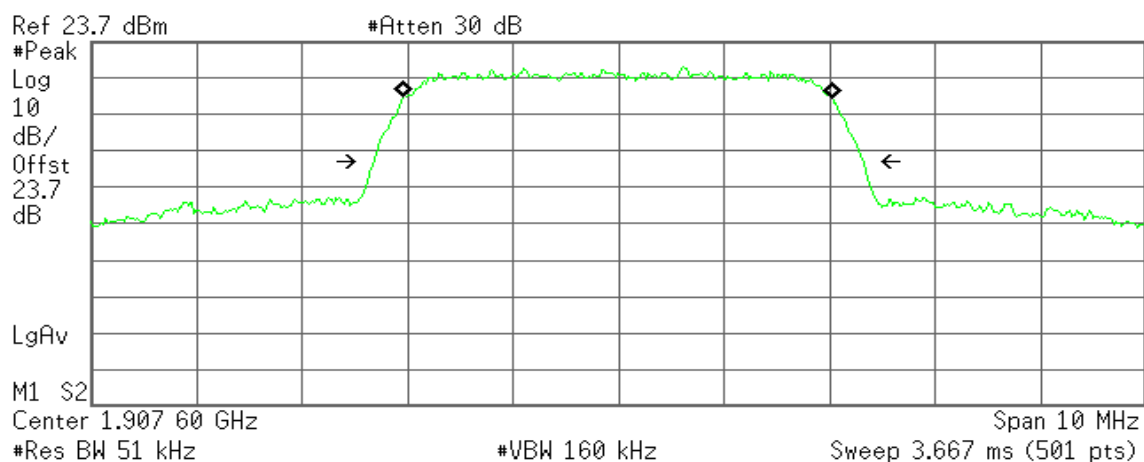
R T

**Occupied Bandwidth**
4.0537 MHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** -1.852 kHz
x dB Bandwidth 4.620 MHz

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

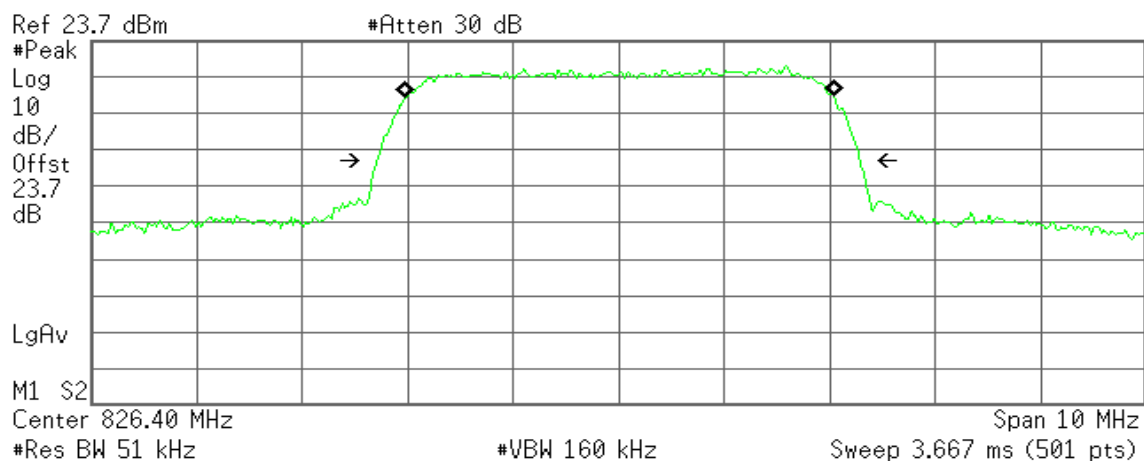
* Agilent 22:02:46 Oct 3, 2013

R T

**Occupied Bandwidth**
4.0611 MHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** -8.590 kHz
x dB Bandwidth 4.634 MHz**WCDMA / HSUPA Band V (CH Low)**

* Agilent 22:04:01 Oct 3, 2013

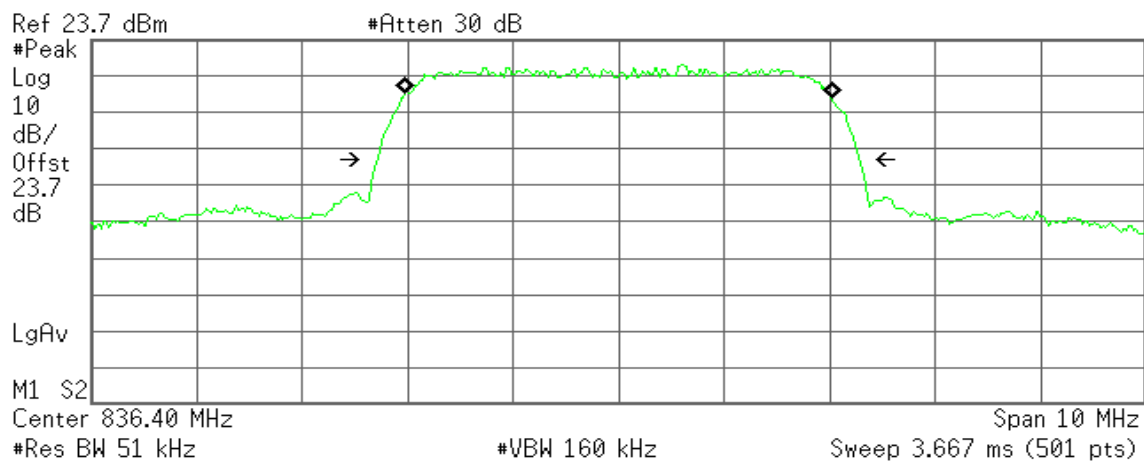
R T

**Occupied Bandwidth**
4.0451 MHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** 9.033 kHz
x dB Bandwidth 4.589 MHz

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

* Agilent 22:05:09 Oct 3, 2013

R T

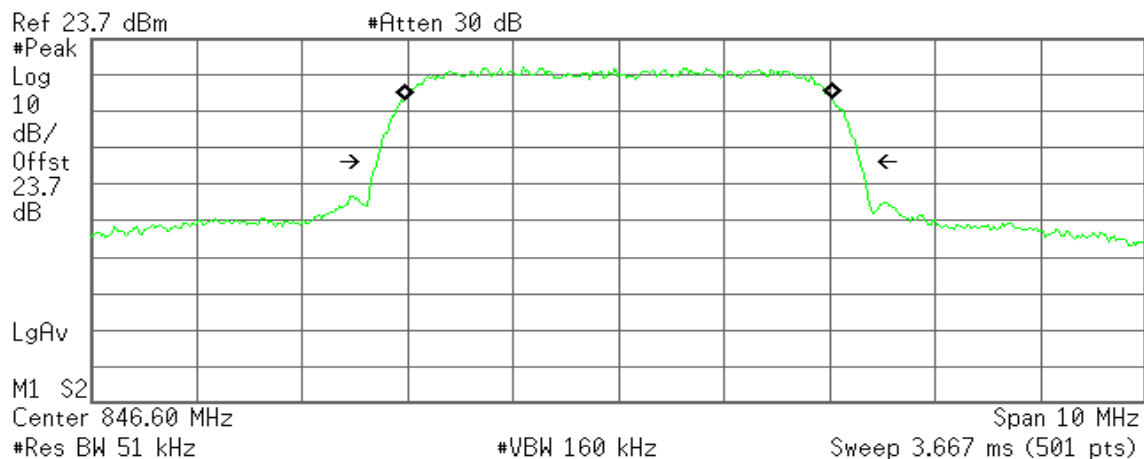


Transmit Freq Error -6.948 kHz
x dB Bandwidth 4.581 MHz

WCDMA / HSUPA Band V (CH High)

* Agilent 22:05:56 Oct 3, 2013

R T



Transmit Freq Error -3.968 kHz
x dB Bandwidth 4.585 MHz

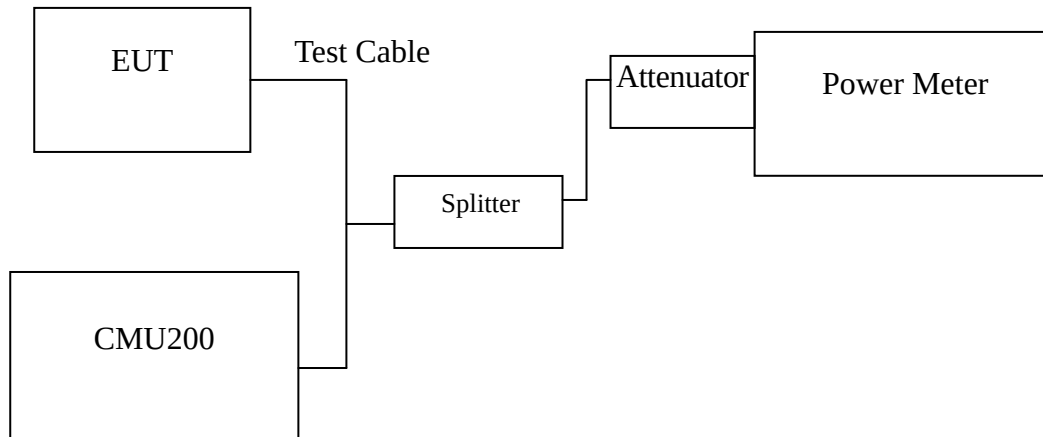


7.2 PEAK POWER

LIMIT

According to FCC §2.1046.

Test Configuration



Remark: Measurement setup for testing on Antenna connector

TEST PROCEDURE

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

TEST RESULTS

No non-compliance noted.

**Test Data**

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power (W)
GSM 850 (Class B)	128	824.20	32.50	1.7783
	190	836.40	32.50	1.7783
	251	848.80	32.30	1.6982
GPRS 850 (Class 12)	128	824.20	32.40	1.7378
	190	836.40	32.30	1.6982
	251	848.80	32.10	1.6218
EDGE 850 (Class 12)	128	824.20	24.90	0.3090
	190	836.40	24.90	0.3090
	251	848.80	24.80	0.3020

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power (W)
GSM 1900 (Class B)	512	1850.20	30.40	1.0965
	661	1880.00	30.30	1.0715
	810	1910.00	30.10	1.0233
GPRS 1900 (Class 12)	512	1850.20	30.20	1.0471
	661	1880.00	30.20	1.0471
	810	1910.00	30.00	1.0000
EDGE 1900 (Class 12)	512	1850.20	26.70	0.4677
	661	1880.00	26.70	0.4677
	810	1910.00	26.60	0.4571

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	25.97	0.3954
	9400	1880.00	25.72	0.3733
	9538	1907.60	25.38	0.3451
WCDMA (BAND V)	4132	826.40	26.55	0.4519
	4182	836.40	26.69	0.4667
	4233	846.60	26.48	0.4446

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power (W)
WCDMA / HSDPA (BAND II)	9262	1852.40	25.87	0.3864
	9400	1880.00	25.68	0.3698
	9538	1907.60	25.53	0.3573
WCDMA / HSDPA (BAND V)	4132	826.40	26.28	0.4246
	4182	836.40	26.31	0.4276
	4233	846.60	26.21	0.4178

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power (W)
WCDMA / HSUPA (BAND II)	9262	1852.40	25.83	0.3828
	9400	1880.00	25.62	0.3648
	9538	1907.60	25.47	0.3524
WCDMA / HSUPA (BAND V)	4132	826.40	26.18	0.4150
	4182	836.40	26.26	0.4227
	4233	846.60	26.32	0.4285

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

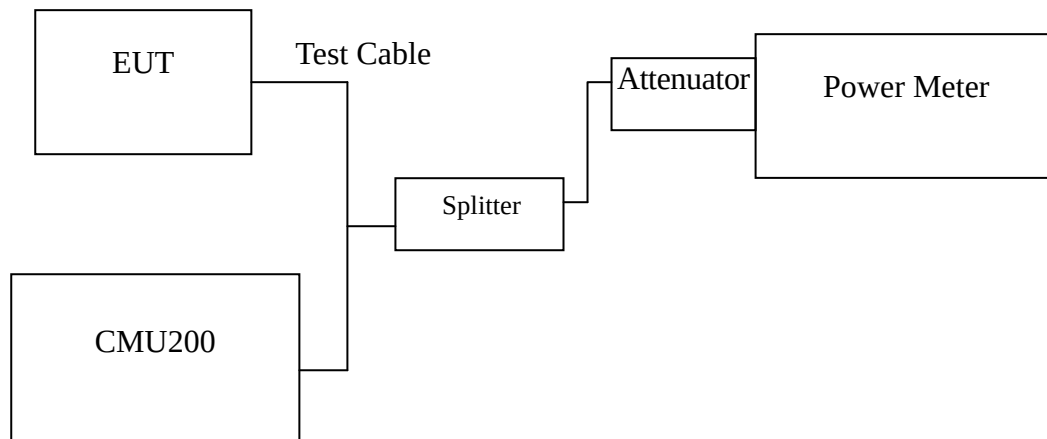


7.3 AVERAGE POWER

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)	Average Power (dBm)	Output Power (W)
GSM 850 (Class B)	128	824.20	32.40	1.7378
	190	836.40	32.40	1.7378
	251	848.80	32.20	1.6596
GPRS 850 (Class 12)	128	824.20	32.20	1.6596
	190	836.40	32.10	1.6218
	251	848.80	32.00	1.5849
EDGE 850 (Class 12)	128	824.20	24.80	0.3020
	190	836.40	24.90	0.3090
	251	848.80	24.60	0.2884

Test Mode	CH	Frequency (MHz)	Average Power (dBm)	Output Power (W)
GSM 1900 (Class 12)	512	1850.20	30.30	1.0715
	661	1880.00	30.20	1.0471
	810	1909.80	30.00	1.0000
GPRS 1900 (Class 12)	512	1850.20	30.10	1.0233
	661	1880.00	30.00	1.0000
	810	1909.80	29.00	0.7943
EDGE 1900 (Class 12)	512	1850.20	26.60	0.4571
	661	1880.00	26.60	0.4571
	810	1909.80	26.50	0.4467

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



Test Mode	CH	Frequency (MHz)	Average Power (dBm)	Output Power (W)
WCDMA (BAND II)	9262	1852.40	23.05	0.2018
	9400	1880.00	22.73	0.1875
	9538	1907.60	22.54	0.1795
WCDMA (BAND V)	4132	826.40	22.80	0.1905
	4182	836.40	22.82	0.1914
	4233	846.60	22.76	0.1888

Test Mode	CH	Frequency (MHz)	Average Power (dBm)	Output Power (W)
WCDMA / HSDPA (BAND II)	9262	1852.40	22.38	0.1730
	9400	1880.00	22.15	0.1641
	9538	1907.60	21.97	0.1574
WCDMA / HSDPA (BAND V)	4132	826.40	22.14	0.1637
	4182	836.40	22.22	0.1667
	4233	846.60	22.15	0.1641

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power (W)
WCDMA / HSUPA (BAND II)	9262	1852.40	22.40	0.1738
	9400	1880.00	22.14	0.1637
	9538	1907.60	21.96	0.1570
WCDMA / HSUPA (BAND V)	4132	826.40	22.17	0.1648
	4182	836.40	22.20	0.1660
	4233	846.60	22.06	0.1607

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



7.4 ERP & EIRP MEASUREMENT

LIMIT

According to FCC §2.1046

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

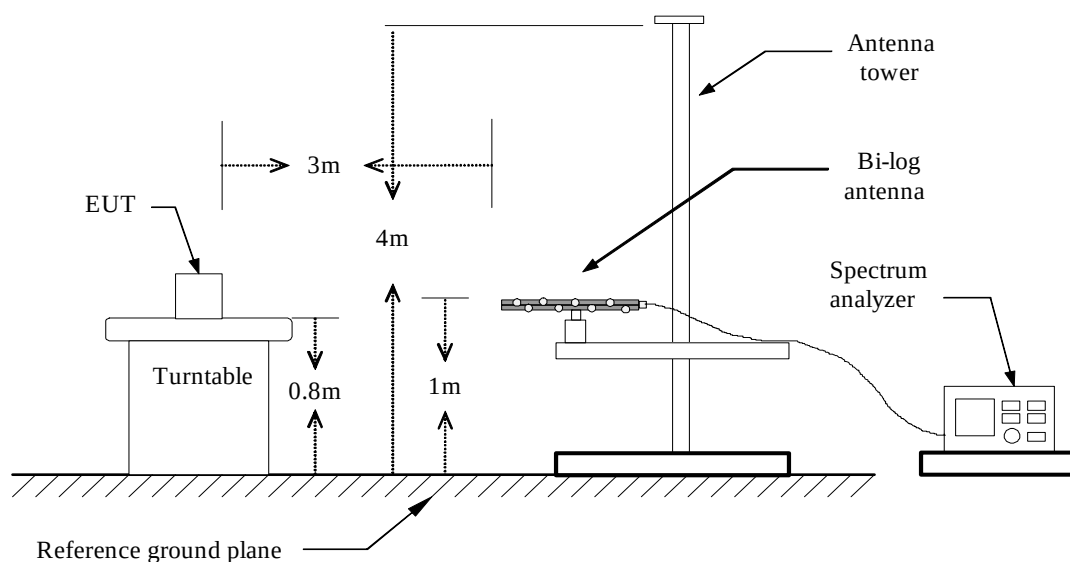
RSS-132 § 4.4 The maximum (ERP) shall be 6.3 Watts for mobile stations.

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

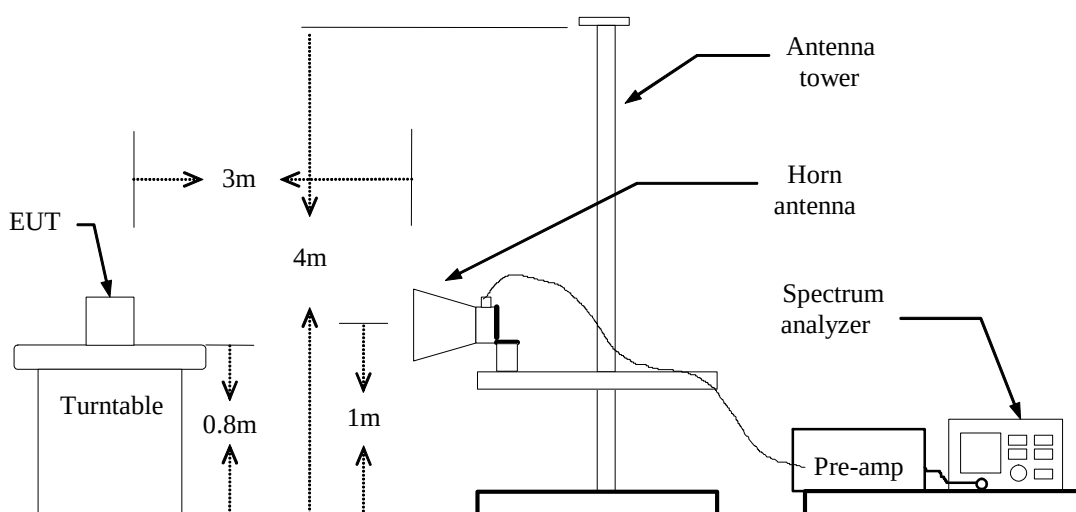
RSS133 § 6.4: Mobile stations and hand-held portables are limited to 2 watts maximum (EIRP).

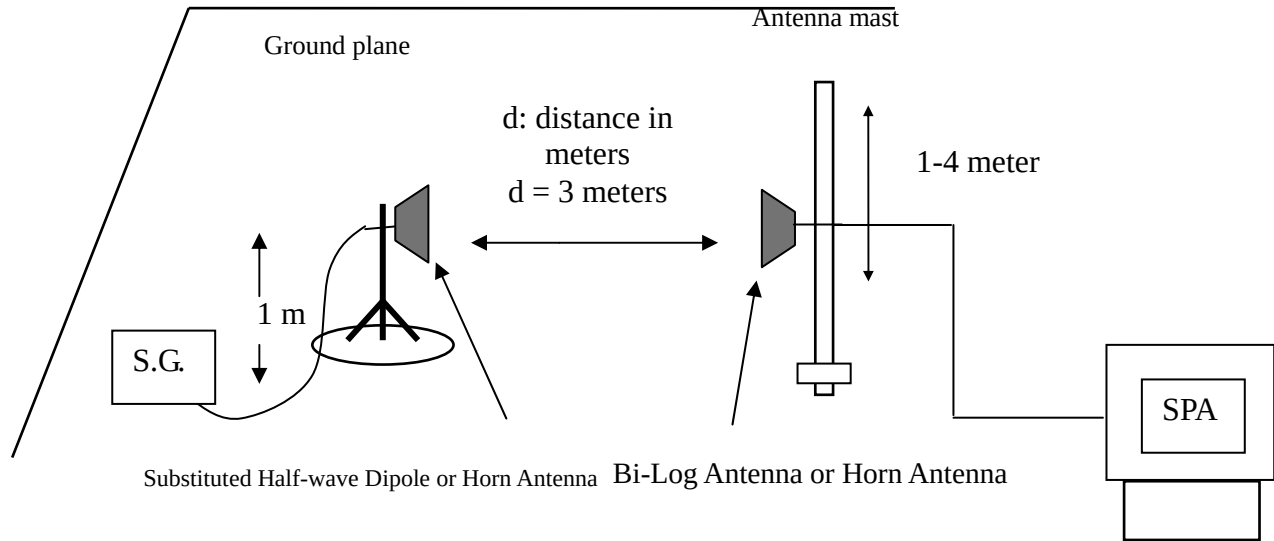
Test Configuration

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.

**GSM 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	22.52	3.39	6.24	25.37	38.45	-13.08
	824.20	H	23.98	3.39	6.24	26.83	38.45	-11.62
190	836.60	V	23.78	3.4	6.36	26.74	38.45	-11.71
	836.60	H	24.15	3.4	6.36	27.11	38.45	-11.34
251	848.80	V	24.53	3.4	6.4	*27.53	38.45	-10.92
	848.80	H	23.44	3.4	6.4	26.44	38.45	-12.01

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	20.91	3.39	6.24	23.76	38.45	-14.69
	824.20	H	21.97	3.39	6.24	24.82	38.45	-13.63
190	836.60	V	22.34	3.4	6.37	25.31	38.45	-13.14
	836.60	H	23.07	3.4	6.37	26.04	38.45	-12.41
251	848.80	V	22.86	3.4	6.4	25.86	38.45	-12.59
	848.80	H	24.23	3.4	6.4	*27.23	38.45	-11.22

GSM 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	25.71	5.37	5.67	26.01	33.00	-6.99
	1850.20	H	17.09	5.37	5.67	17.39	33.00	-15.61
661	1880.00	V	26.22	5.42	5.62	26.42	33.00	-6.58
	1880.00	H	17.19	5.42	5.62	17.39	33.00	-15.61
810	1909.80	V	27	5.48	5.56	*27.08	33.00	-5.92
	1909.80	H	18.09	5.48	5.56	18.17	33.00	-14.83

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	26.46	5.37	5.67	26.76	33.00	-6.24
	1850.20	H	17.9	5.37	5.67	18.20	33.00	-14.80
661	1880.00	V	25.89	5.42	5.62	26.09	33.00	-6.91
	1880.00	H	18.6	5.42	5.62	18.80	33.00	-14.20
810	1909.80	V	27.1	5.48	5.56	*27.18	33.00	-5.82
	1909.80	H	20.73	5.48	5.56	20.81	33.00	-12.19

**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	21.08	3.39	6.24	23.93	38.45	-14.52
	824.20	H	22.01	3.39	6.24	24.86	38.45	-13.59
190	836.60	V	22	3.4	6.37	24.97	38.45	-13.48
	836.60	H	23.08	3.4	6.36	26.04	38.45	-12.41
251	848.80	V	23	3.4	6.4	26.00	38.45	-12.45
	848.80	H	24.2	3.4	6.4	*27.20	38.45	-11.25

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	25.19	5.37	5.67	25.49	33.00	-7.51
	1850.20	H	22.36	5.37	5.67	22.66	33.00	-10.34
661	1880.00	V	25.48	5.42	5.62	25.68	33.00	-7.32
	1880.00	H	22.01	5.42	5.62	22.21	33.00	-10.79
810	1909.80	V	26.44	5.48	5.56	*26.52	33.00	-6.48
	1909.80	H	21.75	5.48	5.56	21.83	33.00	-11.17

WCDMA 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	22.13	5.38	5.66	*22.41	33.00	-10.59
	1852.40	H	13.86	5.38	5.66	14.14	33.00	-18.86
9400	1880.00	V	20.38	5.42	5.62	20.58	33.00	-12.42
	1880.00	H	13.47	5.42	5.62	13.67	33.00	-19.33
9538	1907.60	V	20.48	5.47	5.57	20.58	33.00	-12.42
	1907.60	H	14.3	5.47	5.57	14.40	33.00	-18.60

WCDMA 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	15.48	3.39	6.27	18.36	38.45	-20.09
	826.40	H	15.74	3.39	6.27	18.62	38.45	-19.83
4182	836.40	V	15.35	3.4	6.37	18.32	38.45	-20.13
	836.40	H	14.97	3.4	6.37	17.94	38.45	-20.51
4233	846.60	V	15.68	3.4	6.4	*18.68	38.45	-19.77
	846.60	H	15.43	3.4	6.4	18.43	38.45	-20.02

**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	22.12	5.38	5.66	*22.40	33.00	-10.60
	1852.40	H	14.04	5.38	5.66	14.32	33.00	-18.68
9400	1880.00	V	20.42	5.42	5.62	20.62	33.00	-12.38
	1880.00	H	13.49	5.42	5.62	13.69	33.00	-19.31
9538	1907.60	V	20.51	5.47	5.57	20.61	33.00	-12.39
	1907.60	H	14.18	5.47	5.57	14.28	33.00	-18.72

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	15.49	3.39	6.27	18.37	38.45	-20.08
	826.40	H	15.6	3.39	6.27	18.48	38.45	-19.97
4182	836.40	V	15.4	3.4	6.37	18.37	38.45	-20.08
	836.40	H	15	3.4	6.37	17.97	38.45	-20.48
4233	846.60	V	15.38	3.4	6.4	18.38	38.45	-20.07
	846.60	H	15.56	3.4	6.4	*18.56	38.45	-19.89

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	22.07	5.38	5.66	*22.35	33.00	-10.65
	1852.40	H	14	5.38	5.66	14.28	33.00	-18.72
9400	1880.00	V	20.37	5.42	5.62	20.57	33.00	-12.43
	1880.00	H	13.42	5.42	5.62	13.62	33.00	-19.38
9538	1907.60	V	20.61	5.47	5.57	20.71	33.00	-12.29
	1907.60	H	14.23	5.47	5.57	14.33	33.00	-18.67

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	15.57	3.39	6.27	18.45	38.45	-20.00
	826.40	H	15.54	3.39	6.27	18.42	38.45	-20.03
4182	836.40	V	15.36	3.4	6.37	18.33	38.45	-20.12
	836.40	H	14.86	3.4	6.37	17.83	38.45	-20.62
4233	846.60	V	15.28	3.4	6.4	18.28	38.45	-20.17
	846.60	H	15.56	3.4	6.4	*18.56	38.45	-19.89



7.5 OUT OF BAND EMISSION AT ANTENNA TERMINALS

LIMIT

According to FCC §2.1051, FCC §22.917, FCC §24.238(a), RSS-132 (4.5.2), RSS-133 (6.6).

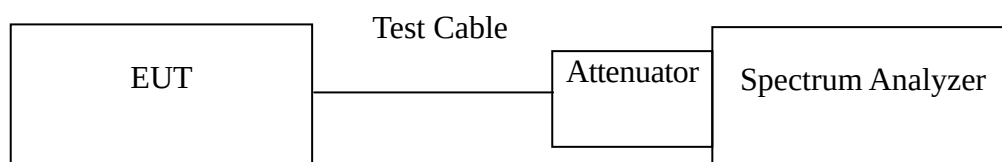
Out of Band Emissions: The mean power of emission must be attenuated below the mean power of the non-modulated carrier (P) on any frequency twice or more than twice the fundamental frequency by at least $43 + 10 \log P$ dB.

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

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

Test Configuration

Out of band emission at antenna terminals:



TEST PROCEDURE

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

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

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

TEST RESULTS

No non-compliance noted.

**Test Data**

Mode	CH	Location	Description
GSM 850	128	Figure 7-1	Conducted spurious emissions, 30MHz - 20GHz
	190	Figure 7-2	Conducted spurious emissions, 30MHz - 20GHz
	251	Figure 7-3	Conducted spurious emissions, 30MHz - 20GHz
GPRS 850	128	Figure 8-1	Conducted spurious emissions, 30MHz - 20GHz
	190	Figure 8-2	Conducted spurious emissions, 30MHz - 20GHz
	251	Figure 8-3	Conducted spurious emissions, 30MHz - 20GHz

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

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

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



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

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



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

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

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

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



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

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



Test Plot

GSM 850

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

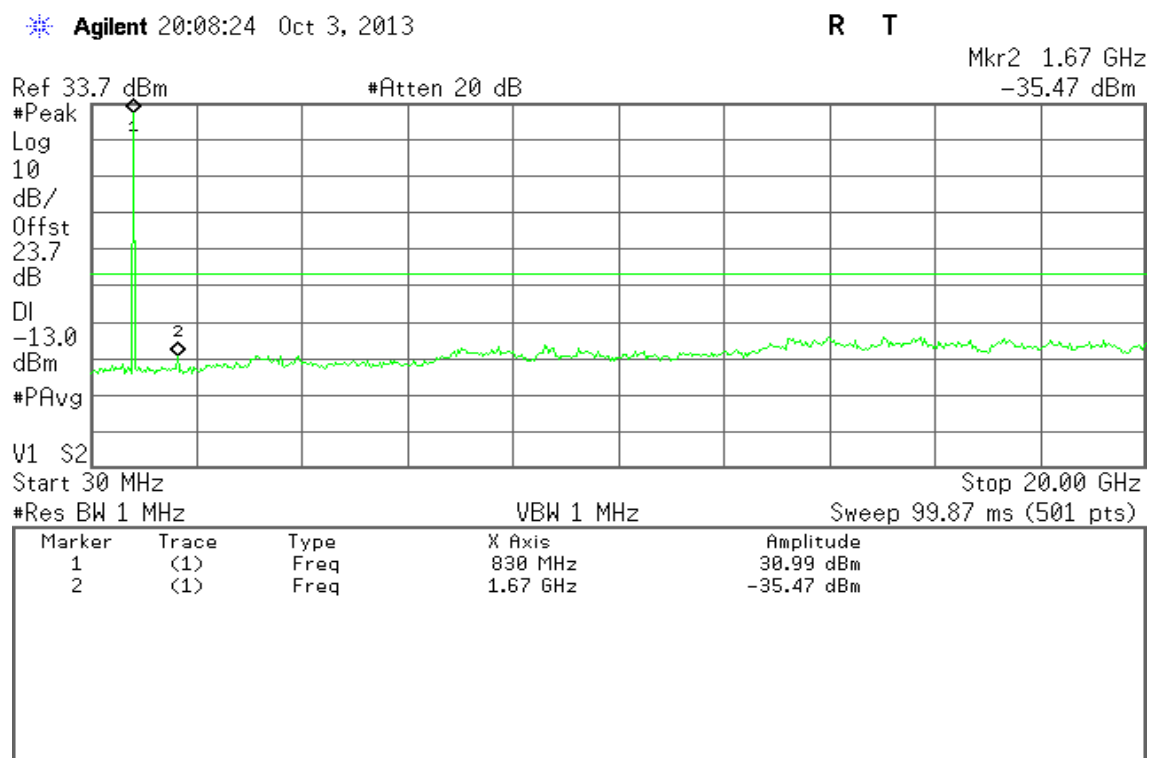


Figure 7-2: Out of Band emission at antenna terminals – GSM CH Mid

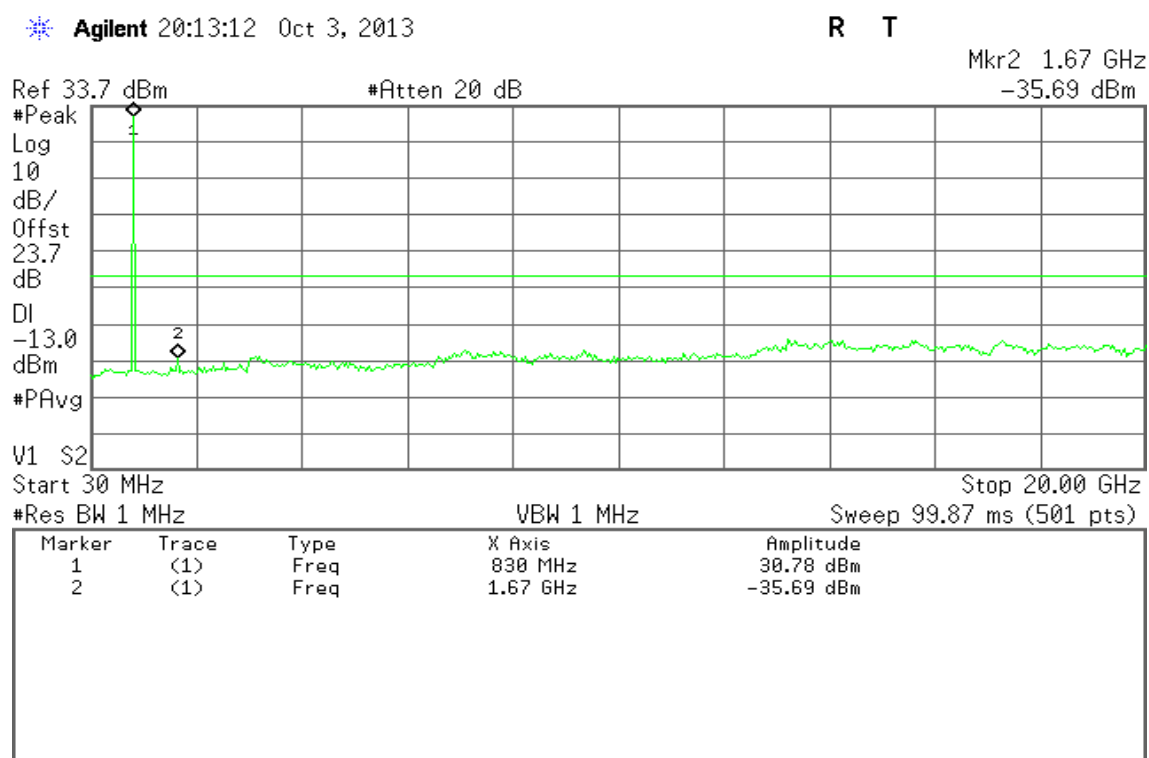
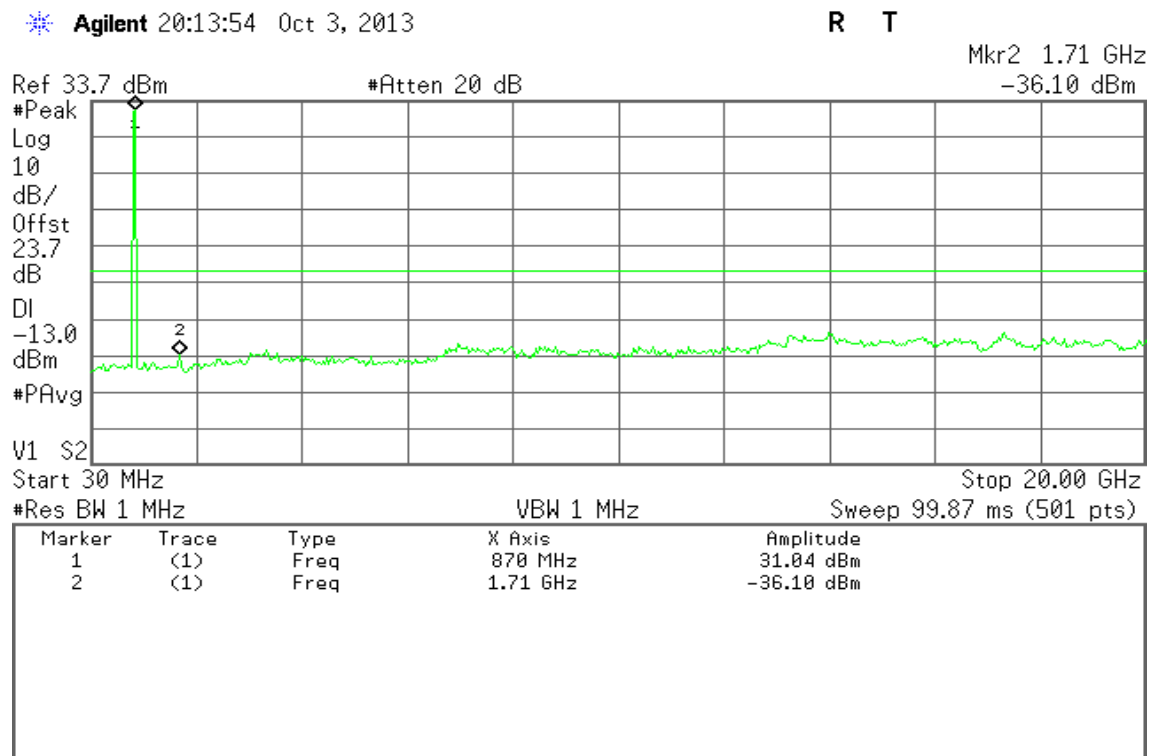




Figure 7-3: Out of Band emission at antenna terminals – GSM CH High



GPRS 850

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

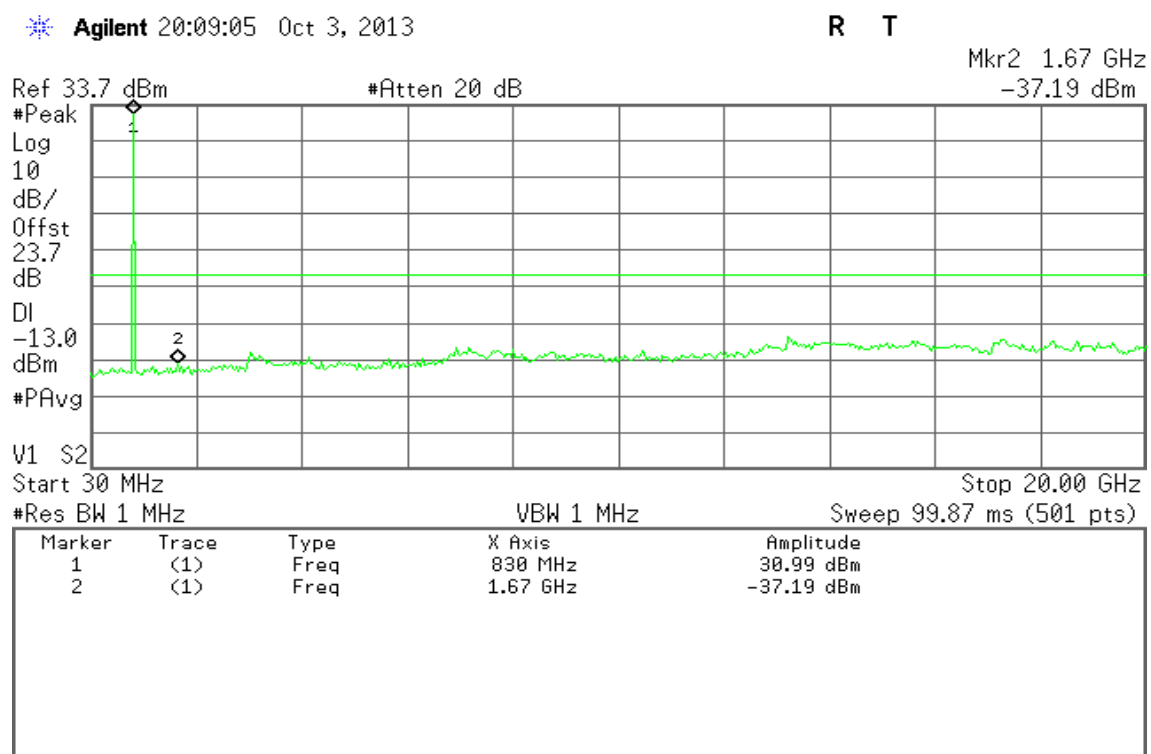




Figure 8-2: Out of Band emission at antenna terminals – GPRS CH Mid

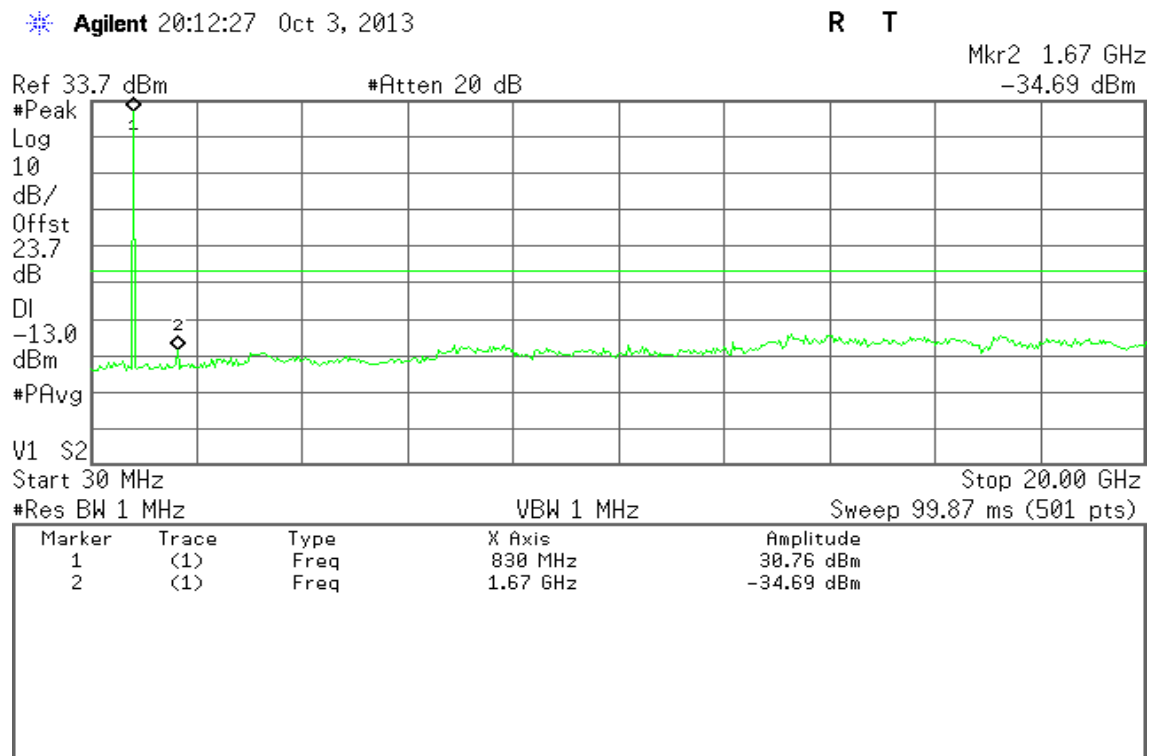
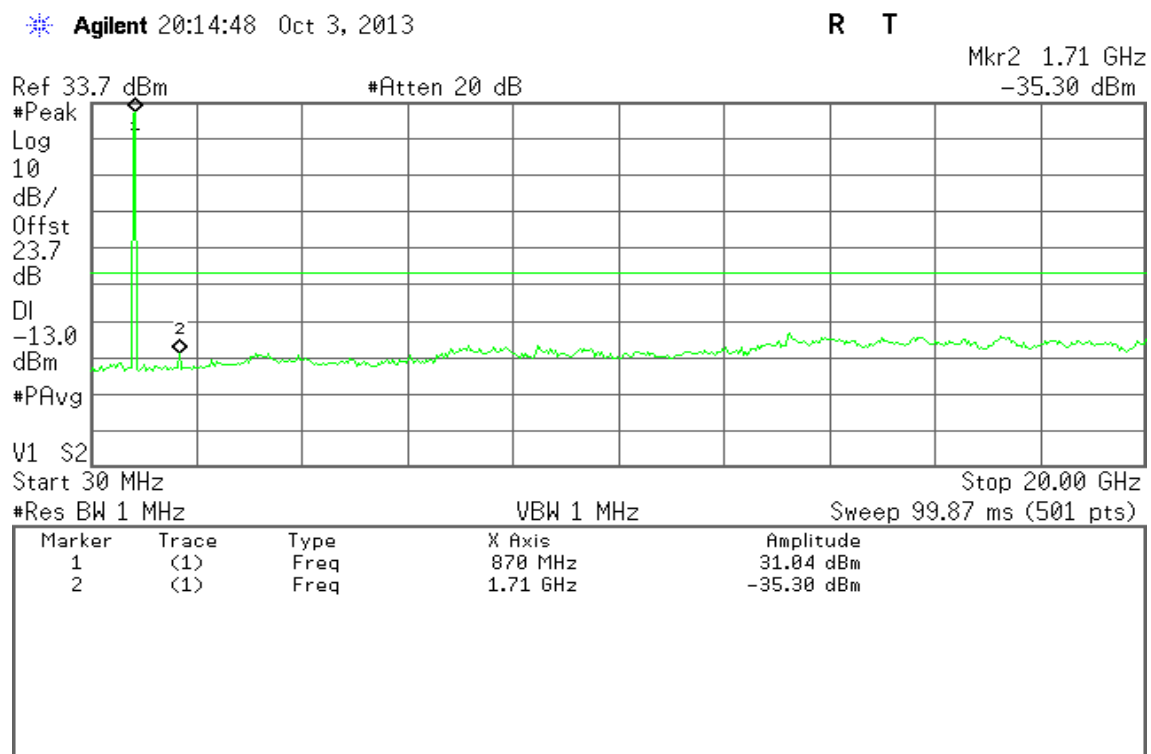


Figure 8-3: Out of Band emission at antenna terminals – GPRS CH High





GSM 1900

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

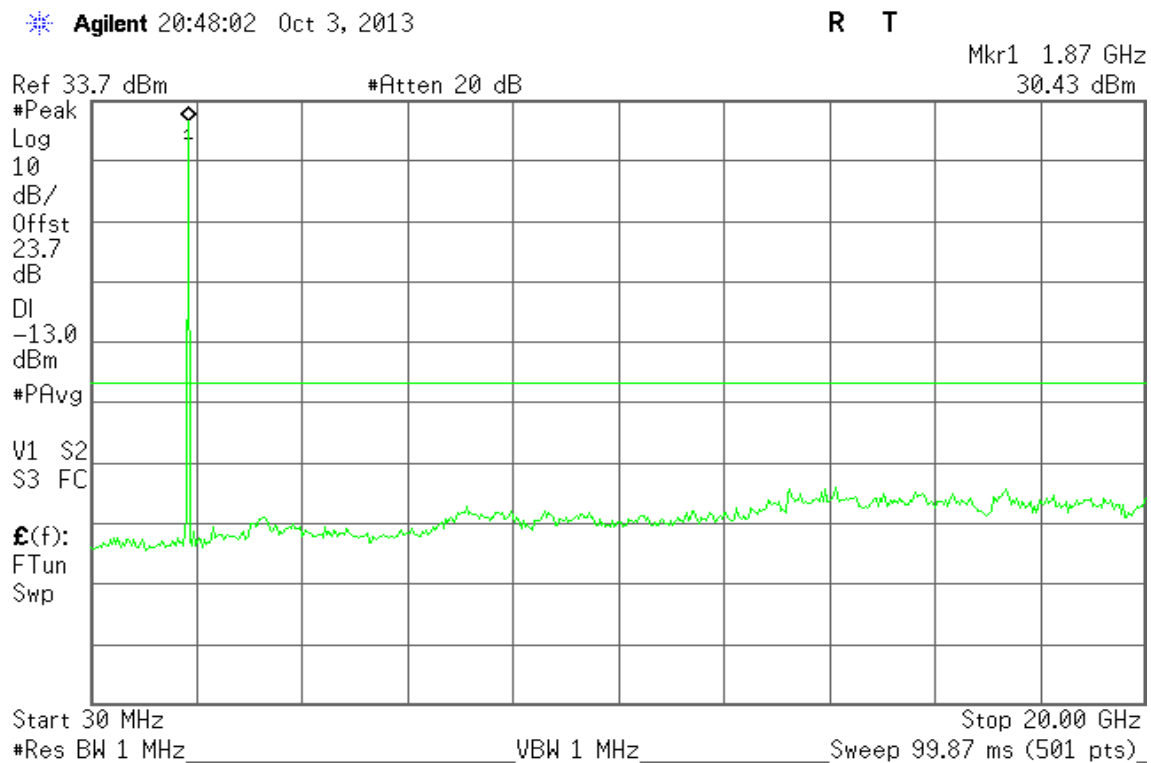


Figure 9-2: Out of Band emission at antenna terminals – GSM CH Mid

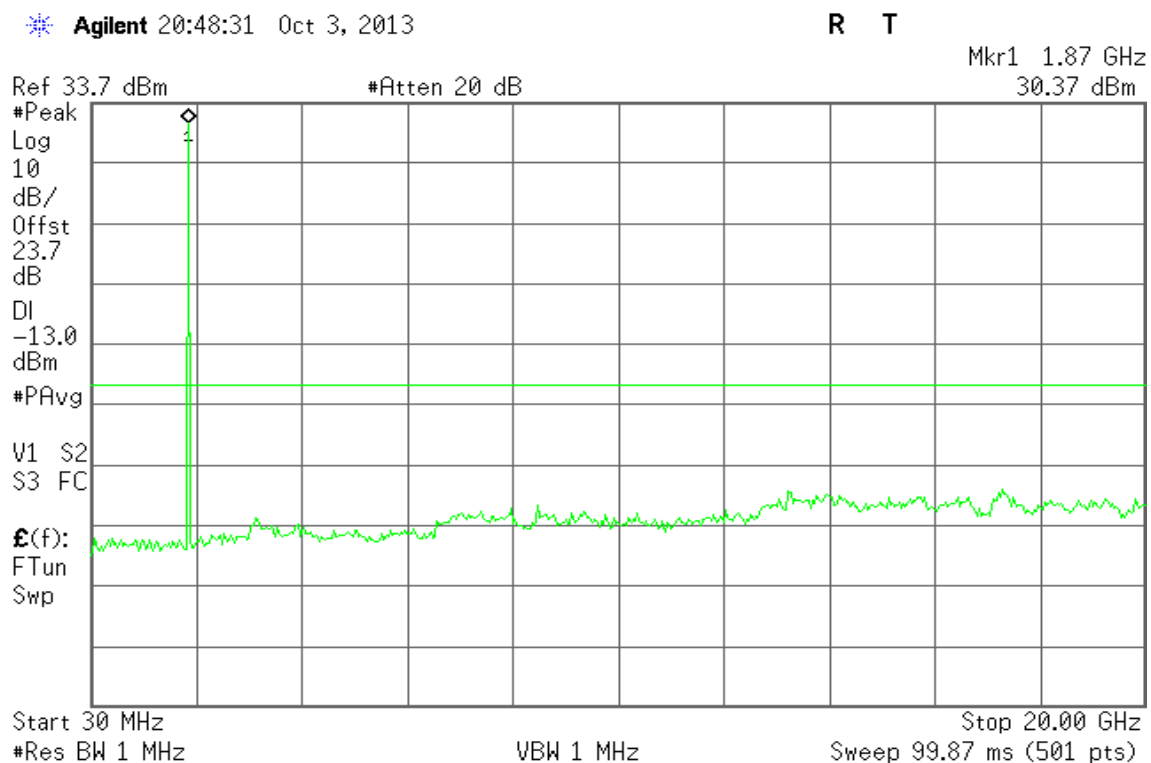
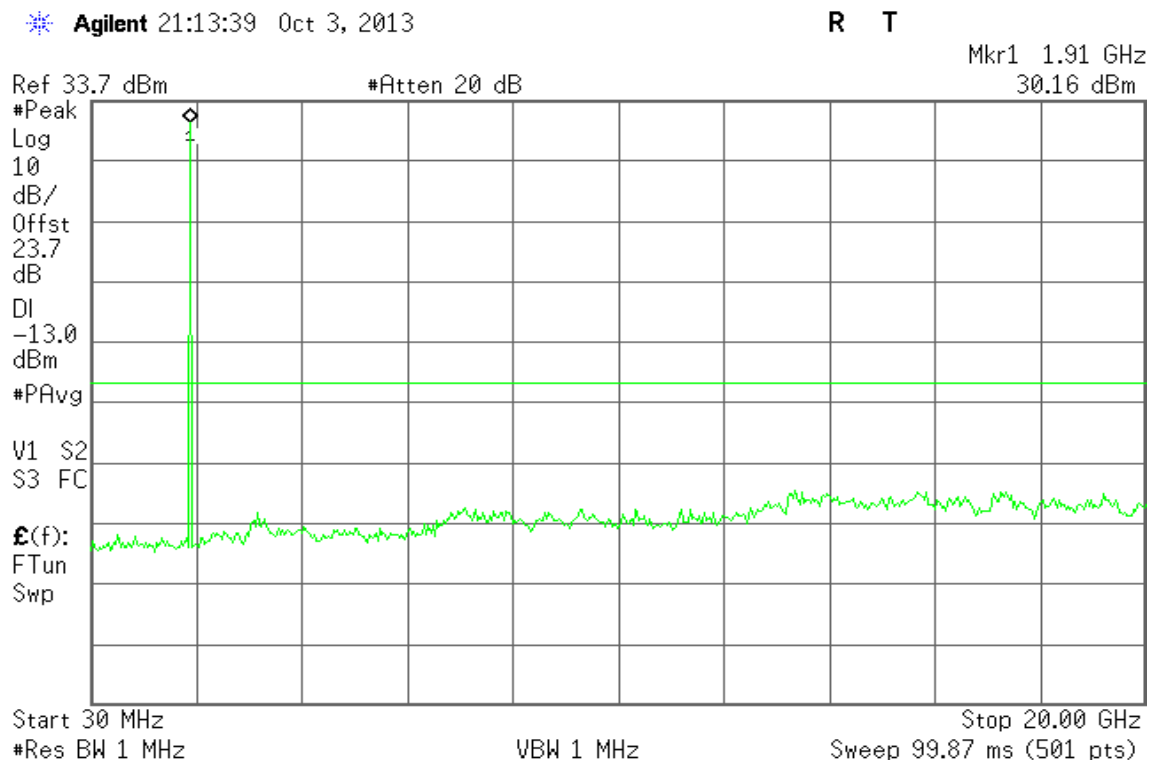




Figure 9-3: Out of Band emission at antenna terminals – GSM CH High



GPRS 1900

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

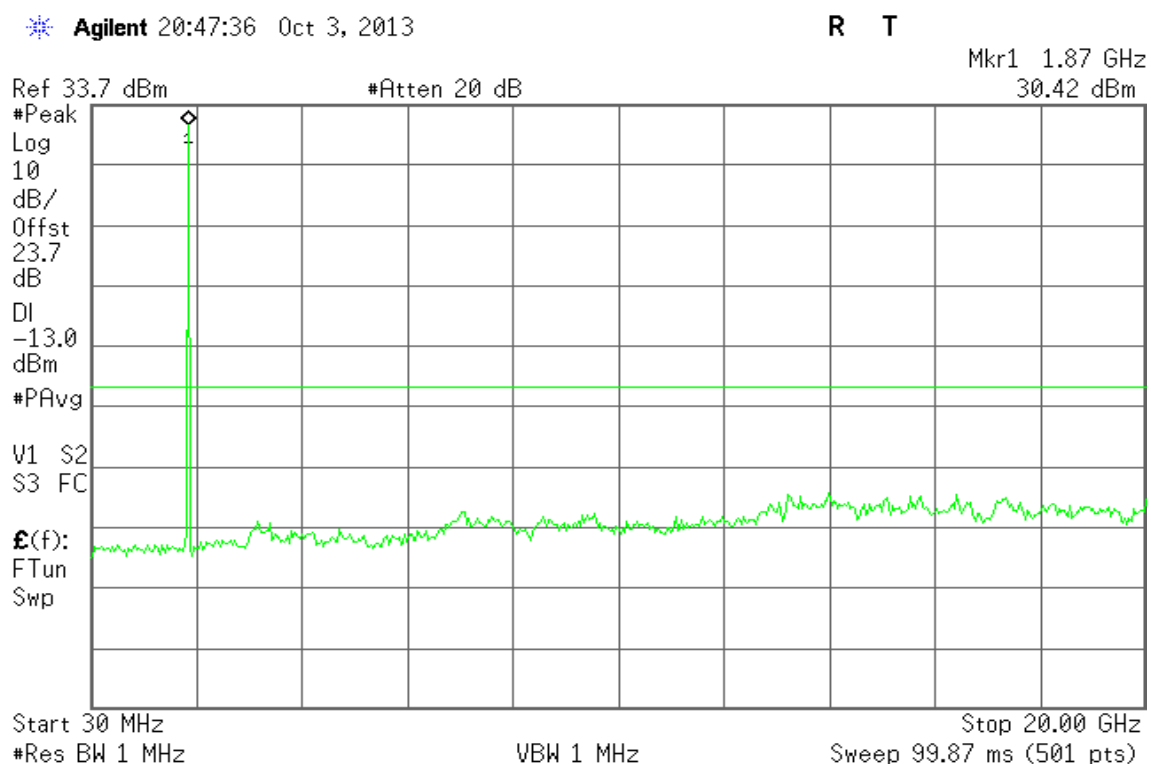




Figure 10-2: Out of Band emission at antenna terminals – GSM CH Mid

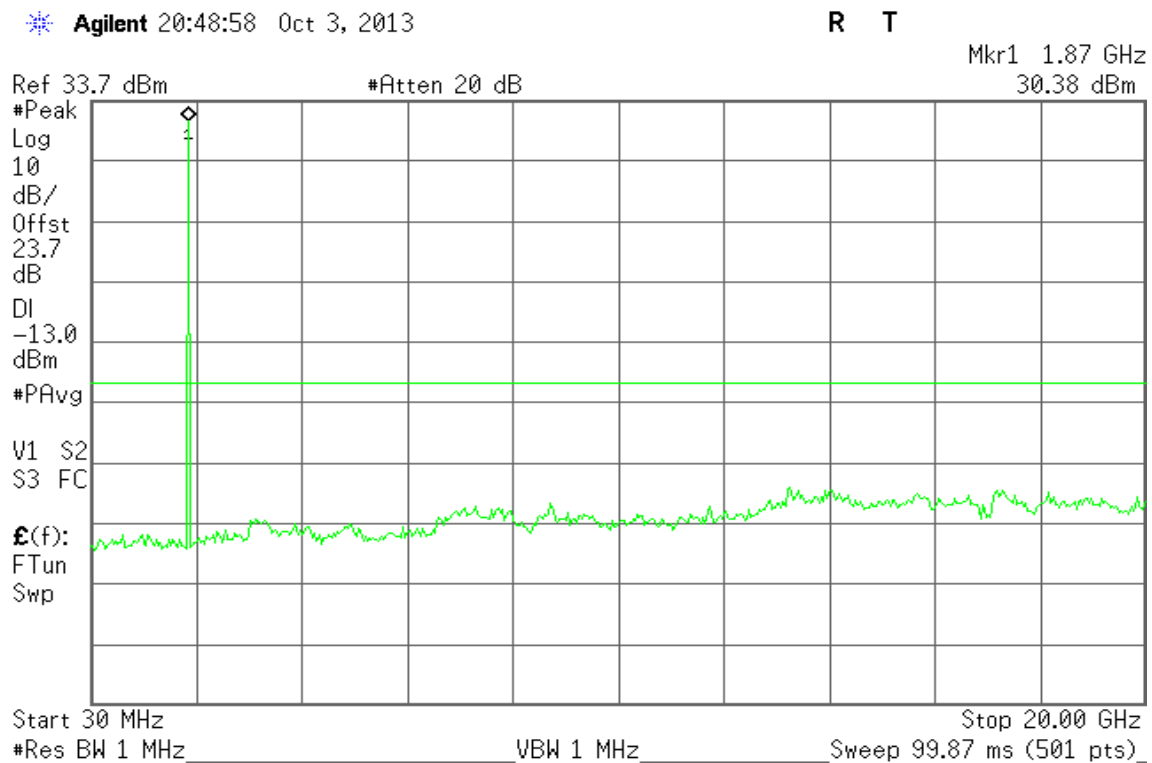
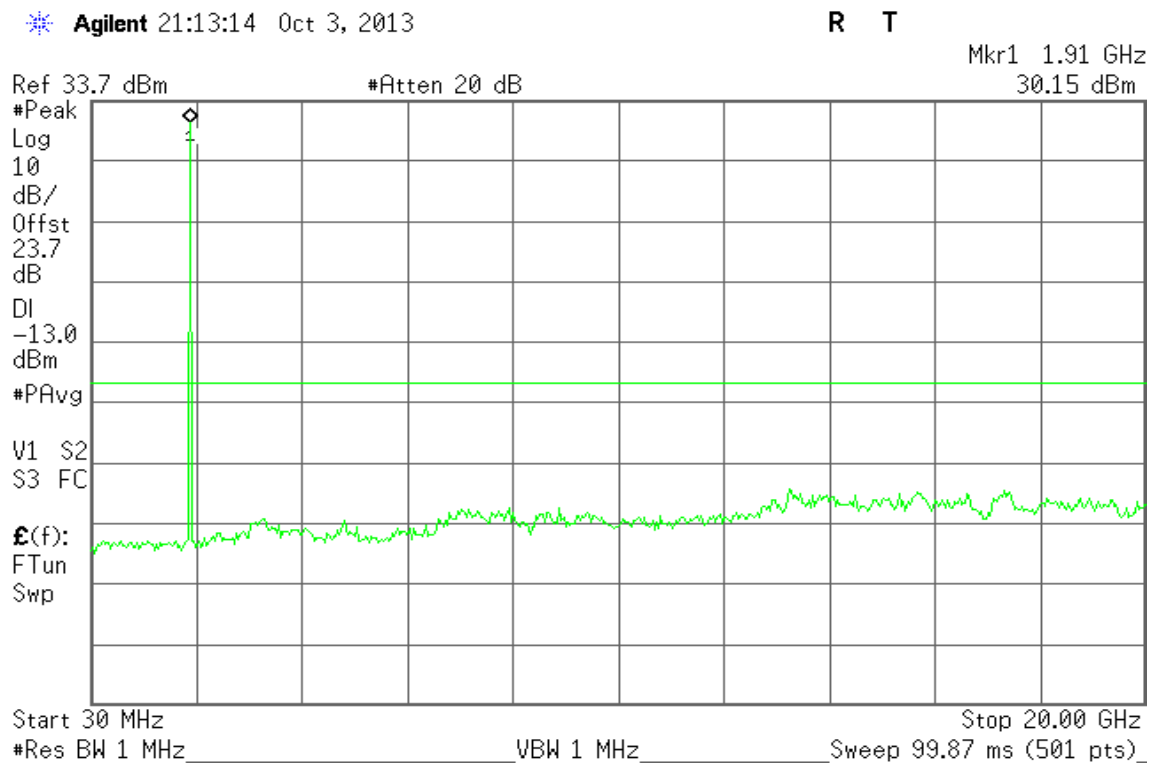


Figure 10-3: Out of Band emission at antenna terminals – GSM CH High





GSM 850

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

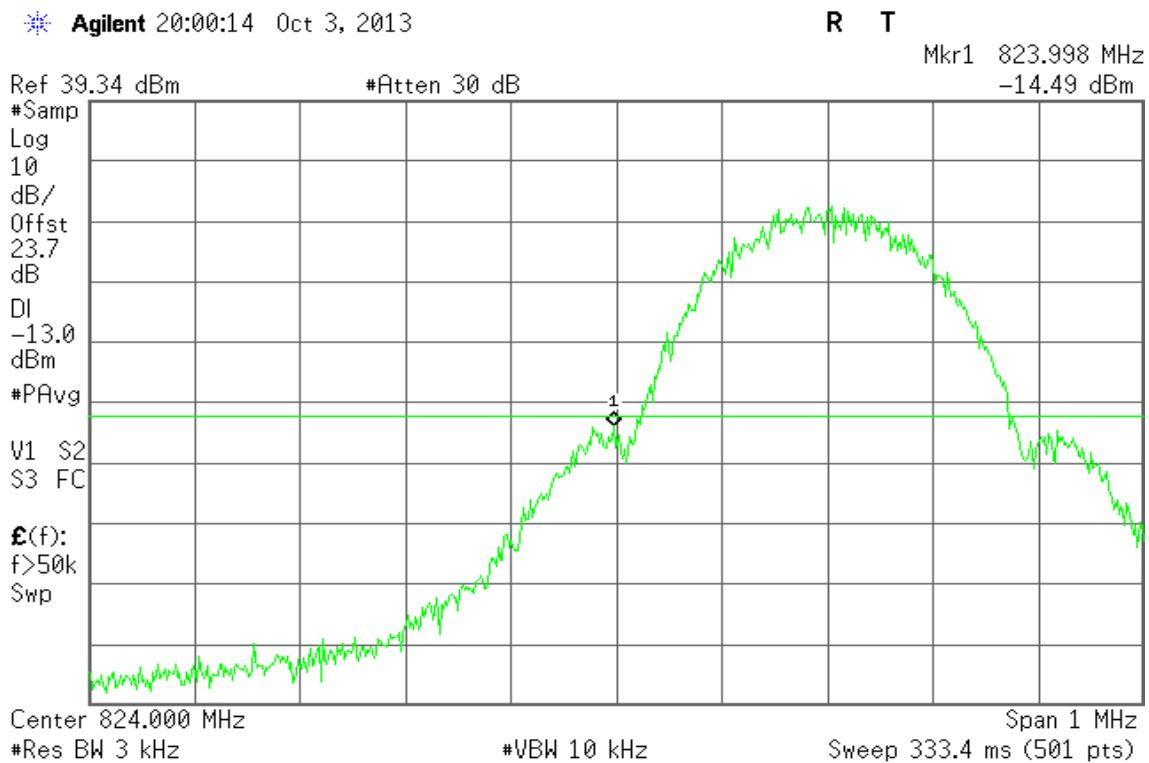
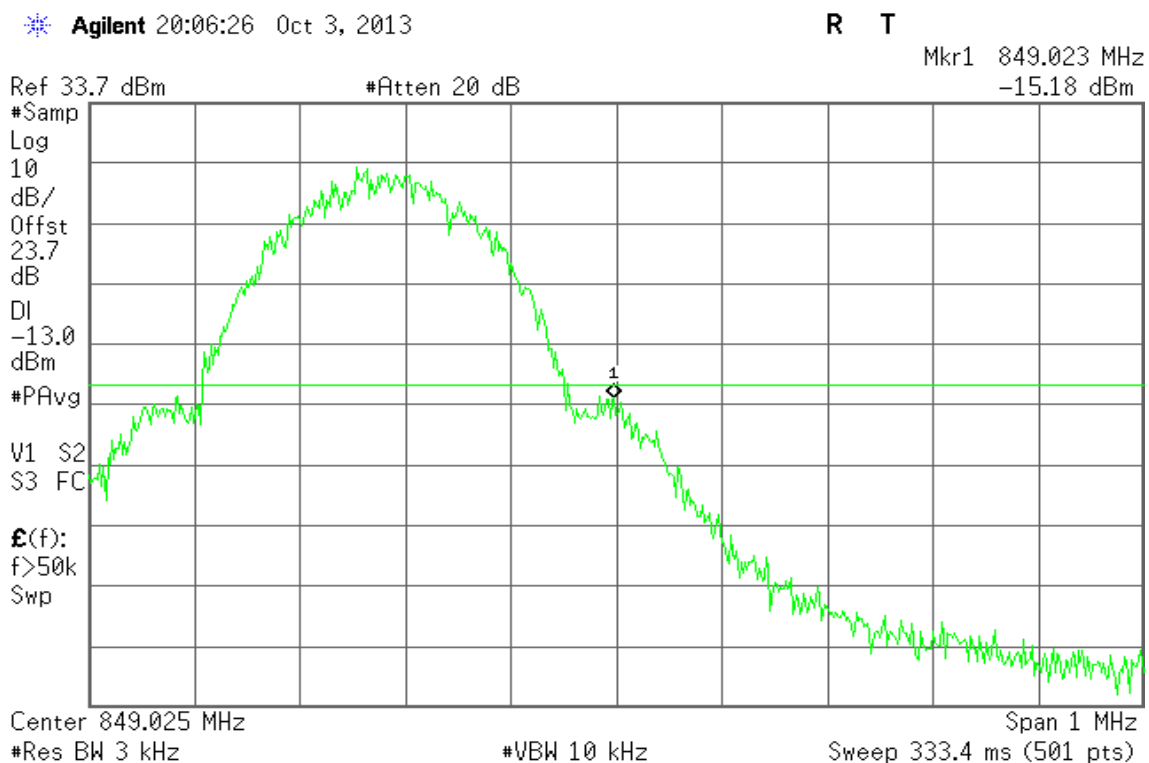


Figure 11-2: Band Edge emissions – GSM CH High





GPRS 850

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

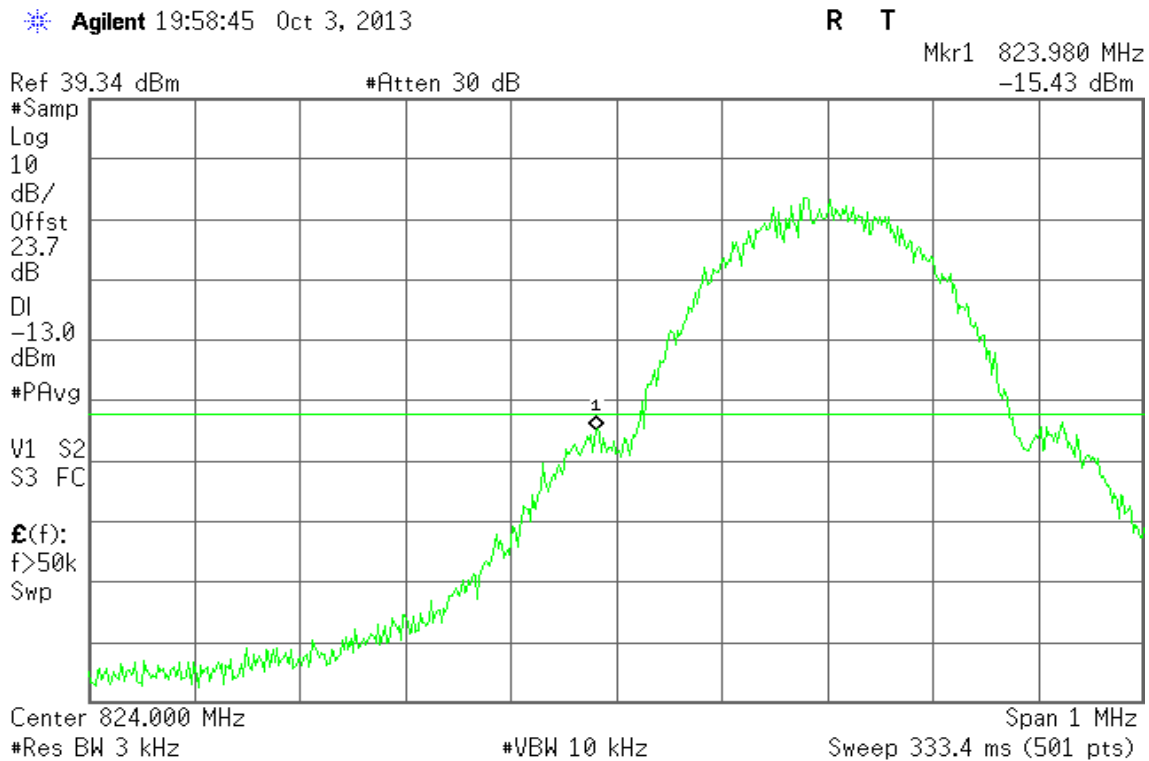
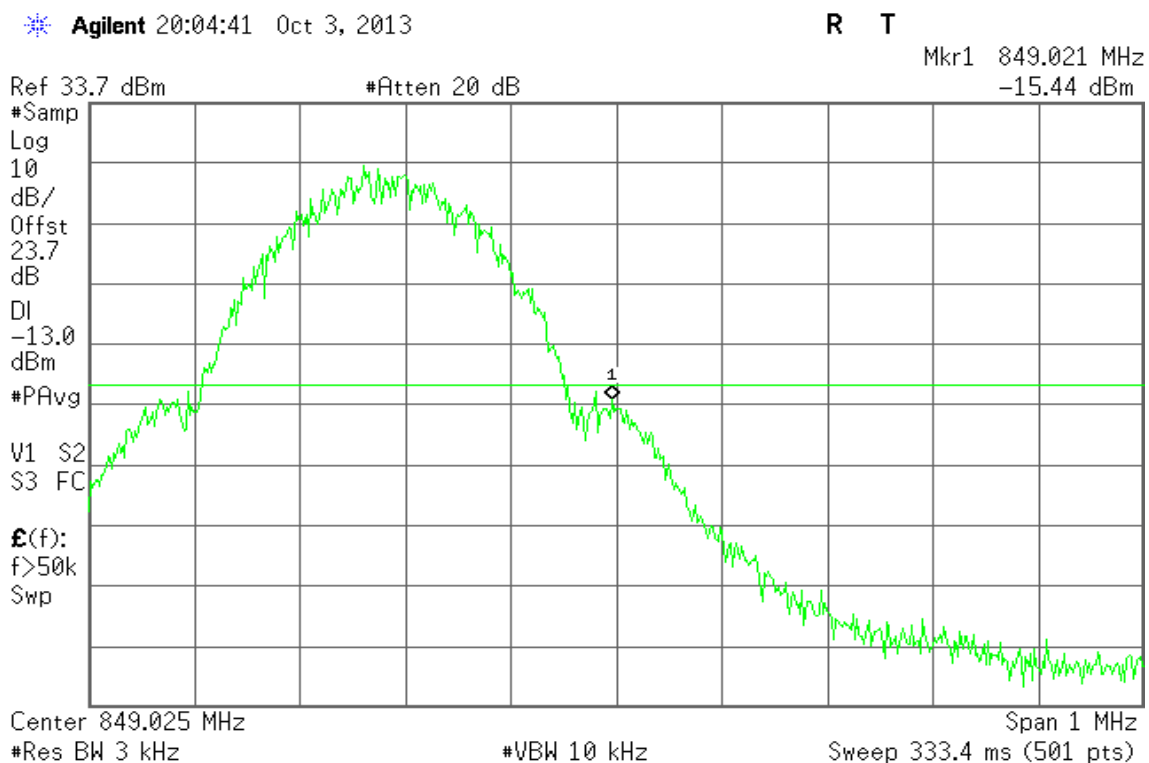


Figure 12-2: Band Edge emissions –GPRS CH High





GSM 1900

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

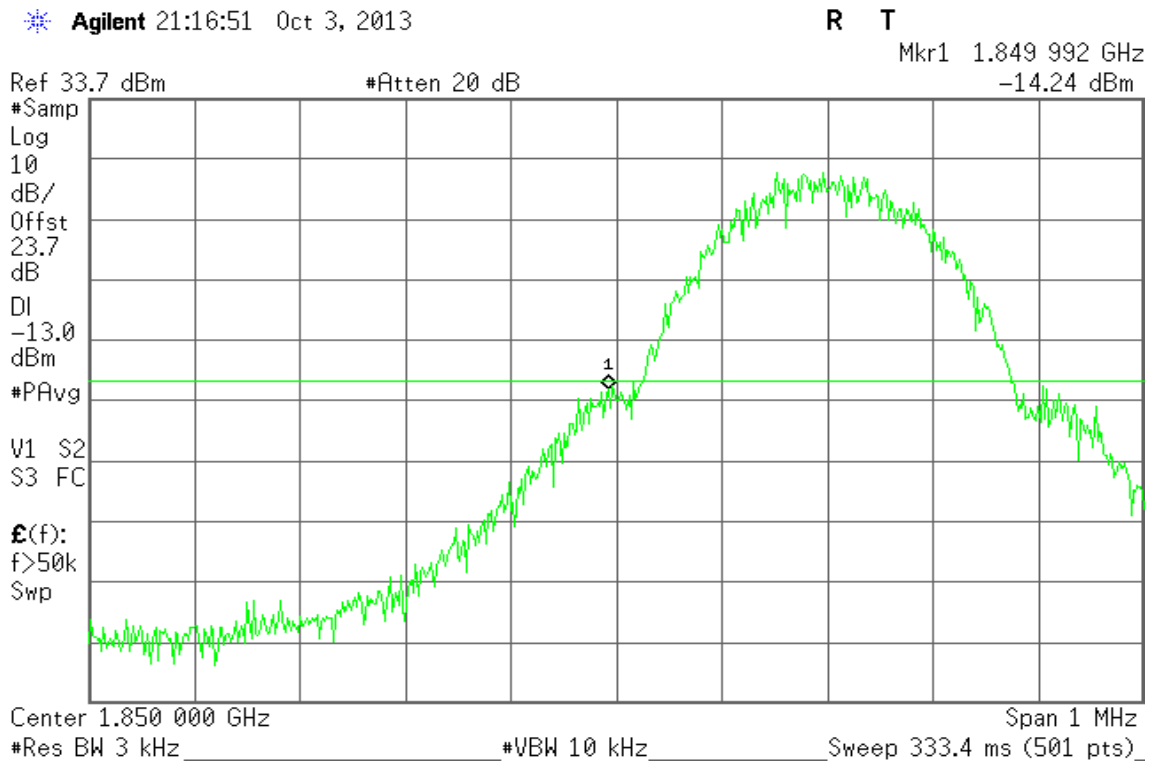
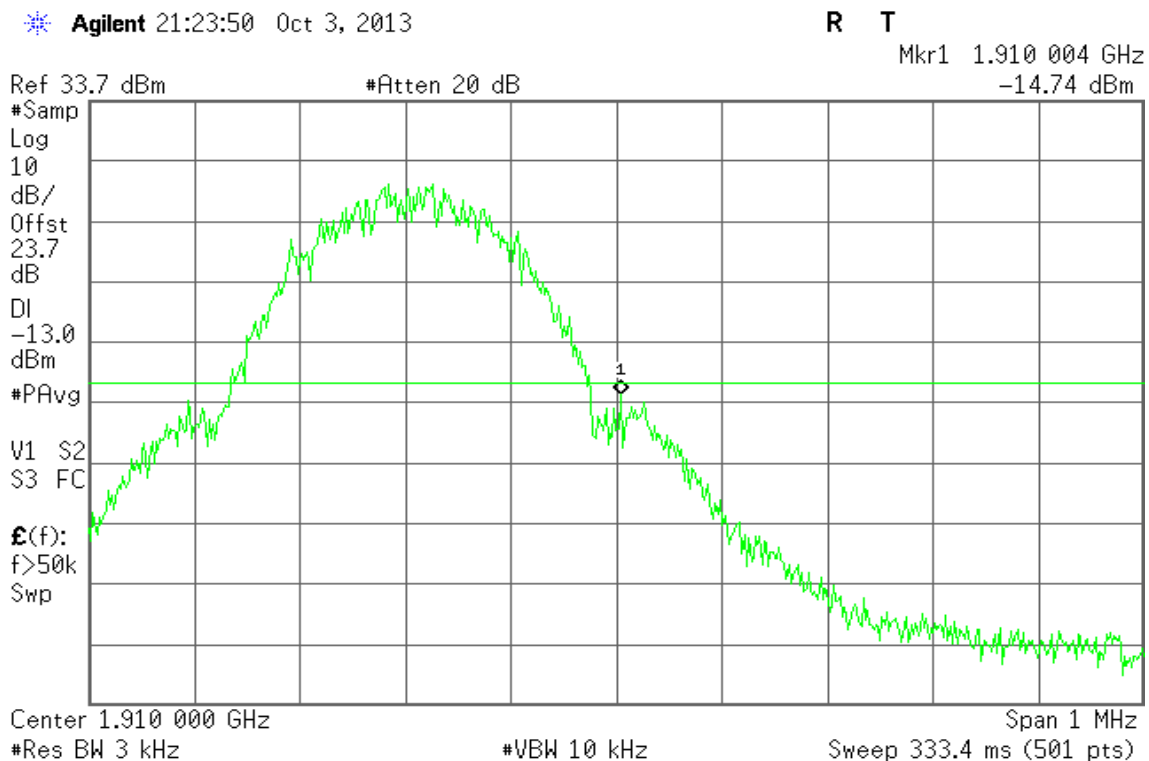


Figure 13-2: Band Edge emissions – GSM CH High





GPRS 1900

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

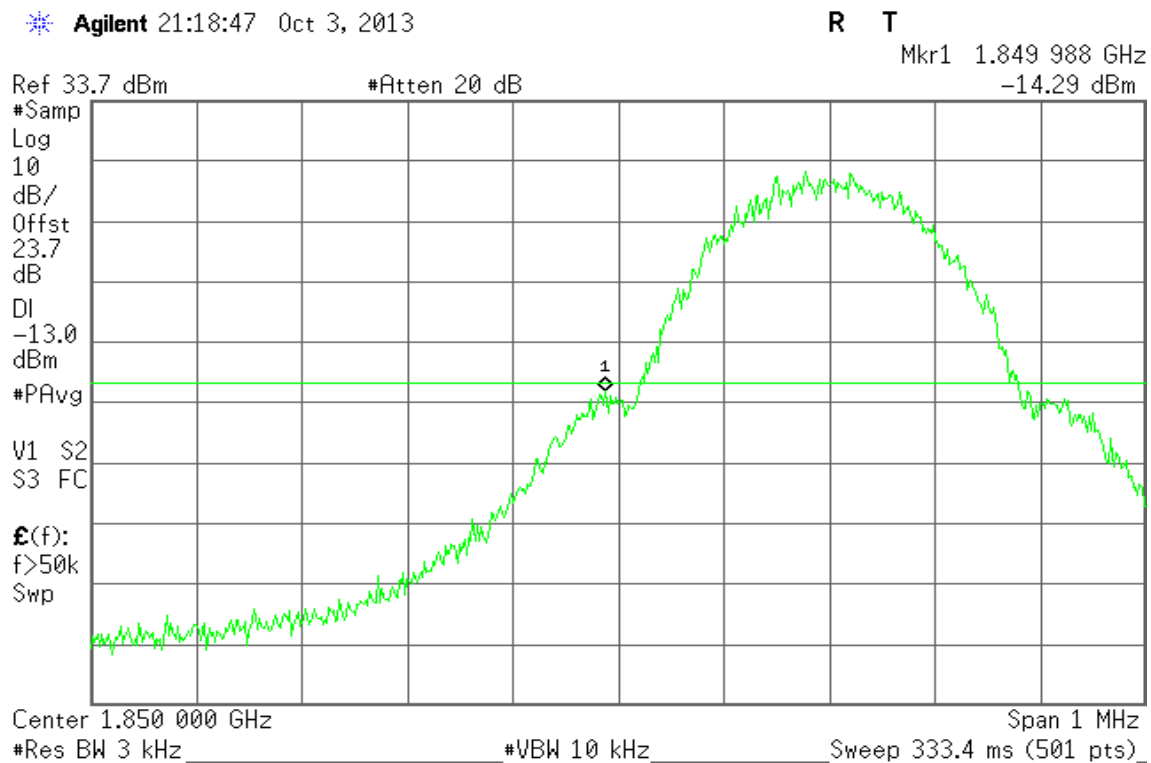
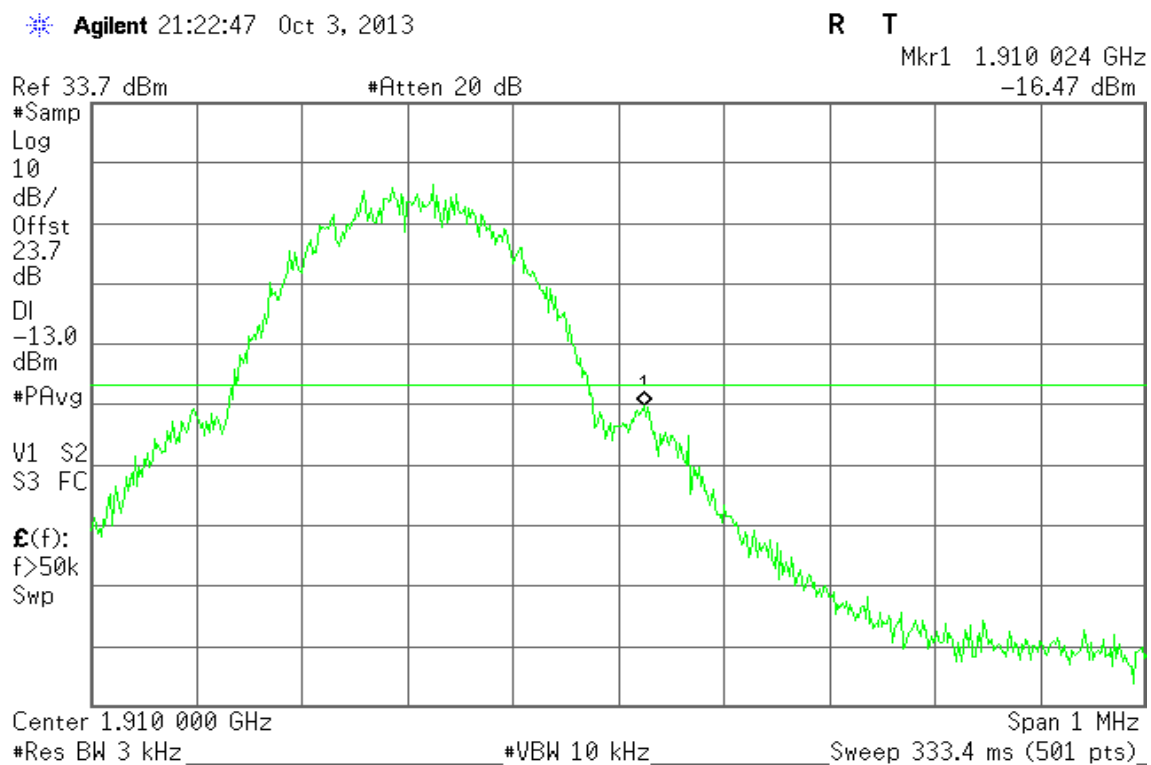


Figure 14-2: Band Edge emissions – GPRS CH High





EDGE 850

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

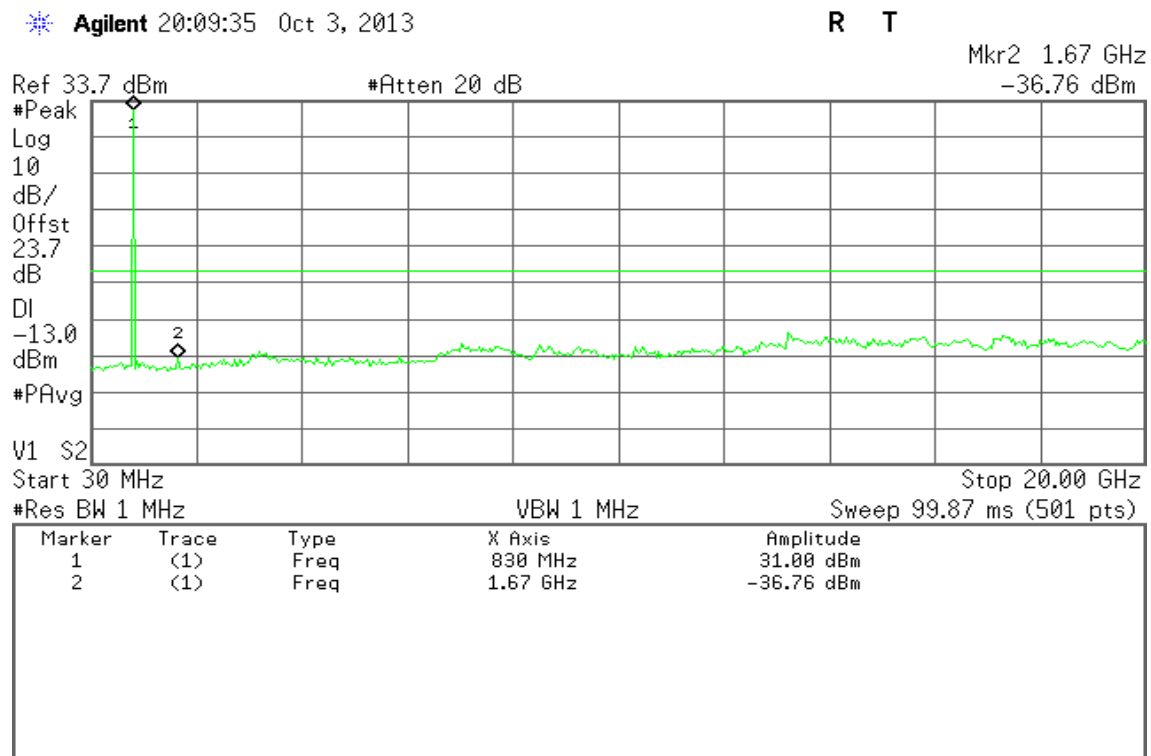


Figure 15-2: Out of Band emission at antenna terminals –EDGE CH Mid

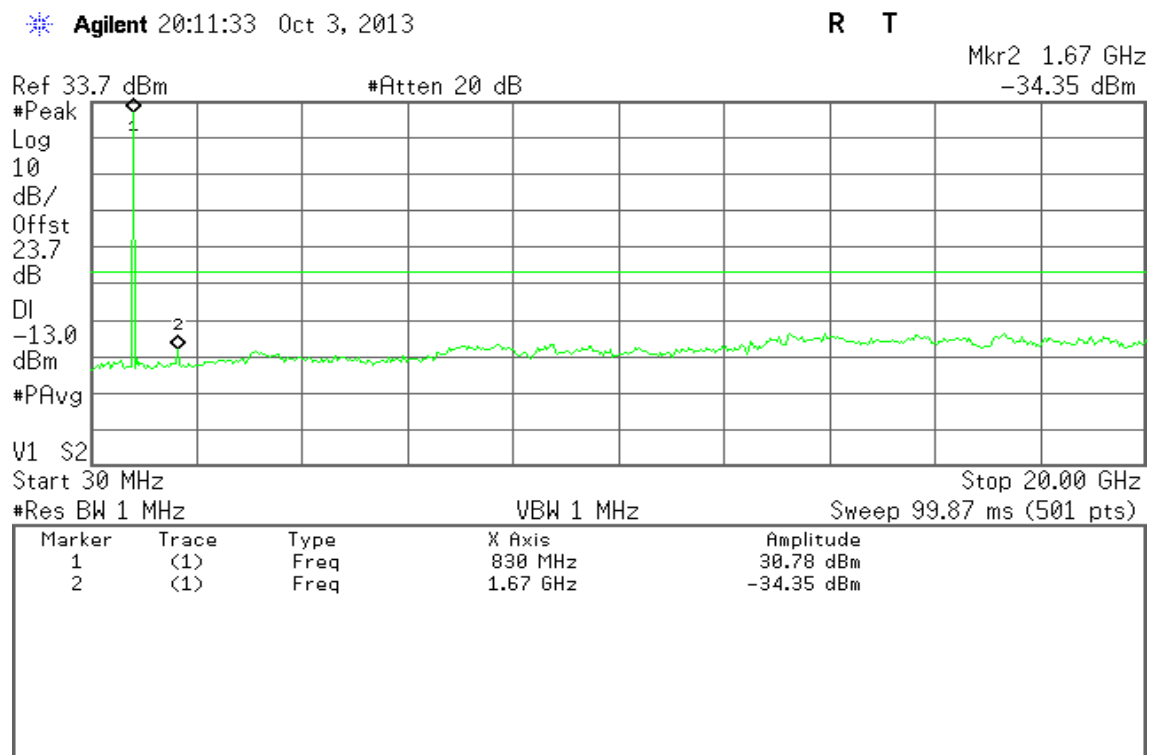
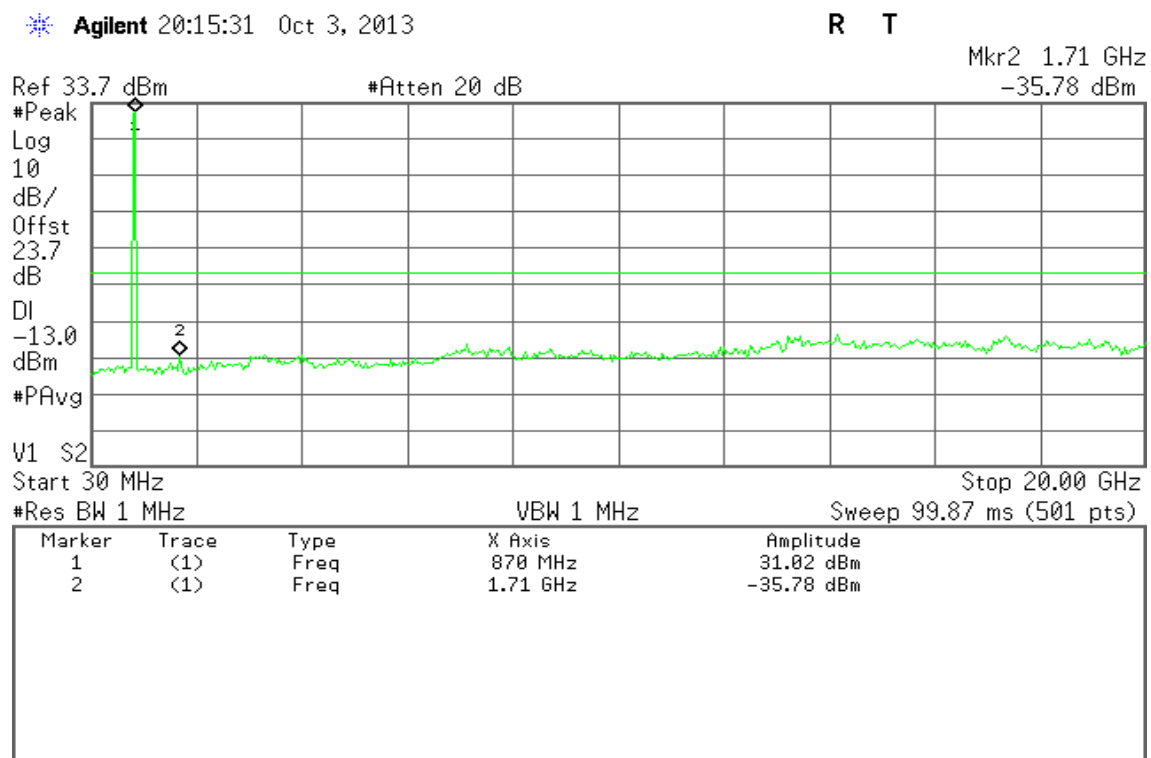




Figure 15-3: Out of Band emission at antenna terminals –EDGE CH High



EDGE 1900

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

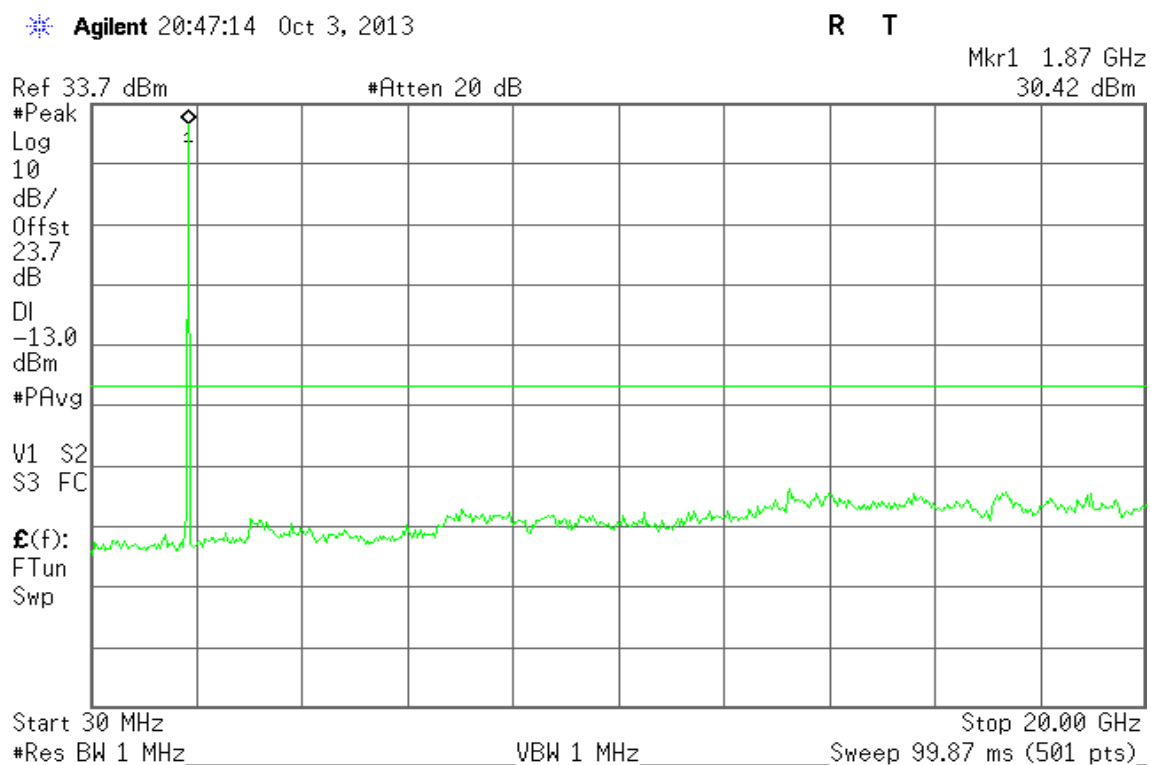




Figure 16-2: Out of Band emission at antenna terminals –EDGE CH Mid

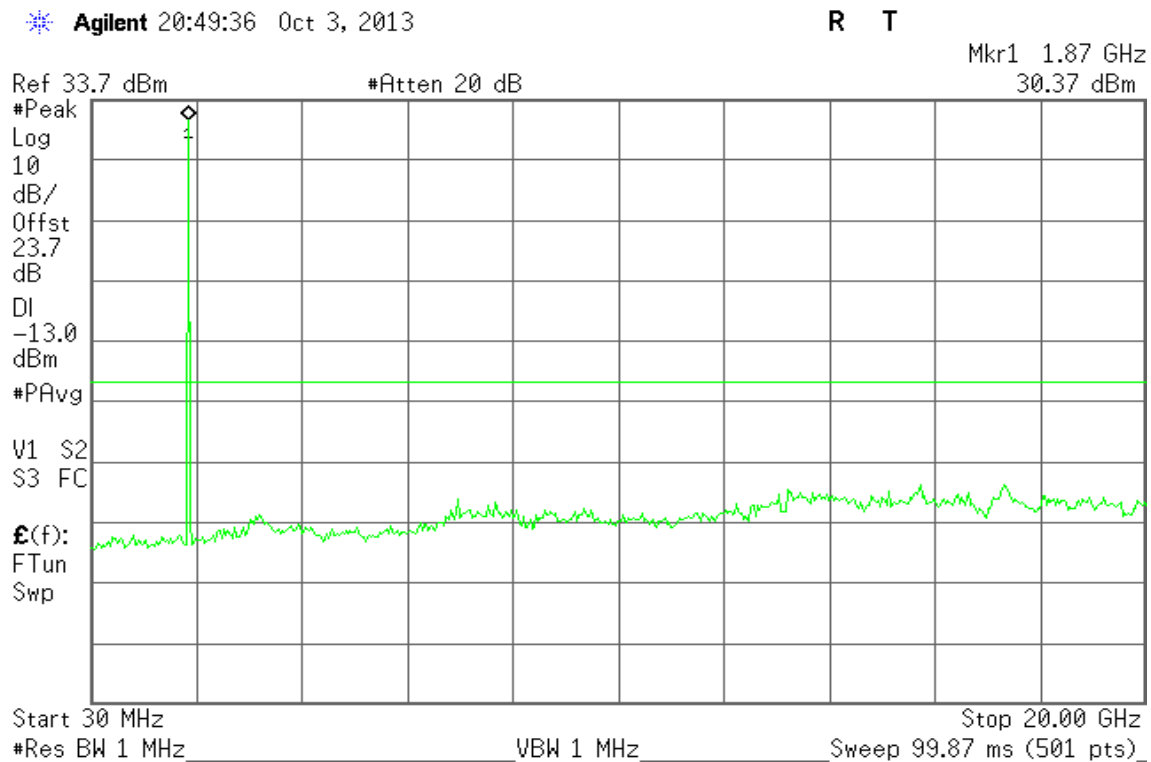
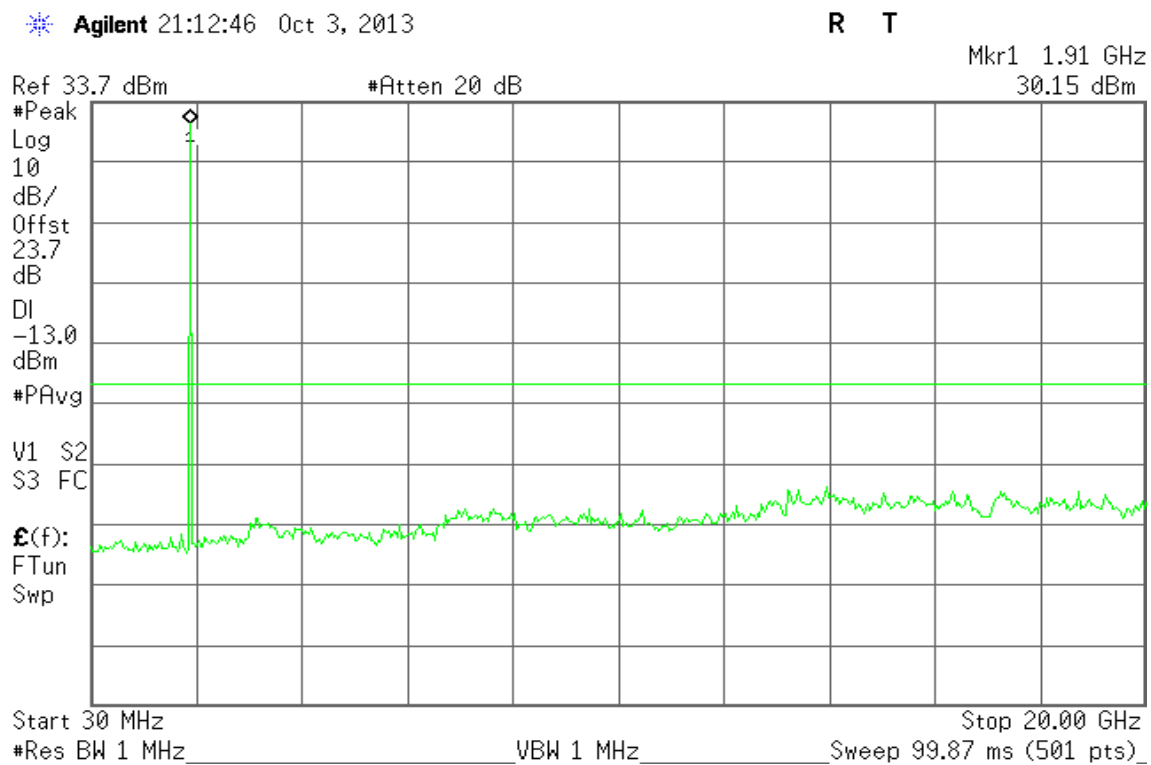


Figure 16-3: Out of Band emission at antenna terminals –EDGE CH High





EDGE 850

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

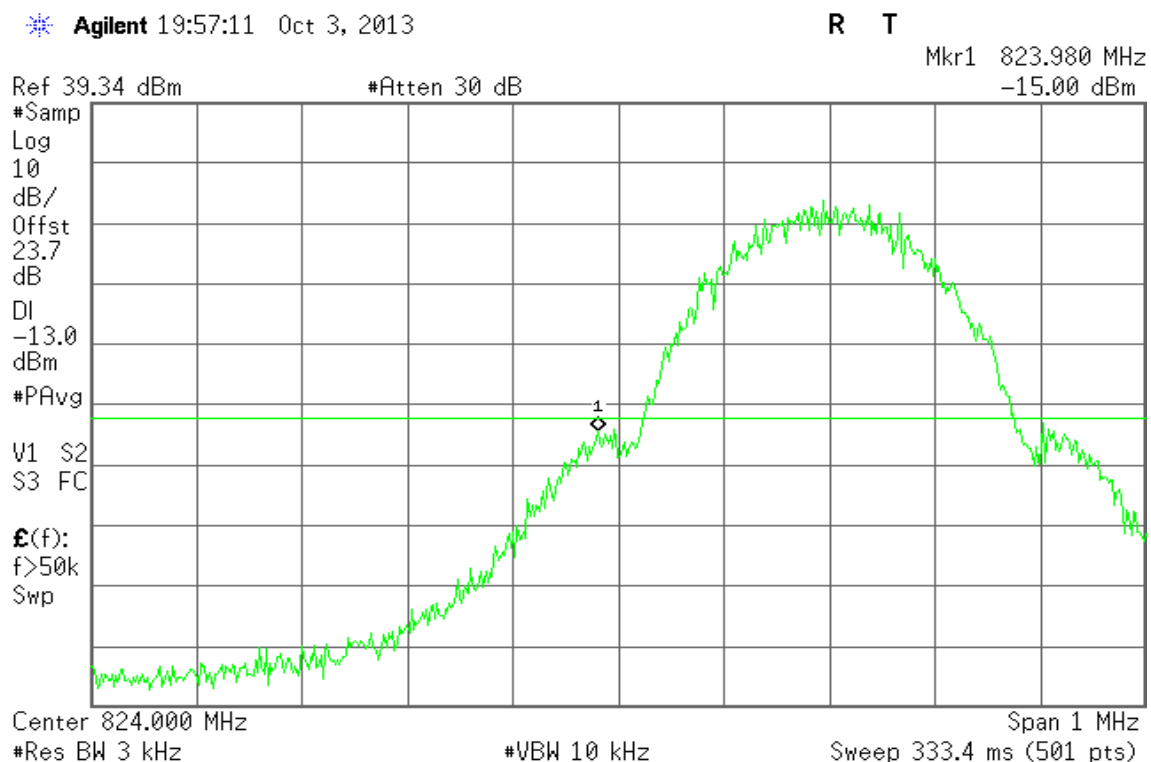
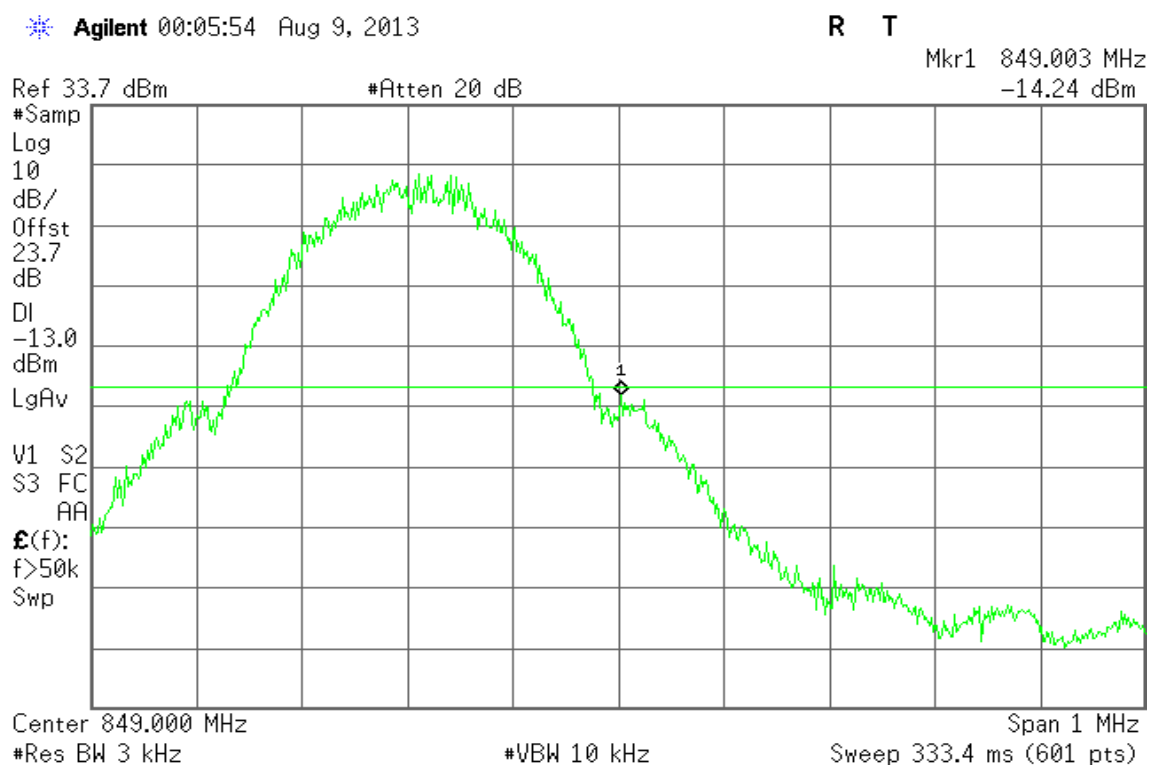


Figure 17-2: Band Edge emissions – EDGE CH High





EDGE 1900

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

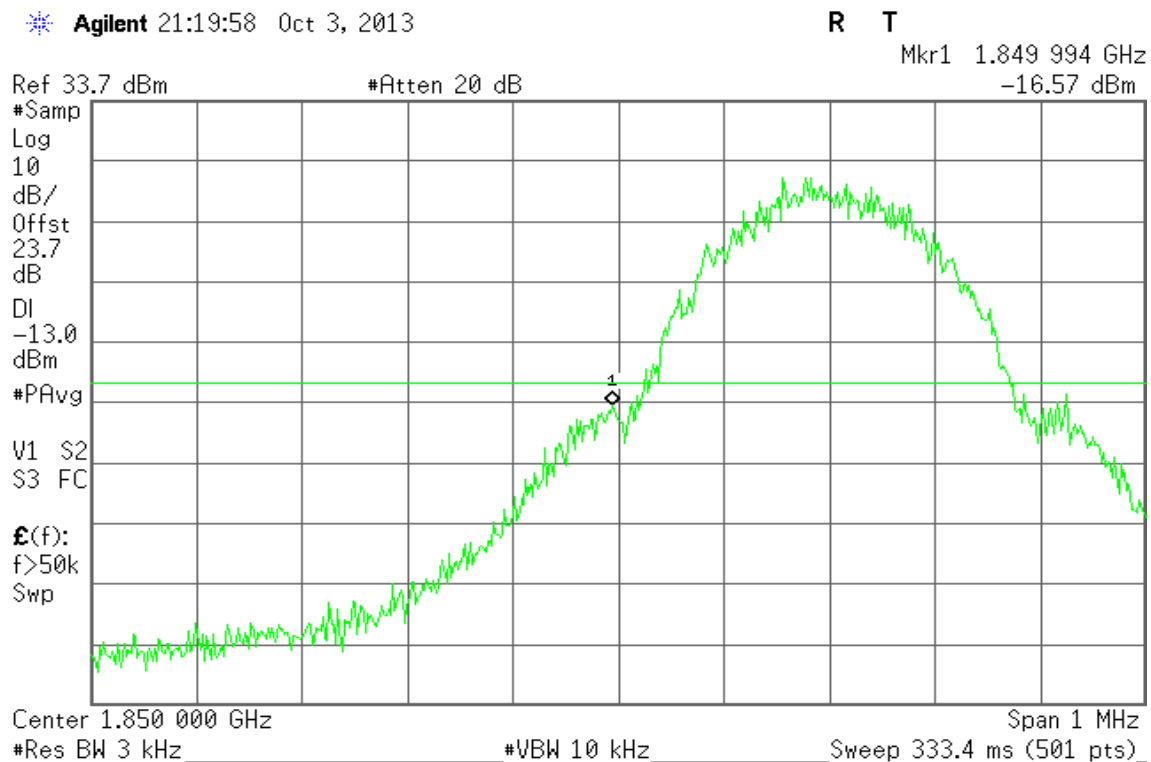
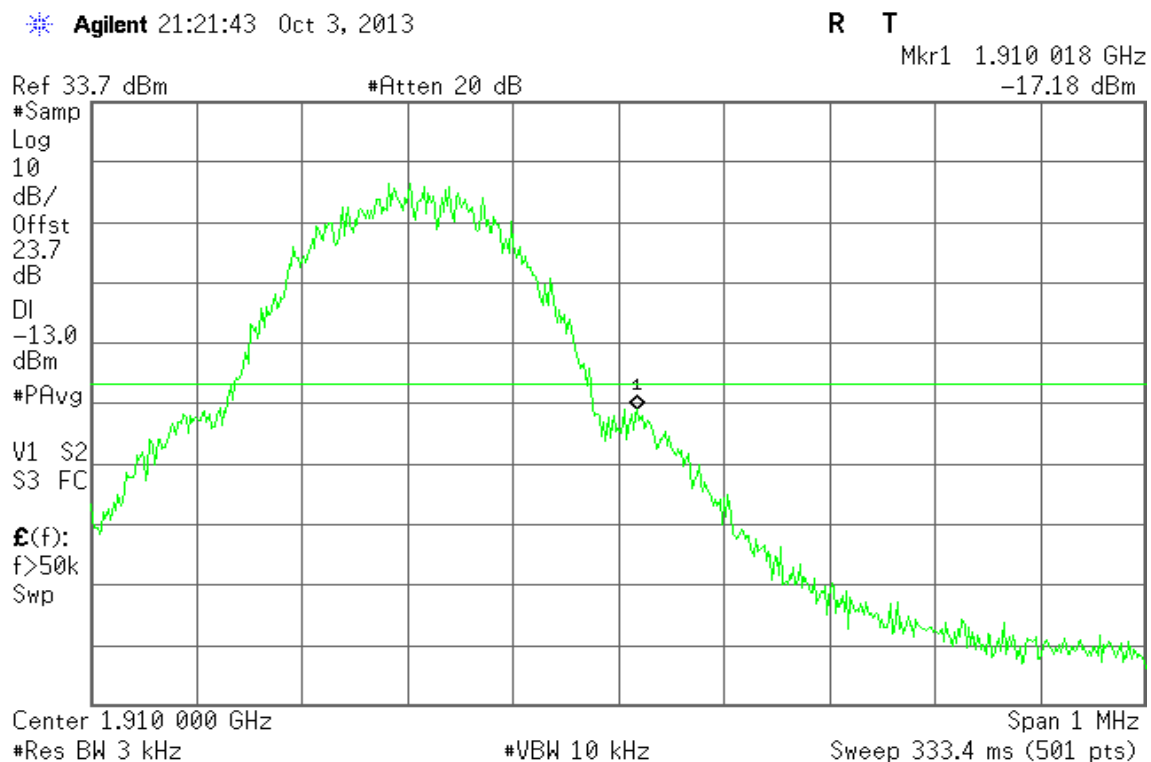


Figure 18-2: Band Edge emissions – EDGE CH High





WCDMA Band II

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

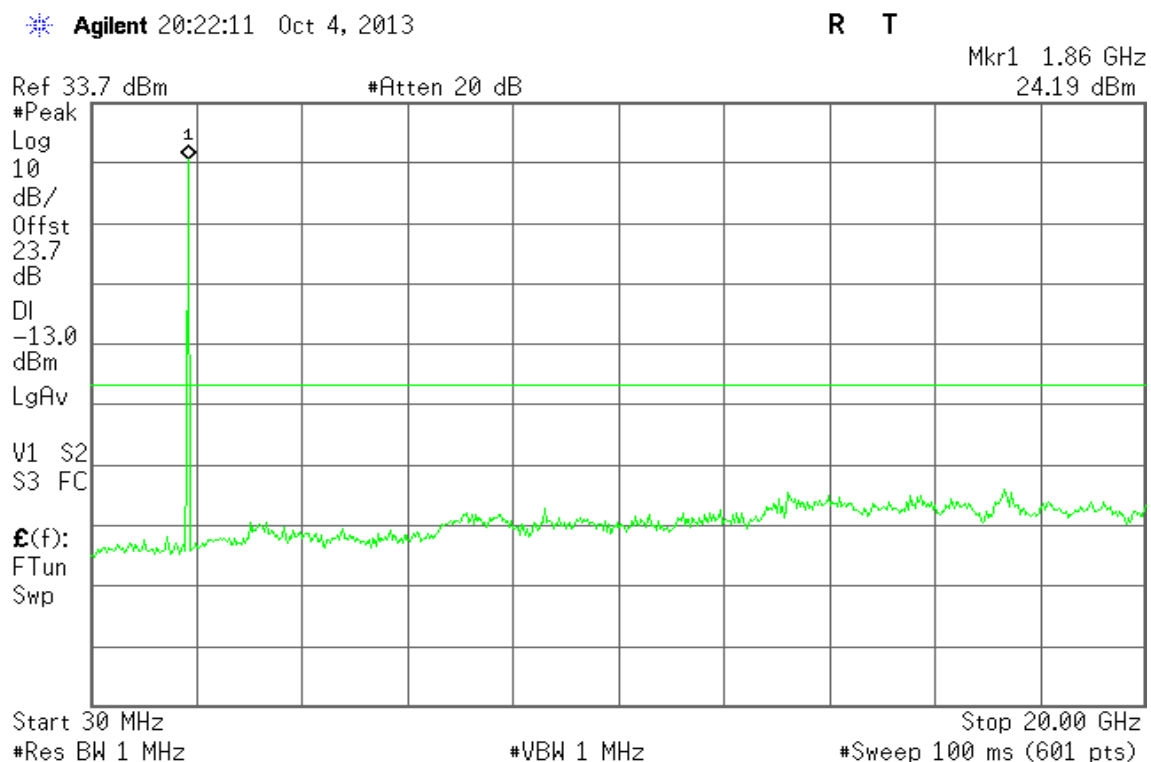


Figure 19-2: Out of Band emission at antenna terminals – WCDMA CH Mid

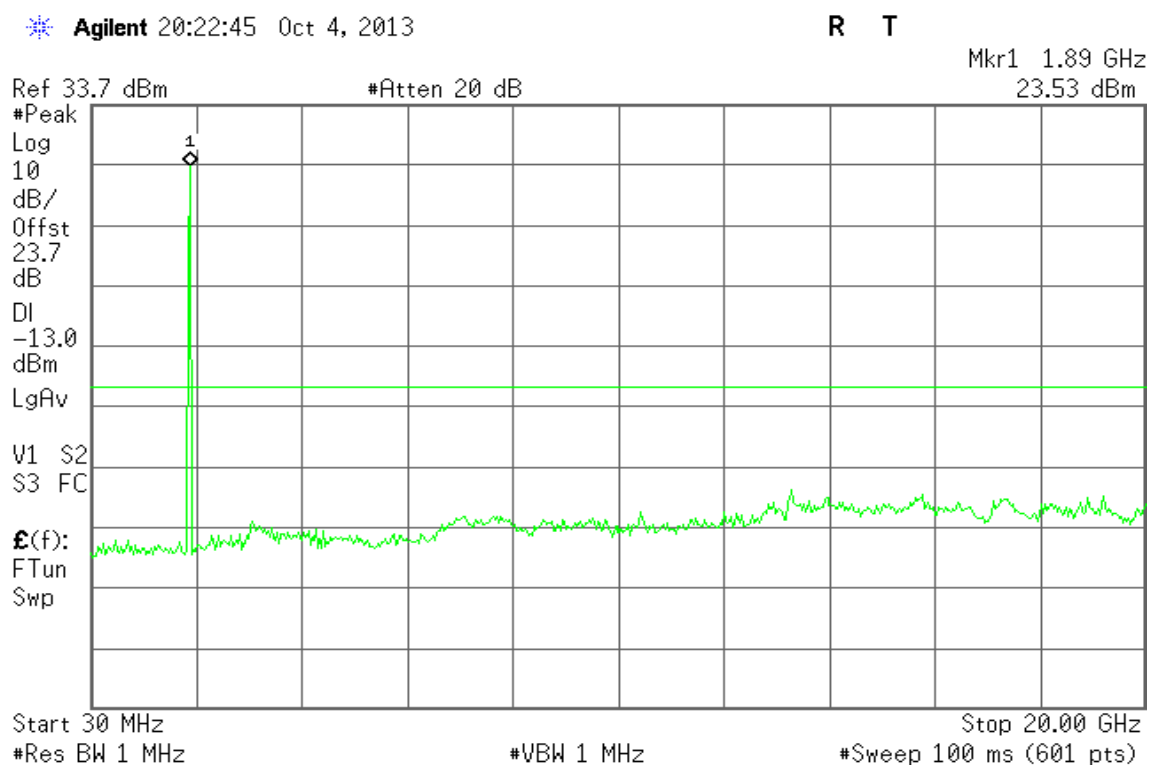
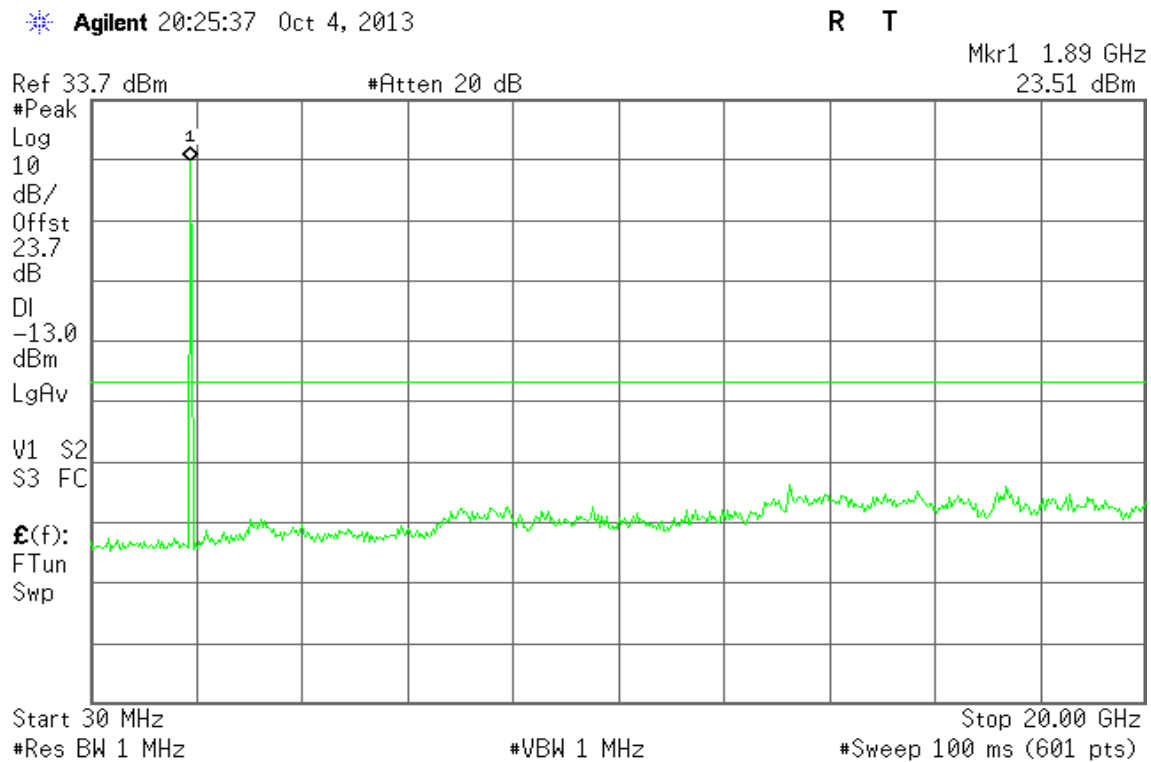




Figure 19-3: Out of Band emission at antenna terminals – WCDMA CH High



WCDMA Band V

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

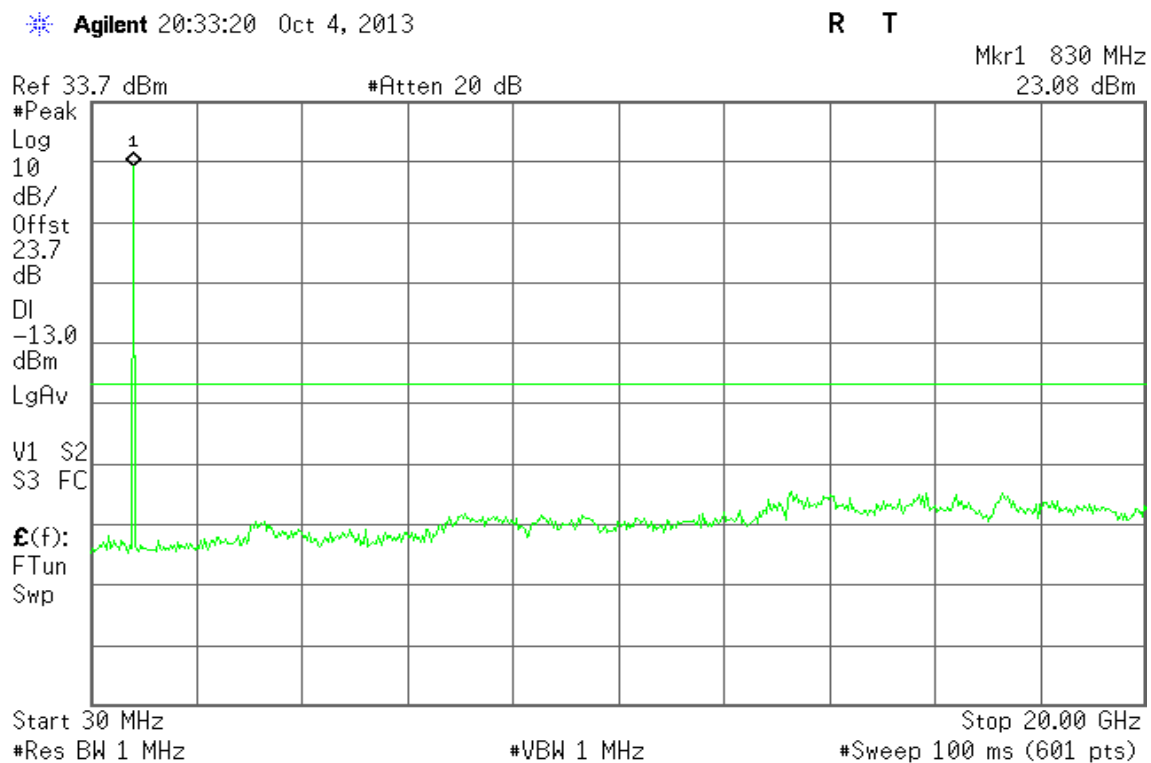




Figure 20-2: Out of Band emission at antenna terminals – WCDMA CH Mid

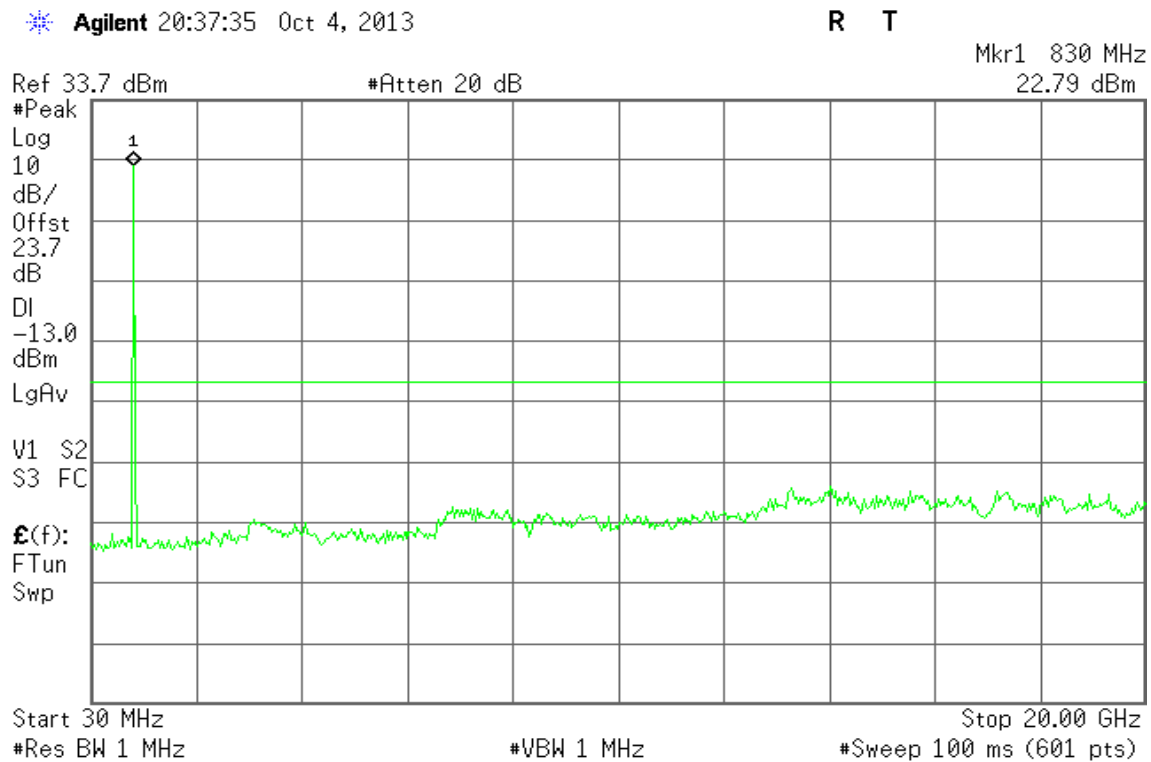
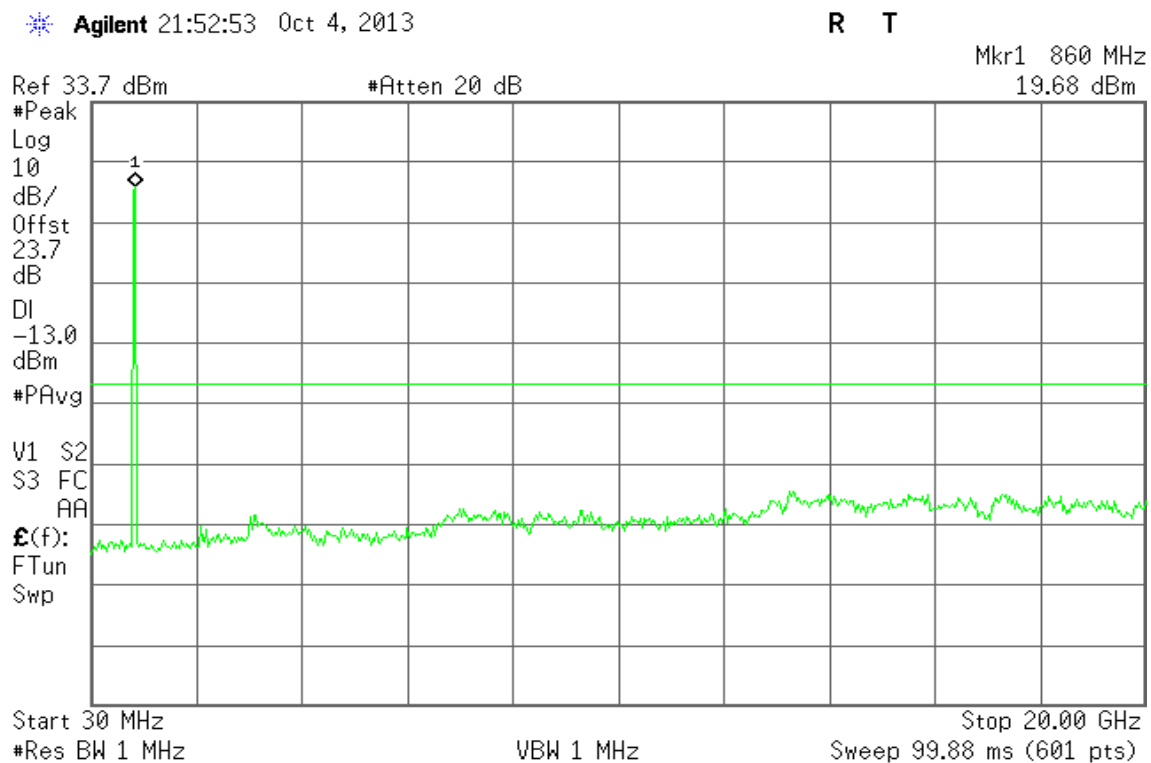


Figure 20-3: Out of Band emission at antenna terminals – WCDMA CH High





WCDMA Band II

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

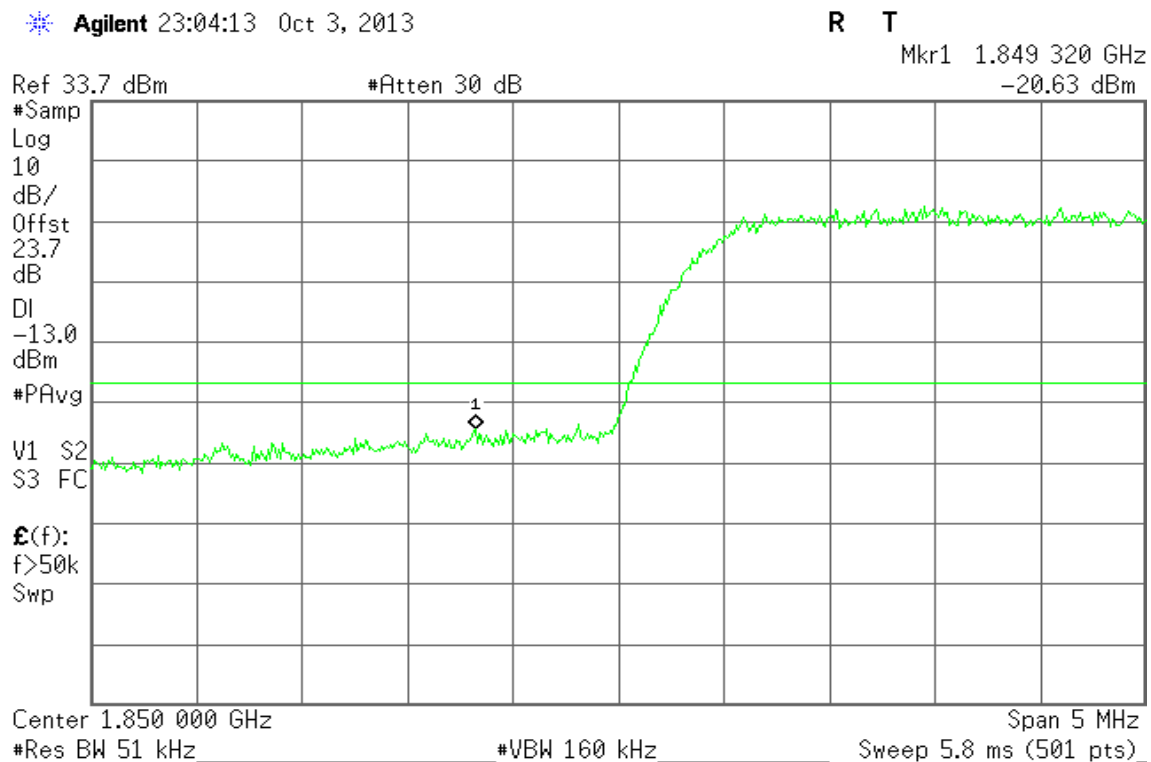
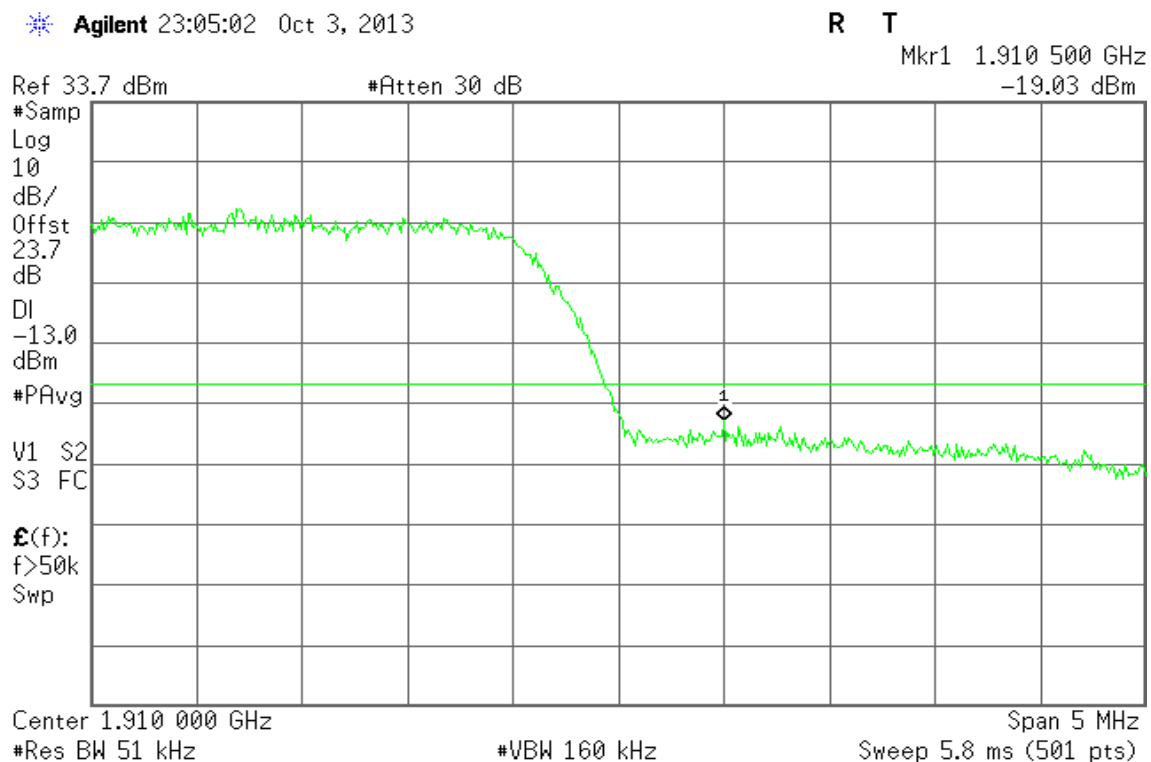


Figure 21-2: Band Edge emissions –WCDMA CH High





WCDMA Band V

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

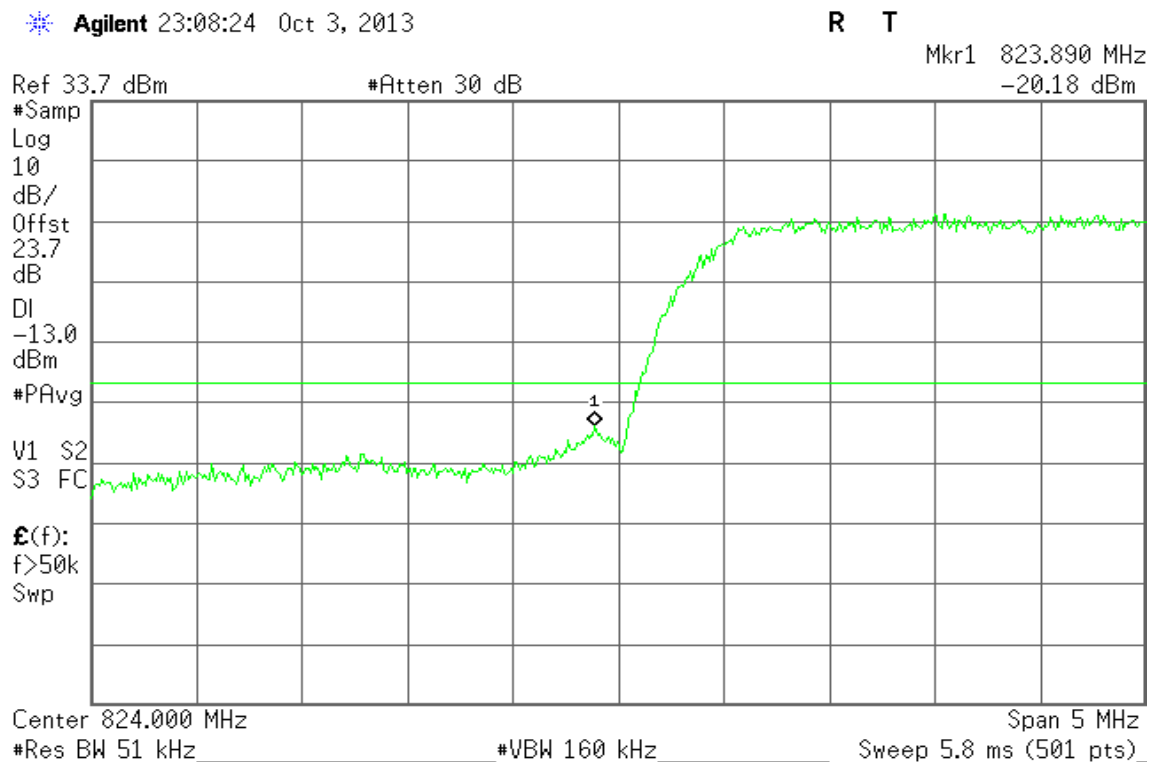
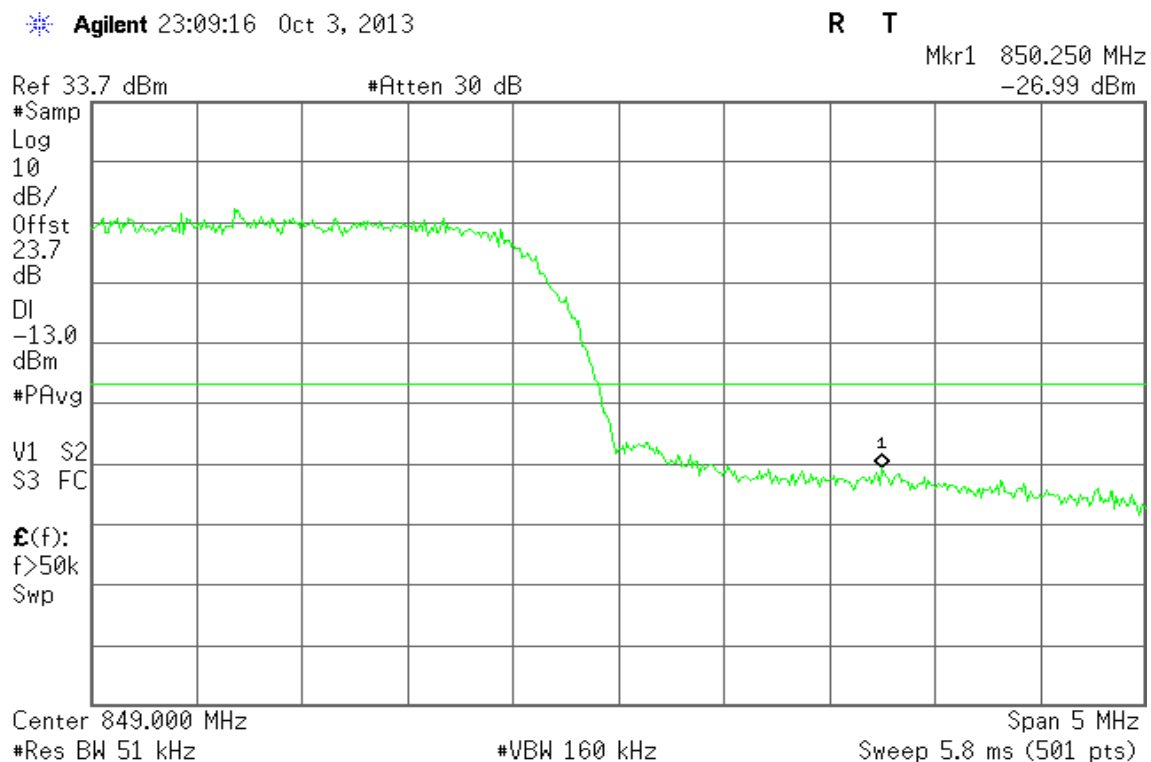


Figure 22-2: Band Edge emissions –WCDMA CH High



**WCDMA / HSDPA Band II**

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

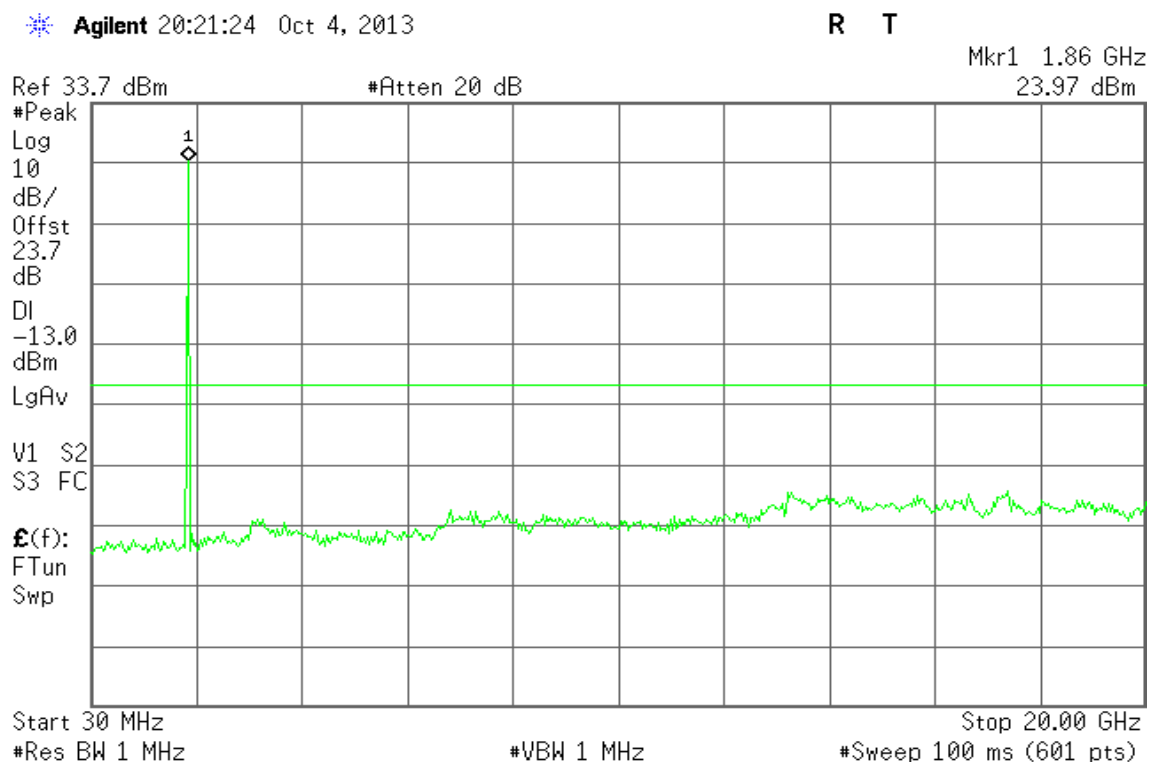


Figure 23-2: Out of Band emission at antenna terminals – HSDPA CH Mid

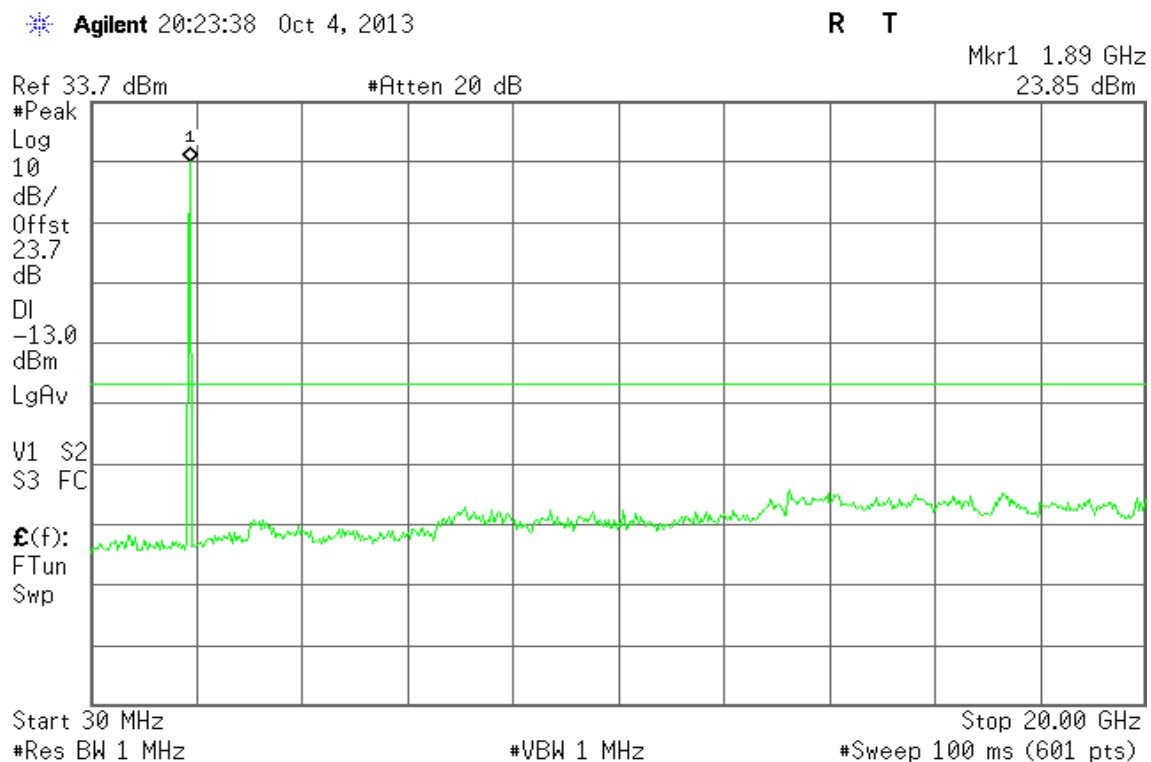
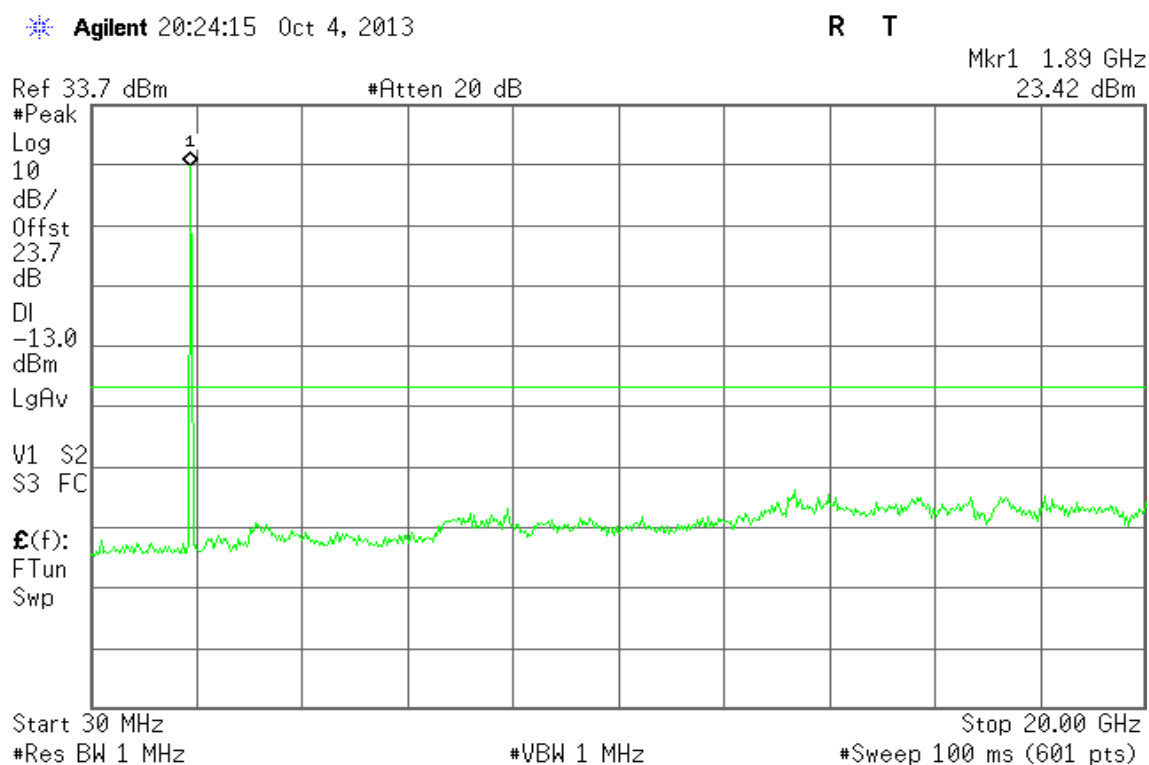




Figure 23-3: Out of Band emission at antenna terminals – HSDPA CH High



WCDMA / HSDPA Band V

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

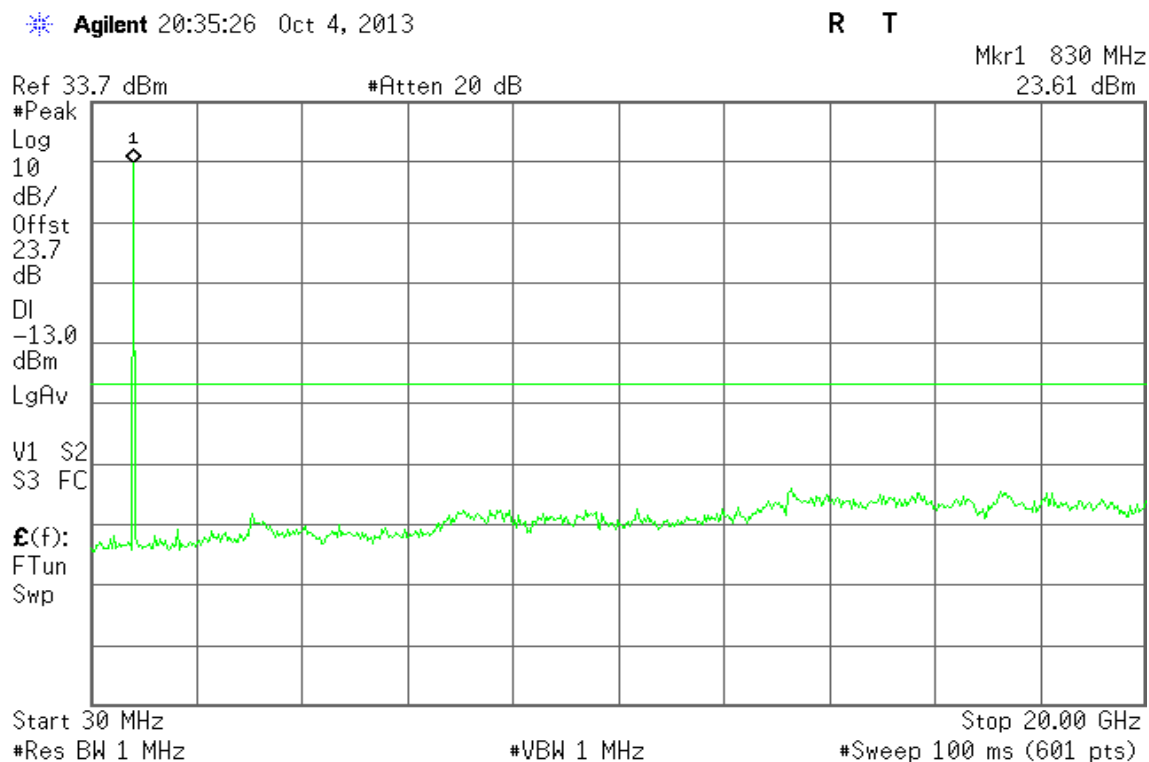




Figure 24-2: Out of Band emission at antenna terminals – HSDPA CH Mid

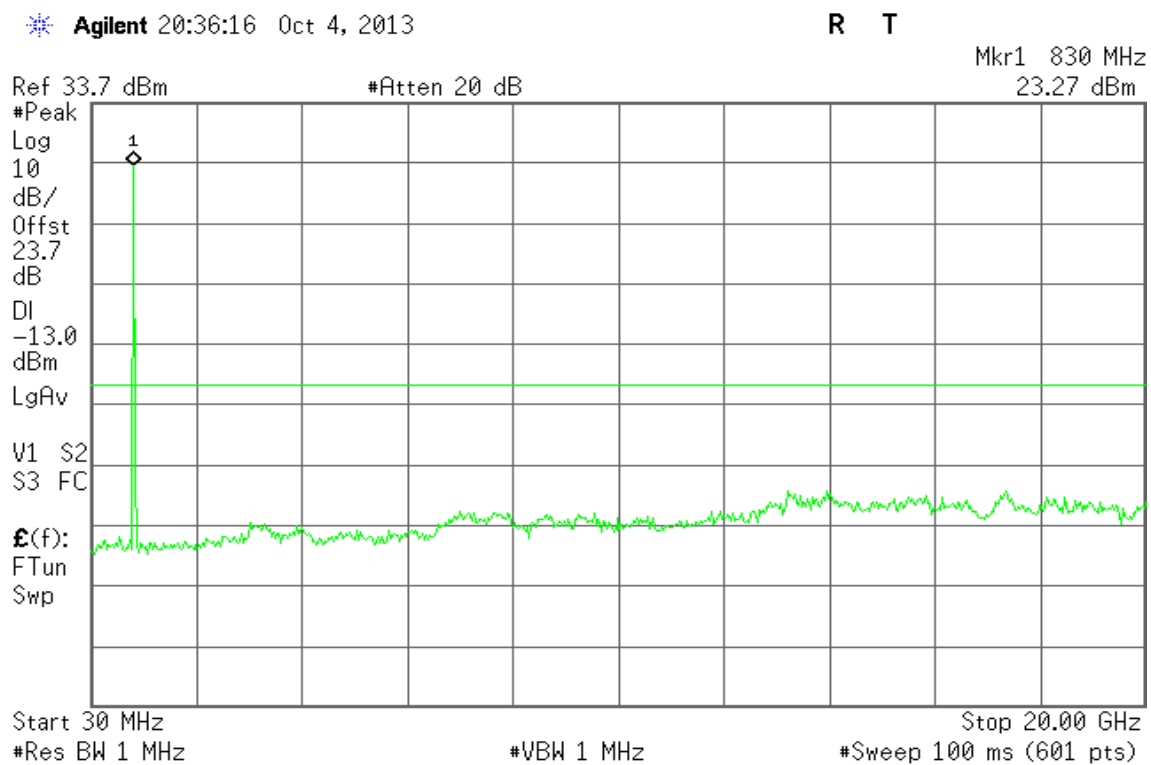
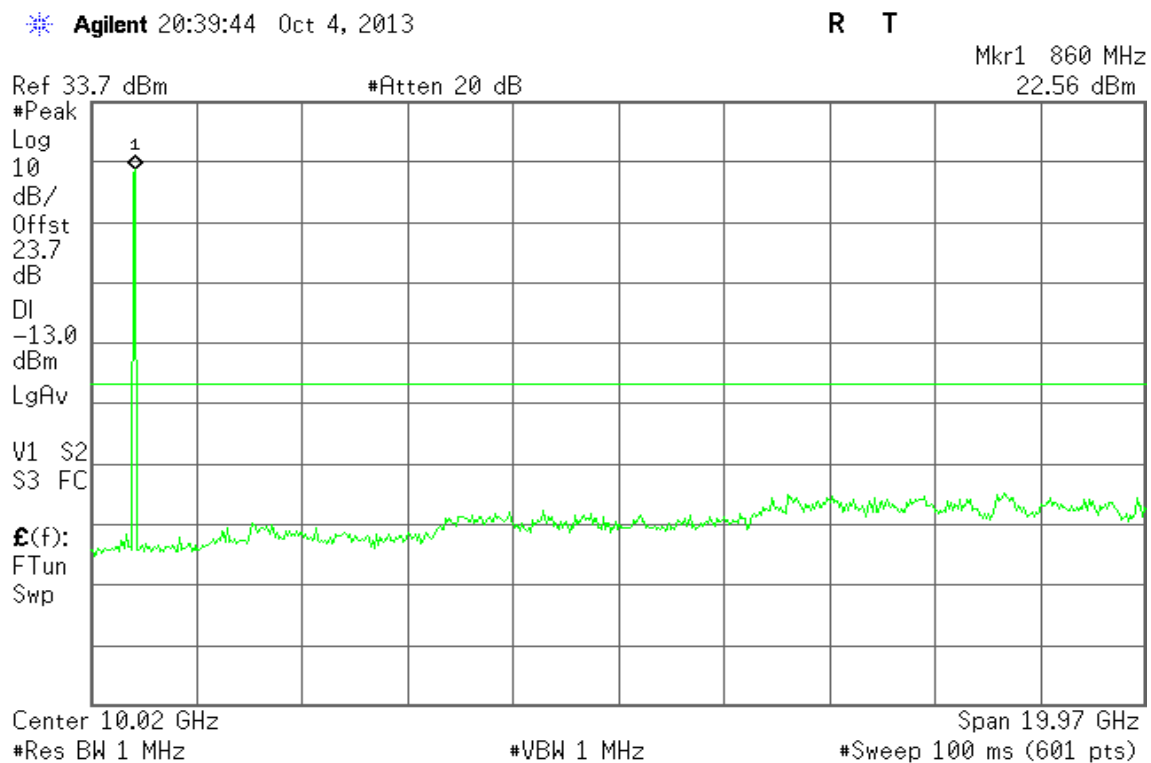


Figure 24-3: Out of Band emission at antenna terminals – HSDPA CH High





WCDMA / HSDPA Band II

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

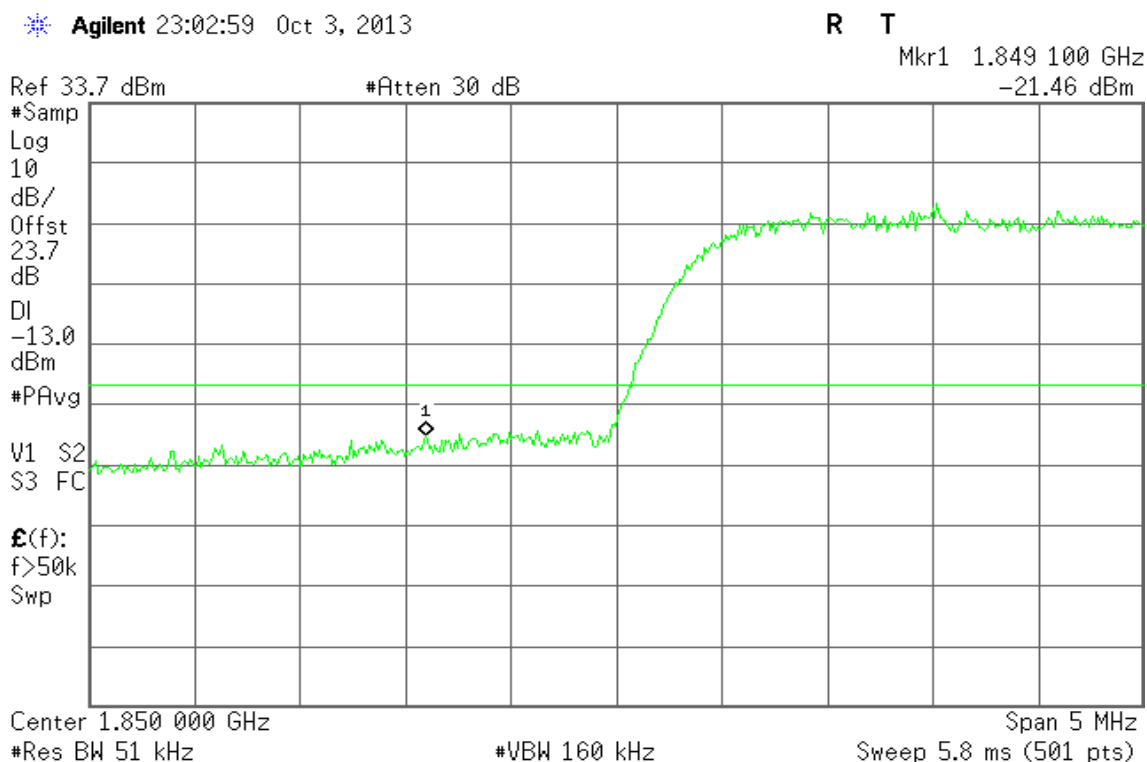
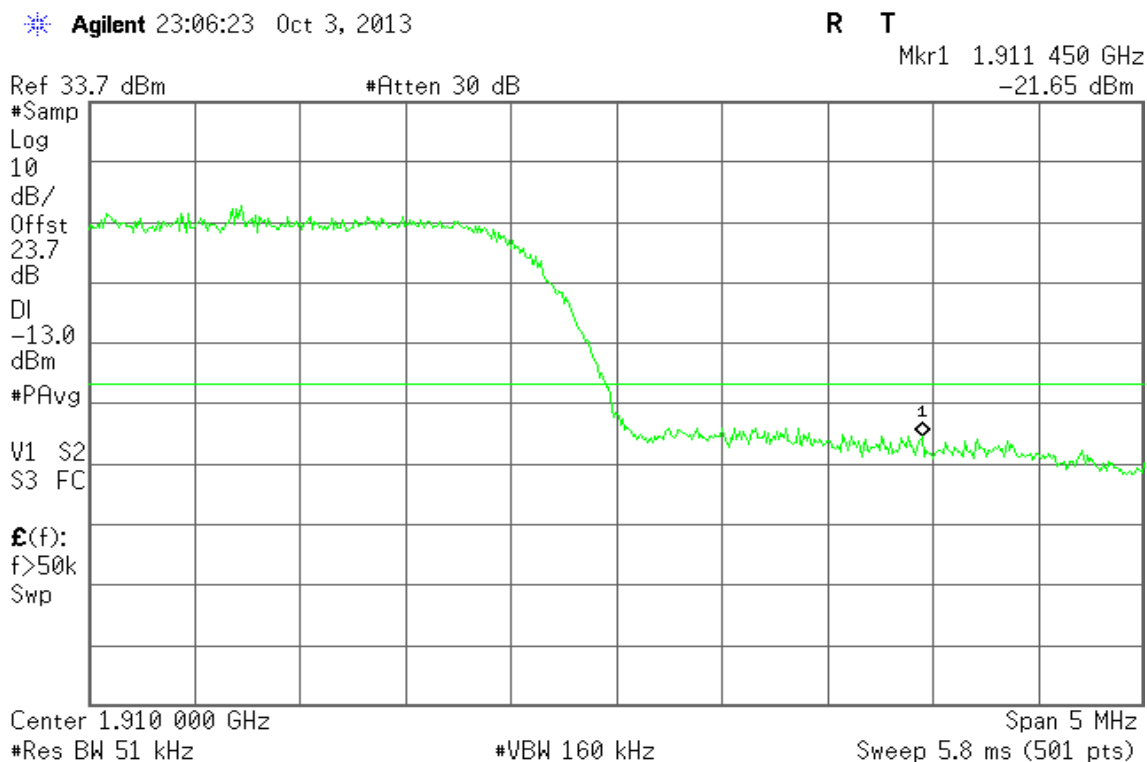


Figure 25-2: Band Edge emissions – HSDPA CH High





WCDMA / HSDPA Band V

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

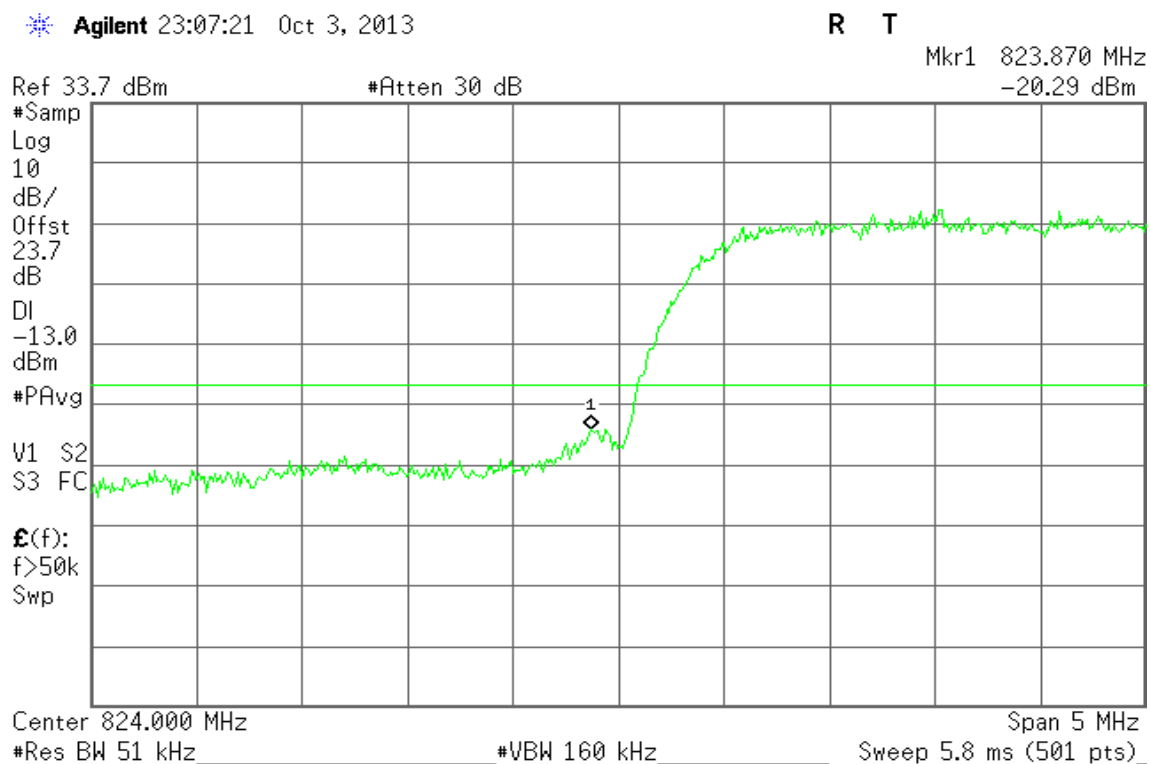
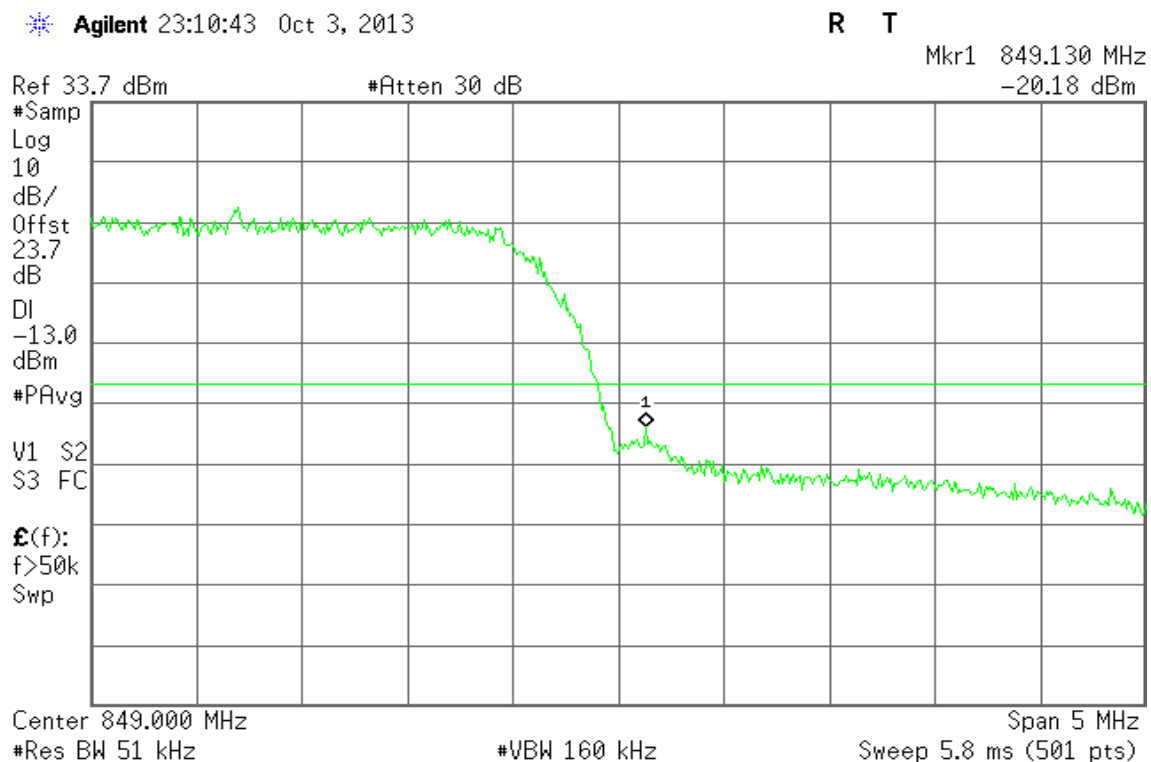


Figure 26-2: Band Edge emissions – HSDPA CH High



**WCDMA / HSUPA Band II**

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

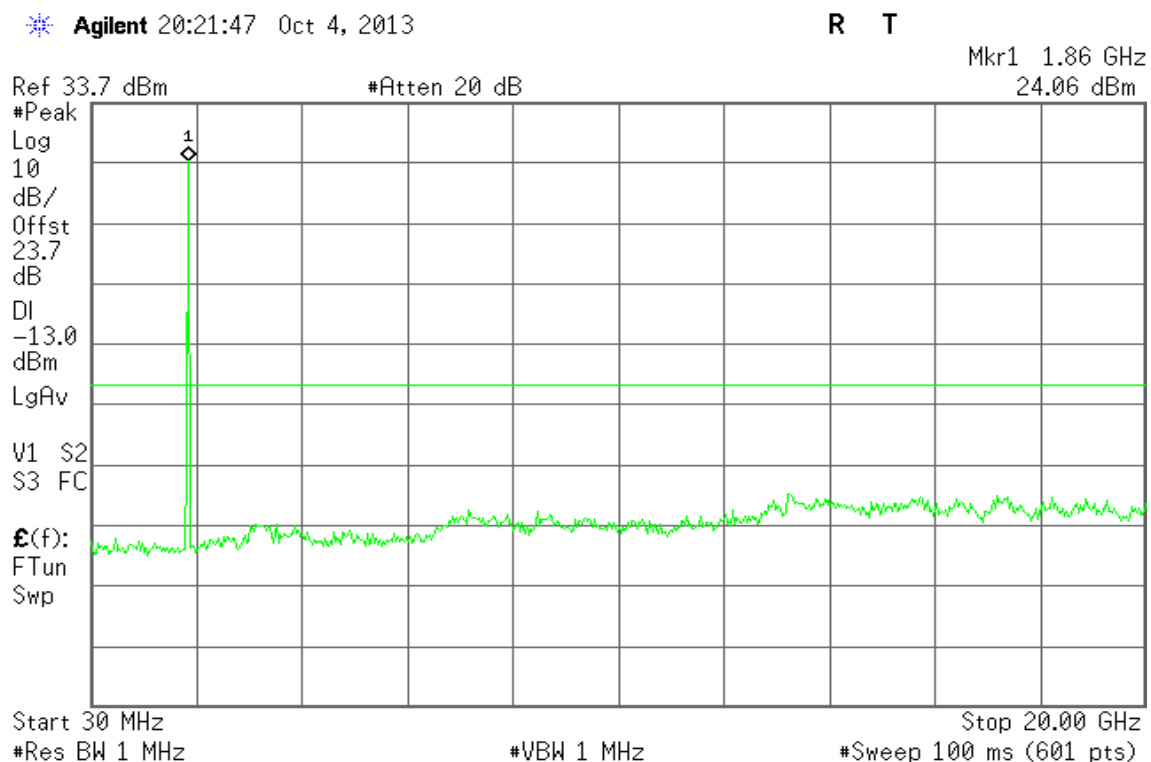


Figure 27-2: Out of Band emission at antenna terminals – HSUPA CH Mid

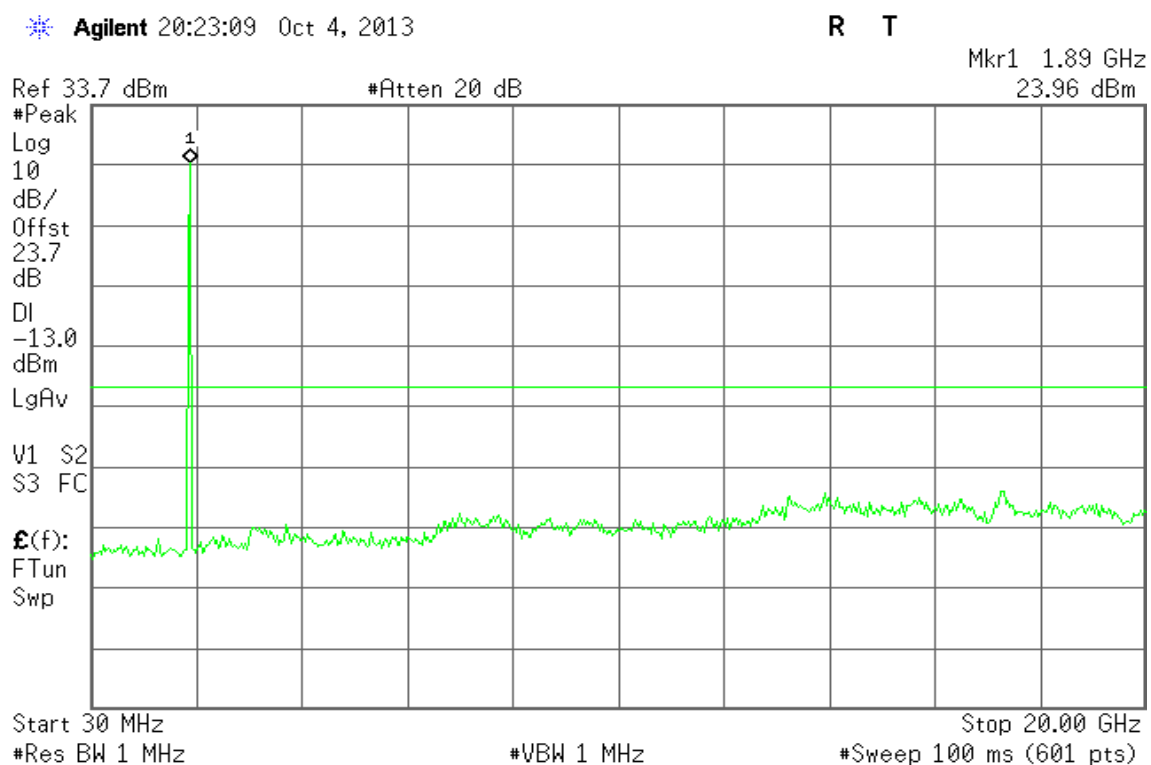
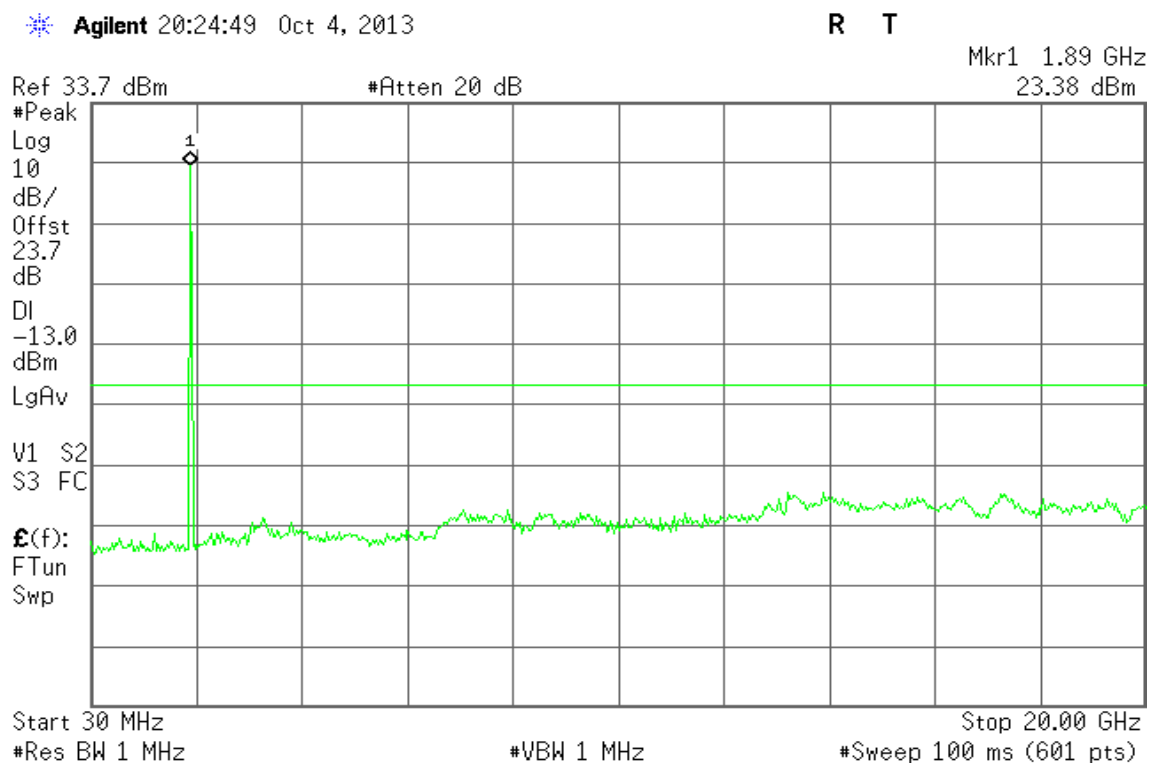




Figure 27-3: Out of Band emission at antenna terminals – HSUPA CH High



HSUPA / WCDMA Band V

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

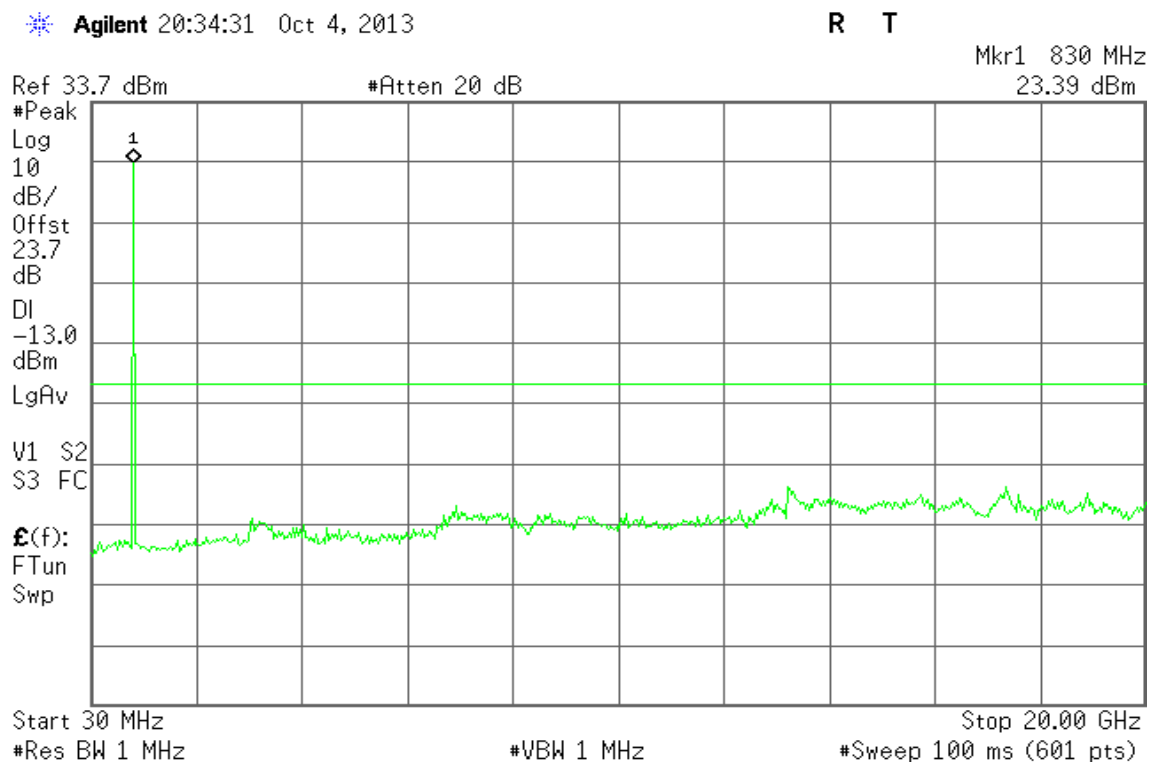




Figure 28-2: Out of Band emission at antenna terminals – HSUPA CH Mid

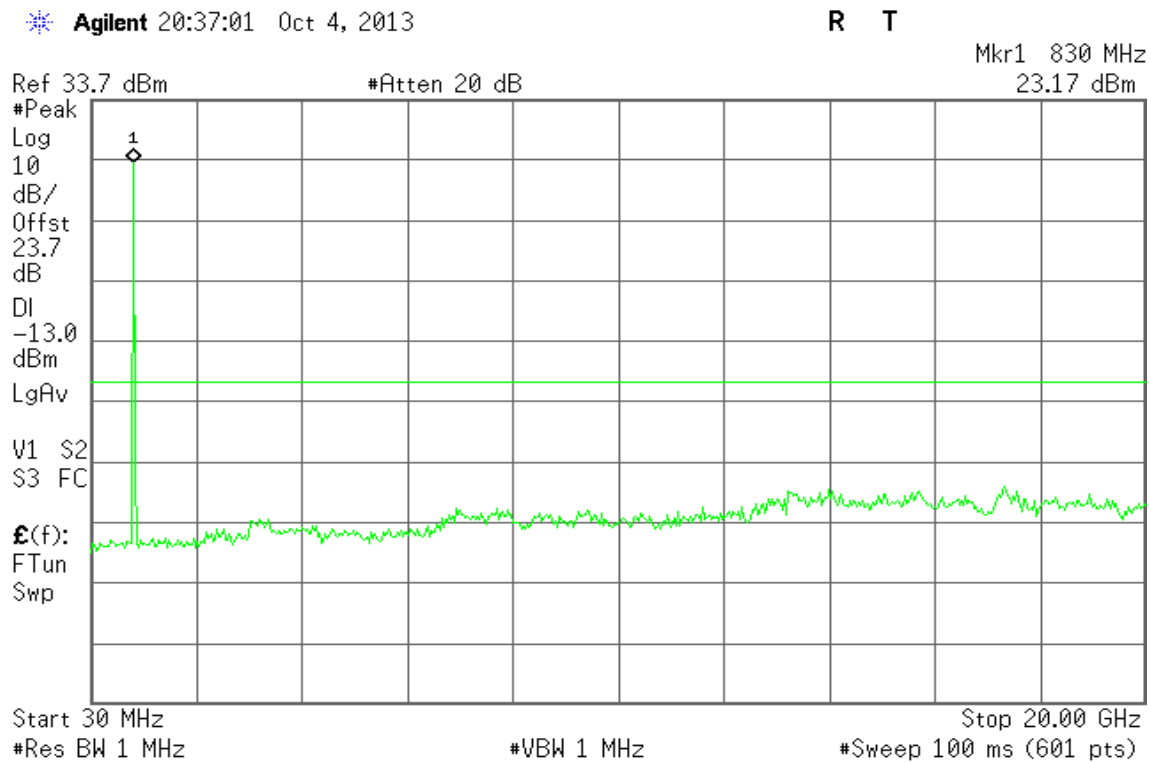
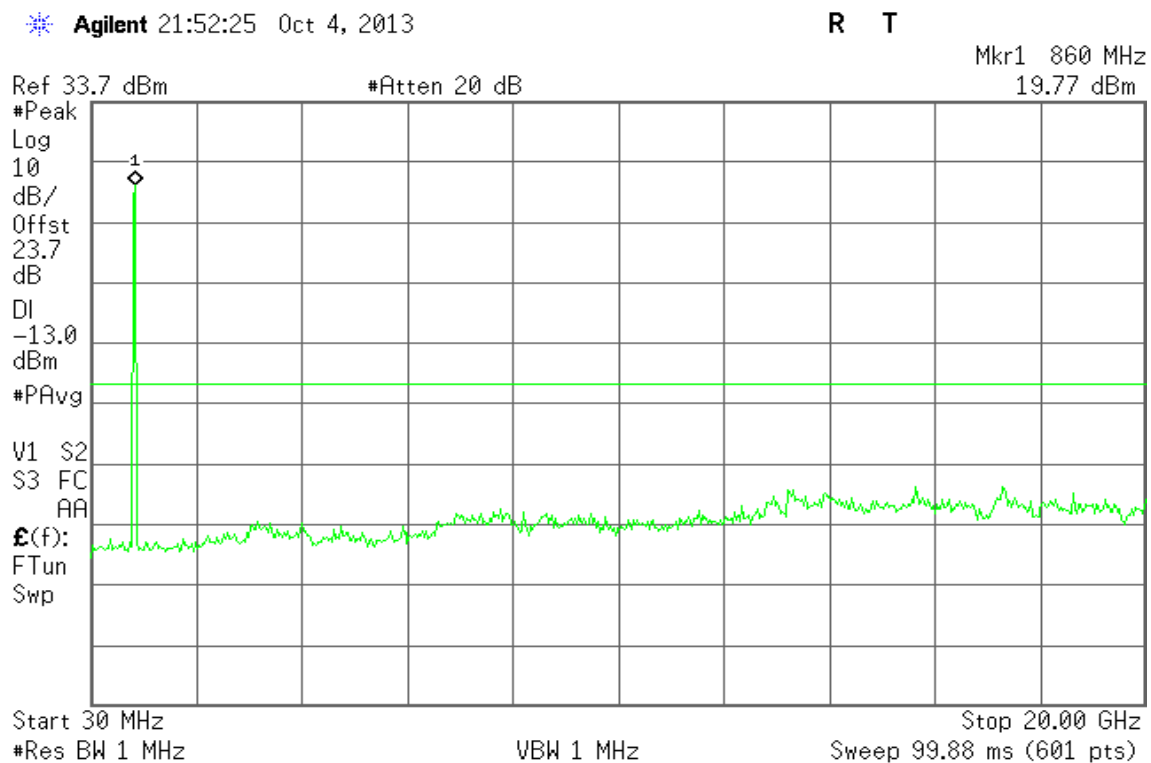


Figure 28-3: Out of Band emission at antenna terminals – HSUPA CH High





WCDMA / HSUPA Band II

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

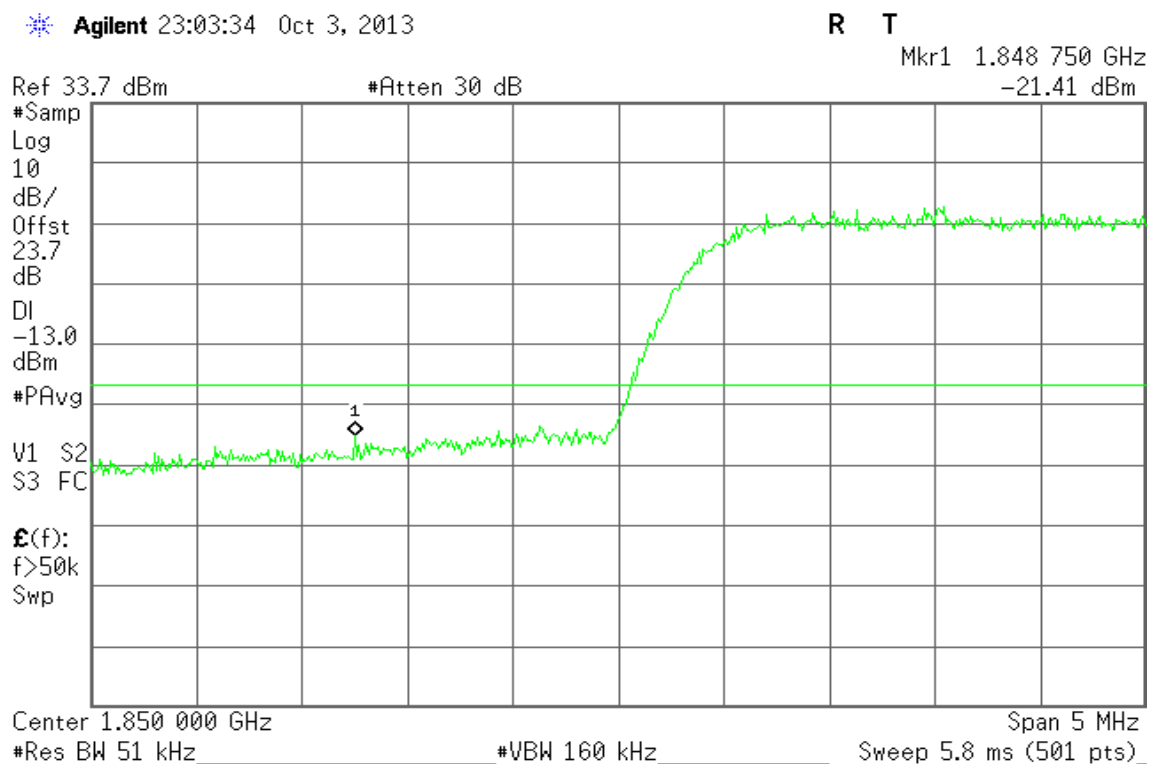
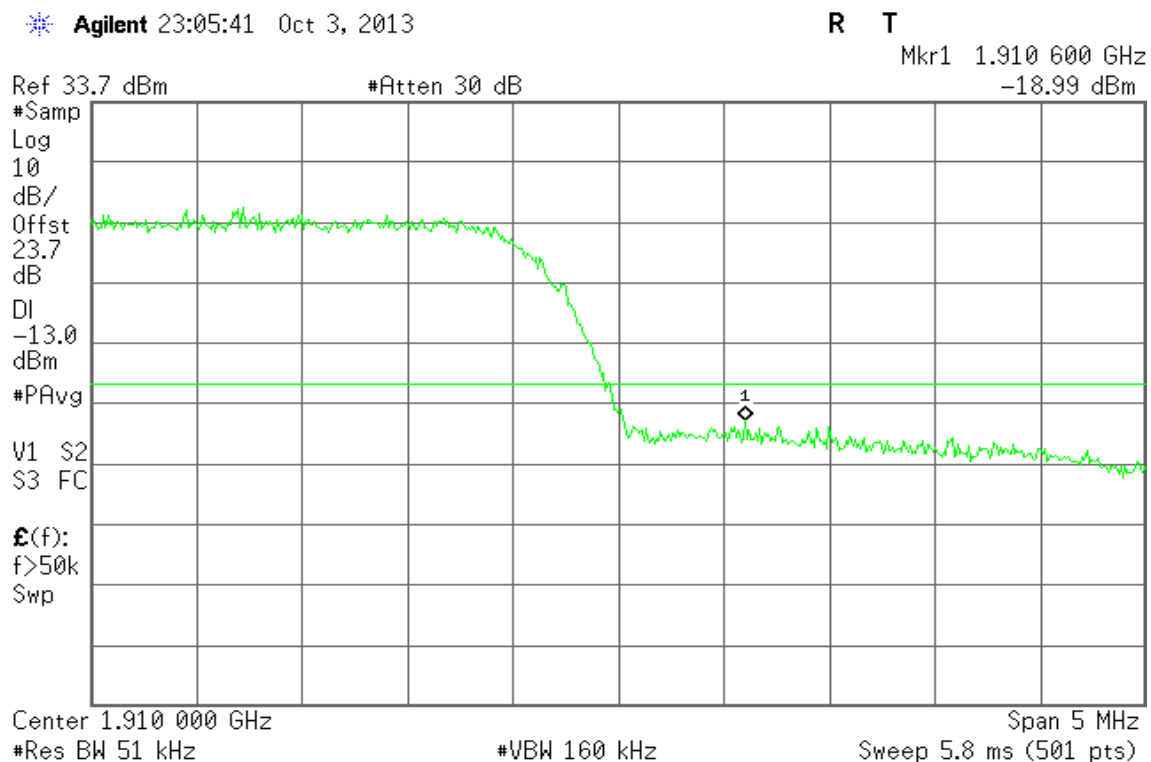


Figure 29-2: Band Edge emissions – HSUPA CH High





WCDMA / HSUPA Band V

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

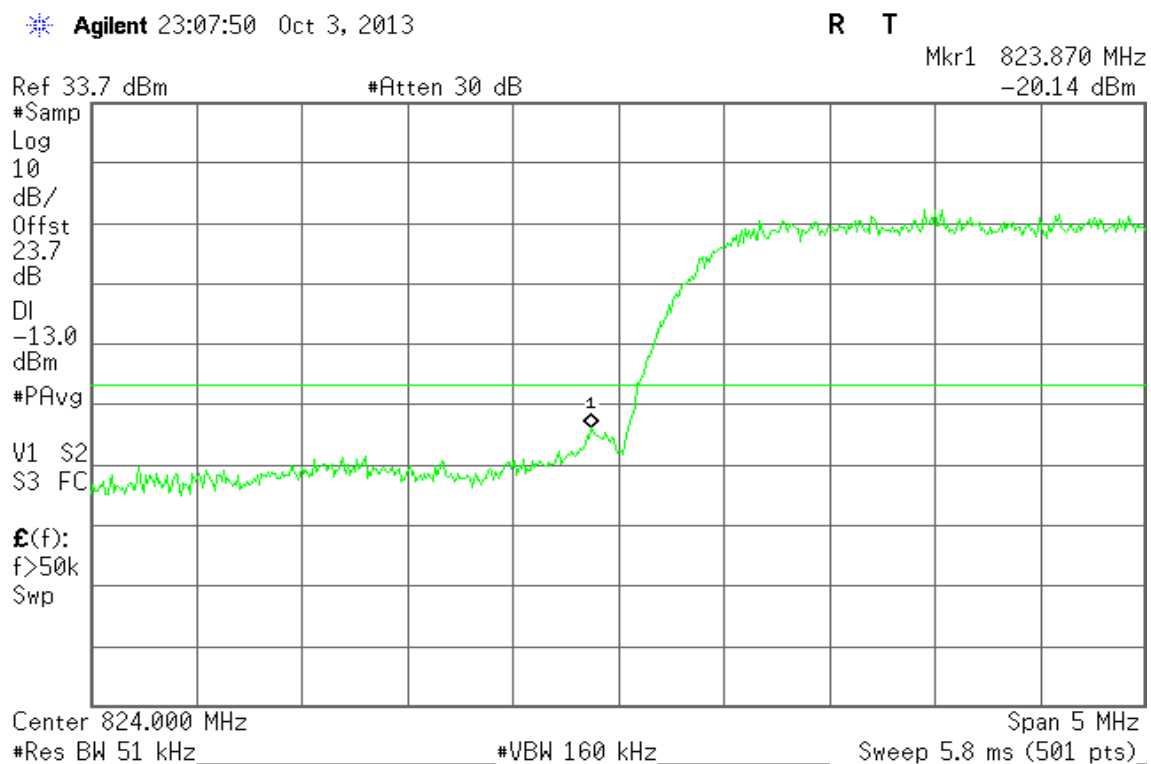
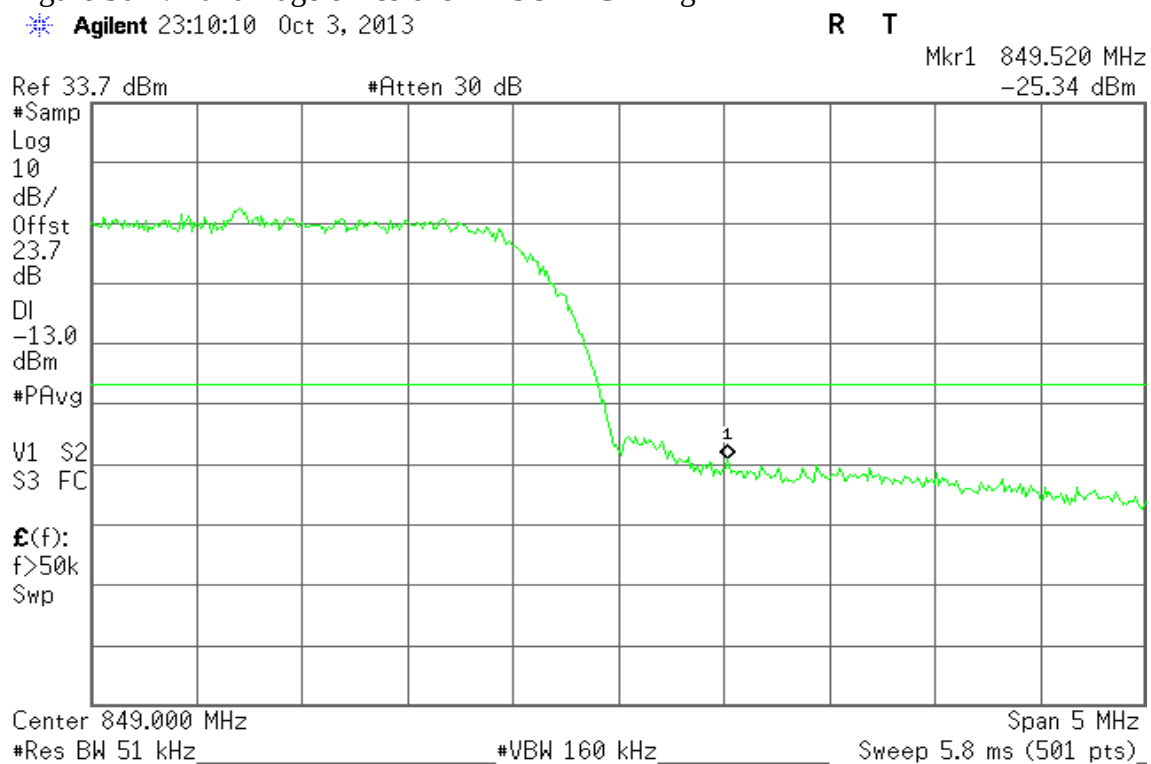


Figure 30-2: Band Edge emissions – HSUPA CH High





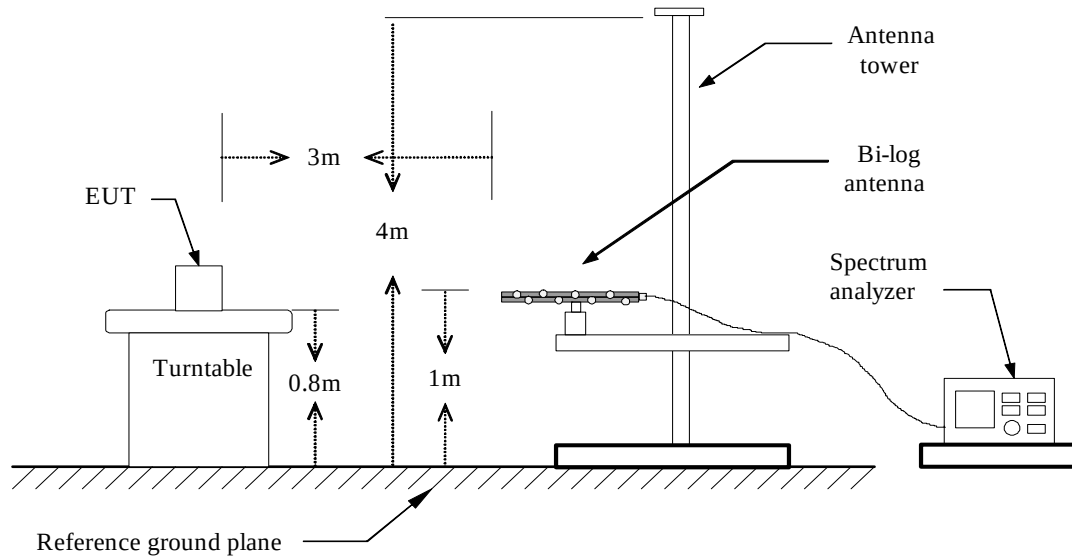
7.6 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

LIMIT

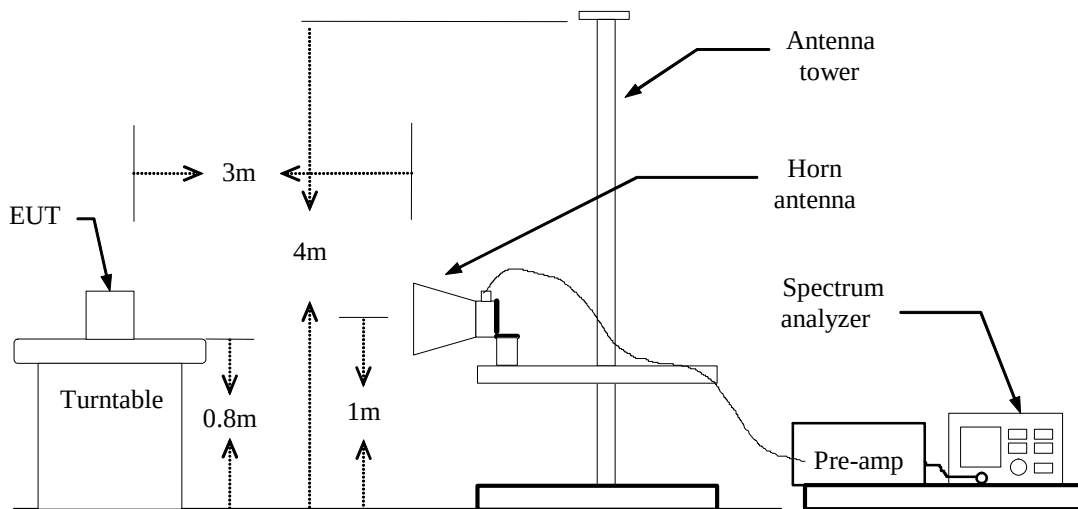
According to FCC §2.1053, RSS-132 (4.6) & RSS-133 (6.5).

Test Configuration

Below 1 GHz

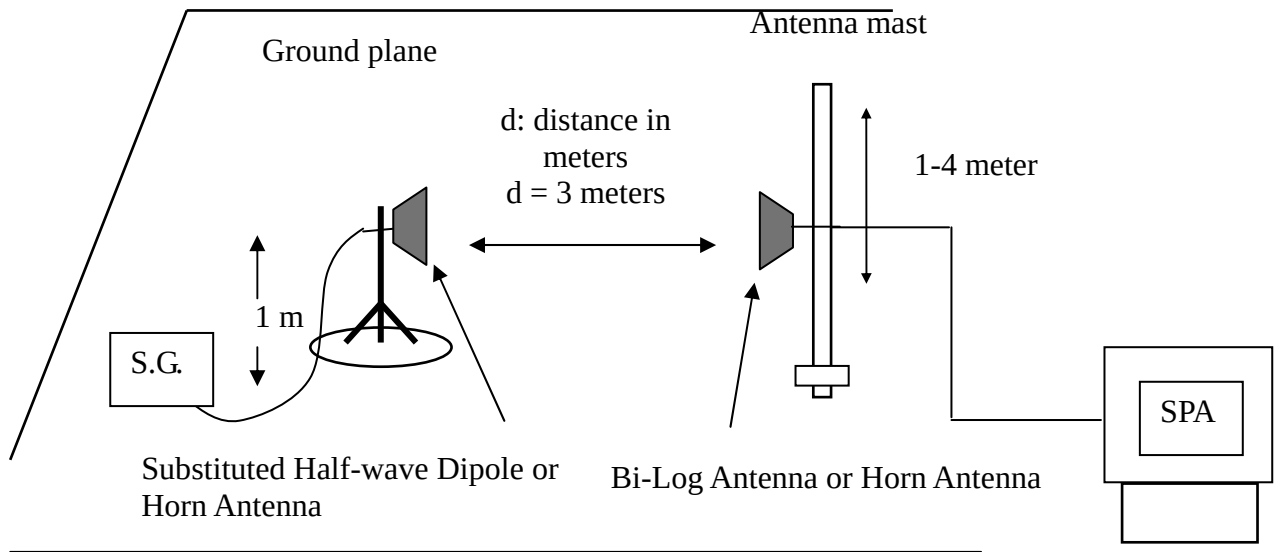


Above 1 GHz





Substituted Method Test Set-up



TEST PROCEDURE

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

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

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

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

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

TEST RESULTS

Refer to the attached tabular data sheets.

**Radiated Spurious Emission Measurement Result / Below 1GHz****Operation Mode:** GSM 850 / TX / CH 128**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
101.7800	-66.33	1.16	-0.64	-68.13	-13.00	-55.13	V
138.6400	-68.57	1.39	-0.38	-70.34	-13.00	-57.34	V
354.9500	-76.52	2.25	5.75	-73.02	-13.00	-60.02	V
389.8700	-73.63	2.32	6	-69.95	-13.00	-56.95	V
448.0700	-78.77	2.58	5.74	-75.61	-13.00	-62.61	V
529.5500	-80.96	2.75	6	-77.71	-13.00	-64.71	V
101.7800	-57.19	1.16	-0.64	-58.99	-13.00	-45.99	H
138.6400	-59.62	1.39	-0.38	-61.39	-13.00	-48.39	H
345.2500	-70.15	2.2	5.8	-66.55	-13.00	-53.55	H
390.8400	-71.28	2.32	6	-67.60	-13.00	-54.60	H
470.3800	-73.39	2.62	5.77	-70.24	-13.00	-57.24	H
642.0700	-74.8	3.01	6.14	-71.67	-13.00	-58.67	H

Remark:

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

**Operation Mode:** GSM 850 / TX / CH 190**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
65.8900	-69.67	0.93	-1.93	-72.53	-13.00	-59.53	V
101.7800	-66.2	1.16	-0.64	-68.00	-13.00	-55.00	V
141.5500	-68.38	1.4	-0.1	-69.88	-13.00	-56.88	V
389.8700	-72.51	2.32	6	-68.83	-13.00	-55.83	V
448.0700	-76.98	2.58	5.74	-73.82	-13.00	-60.82	V
654.6800	-76.69	3.04	6.3	-73.43	-13.00	-60.43	V
101.7800	-57.64	1.16	-0.64	-59.44	-13.00	-46.44	H
138.6400	-59.79	1.39	-0.38	-61.56	-13.00	-48.56	H
330.7000	-69.49	2.16	5.71	-65.94	-13.00	-52.94	H
389.8700	-70.52	2.32	6	-66.84	-13.00	-53.84	H
549.9200	-77.45	2.81	6.18	-74.08	-13.00	-61.08	H
654.6800	-74.25	3.04	6.3	-70.99	-13.00	-57.99	H

Remark:

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

**Operation Mode:** GSM 850 / TX / CH 251**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
101.7800	-65.33	1.16	-0.64	-67.13	-13.00	-54.13	V
141.5500	-68.52	1.4	-0.1	-70.02	-13.00	-57.02	V
346.2200	-76.51	2.21	5.8	-72.92	-13.00	-59.92	V
389.8700	-72.1	2.32	6	-68.42	-13.00	-55.42	V
448.0700	-77.44	2.58	5.74	-74.28	-13.00	-61.28	V
667.2900	-80.52	3.07	6.3	-77.29	-13.00	-64.29	V
65.8900	-55.08	0.93	-1.93	-57.94	-13.00	-44.94	H
138.6400	-58.9	1.39	-0.38	-60.67	-13.00	-47.67	H
342.3400	-70.11	2.18	5.8	-66.49	-13.00	-53.49	H
390.8400	-69.4	2.32	6	-65.72	-13.00	-52.72	H
471.3500	-69.86	2.62	5.74	-66.74	-13.00	-53.74	H
625.5800	-75.04	2.96	6.16	-71.84	-13.00	-58.84	H

Remark:

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

**Operation Mode:** GPRS 850 / TX / CH 128**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
71.7100	-51.71	0.97	-1.61	-54.29	-13.00	-41.29	V
138.6400	-69.49	1.39	-0.38	-71.26	-13.00	-58.26	V
222.0600	-80.81	1.77	5.34	-77.24	-13.00	-64.24	V
354.9500	-78.56	2.25	5.75	-75.06	-13.00	-62.06	V
450.9800	-80.25	2.59	5.74	-77.10	-13.00	-64.10	V
654.6800	-75.48	3.04	6.3	-72.22	-13.00	-59.22	V
71.7100	-50.01	0.97	-1.61	-52.59	-13.00	-39.59	H
276.3800	-75.74	1.99	5.23	-72.50	-13.00	-59.50	H
357.8600	-71.67	2.26	5.72	-68.21	-13.00	-55.21	H
402.4800	-72.81	2.41	5.97	-69.25	-13.00	-56.25	H
516.9400	-73.51	2.7	6.07	-70.14	-13.00	-57.14	H
654.6800	-70.21	3.04	6.3	-66.95	-13.00	-53.95	H

Remark:

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

**Operation Mode:** GPRS 850 / TX / CH 190**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
71.7100	-51.35	0.97	-1.61	-53.93	-13.00	-40.93	V
138.6400	-69.17	1.39	-0.38	-70.94	-13.00	-57.94	V
222.0600	-80.12	1.77	5.34	-76.55	-13.00	-63.55	V
354.9500	-78.06	2.25	5.75	-74.56	-13.00	-61.56	V
516.9400	-78.97	2.7	6.07	-75.60	-13.00	-62.60	V
654.6800	-75.28	3.04	6.3	-72.02	-13.00	-59.02	V
71.7100	-49.36	0.97	-1.61	-51.94	-13.00	-38.94	H
243.4000	-76.36	1.82	5.43	-72.75	-13.00	-59.75	H
390.8400	-72.08	2.32	6	-68.40	-13.00	-55.40	H
402.4800	-72.24	2.41	5.97	-68.68	-13.00	-55.68	H
516.9400	-72.04	2.7	6.07	-68.67	-13.00	-55.67	H
654.6800	-69.53	3.04	6.3	-66.27	-13.00	-53.27	H

Remark:

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

**Operation Mode:** GPRS 850 / TX / CH 251**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
71.7100	-51.21	0.97	-1.61	-53.79	-13.00	-40.79	V
138.6400	-69.05	1.39	-0.38	-70.82	-13.00	-57.82	V
222.0600	-80.05	1.77	5.34	-76.48	-13.00	-63.48	V
354.9500	-78.37	2.25	5.75	-74.87	-13.00	-61.87	V
448.0700	-80.3	2.58	5.74	-77.14	-13.00	-64.14	V
654.6800	-75.53	3.04	6.3	-72.27	-13.00	-59.27	V
71.7100	-49.89	0.97	-1.61	-52.47	-13.00	-39.47	H
95.9600	-56.72	1.13	0.26	-57.59	-13.00	-44.59	H
222.0600	-75.96	1.77	5.34	-72.39	-13.00	-59.39	H
357.8600	-72.28	2.26	5.72	-68.82	-13.00	-55.82	H
448.0700	-72.39	2.58	5.74	-69.23	-13.00	-56.23	H
654.6800	-68.32	3.04	6.3	-65.06	-13.00	-52.06	H

Remark:

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

**Operation Mode:** GSM 1900 / TX / CH 512**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
101.7800	-65.84	1.16	-0.64	-67.64	-13.00	-54.64	V
144.4600	-70.29	1.41	0.17	-71.53	-13.00	-58.53	V
345.2500	-77.92	2.2	5.8	-74.32	-13.00	-61.32	V
448.0700	-78.25	2.58	5.74	-75.09	-13.00	-62.09	V
620.7300	-81.6	2.94	6.12	-78.42	-13.00	-65.42	V
771.0800	-81.24	3.27	6.35	-78.16	-13.00	-65.16	V
65.8900	-56.56	0.93	-1.93	-59.42	-13.00	-46.42	H
101.7800	-57.41	1.16	-0.64	-59.21	-13.00	-46.21	H
138.6400	-60.4	1.39	-0.38	-62.17	-13.00	-49.17	H
330.7000	-70.3	2.16	5.71	-66.75	-13.00	-53.75	H
415.0900	-73.03	2.45	5.86	-69.62	-13.00	-56.62	H
516.9400	-73.75	2.7	6.07	-70.38	-13.00	-57.38	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:** GSM 1900 / TX / CH 661**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
101.7800	-66.72	1.16	-0.64	-68.52	-13.00	-55.52	V
144.4600	-70.04	1.41	0.17	-71.28	-13.00	-58.28	V
354.9500	-78.17	2.25	5.75	-74.67	-13.00	-61.67	V
448.0700	-78.3	2.58	5.74	-75.14	-13.00	-62.14	V
585.8100	-82.29	2.89	6.11	-79.07	-13.00	-66.07	V
671.1700	-82.09	3.07	6.32	-78.84	-13.00	-65.84	V
65.8900	-55.85	0.93	-1.93	-58.71	-13.00	-45.71	H
101.7800	-57.26	1.16	-0.64	-59.06	-13.00	-46.06	H
138.6400	-59.34	1.39	-0.38	-61.11	-13.00	-48.11	H
330.7000	-70.53	2.16	5.71	-66.98	-13.00	-53.98	H
402.4800	-72.35	2.41	5.97	-68.79	-13.00	-55.79	H
516.9400	-74.48	2.7	6.07	-71.11	-13.00	-58.11	H

Remark:

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

**Operation Mode:** GSM 1900 / TX / CH 810**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
78.5000	-57.95	0.93	-1.93	-60.81	-13.00	-47.81	V
96.9300	-57.91	1.16	-0.64	-59.71	-13.00	-46.71	V
151.2500	-60.05	1.39	-0.38	-61.82	-13.00	-48.82	V
319.0600	-70.63	2.18	5.8	-67.01	-13.00	-54.01	V
354.9500	-74.52	2.53	5.9	-71.15	-13.00	-58.15	V
647.8900	-73.43	2.7	6.07	-70.06	-13.00	-57.06	V
101.7800	-41.53	1.13	-1.88	-59.16	-13.00	-46.16	H
138.6400	-48.13	1.22	-0.33	-62.27	-13.00	-49.27	H
333.6100	-61.41	2.14	5.5	-67.12	-13.00	-54.12	H
390.8400	-62.85	2.50	5.8	-67.18	-13.00	-54.18	H
415.0900	-66.29	2.31	5.70	-69.53	-13.00	-56.53	H
516.9400	-71.09	2.88	6	-71.52	-13.00	-58.52	H

Remark:

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

**Operation Mode:** GPRS 1900 / TX / CH 512**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
71.7100	-52.14	0.97	-1.61	-54.72	-13.00	-41.72	V
138.6400	-68.92	1.39	-0.38	-70.69	-13.00	-57.69	V
222.0600	-80.49	1.77	5.34	-76.92	-13.00	-63.92	V
354.9500	-78.34	2.25	5.75	-74.84	-13.00	-61.84	V
450.9800	-80.66	2.59	5.74	-77.51	-13.00	-64.51	V
516.9400	-80.05	2.7	6.07	-76.68	-13.00	-63.68	V
71.7100	-50.77	0.97	-1.61	-53.35	-13.00	-40.35	H
222.0600	-76.12	1.77	5.34	-72.55	-13.00	-59.55	H
357.8600	-72.54	2.26	5.72	-69.08	-13.00	-56.08	H
390.8400	-72.82	2.32	6	-69.14	-13.00	-56.14	H
516.9400	-74.59	2.7	6.07	-71.22	-13.00	-58.22	H
733.2500	-74.95	3.19	6.31	-71.83	-13.00	-58.83	H

Remark:

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

**Operation Mode:** GPRS 1900 / TX / CH 661**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
71.7100	-52.37	0.97	-1.61	-54.95	-13.00	-41.95	V
138.6400	-68.87	1.39	-0.38	-70.64	-13.00	-57.64	V
222.0600	-79.45	1.77	5.34	-75.88	-13.00	-62.88	V
354.9500	-79.09	2.25	5.75	-75.59	-13.00	-62.59	V
448.0700	-80.44	2.58	5.74	-77.28	-13.00	-64.28	V
516.9400	-79.37	2.7	6.07	-76.00	-13.00	-63.00	V
71.7100	-50.21	0.97	-1.61	-52.79	-13.00	-39.79	H
222.0600	-75.99	1.77	5.34	-72.42	-13.00	-59.42	H
369.5000	-73.15	2.3	5.8	-69.65	-13.00	-56.65	H
402.4800	-72.81	2.41	5.97	-69.25	-13.00	-56.25	H
516.9400	-73.84	2.7	6.07	-70.47	-13.00	-57.47	H
769.1400	-74.29	3.27	6.39	-71.17	-13.00	-58.17	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:** GPRS 1900 / TX / CH 810**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
71.7100	-52.12	0.97	-1.61	-54.70	-13.00	-41.70	V
144.4600	-71.61	1.41	0.17	-72.85	-13.00	-59.85	V
222.0600	-79.5	1.77	5.34	-75.93	-13.00	-62.93	V
354.9500	-78.47	2.25	5.75	-74.97	-13.00	-61.97	V
516.9400	-79.78	2.7	6.07	-76.41	-13.00	-63.41	V
697.3600	-78.05	3.11	6.42	-74.74	-13.00	-61.74	V
71.7100	-50.27	0.97	-1.61	-52.85	-13.00	-39.85	H
222.0600	-74.24	1.77	5.34	-70.67	-13.00	-57.67	H
342.3400	-72.37	2.18	5.8	-68.75	-13.00	-55.75	H
390.8400	-71.98	2.32	6	-68.30	-13.00	-55.30	H
516.9400	-73.76	2.7	6.07	-70.39	-13.00	-57.39	H
733.2500	-74.57	3.19	6.31	-71.45	-13.00	-58.45	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:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
71.7100	-51.65	0.97	-1.61	-54.23	-13.00	-41.23	V
150.2800	-71.81	1.43	0.71	-72.53	-13.00	-59.53	V
222.0600	-79.68	1.77	5.34	-76.11	-13.00	-63.11	V
354.9500	-78.11	2.25	5.75	-74.61	-13.00	-61.61	V
456.8000	-80.26	2.6	5.84	-77.02	-13.00	-64.02	V
654.6800	-76.64	3.04	6.3	-73.38	-13.00	-60.38	V
71.7100	-49.67	0.97	-1.61	-52.25	-13.00	-39.25	H
243.4000	-77.03	1.82	5.43	-73.42	-13.00	-60.42	H
342.3400	-72.31	2.18	5.8	-68.69	-13.00	-55.69	H
448.0700	-73.31	2.58	5.74	-70.15	-13.00	-57.15	H
516.9400	-73.79	2.7	6.07	-70.42	-13.00	-57.42	H
654.6800	-69.48	3.04	6.3	-66.22	-13.00	-53.22	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:** EDGE 850 / TX / CH 190**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
71.7100	-51.49	0.97	-1.61	-54.07	-13.00	-41.07	V
138.6400	-69.28	1.39	-0.38	-71.05	-13.00	-58.05	V
222.0600	-80.21	1.77	5.34	-76.64	-13.00	-63.64	V
354.9500	-78.39	2.25	5.75	-74.89	-13.00	-61.89	V
541.1900	-79.6	2.78	6.25	-76.13	-13.00	-63.13	V
654.6800	-76.01	3.04	6.3	-72.75	-13.00	-59.75	V
71.7100	-49.76	0.97	-1.61	-52.34	-13.00	-39.34	H
222.0600	-76.51	1.77	5.34	-72.94	-13.00	-59.94	H
346.2200	-72.86	2.21	5.8	-69.27	-13.00	-56.27	H
390.8400	-72.65	2.32	6	-68.97	-13.00	-55.97	H
505.3000	-73.42	2.69	5.95	-70.16	-13.00	-57.16	H
654.6800	-68.18	3.04	6.3	-64.92	-13.00	-51.92	H

Remark:

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

**Operation Mode:** EDGE 850 / TX / CH 251**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
71.7100	-51.72	0.97	-1.61	-54.30	-13.00	-41.30	V
101.7800	-64.75	1.16	-0.64	-66.55	-13.00	-53.55	V
222.0600	-80.57	1.77	5.34	-77.00	-13.00	-64.00	V
354.9500	-78.16	2.25	5.75	-74.66	-13.00	-61.66	V
516.9400	-79.64	2.7	6.07	-76.27	-13.00	-63.27	V
654.6800	-74.69	3.04	6.3	-71.43	-13.00	-58.43	V
71.7100	-49.75	0.97	-1.61	-52.33	-13.00	-39.33	H
95.9600	-55.93	1.13	0.26	-56.80	-13.00	-43.80	H
222.0600	-76.08	1.77	5.34	-72.51	-13.00	-59.51	H
402.4800	-71.97	2.41	5.97	-68.41	-13.00	-55.41	H
627.5200	-75.33	2.97	6.17	-72.13	-13.00	-59.13	H
654.6800	-68.82	3.04	6.3	-65.56	-13.00	-52.56	H

Remark:

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

**Operation Mode:** EDGE 1900 / TX / CH 512**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Jerry Lin**Humidity:** 60 % 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)
71.7100	-51.89	0.97	-1.61	-54.47	-13.00	-41.47	V
101.7800	-64.15	1.16	-0.64	-65.95	-13.00	-52.95	V
222.0600	-79.47	1.77	5.34	-75.90	-13.00	-62.90	V
354.9500	-77.74	2.25	5.75	-74.24	-13.00	-61.24	V
450.9800	-80.33	2.59	5.74	-77.18	-13.00	-64.18	V
733.2500	-77.69	3.19	6.31	-74.57	-13.00	-61.57	V
71.7100	-51	0.97	-1.61	-53.58	-13.00	-40.58	H
222.0600	-76.43	1.77	5.34	-72.86	-13.00	-59.86	H
345.2500	-71.86	2.2	5.8	-68.26	-13.00	-55.26	H
390.8400	-72.82	2.32	6	-69.14	-13.00	-56.14	H
516.9400	-73.17	2.7	6.07	-69.80	-13.00	-56.80	H
745.8600	-74.33	3.2	6.1	-71.43	-13.00	-58.43	H

Remark:

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

**Operation Mode:** EDGE 1900 / TX / CH 661**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
71.7100	-52.18	0.97	-1.61	-54.76	-13.00	-41.76	V
138.6400	-68	1.39	-0.38	-69.77	-13.00	-56.77	V
222.0600	-80.01	1.77	5.34	-76.44	-13.00	-63.44	V
354.9500	-78.69	2.25	5.75	-75.19	-13.00	-62.19	V
516.9400	-79.04	2.7	6.07	-75.67	-13.00	-62.67	V
625.5800	-80.11	2.96	6.16	-76.91	-13.00	-63.91	V
71.7100	-50.48	0.97	-1.61	-53.06	-13.00	-40.06	H
150.2800	-71.1	1.43	0.71	-71.82	-13.00	-58.82	H
345.2500	-71.57	2.2	5.8	-67.97	-13.00	-54.97	H
426.7300	-73.67	2.48	5.8	-70.35	-13.00	-57.35	H
516.9400	-74.51	2.7	6.07	-71.14	-13.00	-58.14	H
745.8600	-74.03	3.2	6.1	-71.13	-13.00	-58.13	H

Remark:

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

**Operation Mode:** EDGE 1900 / TX / CH 810**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
71.7100	-51.93	0.97	-1.61	-54.51	-13.00	-41.51	V
101.7800	-64.67	1.16	-0.64	-66.47	-13.00	-53.47	V
222.0600	-79.86	1.77	5.34	-76.29	-13.00	-63.29	V
354.9500	-77.98	2.25	5.75	-74.48	-13.00	-61.48	V
516.9400	-78.27	2.7	6.07	-74.90	-13.00	-61.90	V
733.2500	-77.28	3.19	6.31	-74.16	-13.00	-61.16	V
71.7100	-49.99	0.97	-1.61	-52.57	-13.00	-39.57	H
101.7800	-56.18	1.16	-0.64	-57.98	-13.00	-44.98	H
243.4000	-75.28	1.82	5.43	-71.67	-13.00	-58.67	H
402.4800	-72.25	2.41	5.97	-68.69	-13.00	-55.69	H
439.3400	-73.5	2.53	5.9	-70.13	-13.00	-57.13	H
516.9400	-74.4	2.7	6.07	-71.03	-13.00	-58.03	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 Band II / TX / CH 9262**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
101.7800	-68.42	1.16	-0.64	-70.22	-13.00	-57.22	V
138.6400	-68.19	1.39	-0.38	-69.96	-13.00	-56.96	V
345.2500	-77.8	2.2	5.8	-74.20	-13.00	-61.20	V
448.0700	-79.85	2.58	5.74	-76.69	-13.00	-63.69	V
770.1100	-77.22	3.27	6.38	-74.11	-13.00	-61.11	V
890.3900	-78.57	3.5	6.7	-75.37	-13.00	-62.37	V
65.8900	-55.32	0.93	-1.93	-58.18	-13.00	-45.18	H
138.6400	-58.21	1.39	-0.38	-59.98	-13.00	-46.98	H
330.7000	-72.05	2.16	5.71	-68.50	-13.00	-55.50	H
390.8400	-72.07	2.32	6	-68.39	-13.00	-55.39	H
529.5500	-76.88	2.75	6	-73.63	-13.00	-60.63	H
770.1100	-73.41	3.27	6.38	-70.30	-13.00	-57.30	H

Remark:

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

**Operation Mode:** WCDMA Band II / TX / CH 9400**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
101.7800	-68.71	1.16	-0.64	-70.51	-13.00	-57.51	V
141.5500	-70.18	1.4	-0.1	-71.68	-13.00	-58.68	V
345.2500	-78.85	2.2	5.8	-75.25	-13.00	-62.25	V
448.0700	-78.48	2.58	5.74	-75.32	-13.00	-62.32	V
529.5500	-80.33	2.75	6	-77.08	-13.00	-64.08	V
757.5000	-77.57	3.22	6.25	-74.54	-13.00	-61.54	V
65.8900	-55.34	0.93	-1.93	-58.20	-13.00	-45.20	H
138.6400	-59.51	1.39	-0.38	-61.28	-13.00	-48.28	H
342.3400	-70.9	2.18	5.8	-67.28	-13.00	-54.28	H
516.9400	-74.31	2.7	6.07	-70.94	-13.00	-57.94	H
625.5800	-76.91	2.96	6.16	-73.71	-13.00	-60.71	H
770.1100	-73.77	3.27	6.38	-70.66	-13.00	-57.66	H

Remark:

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

**Operation Mode:** WCDMA Band II / TX / CH 9538**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
101.7800	-68.14	1.16	-0.64	-69.94	-13.00	-56.94	V
138.6400	-67.62	1.39	-0.38	-69.39	-13.00	-56.39	V
346.2200	-79.04	2.21	5.8	-75.45	-13.00	-62.45	V
448.0700	-78.31	2.58	5.74	-75.15	-13.00	-62.15	V
757.5000	-76.78	3.22	6.25	-73.75	-13.00	-60.75	V
902.0300	-77.9	3.53	6.6	-74.83	-13.00	-61.83	V
65.8900	-55.05	0.93	-1.93	-57.91	-13.00	-44.91	H
138.6400	-58.43	1.39	-0.38	-60.20	-13.00	-47.20	H
276.3800	-75.75	1.99	5.23	-72.51	-13.00	-59.51	H
342.3400	-71.29	2.18	5.8	-67.67	-13.00	-54.67	H
390.8400	-71.72	2.32	6	-68.04	-13.00	-55.04	H
757.5000	-72.92	3.22	6.25	-69.89	-13.00	-56.89	H

Remark:

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

**Operation Mode:** WCDMA Band V / TX / CH 4132**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
65.8900	-68.18	0.93	-1.93	-71.04	-13.00	-58.04	V
138.6400	-67.84	1.39	-0.38	-69.61	-13.00	-56.61	V
346.2200	-78.59	2.21	5.8	-75.00	-13.00	-62.00	V
448.0700	-78	2.58	5.74	-74.84	-13.00	-61.84	V
529.5500	-80.67	2.75	6	-77.42	-13.00	-64.42	V
594.5400	-82.87	2.89	6.29	-79.47	-13.00	-66.47	V
65.8900	-54.78	0.93	-1.93	-57.64	-13.00	-44.64	H
101.7800	-60.22	1.16	-0.64	-62.02	-13.00	-49.02	H
138.6400	-61.13	1.39	-0.38	-62.90	-13.00	-49.90	H
342.3400	-71.11	2.18	5.8	-67.49	-13.00	-54.49	H
426.7300	-74.3	2.48	5.8	-70.98	-13.00	-57.98	H
516.9400	-74.23	2.7	6.07	-70.86	-13.00	-57.86	H

Remark:

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

**Operation Mode:** WCDMA Band V / TX / CH 4182**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
101.7800	-68.73	1.16	-0.64	-70.53	-13.00	-57.53	V
138.6400	-68.54	1.39	-0.38	-70.31	-13.00	-57.31	V
345.2500	-78.38	2.2	5.8	-74.78	-13.00	-61.78	V
448.0700	-79.06	2.58	5.74	-75.90	-13.00	-62.90	V
541.1900	-81.67	2.78	6.25	-78.20	-13.00	-65.20	V
634.3100	-82.3	2.99	6.18	-79.11	-13.00	-66.11	V
65.8900	-54.49	0.93	-1.93	-57.35	-13.00	-44.35	H
138.6400	-61.09	1.39	-0.38	-62.86	-13.00	-49.86	H
342.3400	-71.35	2.18	5.8	-67.73	-13.00	-54.73	H
435.4600	-74.95	2.51	5.86	-71.60	-13.00	-58.60	H
516.9400	-74.67	2.7	6.07	-71.30	-13.00	-58.30	H
601.3300	-76.77	2.91	6.39	-73.29	-13.00	-60.29	H

Remark:

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

**Operation Mode:** WCDMA Band V / TX / CH 4233**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
101.7800	-68.42	1.16	-0.64	-70.22	-13.00	-57.22	V
138.6400	-68.94	1.39	-0.38	-70.71	-13.00	-57.71	V
345.2500	-79.58	2.2	5.8	-75.98	-13.00	-62.98	V
448.0700	-79.25	2.58	5.74	-76.09	-13.00	-63.09	V
529.5500	-81.55	2.75	6	-78.30	-13.00	-65.30	V
622.6700	-82.49	2.95	6.14	-79.30	-13.00	-66.30	V
71.7100	-56.12	0.97	-1.61	-58.70	-13.00	-45.70	H
138.6400	-61.99	1.39	-0.38	-63.76	-13.00	-50.76	H
276.3800	-77.03	1.99	5.23	-73.79	-13.00	-60.79	H
346.2200	-71.26	2.21	5.8	-67.67	-13.00	-54.67	H
426.7300	-74.72	2.48	5.8	-71.40	-13.00	-58.40	H
516.9400	-74.47	2.7	6.07	-71.10	-13.00	-58.10	H

Remark:

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



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

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
101.7800	-68.04	1.16	-0.64	-69.84	-13.00	-56.84	V
138.6400	-68.42	1.39	-0.38	-70.19	-13.00	-57.19	V
345.2500	-79.51	2.2	5.8	-75.91	-13.00	-62.91	V
448.0700	-79.43	2.58	5.74	-76.27	-13.00	-63.27	V
610.0600	-82.43	2.94	6.29	-79.08	-13.00	-66.08	V
770.1100	-78.14	3.27	6.38	-75.03	-13.00	-62.03	V
65.8900	-55.06	0.93	-1.93	-57.92	-13.00	-44.92	H
138.6400	-59.93	1.39	-0.38	-61.70	-13.00	-48.70	H
342.3400	-71.33	2.18	5.8	-67.71	-13.00	-54.71	H
516.9400	-74.67	2.7	6.07	-71.30	-13.00	-58.30	H
757.5000	-72.76	3.22	6.25	-69.73	-13.00	-56.73	H
770.1100	-72.16	3.27	6.38	-69.05	-13.00	-56.05	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 9400

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
101.7800	-69.35	1.16	-0.64	-71.15	-13.00	-58.15	V
138.6400	-67.52	1.39	-0.38	-69.29	-13.00	-56.29	V
346.2200	-79.69	2.21	5.8	-76.10	-13.00	-63.10	V
448.0700	-78.1	2.58	5.74	-74.94	-13.00	-61.94	V
529.5500	-81.13	2.75	6	-77.88	-13.00	-64.88	V
770.1100	-77.92	3.27	6.38	-74.81	-13.00	-61.81	V
65.8900	-56.66	0.93	-1.93	-59.52	-13.00	-46.52	H
138.6400	-58.05	1.39	-0.38	-59.82	-13.00	-46.82	H
330.7000	-70.7	2.16	5.71	-67.15	-13.00	-54.15	H
415.0900	-73.33	2.45	5.86	-69.92	-13.00	-56.92	H
661.4700	-76.98	3.06	6.3	-73.74	-13.00	-60.74	H
770.1100	-72.82	3.27	6.38	-69.71	-13.00	-56.71	H

Remark:

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



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

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
101.7800	-67.78	1.16	-0.64	-69.58	-13.00	-56.58	V
138.6400	-67.43	1.39	-0.38	-69.20	-13.00	-56.20	V
346.2200	-77.73	2.21	5.8	-74.14	-13.00	-61.14	V
448.0700	-78.83	2.58	5.74	-75.67	-13.00	-62.67	V
757.5000	-76.83	3.22	6.25	-73.80	-13.00	-60.80	V
866.1400	-76.88	3.44	6.47	-73.85	-13.00	-60.85	V
71.7100	-56.97	0.97	-1.61	-59.55	-13.00	-46.55	H
138.6400	-59.35	1.39	-0.38	-61.12	-13.00	-48.12	H
345.2500	-69.65	2.2	5.8	-66.05	-13.00	-53.05	H
439.3400	-74.57	2.53	5.9	-71.20	-13.00	-58.20	H
511.1200	-75.79	2.69	6.01	-72.47	-13.00	-59.47	H
770.1100	-72.42	3.27	6.38	-69.31	-13.00	-56.31	H

Remark:

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



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

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
101.7800	-68.47	1.16	-0.64	-70.27	-13.00	-57.27	V
138.6400	-67.07	1.39	-0.38	-68.84	-13.00	-55.84	V
354.9500	-79.41	2.25	5.75	-75.91	-13.00	-62.91	V
448.0700	-78.28	2.58	5.74	-75.12	-13.00	-62.12	V
529.5500	-79.96	2.75	6	-76.71	-13.00	-63.71	V
622.6700	-82.11	2.95	6.14	-78.92	-13.00	-65.92	V
65.8900	-54.78	0.93	-1.93	-57.64	-13.00	-44.64	H
138.6400	-60.48	1.39	-0.38	-62.25	-13.00	-49.25	H
186.1700	-73.84	1.62	3.85	-71.61	-13.00	-58.61	H
330.7000	-70.35	2.16	5.71	-66.80	-13.00	-53.80	H
390.8400	-72.53	2.32	6	-68.85	-13.00	-55.85	H
511.1200	-75.25	2.69	6.01	-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 / HSDPA Band V /
TX / CH 4182

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
101.7800	-69.42	1.16	-0.64	-71.22	-13.00	-58.22	V
138.6400	-68.47	1.39	-0.38	-70.24	-13.00	-57.24	V
345.2500	-78.35	2.2	5.8	-74.75	-13.00	-61.75	V
448.0700	-79.76	2.58	5.74	-76.60	-13.00	-63.60	V
529.5500	-79.78	2.75	6	-76.53	-13.00	-63.53	V
625.5800	-82.42	2.96	6.16	-79.22	-13.00	-66.22	V
65.8900	-55.02	0.93	-1.93	-57.88	-13.00	-44.88	H
138.6400	-60.74	1.39	-0.38	-62.51	-13.00	-49.51	H
234.6700	-76.36	1.8	5.38	-72.78	-13.00	-59.78	H
342.3400	-71.44	2.18	5.8	-67.82	-13.00	-54.82	H
415.0900	-73.25	2.45	5.86	-69.84	-13.00	-56.84	H
516.9400	-74.93	2.7	6.07	-71.56	-13.00	-58.56	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:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
71.7100	-68.59	0.97	-1.61	-71.17	-13.00	-58.17	V
138.6400	-68.46	1.39	-0.38	-70.23	-13.00	-57.23	V
346.2200	-80.27	2.21	5.8	-76.68	-13.00	-63.68	V
450.9800	-79.89	2.59	5.74	-76.74	-13.00	-63.74	V
529.5500	-81.8	2.75	6	-78.55	-13.00	-65.55	V
625.5800	-82.03	2.96	6.16	-78.83	-13.00	-65.83	V
71.7100	-55.8	0.97	-1.61	-58.38	-13.00	-45.38	H
138.6400	-61.98	1.39	-0.38	-63.75	-13.00	-50.75	H
276.3800	-76.7	1.99	5.23	-73.46	-13.00	-60.46	H
390.8400	-71.76	2.32	6	-68.08	-13.00	-55.08	H
415.0900	-73.18	2.45	5.86	-69.77	-13.00	-56.77	H
516.9400	-74.73	2.7	6.07	-71.36	-13.00	-58.36	H

Remark:

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



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

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
101.7800	-67.93	1.16	-0.64	-69.73	-13.00	-56.73	V
138.6400	-68.21	1.39	-0.38	-69.98	-13.00	-56.98	V
345.2500	-77.32	2.2	5.8	-73.72	-13.00	-60.72	V
448.0700	-80.07	2.58	5.74	-76.91	-13.00	-63.91	V
625.5800	-81.71	2.96	6.16	-78.51	-13.00	-65.51	V
745.8600	-77.59	3.2	6.1	-74.69	-13.00	-61.69	V
65.8900	-55.52	0.93	-1.93	-58.38	-13.00	-45.38	H
138.6400	-58.5	1.39	-0.38	-60.27	-13.00	-47.27	H
330.7000	-71.57	2.16	5.71	-68.02	-13.00	-55.02	H
390.8400	-71.96	2.32	6	-68.28	-13.00	-55.28	H
511.1200	-74.48	2.69	6.01	-71.16	-13.00	-58.16	H
769.1400	-72.7	3.27	6.39	-69.58	-13.00	-56.58	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 / HSUPA Band II /
TX / CH 9400

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
101.7800	-68.78	1.16	-0.64	-70.58	-13.00	-57.58	V
138.6400	-65.61	1.39	-0.38	-67.38	-13.00	-54.38	V
222.0600	-84.26	1.77	5.34	-80.69	-13.00	-67.69	V
346.2200	-80.36	2.21	5.8	-76.77	-13.00	-63.77	V
448.0700	-79.34	2.58	5.74	-76.18	-13.00	-63.18	V
770.1100	-77.3	3.27	6.38	-74.19	-13.00	-61.19	V
65.8900	-55.92	0.93	-1.93	-58.78	-13.00	-45.78	H
138.6400	-59.27	1.39	-0.38	-61.04	-13.00	-48.04	H
330.7000	-71.08	2.16	5.71	-67.53	-13.00	-54.53	H
415.0900	-73.65	2.45	5.86	-70.24	-13.00	-57.24	H
516.9400	-75.76	2.7	6.07	-72.39	-13.00	-59.39	H
770.1100	-71.8	3.27	6.38	-68.69	-13.00	-55.69	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: October 8, 2013

Temperature: 26°C

Tested by: Wayne Tsai

Humidity: 60 % 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)
71.7100	-67.19	0.97	-1.61	-69.77	-13.00	-56.77	V
138.6400	-67.73	1.39	-0.38	-69.50	-13.00	-56.50	V
345.2500	-77.86	2.2	5.8	-74.26	-13.00	-61.26	V
448.0700	-79.1	2.58	5.74	-75.94	-13.00	-62.94	V
715.7900	-79.46	3.16	6.41	-76.21	-13.00	-63.21	V
770.1100	-77.65	3.27	6.38	-74.54	-13.00	-61.54	V
65.8900	-55.87	0.93	-1.93	-58.73	-13.00	-45.73	H
138.6400	-57.89	1.39	-0.38	-59.66	-13.00	-46.66	H
330.7000	-71.16	2.16	5.71	-67.61	-13.00	-54.61	H
390.8400	-71.31	2.32	6	-67.63	-13.00	-54.63	H
415.0900	-73.35	2.45	5.86	-69.94	-13.00	-56.94	H
516.9400	-73.49	2.7	6.07	-70.12	-13.00	-57.12	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: WCDMA / HSUPA Band V /
TX / CH 4132

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
101.7800	-68.22	1.16	-0.64	-70.02	-13.00	-57.02	V
138.6400	-67.46	1.39	-0.38	-69.23	-13.00	-56.23	V
345.2500	-78.38	2.2	5.8	-74.78	-13.00	-61.78	V
448.0700	-77.1	2.58	5.74	-73.94	-13.00	-60.94	V
529.5500	-80.72	2.75	6	-77.47	-13.00	-64.47	V
625.5800	-81.8	2.96	6.16	-78.60	-13.00	-65.60	V
65.8900	-55.04	0.93	-1.93	-57.90	-13.00	-44.90	H
101.7800	-59.84	1.16	-0.64	-61.64	-13.00	-48.64	H
138.6400	-61.38	1.39	-0.38	-63.15	-13.00	-50.15	H
330.7000	-71.18	2.16	5.71	-67.63	-13.00	-54.63	H
390.8400	-72.17	2.32	6	-68.49	-13.00	-55.49	H
516.9400	-74.58	2.7	6.07	-71.21	-13.00	-58.21	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: October 8, 2013

Temperature: 26°C

Tested by: Wayne Tsai

Humidity: 60 % 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)
101.7800	-68.95	1.16	-0.64	-70.75	-13.00	-57.75	V
138.6400	-68.73	1.39	-0.38	-70.50	-13.00	-57.50	V
357.8600	-79.68	2.26	5.72	-76.22	-13.00	-63.22	V
448.0700	-79.05	2.58	5.74	-75.89	-13.00	-62.89	V
529.5500	-80.95	2.75	6	-77.70	-13.00	-64.70	V
575.1400	-82.15	2.88	6.06	-78.97	-13.00	-65.97	V
65.8900	-55.72	0.93	-1.93	-58.58	-13.00	-45.58	H
101.7800	-60.59	1.16	-0.64	-62.39	-13.00	-49.39	H
138.6400	-60.76	1.39	-0.38	-62.53	-13.00	-49.53	H
279.2900	-76.9	2	5.29	-73.61	-13.00	-60.61	H
342.3400	-71.48	2.18	5.8	-67.86	-13.00	-54.86	H
511.1200	-74.52	2.69	6.01	-71.20	-13.00	-58.20	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: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
101.7800	-67.83	1.16	-0.64	-69.63	-13.00	-56.63	V
138.6400	-68.28	1.39	-0.38	-70.05	-13.00	-57.05	V
345.2500	-80.26	2.2	5.8	-76.66	-13.00	-63.66	V
450.9800	-79.48	2.59	5.74	-76.33	-13.00	-63.33	V
529.5500	-80.42	2.75	6	-77.17	-13.00	-64.17	V
607.1500	-81.97	2.93	6.33	-78.57	-13.00	-65.57	V
71.7100	-55.96	0.97	-1.61	-58.54	-13.00	-45.54	H
138.6400	-61.61	1.39	-0.38	-63.38	-13.00	-50.38	H
309.3600	-77.28	2.13	5.78	-73.63	-13.00	-60.63	H
342.3400	-71.89	2.18	5.8	-68.27	-13.00	-55.27	H
516.9400	-74.29	2.7	6.07	-70.92	-13.00	-57.92	H
601.3300	-77.2	2.91	6.39	-73.72	-13.00	-60.72	H

Remark:

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

**Above 1GHz****Operation Mode:** GSM 850 / TX / CH 128**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
1651.000	-43.66	5.05	6.03	-42.68	-13.00	-29.68	V
1952.000	-46.58	5.59	5.49	-46.68	-13.00	-33.68	V
4122.000	-44.29	8.47	9.5	-43.26	-13.00	-30.26	V
4948.000	-46.79	9.33	10.52	-45.60	-13.00	-32.60	V
7419.000	-41.2	12.12	12.57	-40.75	-13.00	-27.75	V
N/A							
1651.000	-45.58	5.05	6.03	-44.60	-13.00	-31.60	H
1952.000	-50.25	5.59	5.49	-50.35	-13.00	-37.35	H
4122.000	-45.91	8.47	9.5	-44.88	-13.00	-31.88	H
4948.000	-49.04	9.33	10.52	-47.85	-13.00	-34.85	H
N/A							

Remark:

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

**Operation Mode:** GSM 850 / TX / CH 190**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
1672.000	-45.96	5.07	5.99	-45.04	-13.00	-32.04	V
1959.000	-48.89	5.61	5.47	-49.03	-13.00	-36.03	V
4185.000	-42.59	8.49	9.55	-41.53	-13.00	-28.53	V
5018.000	-49.15	9.42	10.61	-47.96	-13.00	-34.96	V
6691.000	-46.32	11.29	11.53	-46.08	-13.00	-33.08	V
N/A							
1672.000	-49.59	5.07	5.99	-48.67	-13.00	-35.67	H
4185.000	-48.32	8.49	9.55	-47.26	-13.00	-34.26	H
N/A							

Remark:

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

**Operation Mode:** GSM 850 / TX / CH 251**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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	-48.15	5.11	5.94	-47.32	-13.00	-34.32	V
4241.000	-48.81	8.54	9.59	-47.76	-13.00	-34.76	V
5095.000	-49.48	9.45	10.64	-48.29	-13.00	-35.29	V
N/A							
1700.000	-48.16	5.11	5.94	-47.33	-13.00	-34.33	H
3051.000	-53.43	7.09	7.55	-52.97	-13.00	-39.97	H
N/A							

Remark:

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

**Operation Mode:** GPRS 850 / TX / CH 128**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
1651.000	-43.19	5.05	6.03	-42.21	-13.00	-29.21	V
4948.000	-42.64	9.33	10.52	-41.45	-13.00	-28.45	V
5767.000	-46.17	10.33	10.85	-45.65	-13.00	-32.65	V
N/A							
1651.000	-46.03	5.05	6.03	-45.05	-13.00	-32.05	H
4948.000	-46.17	9.33	10.52	-44.98	-13.00	-31.98	H
N/A							

Remark:

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

**Operation Mode:** GPRS 850 / TX / CH 190**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
1672.000	-47.1	5.07	5.99	-46.18	-13.00	-33.18	V
4185.000	-42.42	8.49	9.55	-41.36	-13.00	-28.36	V
6691.000	-42.29	11.29	11.53	-42.05	-13.00	-29.05	V
N/A							
1672.000	-48.17	5.07	5.99	-47.25	-13.00	-34.25	H
4185.000	-45.89	8.49	9.55	-44.83	-13.00	-31.83	H
N/A							

Remark:

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

**Operation Mode:** GPRS 850 / TX / CH 251**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
1672.000	-46.64	5.07	5.99	-45.72	-13.00	-32.72	V
4185.000	-41.63	8.49	9.55	-40.57	-13.00	-27.57	V
5018.000	-46	9.42	10.61	-44.81	-13.00	-31.81	V
N/A							
1672.000	-47.6	5.07	5.99	-46.68	-13.00	-33.68	H
4185.000	-47.62	8.49	9.55	-46.56	-13.00	-33.56	H
5018.000	-48.34	9.42	10.61	-47.15	-13.00	-34.15	H
N/A							

Remark:

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

**Operation Mode:** GSM 1900 / TX / CH 512**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
3632.000	-55.81	8.14	9.03	-54.92	-13.00	-41.92	V
4661.000	-53.31	9.13	10.06	-52.38	-13.00	-39.38	V
N/A							
3849.000	-54.06	8.32	9.25	-53.13	-13.00	-40.13	H
5081.000	-52.88	9.44	10.63	-51.69	-13.00	-38.69	H
N/A							

Remark:

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

**Operation Mode:** GSM 1900 / TX / CH 661**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
3100.000	-55.85	7.17	7.7	-55.32	-13.00	-42.32	V
3758.000	-52.8	8.23	9.16	-51.87	-13.00	-38.87	V
N/A							
4367.000	-52.7	8.63	9.69	-51.64	-13.00	-38.64	H
5725.000	-51.52	10.22	10.84	-50.90	-13.00	-37.90	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:** GSM 1900 / TX / CH 810**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
3821.000	-50	8.29	9.22	-49.07	-13.00	-36.07	V
7181.000	-45.88	11.85	12.19	-45.54	-13.00	-32.54	V
N/A							
4038.000	-52.59	8.39	9.43	-51.55	-13.00	-38.55	H
5123.000	-52.36	9.48	10.65	-51.19	-13.00	-38.19	H
N/A							

Remark:

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

**Operation Mode:** GPRS 1900 / TX / CH 512**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
3702.000	-42.78	8.2	9.1	-41.88	-13.00	-28.88	V
5550.000	-43.82	10.06	10.81	-43.07	-13.00	-30.07	V
N/A							
3702.000	-47.66	8.2	9.1	-46.76	-13.00	-33.76	H
5550.000	-45.92	10.06	10.81	-45.17	-13.00	-32.17	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:** GPRS 1900 / TX / CH 661**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
3758.000	-42.36	8.23	9.16	-41.43	-13.00	-28.43	V
5641.000	-46.05	10.18	10.83	-45.40	-13.00	-32.40	V
N/A							
4514.000	-52.04	8.94	9.82	-51.16	-13.00	-38.16	H
5641.000	-45.34	10.18	10.83	-44.69	-13.00	-31.69	H
N/A							

Remark:

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

**Operation Mode:** GPRS 1900 / TX / CH 810**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
3821.000	-43.98	8.29	9.22	-43.05	-13.00	-30.05	V
5732.000	-45.38	10.24	10.85	-44.77	-13.00	-31.77	V
N/A							
3821.000	-48.49	8.29	9.22	-47.56	-13.00	-34.56	H
5732.000	-49.44	10.24	10.85	-48.83	-13.00	-35.83	H
N/A							

Remark:

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

**Operation Mode:** EDGE 850 / TX / CH 128**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
1966.000	-51.37	5.63	5.46	-51.54	-13.00	-38.54	V
4948.000	-43.77	9.33	10.52	-42.58	-13.00	-29.58	V
5767.000	-45.74	10.33	10.85	-45.22	-13.00	-32.22	V
6593.000	-43.02	11.22	11.41	-42.83	-13.00	-29.83	V
N/A							
1651.000	-45.52	5.05	6.03	-44.54	-13.00	-31.54	H
4122.000	-50.02	8.47	9.5	-48.99	-13.00	-35.99	H
4948.000	-46.1	9.33	10.52	-44.91	-13.00	-31.91	H
N/A							

Remark:

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

**Operation Mode:** EDGE 850 / TX / CH 190**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
1672.000	-46.13	5.07	5.99	-45.21	-13.00	-32.21	V
4185.000	-40.69	8.49	9.55	-39.63	-13.00	-26.63	V
5018.000	-45.13	9.42	10.61	-43.94	-13.00	-30.94	V
N/A							
1672.000	-48.03	5.07	5.99	-47.11	-13.00	-34.11	H
4185.000	-44.6	8.49	9.55	-43.54	-13.00	-30.54	H
5018.000	-44.8	9.42	10.61	-43.61	-13.00	-30.61	H
N/A							

Remark:

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

**Operation Mode:** EDGE 850 / TX / CH 251**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
1672.000	-46.16	5.07	5.99	-45.24	-13.00	-32.24	V
4185.000	-41.14	8.49	9.55	-40.08	-13.00	-27.08	V
6691.000	-40.77	11.29	11.53	-40.53	-13.00	-27.53	V
N/A							
1672.000	-48.12	5.07	5.99	-47.20	-13.00	-34.20	H
4185.000	-44.38	8.49	9.55	-43.32	-13.00	-30.32	H
5018.000	-45.75	9.42	10.61	-44.56	-13.00	-31.56	H
N/A							

Remark:

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

**Operation Mode:** EDGE 1900 / TX / CH 512**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
3702.000	-41.95	8.2	9.1	-41.05	-13.00	-28.05	V
5550.000	-46.53	10.06	10.81	-45.78	-13.00	-32.78	V
N/A							
3702.000	-48.57	8.2	9.1	-47.67	-13.00	-34.67	H
5550.000	-45.79	10.06	10.81	-45.04	-13.00	-32.04	H
N/A							

Remark:

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

**Operation Mode:** EDGE 1900 / TX / CH 661**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
3758.000	-42.75	8.23	9.16	-41.82	-13.00	-28.82	V
5641.000	-45.42	10.18	10.83	-44.77	-13.00	-31.77	V
N/A							
3758.000	-47.48	8.23	9.16	-46.55	-13.00	-33.55	H
5641.000	-46.06	10.18	10.83	-45.41	-13.00	-32.41	H
N/A							

Remark:

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

**Operation Mode:** EDGE 1900 / TX / CH 810**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
3821.000	-43.02	8.29	9.22	-42.09	-13.00	-29.09	V
5732.000	-45.85	10.24	10.85	-45.24	-13.00	-32.24	V
N/A							
3821.000	-51.45	8.29	9.22	-50.52	-13.00	-37.52	H
5732.000	-46.3	10.24	10.85	-45.69	-13.00	-32.69	H
N/A							

Remark:

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

**Operation Mode:** WCDMA Band II / TX / CH 9262**Test Date:** October 8, 2013**Temperature:** 25°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
4318.000	-53.01	8.61	9.65	-51.97	-13.00	-38.97	V
6775.000	-49.36	11.3	11.63	-49.03	-13.00	-36.03	V
N/A							
4311.000	-53	8.6	9.65	-51.95	-13.00	-38.95	H
5221.000	-52.38	9.58	10.69	-51.27	-13.00	-38.27	H
N/A							

Remark:

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

**Operation Mode:** WCDMA Band II / TX / CH 9400**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
3758.000	-49.8	8.23	9.16	-48.87	-13.00	-35.87	V
6201.000	-51.03	11.22	11.06	-51.19	-13.00	-38.19	V
N/A							
4451.000	-53.38	8.78	9.76	-52.40	-13.00	-39.40	H
6467.000	-50.27	11.1	11.27	-50.10	-13.00	-37.10	H
N/A							

Remark:

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

**Operation Mode:** WCDMA Band II / TX / CH 9538**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
3814.000	-52.77	8.28	9.21	-51.84	-13.00	-38.84	V
6222.000	-51.6	11.12	11.08	-51.64	-13.00	-38.64	V
N/A							
4388.000	-51.41	8.64	9.71	-50.34	-13.00	-37.34	H
7209.000	-45.01	11.87	12.23	-44.65	-13.00	-31.65	H
N/A							

Remark:

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

**Operation Mode:** WCDMA Band V / TX / CH 4132**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
1658.000	-52.28	5.06	6.02	-51.32	-13.00	-38.32	V
2463.000	-55.69	6.29	6.05	-55.93	-13.00	-42.93	V
N/A							
1658.000	-51.25	5.12	6.13	-50.72	-13.00	-37.72	H
3597.000	-54.42	8.22	9.2	-53.65	-13.00	-40.62	H
N/A							

Remark:

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

**Operation Mode:** WCDMA Band V / TX / CH 4182**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
1672.000	-52.86	5.07	5.99	-51.94	-13.00	-38.94	V
3968.000	-54.71	8.36	9.37	-53.70	-13.00	-40.70	V
N/A							
1672.000	-52.32	5.07	5.99	-51.40	-13.00	-38.40	H
3730.000	-54.99	8.22	9.13	-54.08	-13.00	-41.08	H
N/A							

Remark:

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

**Operation Mode:** WCDMA Band V / TX / CH 4233**Test Date:** October 8, 2013**Temperature:** 26°C**Tested by:** Wayne Tsai**Humidity:** 60 % 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)
1693.000	-53.51	5.1	5.95	-52.66	-13.00	-39.66	V
3758.000	-55.23	8.23	9.16	-54.30	-13.00	-41.30	V
N/A							
1693.000	-53.01	5.1	5.95	-52.16	-13.00	-39.16	H
3856.000	-54.34	8.33	9.26	-53.41	-13.00	-40.41	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

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
3709.000	-50.47	8.21	9.11	-49.57	-13.00	-36.57	V
5445.000	-53.82	9.87	10.78	-52.91	-13.00	-39.91	V
N/A							
4367.000	-52.8	8.63	9.69	-51.74	-13.00	-38.74	H
6453.000	-50.65	11.12	11.26	-50.51	-13.00	-37.51	H
N/A							

Remark:

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



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

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
3758.000	-49.89	8.23	9.16	-48.96	-13.00	-35.96	V
6712.000	-49.66	11.3	11.55	-49.41	-13.00	-36.41	V
N/A							
4955.000	-52.97	9.34	10.53	-51.78	-13.00	-38.78	H
7188.000	-45.83	11.85	12.2	-45.48	-13.00	-32.48	H
N/A							

Remark:

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



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

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
3814.000	-52.74	8.28	9.21	-51.81	-13.00	-38.81	V
6187.000	-50.3	11.14	11.05	-50.39	-13.00	-37.39	V
N/A							
4514.000	-52.34	8.94	9.82	-51.46	-13.00	-38.46	H
6992.000	-47.03	11.54	11.89	-46.68	-13.00	-33.68	H
N/A							

Remark:

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



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

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
1651.000	-53.89	5.05	6.03	-52.91	-13.00	-39.91	V
3905.000	-54.16	8.39	9.31	-53.24	-13.00	-40.24	V
N/A							
1651.000	-52.92	4.95	6	-51.95	-13.00	-38.95	H
4864.000	-53.11	9.32	10.42	-52.12	-13.00	-39.12	H
N/A							

Remark:

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



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

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
1672.000	-52.68	5.07	5.99	-51.76	-13.00	-38.76	V
3107.000	-56.55	7.18	7.72	-56.01	-13.00	-43.01	V
N/A							
1672.000	-51.68	5.07	5.99	-50.76	-13.00	-37.76	H
3870.000	-54.1	8.35	9.27	-53.18	-13.00	-40.18	H
N/A							

Remark:

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



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

Test Date: October 8, 2013

Temperature: 26°C

Tested by: Wayne Tsai

Humidity: 60 % 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)
1693.000	-54.66	5.1	5.95	-53.81	-13.00	-40.81	V
3506.000	-55.79	7.88	8.91	-54.76	-13.00	-41.76	V
N/A							
1693.000	-51.78	5.1	5.95	-50.93	-13.00	-37.93	H
5382.000	-52.92	9.79	10.75	-51.96	-13.00	-38.96	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 / HSUPA Band II /
TX / CH 9262

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
3709.000	-51.6	8.21	9.11	-50.70	-13.00	-37.70	V
4388.000	-53.14	8.64	9.71	-52.07	-13.00	-39.07	V
N/A							
3877.000	-53.69	8.36	9.28	-52.77	-13.00	-39.77	H
4584.000	-53.18	9.09	9.93	-52.34	-13.00	-39.34	H
N/A							

Remark:

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



Operation Mode: WCDMA / HSUPA Band II /
TX / CH 9400

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
3758.000	-49.31	8.23	9.16	-48.38	-13.00	-35.38	V
6411.000	-50.47	11.2	11.23	-50.44	-13.00	-37.44	V
N/A							
4479.000	-51.83	8.85	9.78	-50.90	-13.00	-37.90	H
6859.000	-47.42	11.44	11.73	-47.13	-13.00	-34.13	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 9538

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
3814.000	-52.95	8.28	9.21	-52.02	-13.00	-39.02	V
6712.000	-49.98	11.3	11.55	-49.73	-13.00	-36.73	V
N/A							
4815.000	-52.38	9.31	10.3	-51.39	-13.00	-38.39	H
6397.000	-49.99	11.21	11.22	-49.98	-13.00	-36.98	H
N/A							

Remark:

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



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

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
1658.000	-52.64	5.06	6.02	-51.68	-13.00	-38.68	V
3611.000	-55.01	8.12	9.01	-54.12	-13.00	-41.12	V
N/A							
1658.000	-52.93	5.06	6.02	-51.97	-13.00	-38.97	H
4801.000	-52.92	9.32	10.28	-51.96	-13.00	-38.96	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 / HSUPA Band V /
TX / CH 4182

Temperature: 26°C

Humidity: 60 % RH

Test Date: October 8, 2013

Tested by: Wayne Tsai

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)
1672.000	-52.68	5.07	5.99	-51.76	-13.00	-38.76	V
3107.000	-56.55	7.18	7.72	-56.01	-13.00	-43.01	V
N/A							
1672.000	-51.68	5.07	5.99	-50.76	-13.00	-37.76	H
3870.000	-54.1	8.35	9.27	-53.18	-13.00	-40.18	H
N/A							

Remark:

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



Operation Mode: WCDMA / HSUPA Band V /
TX / CH 4233

Test Date: October 8, 2013

Temperature: 26°C

Tested by: Wayne Tsai

Humidity: 60 % 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)
1693.000	-54.66	5.1	5.95	-53.81	-13.00	-40.81	V
3506.000	-55.79	7.88	8.91	-54.76	-13.00	-41.76	V
N/A							
1693.000	-51.78	5.1	5.95	-50.93	-13.00	-37.93	H
5382.000	-52.92	9.79	10.75	-51.96	-13.00	-38.96	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.



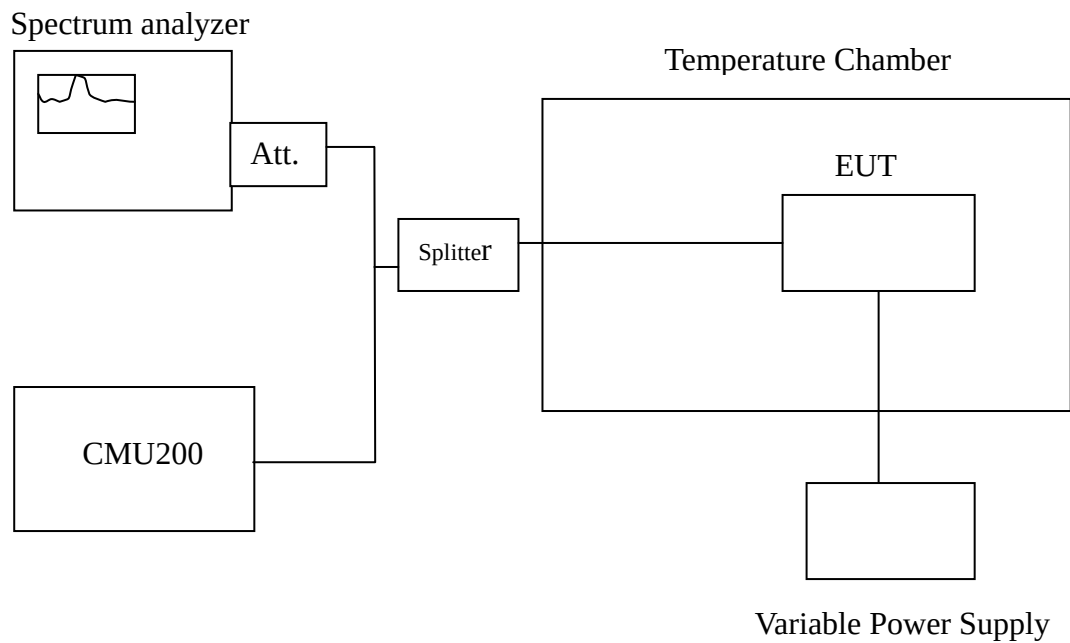
7.7 FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

LIMIT

According to FCC §2.1055, FCC §24.235, RSS-132 (4.3) & RSS-133 (6.3).

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: GSM Mid Channel 836.4 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.8	50	836599979	-35	2090
	40	836599976	-38	
	30	836599973	-41	
	20	836600014	0	
	10	836599990	-24	
	0	836599989	-25	
	-10	836599986	-28	
	-20	836599986	-28	
	-30	836599983	-31	

Reference Frequency: GSM Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.8	50	1879999990	-41	4700
	40	1879999983	-48	
	30	1879999982	-49	
	20	1880000031	0	
	10	1879999991	-40	
	0	1879999980	-51	
	-10	1879999976	-55	
	-20	1879999978	-53	
	-30	1879999979	-52	



Reference Frequency: GPRS Mid Channel 836.4 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.8	50	836599990	-29	2090
	40	836599991	-28	
	30	836599992	-27	
	20	836600019	0	
	10	836599978	-41	
	0	836599974	-45	
	-10	836599975	-44	
	-20	836599983	-36	
	-30	836599981	-38	

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.8	50	1879999995	-31	4700
	40	1879999981	-45	
	30	1879999992	-34	
	20	1880000026	0	
	10	1879999978	-48	
	0	1879999977	-49	
	-10	1879999971	-55	
	-20	1879999969	-57	
	-30	1879999968	-58	



Reference Frequency: EDGE Mid Channel 836.4 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.8	50	836599997	-28	2090
	40	836599996	-29	
	30	836599990	-35	
	20	836600025	0	
	10	836599988	-37	
	0	836599985	-40	
	-10	836599984	-41	
	-20	836599983	-42	
	-30	836599982	-43	

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.8	50	1879999992	-15	4700
	40	1879999986	-21	
	30	1879999984	-23	
	20	1880000007	0	
	10	1879999998	-9	
	0	1879999995	-12	
	-10	1879999981	-26	
	-20	1879999968	-39	
	-30	1879999978	-29	



Reference Frequency: WCDMA Band V Mid Channel 836.4 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.8	50	836399996	-33	2091
	40	836399993	-36	
	30	836399990	-39	
	20	836400029	0	
	10	836399983	-46	
	0	836399981	-48	
	-10	836399980	-49	
	-20	836399976	-53	
	-30	836399975	-54	

Reference Frequency: WCDMA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.8	50	1879999960	-101	4700
	40	1879999953	-108	
	30	1879999955	-106	
	20	1880000061	0	
	10	1879999981	-80	
	0	1879999972	-89	
	-10	1879999964	-97	
	-20	1879999962	-99	
	-30	1879999945	-116	



Reference Frequency: WCDMA / HSDPA Band V Mid Channel 836.4 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.8	50	836399983	-83	2091
	40	836399979	-87	
	30	836399981	-85	
	20	836400066	0	
	10	836399963	-103	
	0	836399961	-105	
	-10	836399989	-77	
	-20	836399986	-80	
	-30	836399984	-82	

Reference Frequency: WCDMA / HSDPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.8	50	1879999991	-38	4700
	40	1879999992	-37	
	30	1879999995	-34	
	20	1880000029	0	
	10	1879999999	-30	
	0	1879999982	-47	
	-10	1879999984	-45	
	-20	1879999989	-40	
	-30	1879999988	-41	



Reference Frequency: WCDMA / HSUPA Band V Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.8	50	836399993	-35	4700
	40	836399991	-37	
	30	836399986	-42	
	20	836400028	0	
	10	836399929	-99	
	0	836399924	-104	
	-10	836399921	-107	
	-20	836399937	-91	
	-30	836399936	-92	

Reference Frequency: WCDMA / HSUPA Band II Mid Channel 836.4 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.8	50	1879999980	-22	2091
	40	1879999973	-29	
	30	1879999960	-42	
	20	1880000002	0	
	10	1879999970	-32	
	0	1879999981	-21	
	-10	1879999965	-37	
	-20	1879999986	-16	
	-30	1879999975	-27	



7.8 FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

LIMIT

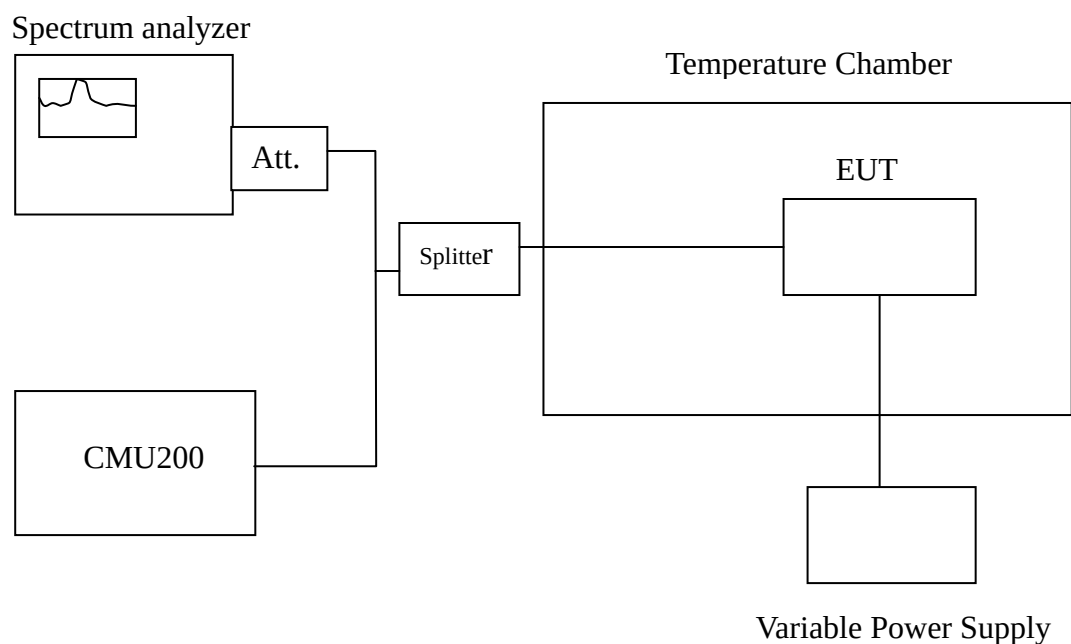
According to FCC §2.1055, FCC §24.235,

Frequency Tolerance: 2.5 ppm.

According to RSS-132 (4.3) & RSS-133 (6.3).

The carrier frequency shall not depart from the reference frequency in excess of ± 2.5 ppm for mobile stations and ± 1.0 ppm for base stations.

Test Configuration



Remark: Measurement setup for testing on Antenna connector.



TEST PROCEDURE

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

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

TEST RESULTS

No non-compliance noted.

Reference Frequency: GSM Mid Channel 836.4 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.37	20	836600017	3	2091
3.8		836600014	0	
3.7		836600015	1	
3.7		836600016	2	

Reference Frequency: GSM Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.37	20	1880000030	-1	4700
3.8		1880000031	0	
3.7		1880000032	1	
3.7		1880000033	2	



Reference Frequency: GPRS Mid Channel 836.4 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.37	20	836600018	-1	2091
3.8		836600019	0	
3.7		836600011	-8	
3.7		836600010	-9	

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.37	20	1880000002	-24	4700
3.8		1880000026	0	
3.7		1880000025	-1	
3.7		1880000021	-5	



Reference Frequency: EDGE Mid Channel 836.4 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.37	20	836600019	-6	2091
3.8		836600025	0	
3.7		836600005	-20	
3.7		836600009	-16	

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.37	20	1880000005	-2	4700
3.8		1880000007	0	
3.7		1880000004	-3	
3.7		1880000008	1	



Reference Frequency: WCDMA Band V Mid Channel 836.4 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.37	20	836400026	-3	2091
3.8		836400029	0	
3.7		836400030	1	
3.7		836400031	2	

Reference Frequency: WCDMA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.37	20	1880000058	-3	4700
3.8		1880000061	0	
3.7		1880000032	-29	
3.7		1880000034	-27	



Reference Frequency: WCDMA / HSDPA Band V Mid Channel 836.4 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.37	20	836400011	-55	2091
3.8		836400066	0	
3.7		836400018	-48	
3.7		836400069	3	

Reference Frequency: WCDMA / HSDPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.37	20	1880000025	-4	4700
3.8		1880000029	0	
3.7		1880000036	7	
3.7		1880000038	9	



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)
4.37	20	836400019	-9	4700
3.8		836400028	0	
3.7		836400026	-2	
3.7		836400033	5	

Reference Frequency: WCDMA HSUPA Band V Mid Channel 836.4 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.37	20	1880000005	3	2091
3.8		1880000002	0	
3.7		1880000008	6	
3.7		1880000008	6	