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

TEST REPORT

For

Rugged Handheld Device

Model: IMX-3000

Trade Name: ADLINK TECHNOLOGY INC.

Issued to

ADLINK TECHNOLOGY INC.
9F, No.166, Jian Yi Rd., Zhonghe Dist.,
New Taipei City, 235 Taiwan

Issued by

Compliance Certification Services Inc.
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City 24891, Taiwan. (R.O.C.)
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Issued Date: August 19, 2014

TAF
Testing Laboratory
1309

Revision History

Rev.		Issue Date		Revisions	Effect Page	Revised By
00		August 19, 2014		Initial Issue	ALL	Doris Chu

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1. TEST RESULT CERTIFICATION

Applicant: ADLINK TECHNOLOGY INC.
9F, No.166, Jian Yi Rd., Zhonghe Dist.,
New Taipei City, 235 Taiwan

Equipment Under Test: Rugged Handheld Device

Trade Name: ADLINK TECHNOLOGY INC.

Model Number: IMX-3000

Date of Test: June 10 ~ July 8, 2014

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

We hereby certify that:

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

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

Approved by:

Miller Lee
Section Manager
Compliance Certification Services Inc.

Reviewed by:

Angel Cheng
Section Manager
Compliance Certification Services Inc.

2. EUT DESCRIPTION

Product	Rugged Handheld Device
Trade Name	ADLINK TECHNOLOGY INC.
Model Number	IMX-3000
Model Discrepancy	N/A
Received Date	May 24, 2014
Power Supply	Power from Power Adapter Model: STD-05035V I/P : 100-240V 47-63Hz 0.48A MAX O/P: 5V 3.5A
Frequency Range	GSM / GPRS / EDGE: 850: 824.2 ~ 848.8 MHz GSM / GPRS / EDGE: 1900: 1850.2 ~ 1909.8 MHz WCDMA / HSDPA / HSUPA Band II: 1852.4 ~ 1907.6 MHz WCDMA / HSDPA / HSUPA Band V: 826.4 ~ 846.6MHz
Transmit Power (ERP & EIRP Power)	GSM 850: 24.59dBm GSM 1900: 29.97 dBm GPRS 850: 24.50 dBm GPRS 1900: 29.50 dBm EDGE 850: 24.64 dBm EDGE 1900: 29.52 dBm WCDMA Band II: 25.57 dBm HSDPA Band II: 26.35 dBm HSUPA Band II: 26.66 dBm WCDMA Band V: 21.11 dBm HSDPA Band V: 22.49 dBm HSUPA Band V: 22.91 dBm
Cellular Phone Protocol	GSM: GMSK GPRS: GMSK EDGE: 8PSK WCDMA: Quadrature Phase Shift Keying (QPSK) with Root-raised cosine pulse shaping filters (roll off = 0.22)
Type of Emission	GSM 850: 247KGXW--- GSM 1900: 248KGXW--- GPRS 850: 247KGXW--- GPRS 1900: 252KGXW--- EDGE 850: 248KG7W--- EDGE 1900: 246KG7W--- WCDMA Band II: 4M15F9W--- WCDMA Band V: 4M15F9W--- WCDMA HSDPA Band II: 4M17F9W--- WCDMA HSDPA Band V: 4M17F9W--- WCDMA HSUPA Band II: 4M16F9W--- WCDMA HSUPA Band V: 4M16F9W---

Antenna Gain	GSM / GPRS / EDGE 850: -0.640913dBi GSM / GPRS / EDGE 1900: 2.1034dBi WCDMA band II: 2.1034dBi WCDMA band V: -0.640913dBi
Antenna Type	PIFA Antenna

Remark:

1. *The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.*
2. *This submittal(s) (test report) is intended for FCC ID:* ***X4D-IMX-3000*** *filing to comply with Part 22 and Part 24 of the FCC 47 CFR Rules.*

3. TEST METHODOLOGY

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

3.1EUT 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.

3.2EUT EXERCISE

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

3.3GENERAL 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.

3.4DESCRIPTION OF TEST MODES

The EUT (model: IMX-3000) had been tested under operating condition.

Software used to control the EUT for staying in continuous transmitting mode was programmed.

EUT staying in continuous transmitting mode was programmed.

GSM / GPRS / EDGE 850:
Channel Low (CH128), Channel Mid (CH190) and Channel High (CH251) were chosen for full testing.

GSM / GPRS / EDGE 1900:
Channel Low (CH512), Channel Mid (CH661) and Channel High (CH810) were chosen for full testing.

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

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

WCDMA / HSDPA Band II:
Channel Low (CH9262), Channel Mid (CH9400) and Channel High (CH9538) were chosen for full testing.
WCDMA / HSDPA Band V:
Channel Low (CH4132), Channel Mid (CH4182) and Channel High (CH4233) were chosen for full testing.

WCDMA / HSUPA Band II:
Channel Low (CH9262), Channel Mid (CH9400) and Channel High (CH9538) were chosen for full testing.

WCDMA / HSDPA Band V:
Channel Low (CH4132), Channel Mid (CH4182) and Channel High (CH4233) were chosen for full testing.

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

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

The worst emission was found: slide mode

Stand-up (Z axis) for GSM850 / GPRS 850 / EDGE 850 / HSDPA Band V / HSUPA Band V slide mode
Lie-down (Y axis) for GSM1900 / GPRS1900 / EDGE 1900 / WCDMA Band II / WCDMA Band V / HSDPA Band II / HSUPA Band II slide mode.

4. INSTRUMENT CALIBRATION

4.1MEASURING 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.

4.2MEASUREMENT 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	03/19/2015
Power Meter	Anritsu	ML2495A	1012009	06/03/2015
Power Sensor	Anritsu	MA2411A	0917072	06/03/2015
Temp. / Humidity Chamber	Terchy	MHG-150LF	930619	10/17/2014

Wugu 966 Chamber A				
Name of Equipment	**Manufacturer**	**Model**	**Serial Number**	**Calibration Due**
Spectrum Analyzer	Agilent	E4446A	US42510268	11/13/2014
EMI Test Receiver	R&S	ESCI	100064	02/27/2015
Pre-Amplifier	Mini-Circults	ZFL-1000LN	SF350700823	01/12/2015
Pre-Amplifier	MITEQ	AFS44-00102650-42-10P-44	1415367	11/18/2014
Bilog Antenna	Sunol Sciences	JB3	A030105	10/01/2014
Bilog Antenna	Sunol Sciences	JB3	A030205	10/01/2014
Horn Antenna	EMCO	3117	00055165	02/12/2015
Horn Antenna	EMCO	3117	00055167	01/27/2015
Horn Antenna	EMCO	3116	00026370	10/10/2014
Loop Antenna	EMCO	6502	8905/2356	06/08/2015
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	12/21/2014
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

5.1FACILITIES

☐ 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 and CISPR Publication 22.

5.2EQUIPMENT

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.”

5.3TABLE 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	TAF Testing Laboratory 1309
Canada	Industry Canada	3M Semi Anechoic Chamber (IC 2324G-1 / IC 2324G-2) to perform	Canada 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

6.1SETUP CONFIGURATION OF EUT

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

6.2SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	FCC ID	Series No.	Data Cable	Power Cord
	N/A						

Remark:

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

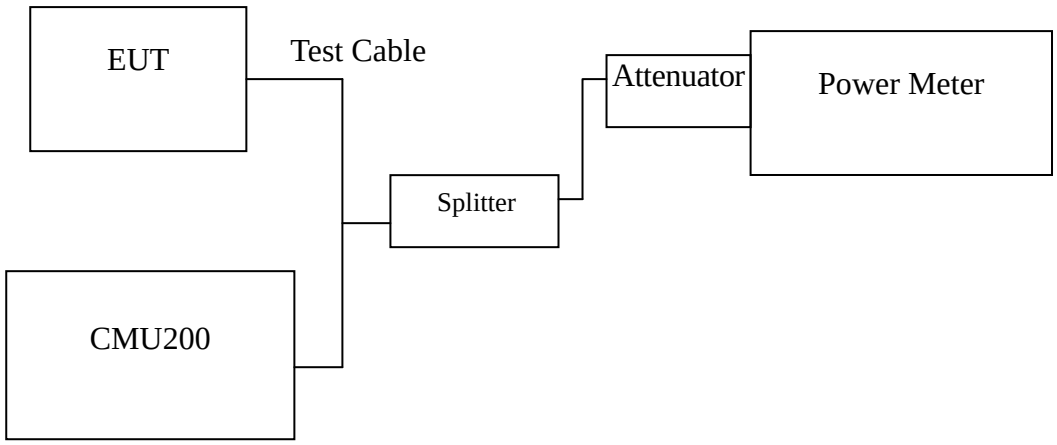
7. FCC PART 22 & 24 REQUIREMENTS

7.1PEAK POWER

LIMIT

According to FCC §2.1046.

Test Configuration



Remark: *Measurement setup for testing on Antenna connector*

TEST PROCEDURE

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

TEST RESULTS

No non-compliance noted.

Test Data

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
GSM 850	128	824.20	32.30	1.69824
	190	836.60	32.20	1.65959
	251	848.80	32.30	1.69824
GPRS 850	128	824.20	32.20	1.65959
	190	836.60	32.20	1.65959
	251	848.80	32.10	1.62181
EDGE 850	128	824.20	30.10	1.02329
	190	836.60	29.70	0.93325
	251	848.80	29.50	0.89125

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
GSM 1900	512	1850.20	30.80	1.20226
	661	1880.00	31.10	1.28825
	810	1909.80	30.60	1.14815
GPRS 1900	512	1850.20	30.70	1.17490
	661	1880.00	30.90	1.23027
	810	1909.80	30.50	1.12202
EDGE 1900	512	1850.20	29.10	0.81283
	661	1880.00	29.50	0.89125
	810	1909.80	29.30	0.85114

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	25.44	0.34995
	9400	1880.00	26.07	0.40458
	9538	1907.60	25.99	0.39719
WCDMA (BAND V)	4132	826.40	26.66	0.46345
	4182	836.40	26.65	0.46238
	4233	846.60	26.31	0.42756

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
WCDMA / HSDPA (BAND II)	9262	1852.40	25.62	0.36475
	9400	1880.00	26.38	0.43451
	9538	1907.60	26.18	0.41495
WCDMA / HSDPA (BAND V)	4132	826.40	27.18	0.52240
	4182	836.40	27.08	0.51050
	4233	846.60	26.92	0.49204

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
WCDMA / HSUPA (BAND II)	9262	1852.40	26.47	0.44361
	9400	1880.00	26.36	0.43251
	9538	1907.60	26.32	0.42855
WCDMA / HSUPA (BAND V)	4132	826.40	22.84	0.19231
	4182	836.40	26.94	0.49431
	4233	846.60	26.95	0.49545

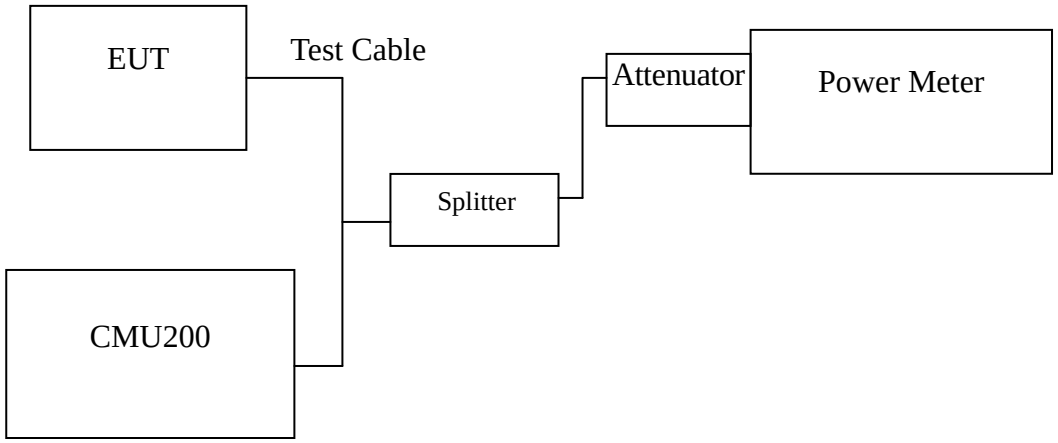
Remark: *The value of factor includes both the loss of cable and external attenuator*

7.2AVERAGE POWER

LIMIT

For reporting purposes only.

Test Configuration



Remark: *Measurement setup for testing on Antenna connector*

TEST PROCEDURE

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

TEST RESULTS

No non-compliance noted.

Test Data

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
GSM 850	128	824.20	32.00	1.58489
	190	836.60	32.00	1.58489
	251	848.80	32.00	1.58489
GPRS 850	128	824.20	32.00	1.58489
	190	836.60	32.00	1.58489
	251	848.80	32.00	1.58489
EDGE 850	128	824.20	27.00	0.50119
	190	836.60	26.60	0.45709
	251	848.80	26.30	0.42658

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
GSM 1900	512	1850.20	30.50	1.12202
	661	1880.00	30.80	1.20226
	810	1909.80	30.30	1.07152
GPRS 1900	512	1850.20	30.40	1.09648
	661	1880.00	30.60	1.14815
	810	1909.80	30.30	1.07152
EDGE 1900	512	1850.20	25.90	0.38905
	661	1880.00	26.20	0.41687
	810	1909.80	26.20	0.41687

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

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
WCDMA (BAND II)	9262	1852.40	22.63	0.18323
	9400	1880.00	22.87	0.19364
	9538	1907.60	22.49	0.17742
WCDMA (BAND V)	4132	826.40	22.98	0.19861
	4182	836.40	22.78	0.18967
	4233	846.60	22.71	0.18664

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power W
WCDMA / HSDPA (BAND II)	9262	1852.40	22.13	0.16331
	9400	1880.00	22.41	0.17418
	9538	1907.60	22.11	0.16255
WCDMA / HSDPA (BAND V)	4132	826.40	22.61	0.18239
	4182	836.40	22.56	0.18030
	4233	846.60	22.50	0.17783

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power W
WCDMA / HSUPA (BAND II)	9262	1852.40	22.68	0.18535
	9400	1880.00	22.53	0.17906
	9538	1907.60	22.61	0.18239
WCDMA / HSUPA (BAND V)	4132	826.40	22.71	0.18664
	4182	836.40	22.46	0.17620
	4233	846.60	22.73	0.18750

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

7.3ERP & EIRP MEASUREMENT

LIMIT

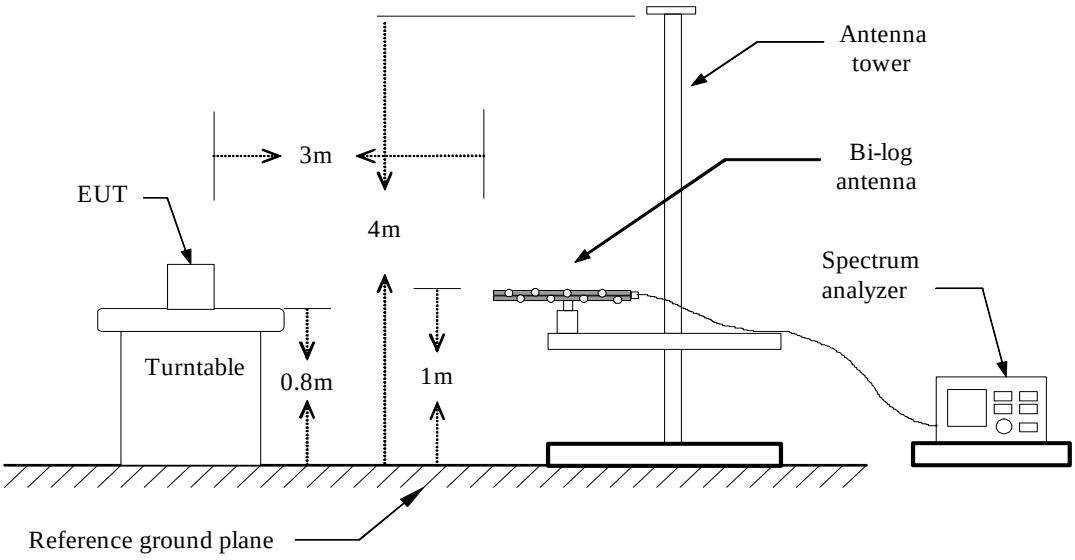
According to FCC §2.1046

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

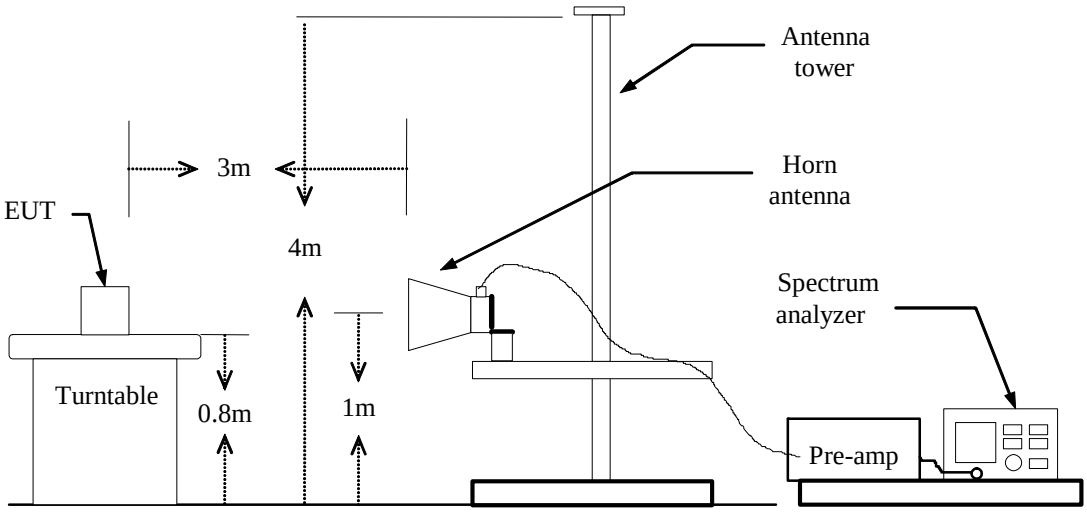
FCC 24.232(b): The equivalent Isotropic Radiated Power (EIRP) must not exceed 2 Watts.

Test Configuration

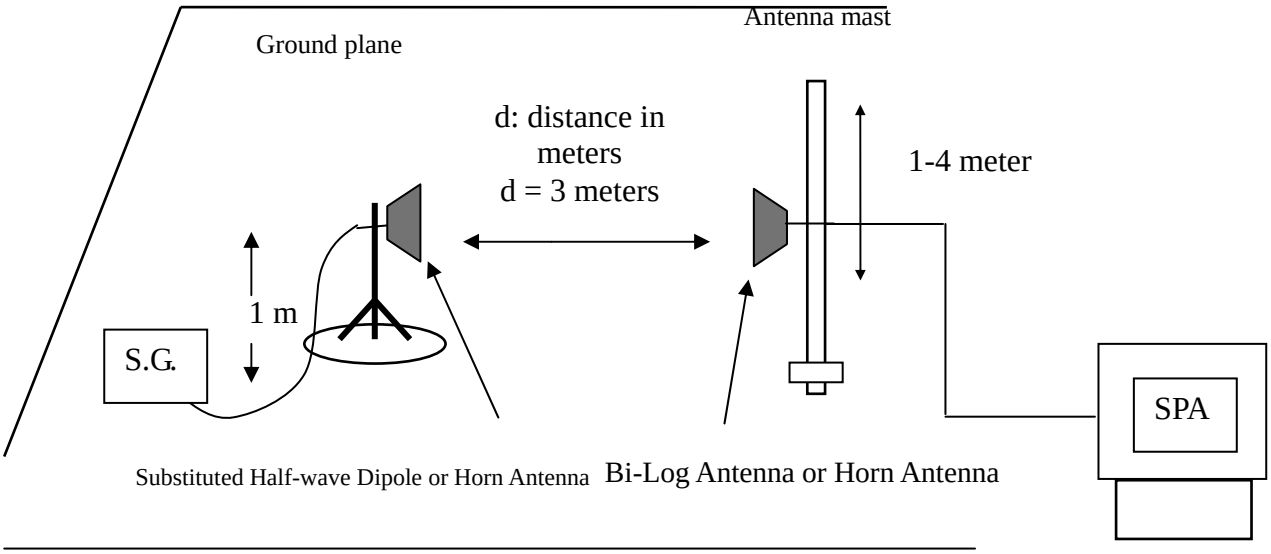
Below 1 GHz



Above 1 GHz



For Substituted Method Test Set-UP



TEST PROCEDURE

The EUT was placed on an 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 5MHz and the average bandwidth was set to 50MHz. 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:

ERP = S.G. output (dBm) + Antenna Gain (dBi) – Cable (dB)-2.15
EIRP = S.G. output (dBm) + Antenna Gain (dBi) – 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	21.4	3.39	6.24	24.25	38.45	-14.20
	824.20	H	12.61	3.39	6.24	15.46	38.45	-22.99
190	836.60	V	21.54	3.4	6.36	24.50	38.45	-13.95
	836.60	H	13.57	3.4	6.37	16.54	38.45	-21.91
251	848.80	V	21.59	3.4	6.4	***24.59**	38.45	-13.86
	848.80	H	13.47	3.4	6.4	16.47	38.45	-21.98

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	21.64	3.39	6.24	24.49	38.45	-13.96
	824.20	H	13.25	3.39	6.24	16.10	38.45	-22.35
190	836.60	V	21.43	3.4	6.36	24.39	38.45	-14.06
	836.60	H	13.34	3.4	6.37	16.31	38.45	-22.14
251	848.80	V	21.5	3.4	6.4	***24.50**	38.45	-13.95
	848.80	H	13.75	3.4	6.4	16.75	38.45	-21.70

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	27.36	5.37	5.67	27.66	33.00	-5.34
	1850.20	H	23.32	5.37	5.67	23.62	33.00	-9.38
661	1880.00	V	28.32	5.42	5.62	28.52	33.00	-4.48
	1880.00	H	24.8	5.42	5.62	25.00	33.00	-8.00
810	1909.80	V	29.89	5.48	5.56	***29.97**	33.00	-3.03
	1909.80	H	26.07	5.48	5.56	26.15	33.00	-6.85

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	27.28	5.37	5.67	27.58	33.00	-5.42
	1850.20	H	24.34	5.37	5.67	24.64	33.00	-8.36
661	1880.00	V	28.15	5.42	5.62	28.35	33.00	-4.65
	1880.00	H	25.04	5.42	5.62	25.24	33.00	-7.76
810	1909.80	V	29.42	5.48	5.56	***29.50**	33.00	-3.50
	1909.80	H	25.44	5.48	5.56	25.52	33.00	-7.48

EDGE 850 Test Data

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.20	V	21.54	3.39	6.24	24.39	38.45	-14.06
	824.20	H	13.35	3.39	6.24	16.20	38.45	-22.25
190	836.60	V	21.47	3.4	6.37	24.44	38.45	-14.01
	836.60	H	13.67	3.4	6.37	16.64	38.45	-21.81
251	848.80	V	21.64	3.4	6.4	***24.64**	38.45	-13.81
	848.80	H	13.51	3.4	6.4	16.51	38.45	-21.94

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	26.96	5.37	5.67	27.26	33.00	-5.74
	1850.20	H	24.26	5.37	5.67	24.56	33.00	-8.44
661	1880.00	V	28.21	5.42	5.62	28.41	33.00	-4.59
	1880.00	H	25.08	5.42	5.62	25.28	33.00	-7.72
810	1909.80	V	29.44	5.48	5.56	***29.52**	33.00	-3.48
	1909.80	H	26.26	5.48	5.56	26.34	33.00	-6.66

WCDMA Test Data (BAND II)

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
9262	1852.40	V	23.47	5.37	5.66	23.76	33.00	-9.24
	1852.40	H	19.33	5.38	5.66	19.61	33.00	-13.39
9400	1880.00	V	25.38	5.42	5.61	***25.57**	33.00	-7.43
	1880.00	H	20.56	5.42	5.61	20.75	33.00	-12.25
9538	1907.60	V	23.69	5.47	5.57	23.79	33.00	-9.21
	1907.60	H	18.85	5.47	5.57	18.95	33.00	-14.05

WCDMA Test Data (BAND V)

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	826.40	V	6.59	3.39	6.26	9.46	38.45	-28.99
	826.40	H	16.03	3.39	6.25	18.89	38.45	-19.56
4182	836.40	V	7.92	3.4	6.35	10.87	38.45	-27.58
	836.40	H	16.64	3.4	6.35	19.59	38.45	-18.86
4233	846.60	V	8.68	3.4	6.4	11.68	38.45	-26.77
	846.60	H	18.11	3.4	6.4	***21.11**	38.45	-17.34

WCDMA / HSDPA BAND II Test Data

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
9262	1852.40	V	25.35	5.37	5.67	25.65	33.00	-7.35
	1852.40	H	20.31	5.37	5.67	20.61	33.00	-12.39
9400	1880.00	V	26.16	5.42	5.61	***26.35**	33.00	-6.65
	1880.00	H	21.14	5.42	5.61	21.33	33.00	-11.67
9538	1907.60	V	25.56	5.47	5.57	25.66	33.00	-7.34
	1907.60	H	19.31	5.47	5.57	19.41	33.00	-13.59

WCDMA / HSDPA BAND V Test Data

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	826.40	V	17.94	3.39	6.25	20.80	38.45	-17.65
	826.40	H	6.15	3.39	6.25	9.01	38.45	-29.44
4182	836.40	V	18.47	3.4	6.35	21.42	38.45	-17.03
	836.40	H	7.5	3.4	6.35	10.45	38.45	-28.00
4233	846.60	V	19.49	3.4	6.4	***22.49**	38.45	-15.96
	846.60	H	9.03	3.4	6.4	12.03	38.45	-26.42

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	25.43	5.38	5.66	25.71	33.00	-7.29
	1852.40	H	19.93	5.37	5.67	20.23	33.00	-12.77
9400	1880.00	V	26.47	5.42	5.61	***26.66**	33.00	-6.34
	1880.00	H	20.25	5.42	5.61	20.44	33.00	-12.56
9538	1907.60	V	25.72	5.47	5.57	25.82	33.00	-7.18
	1907.60	H	19.36	5.47	5.57	19.46	33.00	-13.54

WCDMA / HSUPA BAND V Test Data

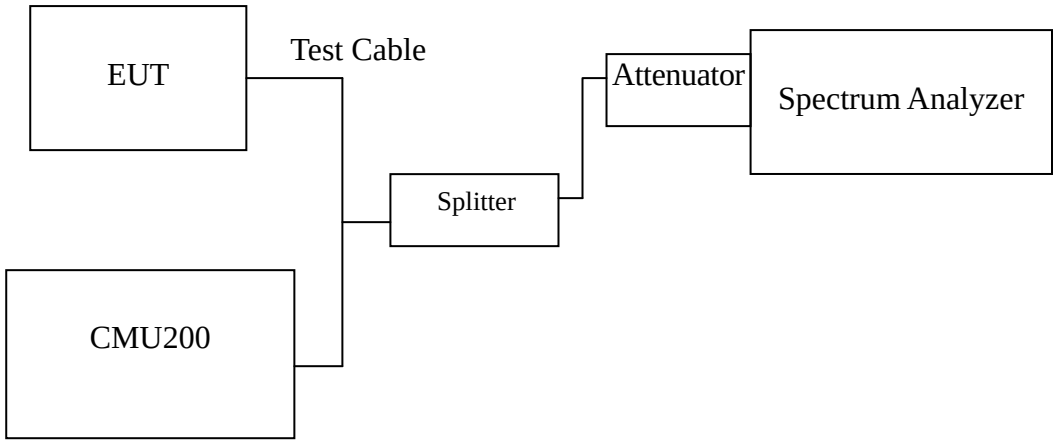
Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	826.40	V	18.04	3.39	6.25	20.90	38.45	-17.55
	826.40	H	7.07	3.39	6.27	9.95	38.45	-28.50
4182	836.40	V	19.04	3.4	6.35	21.99	38.45	-16.46
	836.40	H	8.4	3.4	6.35	11.35	38.45	-27.10
4233	846.60	V	19.91	3.4	6.4	***22.91**	38.45	-15.54
	846.60	H	9.85	3.4	6.4	12.85	38.45	-25.60

7.4OCCUPIED BANDWIDTH MEASUREMENT

LIMIT

According to §FCC 2.1049.

Test Configuration



Remark: *Measurement setup for testing on Antenna connector*

TEST PROCEDURE

The EUT's output RF connector was connected with a short cable to the spectrum analyzer, RBW was set to about 1% of emission BW, VBW is set to 3 times the RBW, -26dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

TEST RESULTS

No non-compliance noted

Test Data

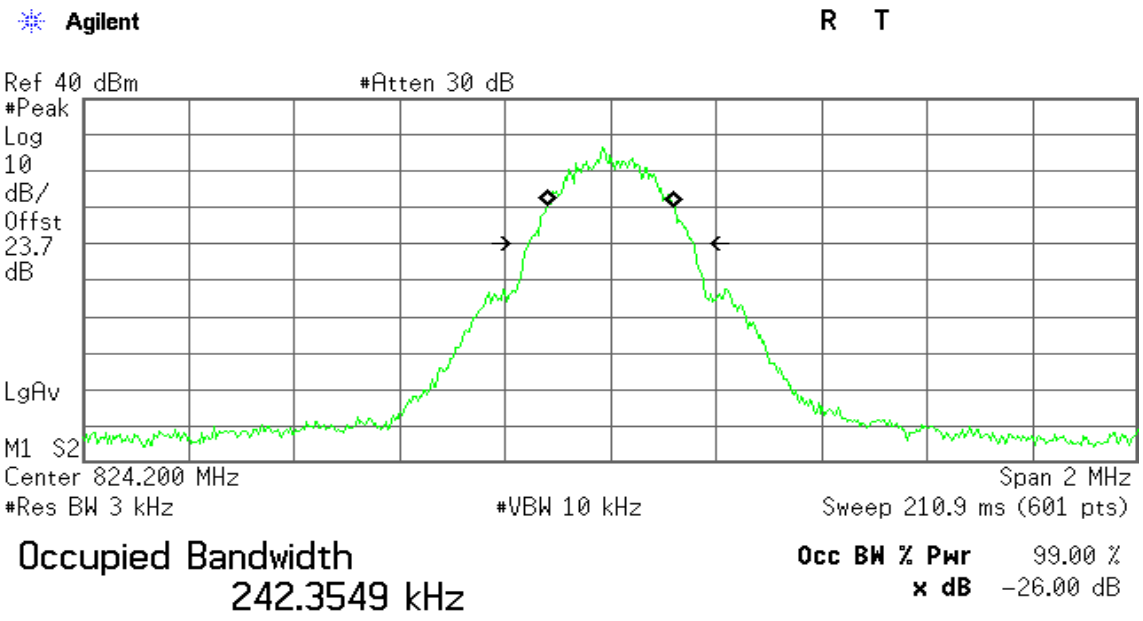
Test Mode	CH	Frequency (MHz)	99% Bandwidth (kHz)
GSM 850	128	824.20	242.3549
	190	836.60	***247.6180**
	251	848.80	243.9142
GPRS 850	128	824.20	240.6707
	190	836.60	244.1071
	251	848.80	***247.6768**
EDGE 850	128	824.20	243.2826
	190	836.60	242.8230
	251	848.80	***248.0802**

Test Mode	CH	Frequency (MHz)	99% Bandwidth (kHz)
GSM 1900	512	1850.20	***248.9953**
	661	1880.00	243.8030
	810	1909.80	244.7721
GPRS 1900	512	1850.20	246.9118
	661	1880.00	234.3843
	810	1909.80	***252.9969**
EDGE 1900	512	1850.20	***246.1149**
	661	1880.00	245.3931
	810	1909.80	243.6313

Test Mode	CH	Frequency (MHz)	99% Bandwidth (MHz)
WCDMA (Band II)	9262	1852.40	***4.1546**
	9400	1880.00	4.1428
	9538	1907.60	4.1498
WCDMA (Band V)	4132	826.40	4.1503
	4182	836.40	4.1434
	4233	846.60	***4.1568**
WCDMA / HSDPA (BAND II)	9262	1852.40	4.1594
	9400	1880.00	***4.1705**
	9538	1907.60	4.1695
WCDMA / HSDPA (BAND V)	4132	826.40	4.1607
	4182	836.40	4.1616
	4233	846.60	***4.1756**
WCDMA / HSUPA (BAND II)	9262	1852.40	4.1484
	9400	1880.00	4.1604
	9538	1907.60	***4.1665**
WCDMA / HSUPA (BAND V)	4132	826.40	4.1695
	4182	836.40	4.1646
	4233	846.60	***4.1697**

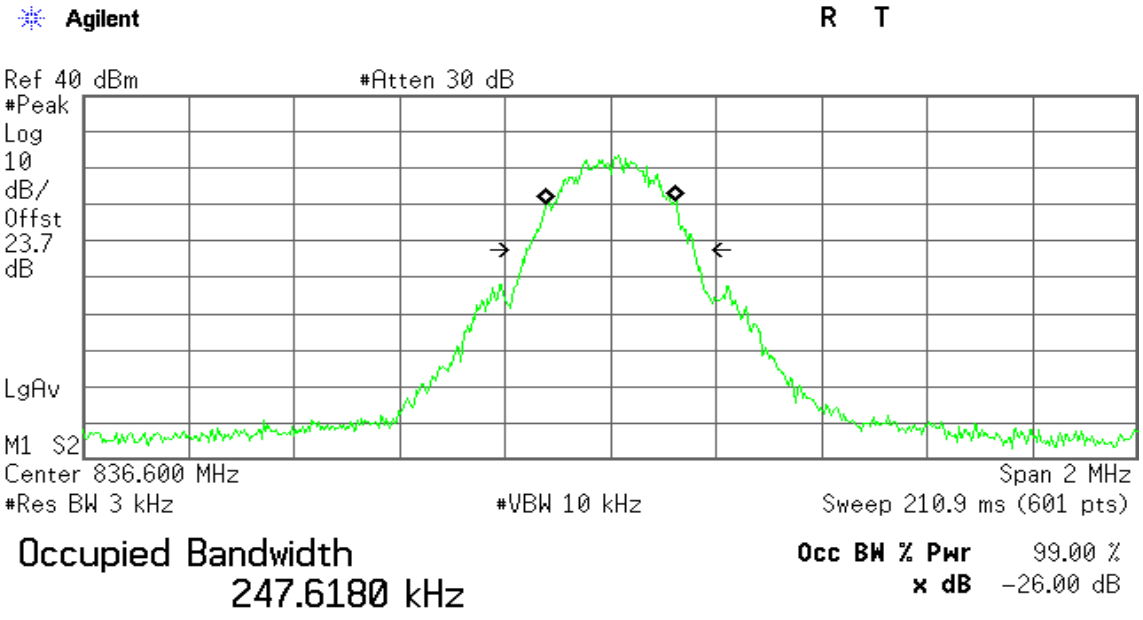
Test Plot

GSM 850 (CH Low)



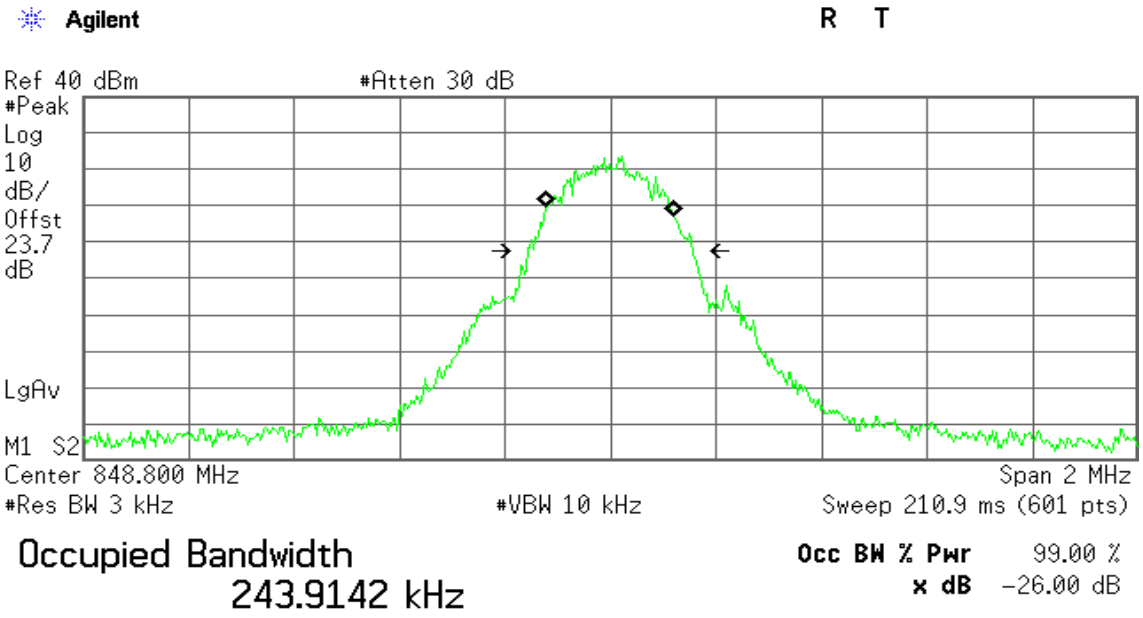
Transmit Freq Error -78.134 Hz
x dB Bandwidth 311.618 kHz

GSM 850 (CH Mid)



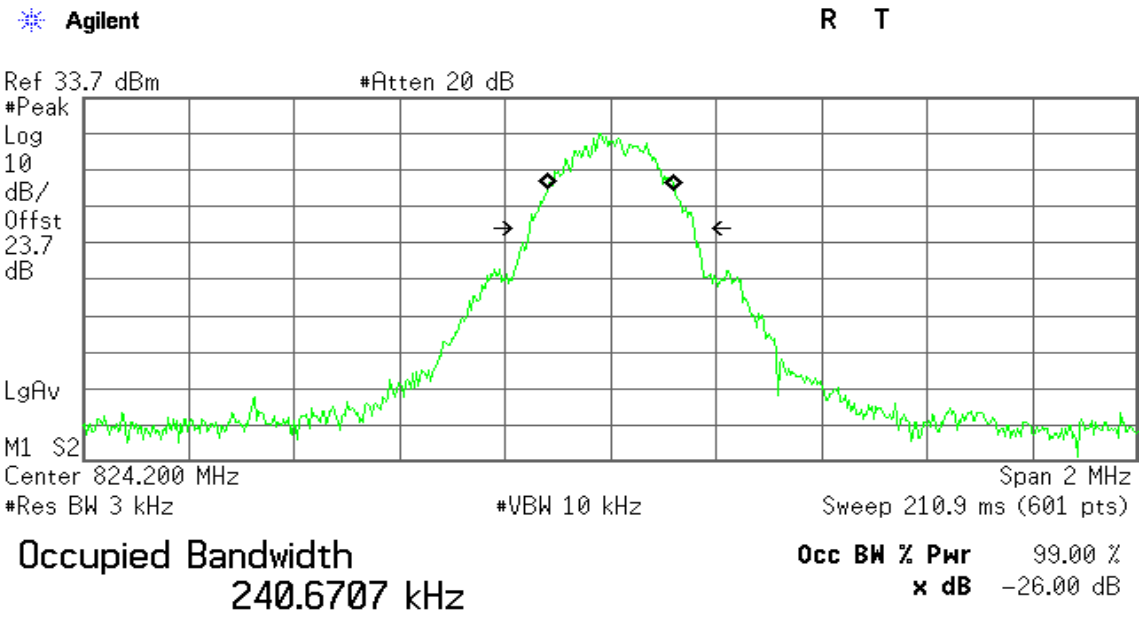
Transmit Freq Error 941.538 Hz
x dB Bandwidth 319.318 kHz

GSM 850 (CH High)



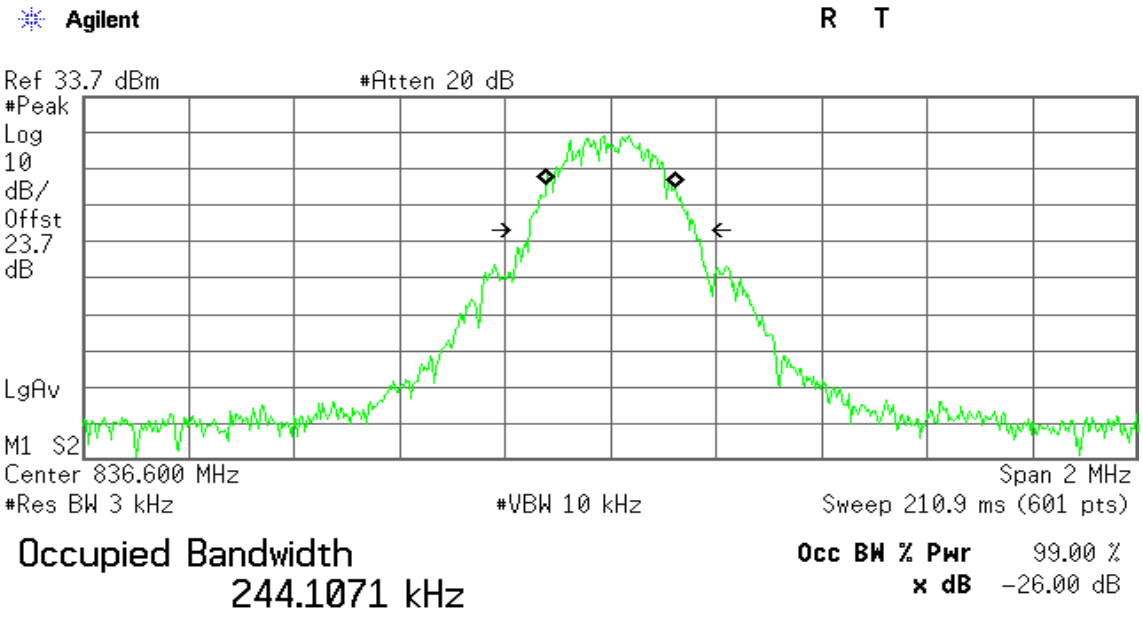
Transmit Freq Error	-1.409 kHz
x dB Bandwidth	313.845 kHz

GPRS 850 (CH Low)



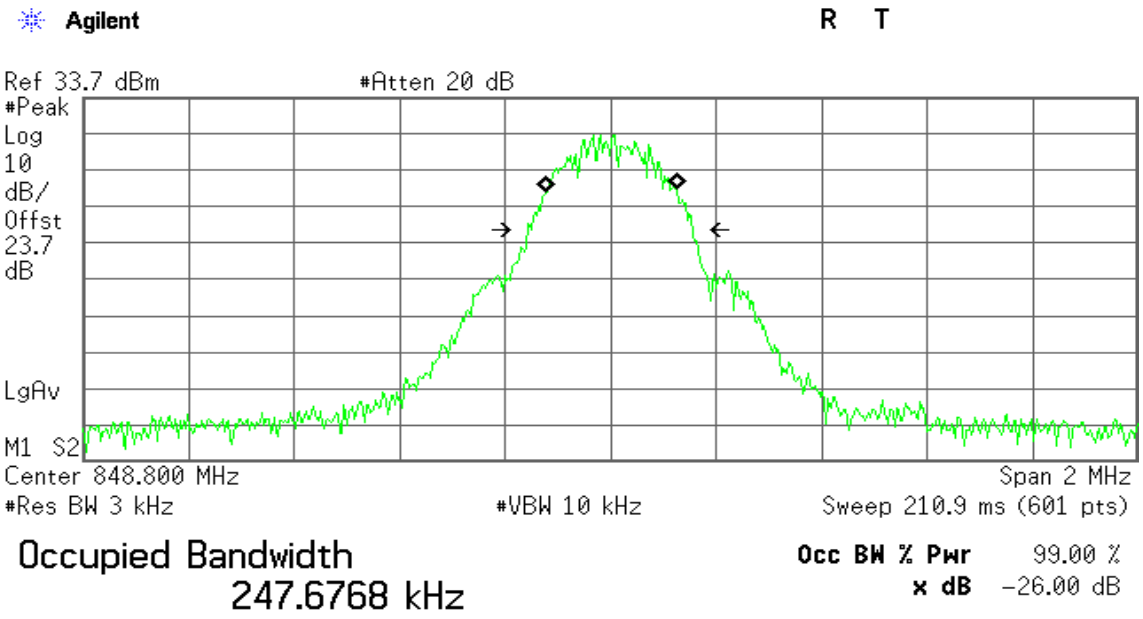
Transmit Freq Error	1.066 kHz
x dB Bandwidth	312.357 kHz

GPRS 850 (CH Mid)



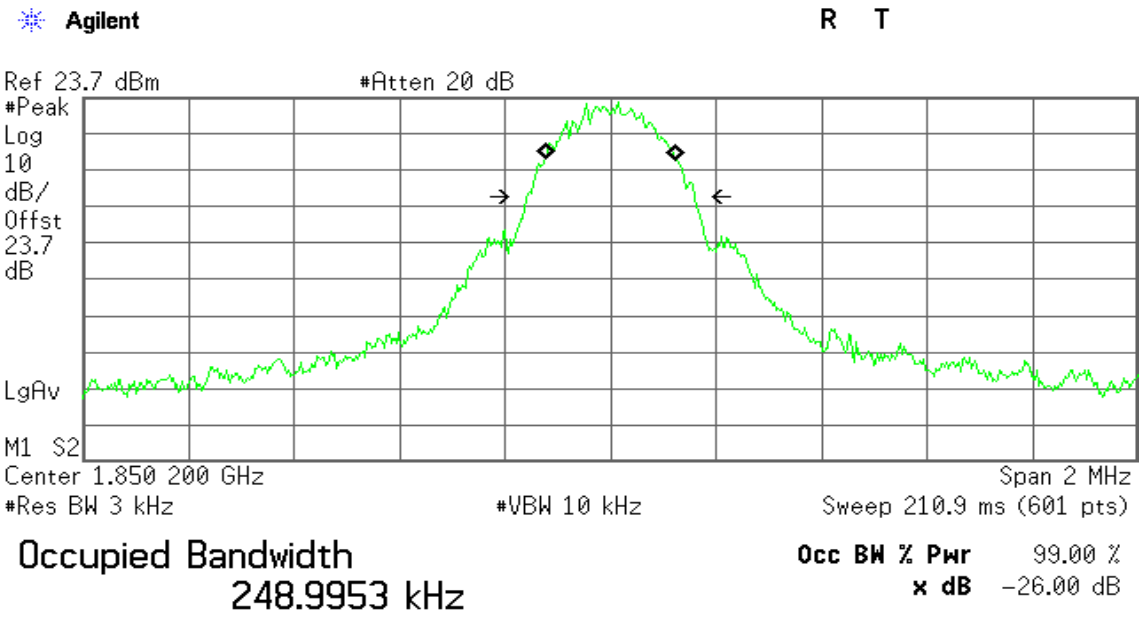
Transmit Freq Error	382.080 Hz
x dB Bandwidth	315.325 kHz

GPRS 850(CH High)

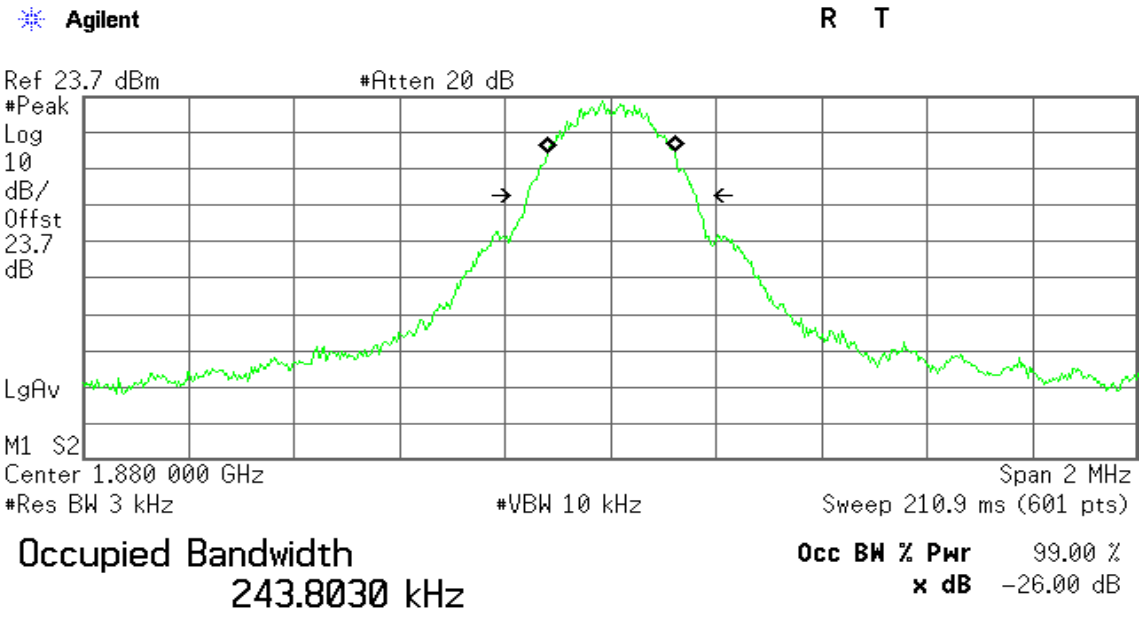


Transmit Freq Error	1.805 kHz
x dB Bandwidth	314.075 kHz

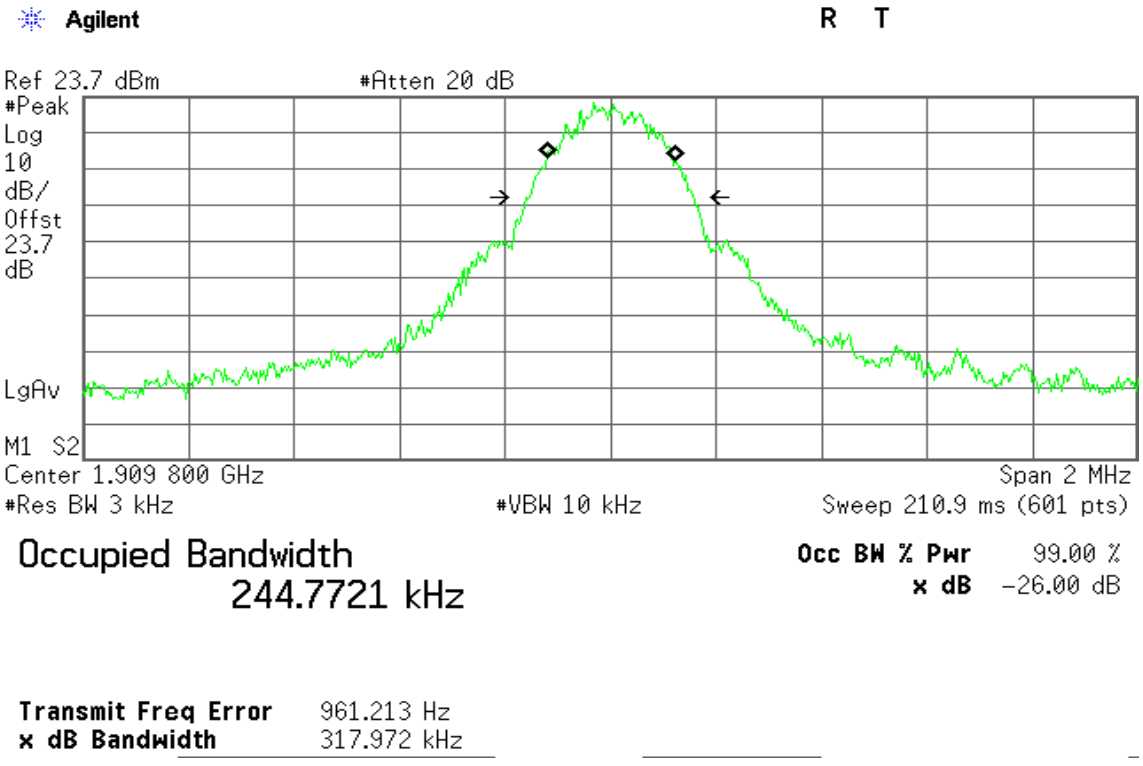
GSM 1900 (CH Low)



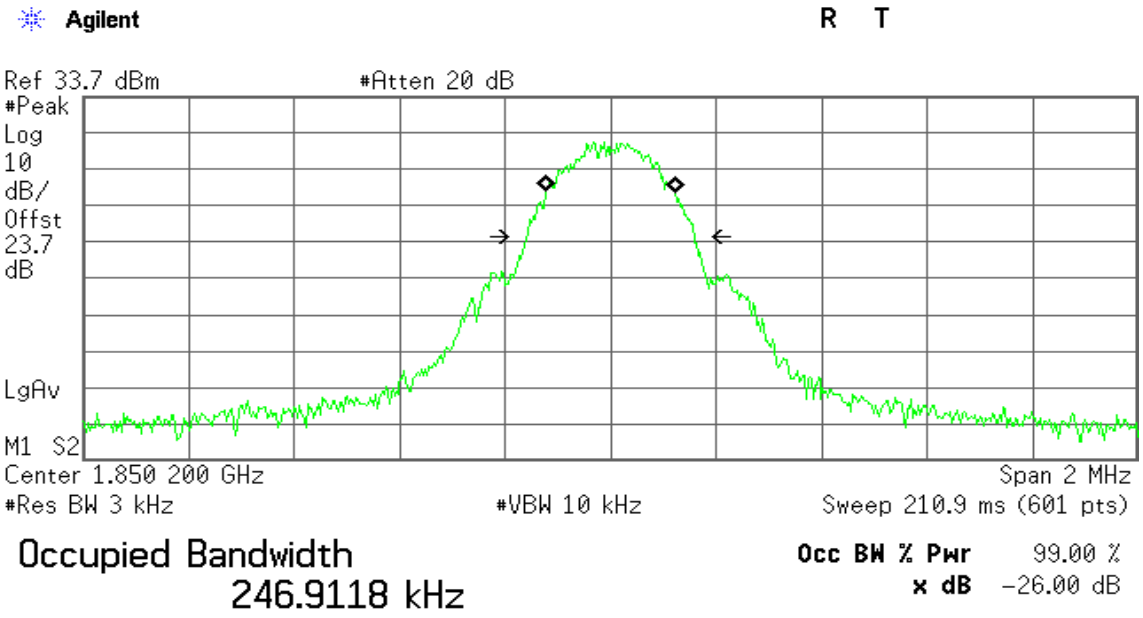
GSM 1900 (CH Mid)



GSM 1900 (CH High)

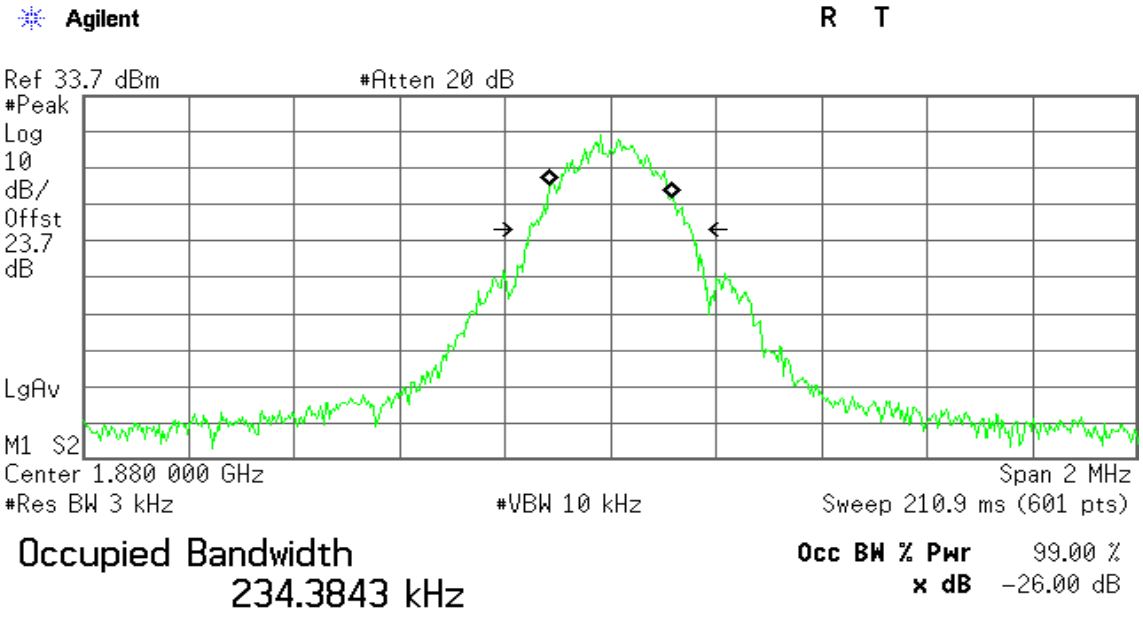


GPRS 1900 (CH Low)



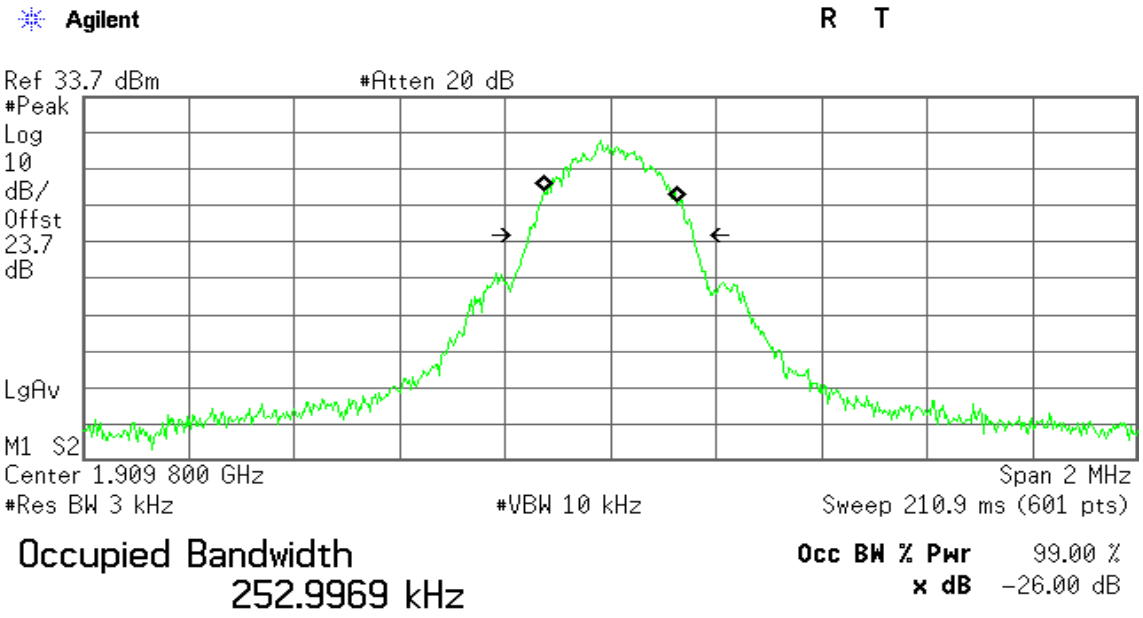
Transmit Freq Error	142.432 Hz
x dB Bandwidth	318.679 kHz

GPRS 1900 (CH Mid)

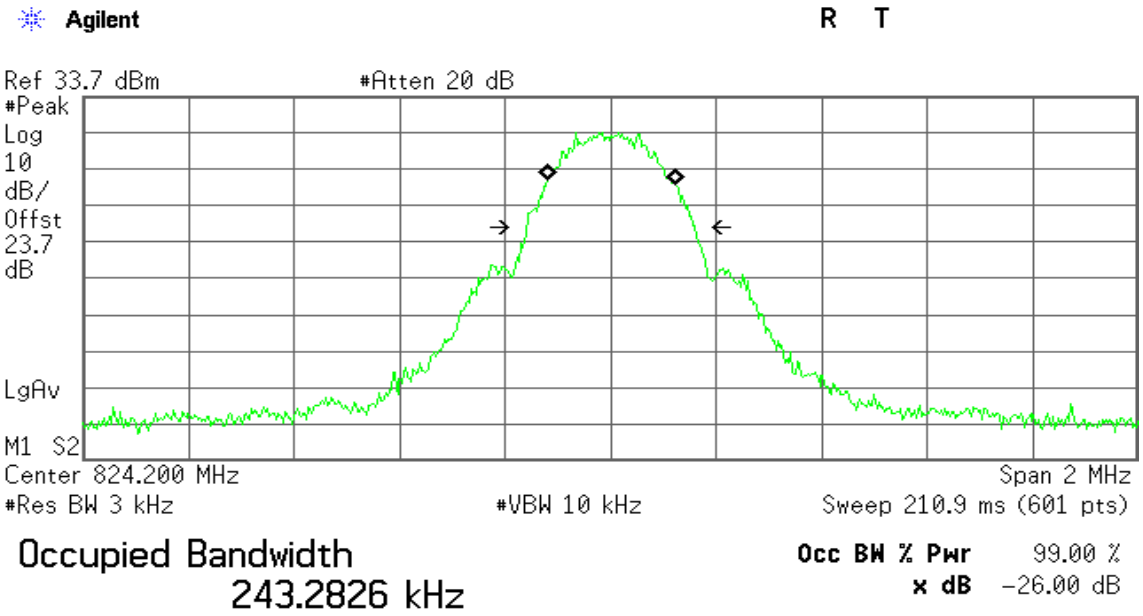


Transmit Freq Error	459.785 Hz
x dB Bandwidth	306.458 kHz

GPRS 1900 (CH High)

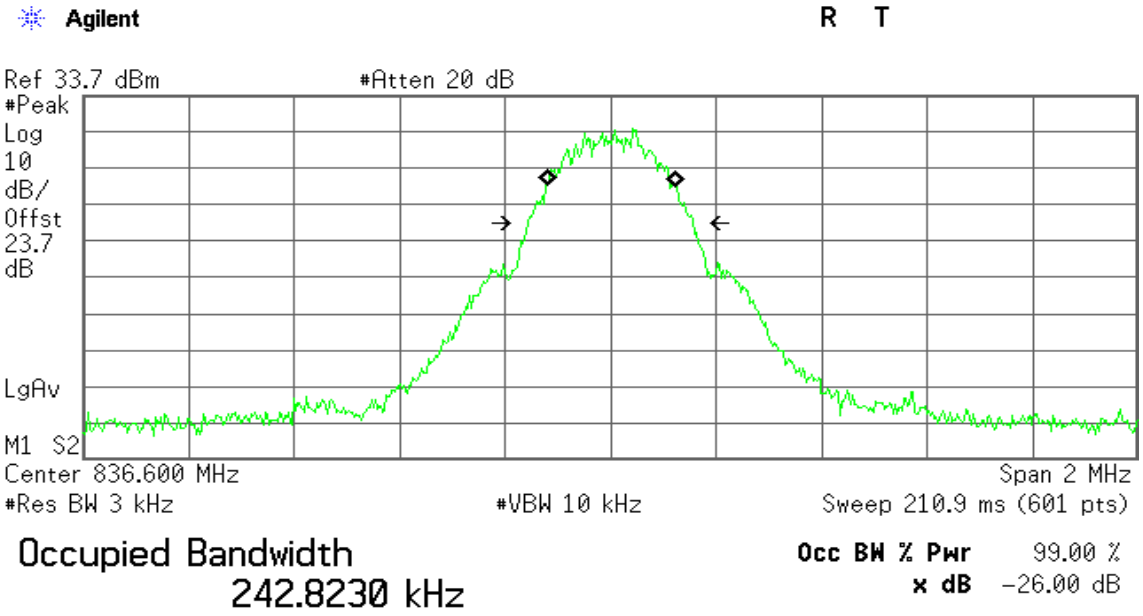


EDGE 850 (CH Low)



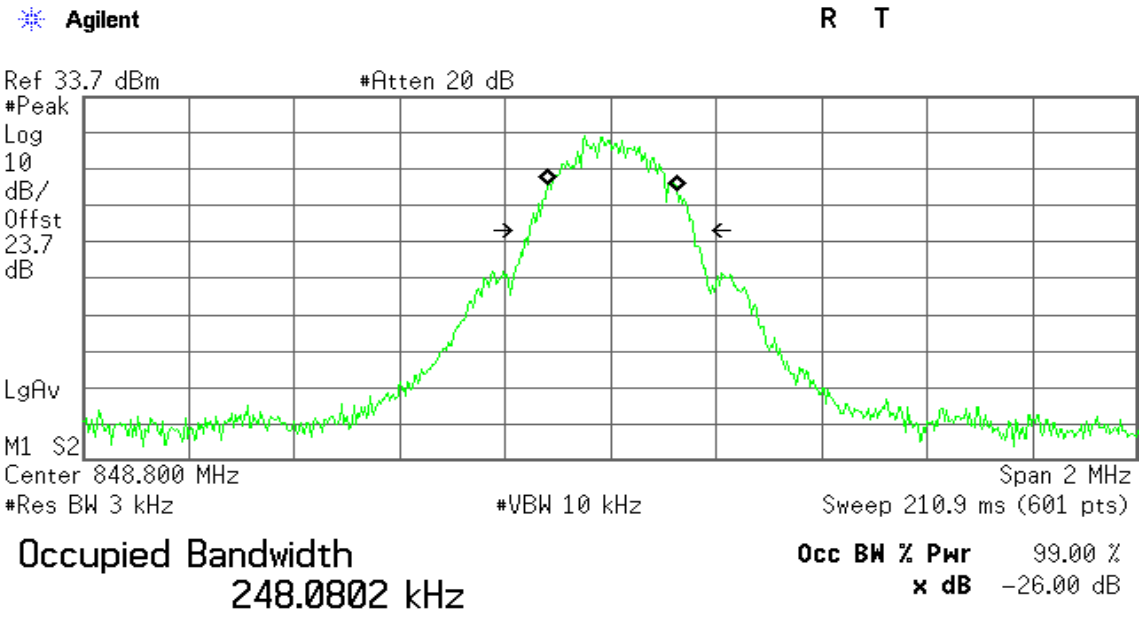
Transmit Freq Error	529.470 Hz
x dB Bandwidth	319.406 kHz

EDGE 850 (CH Mid)



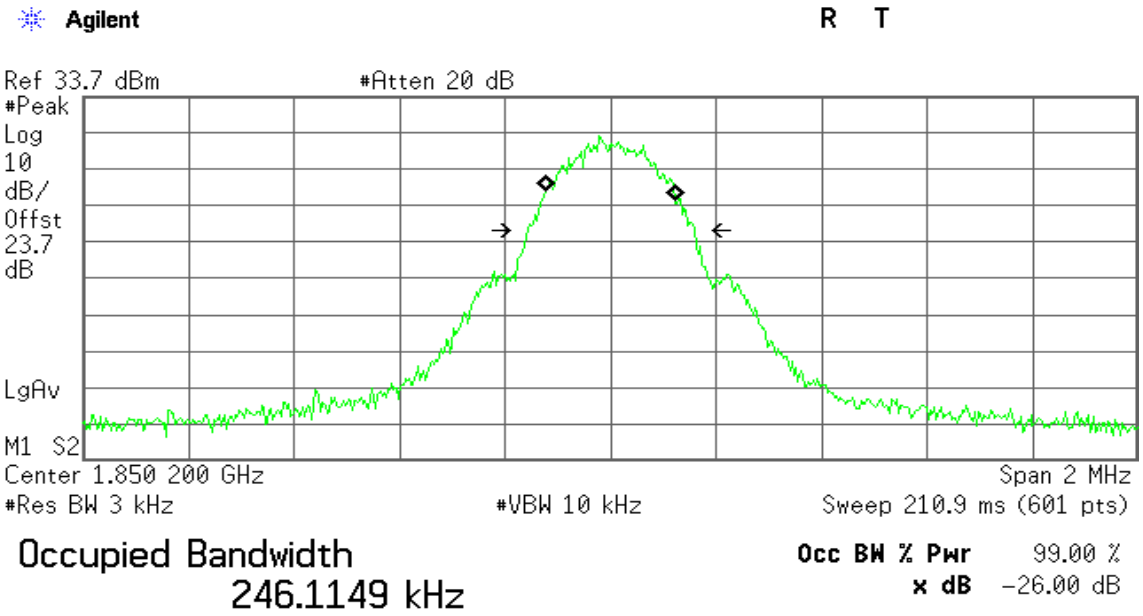
Transmit Freq Error	367.478 Hz
x dB Bandwidth	314.398 kHz

EDGE 850 (CH High)



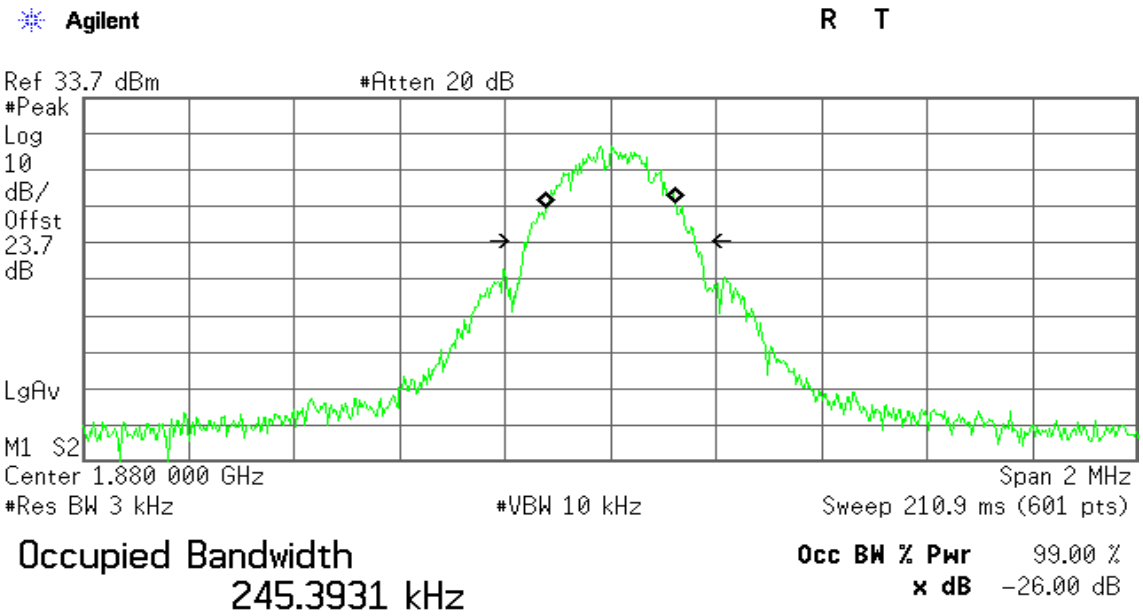
Transmit Freq Error	3.328 kHz
x dB Bandwidth	312.509 kHz

EDGE 1900 (CH Low)



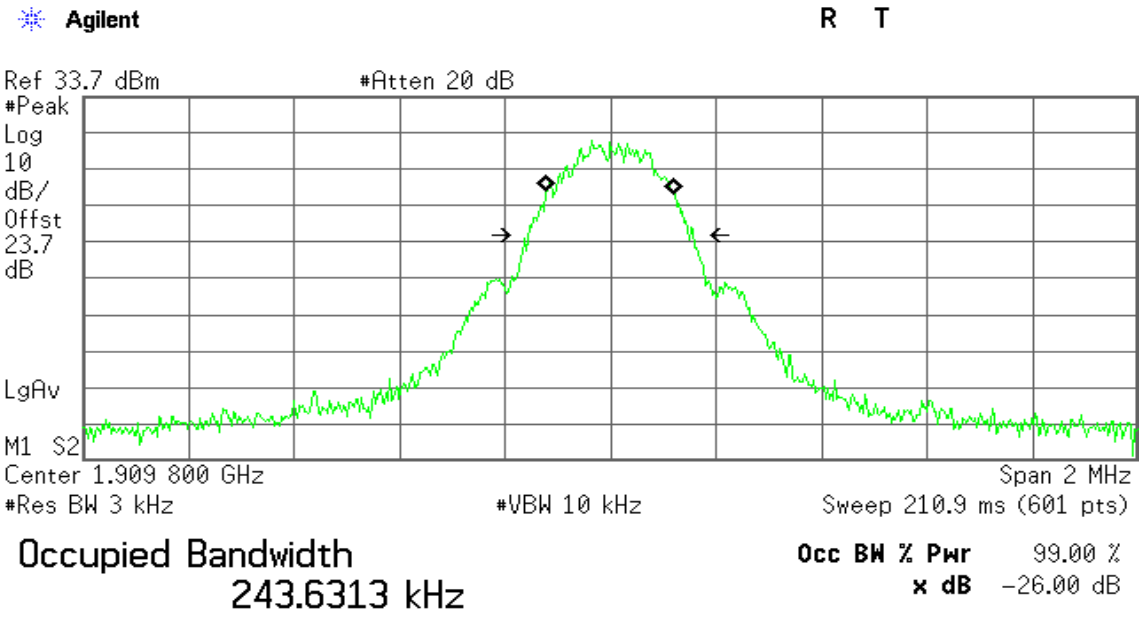
Transmit Freq Error	-154.382 Hz
x dB Bandwidth	318.580 kHz

EDGE 1900 (CH Mid)



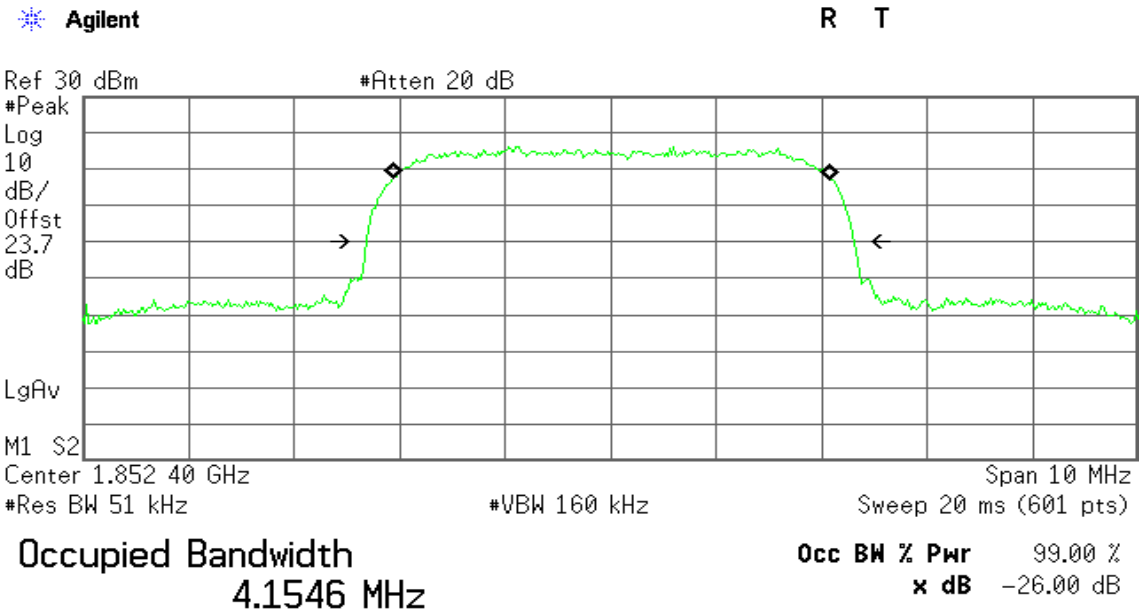
Transmit Freq Error	880.987 Hz
x dB Bandwidth	318.452 kHz

EDGE 1900 (CH High)



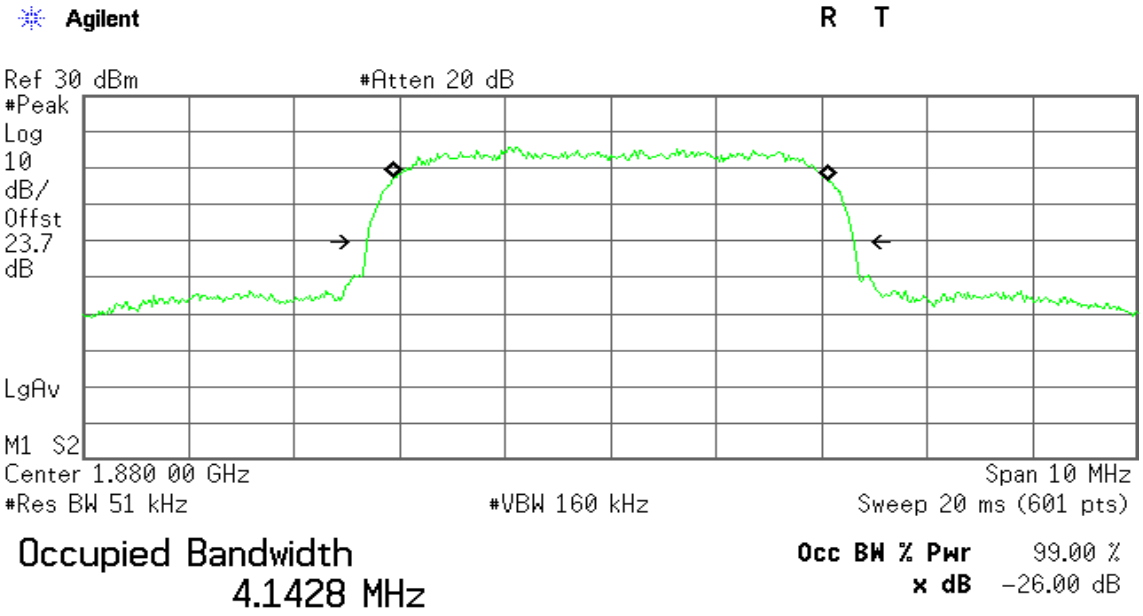
Transmit Freq Error	-611.836 Hz
x dB Bandwidth	314.061 kHz

WCDMA Band II (CH Low)



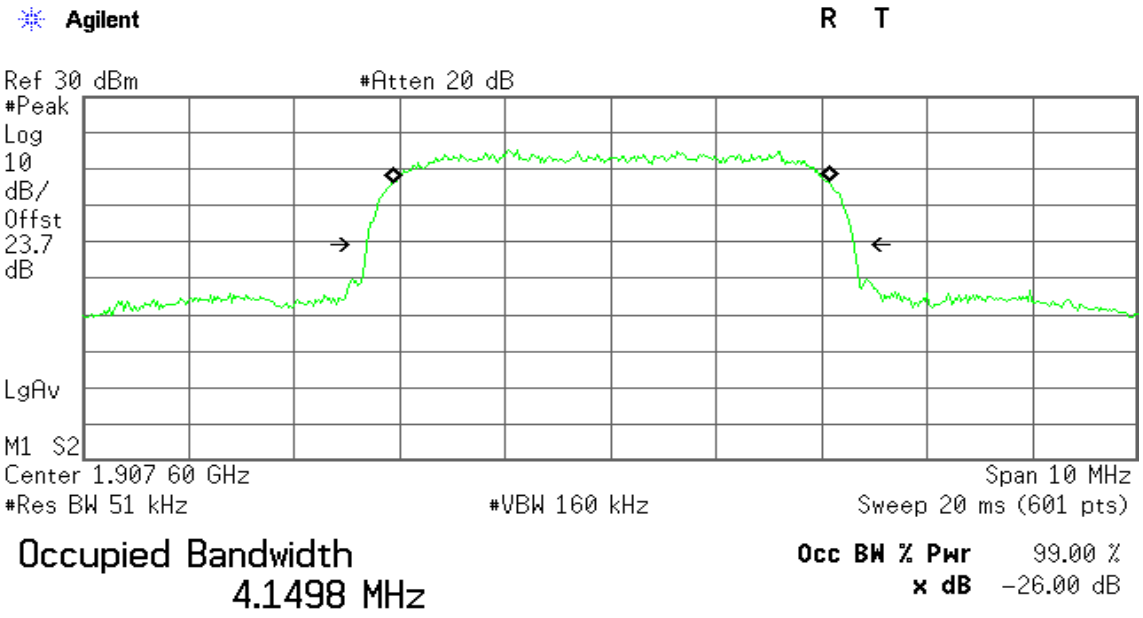
Transmit Freq Error	3.499 kHz
x dB Bandwidth	4.635 MHz

WCDMA Band II (CH Mid)



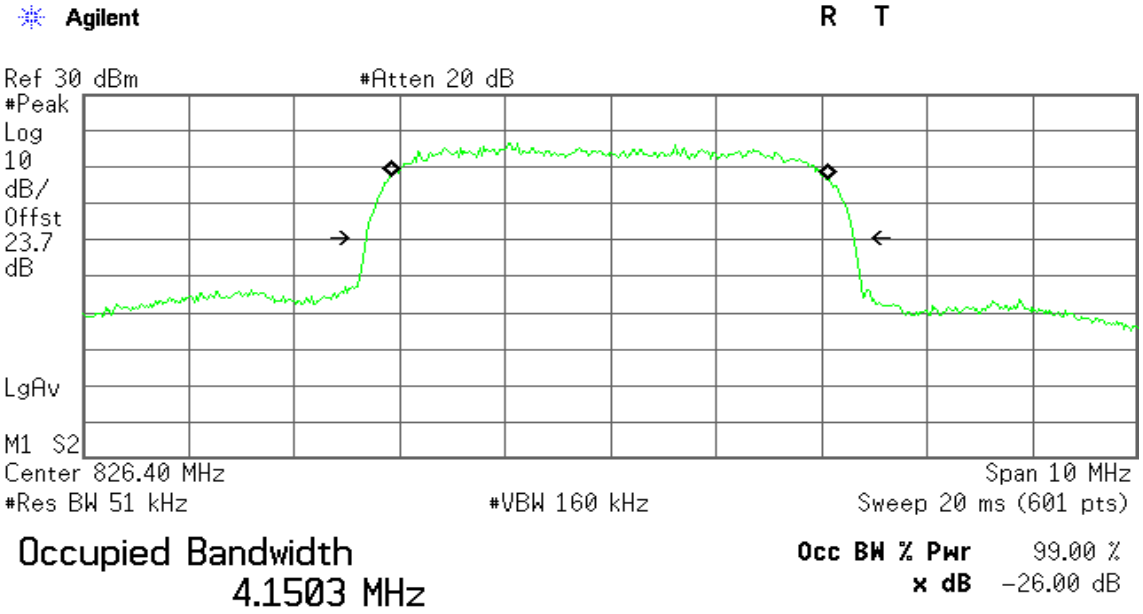
Transmit Freq Error	3.195 kHz
x dB Bandwidth	4.625 MHz

WCDMA Band II (CH High)



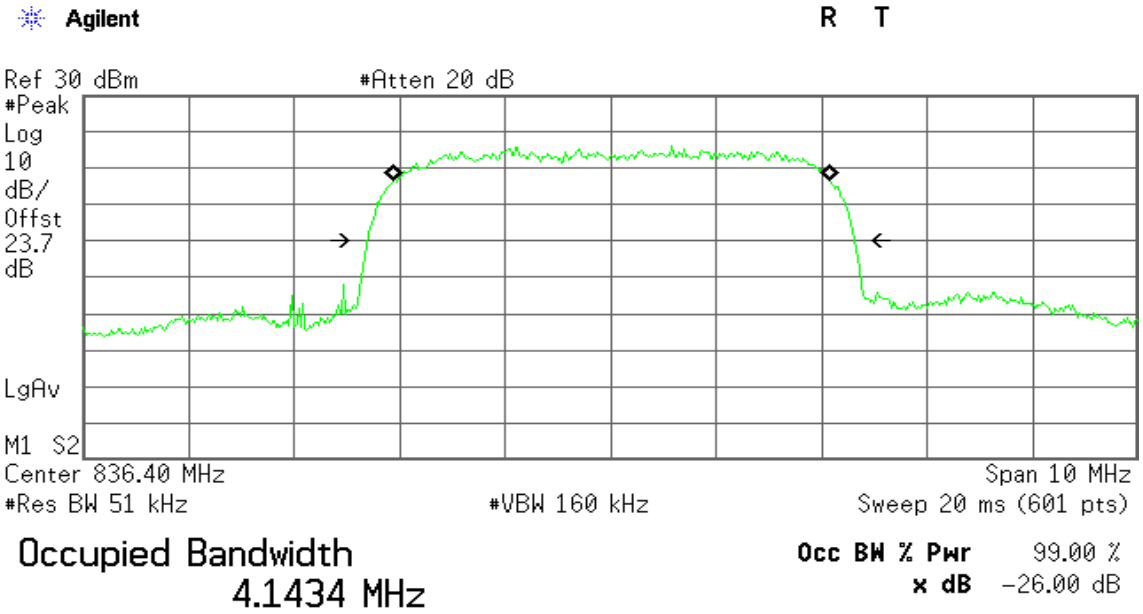
Transmit Freq Error	98.276 Hz
x dB Bandwidth	4.628 MHz

WCDMA Band V (CH Low)



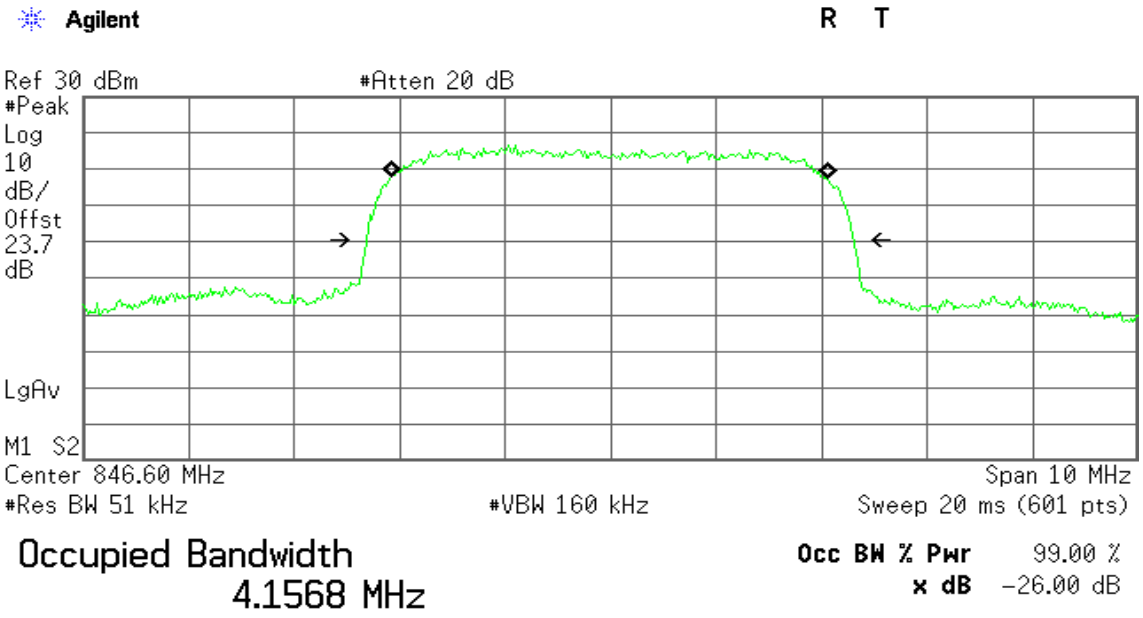
Transmit Freq Error	-13.055 kHz
x dB Bandwidth	4.633 MHz

WCDMA Band V (CH Mid)



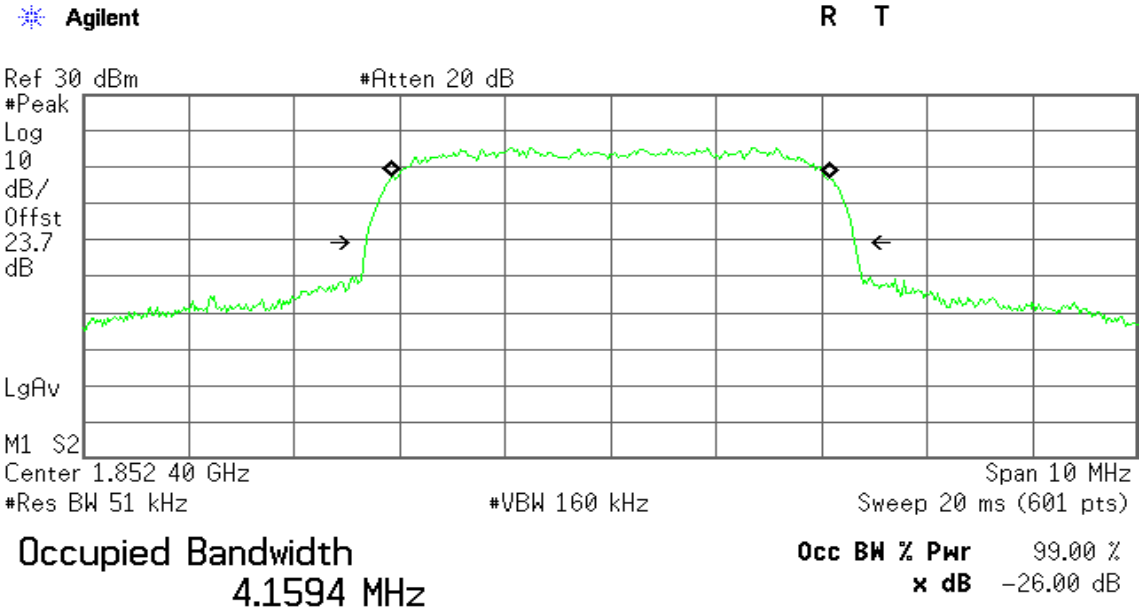
Transmit Freq Error	10.828 kHz
x dB Bandwidth	4.631 MHz

WCDMA Band V (CH High)



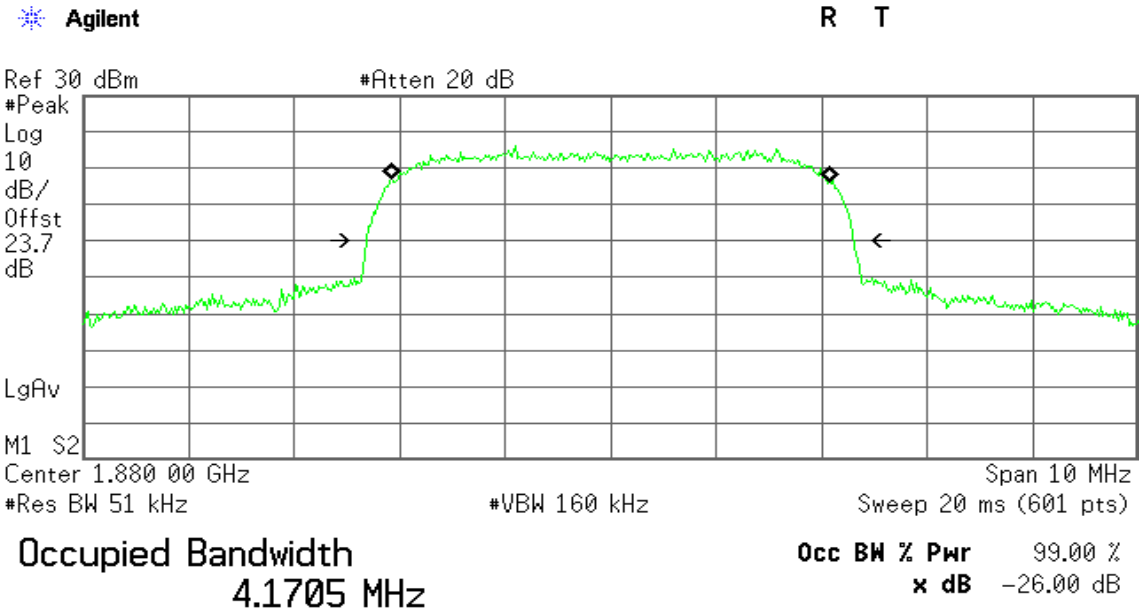
Transmit Freq Error	-12.503 kHz
x dB Bandwidth	4.625 MHz

WCDMA / HSDPA Band II (CH Low)



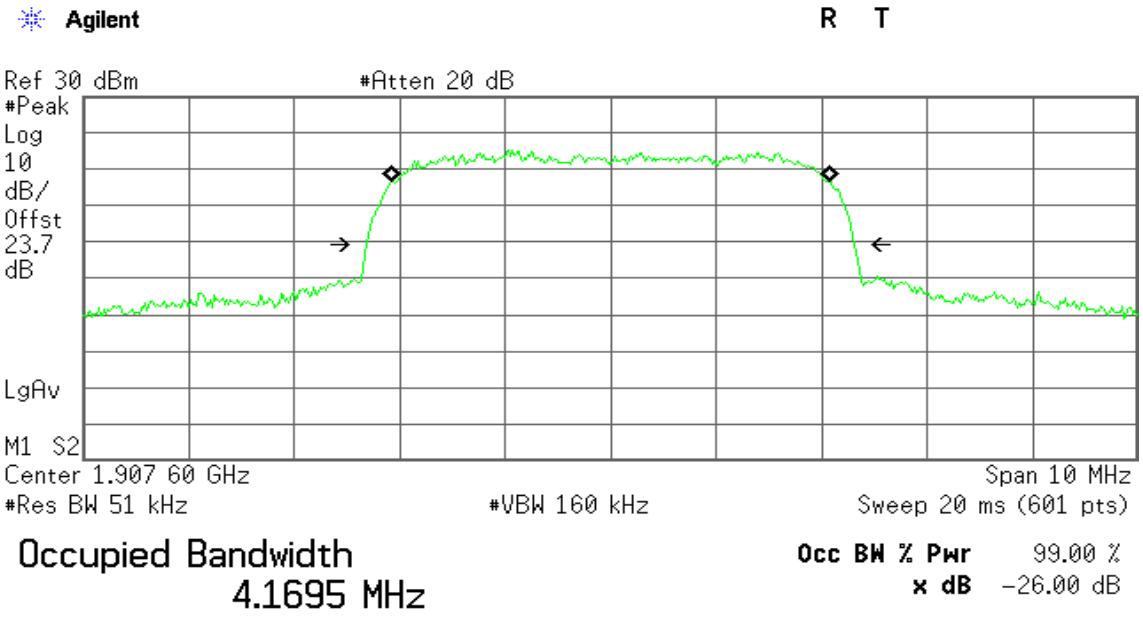
Transmit Freq Error	3.808 kHz
x dB Bandwidth	4.636 MHz

WCDMA / HSDPA Band II (CH Mid)



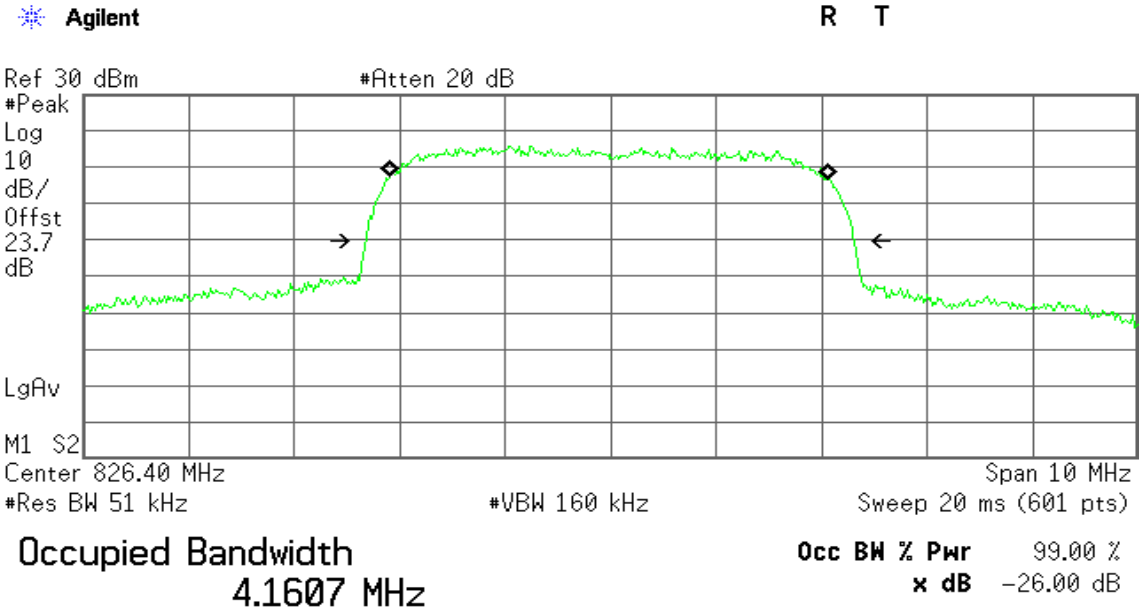
Transmit Freq Error	3.458 kHz
x dB Bandwidth	4.626 MHz

WCDMA / HSDPA Band II (CH High)



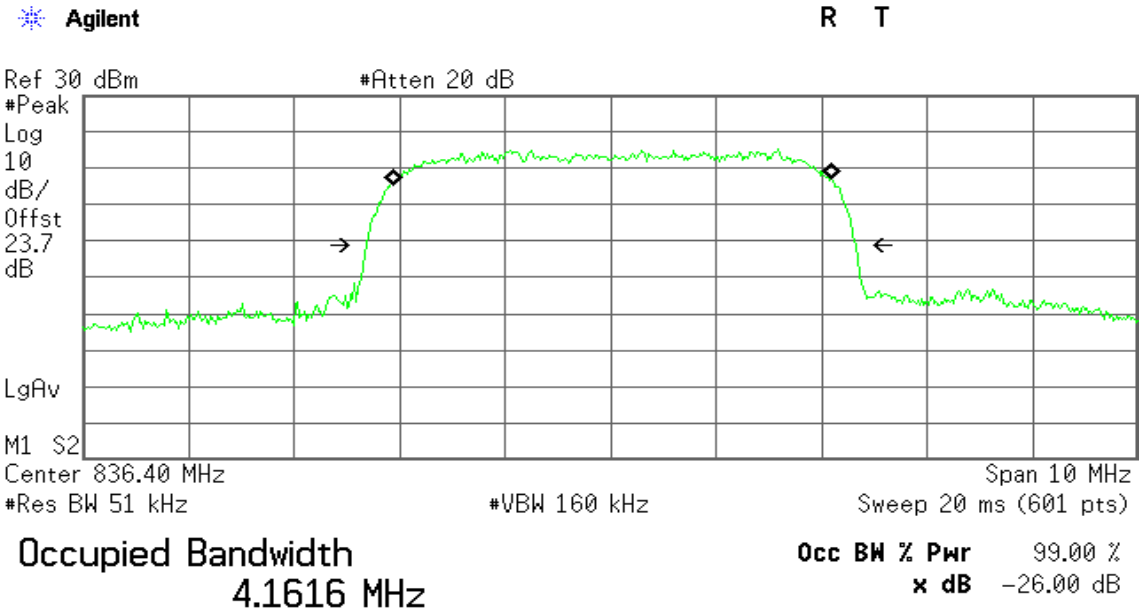
Transmit Freq Error	5.181 kHz
x dB Bandwidth	4.632 MHz

WCDMA / HSDPA Band V (CH Low)



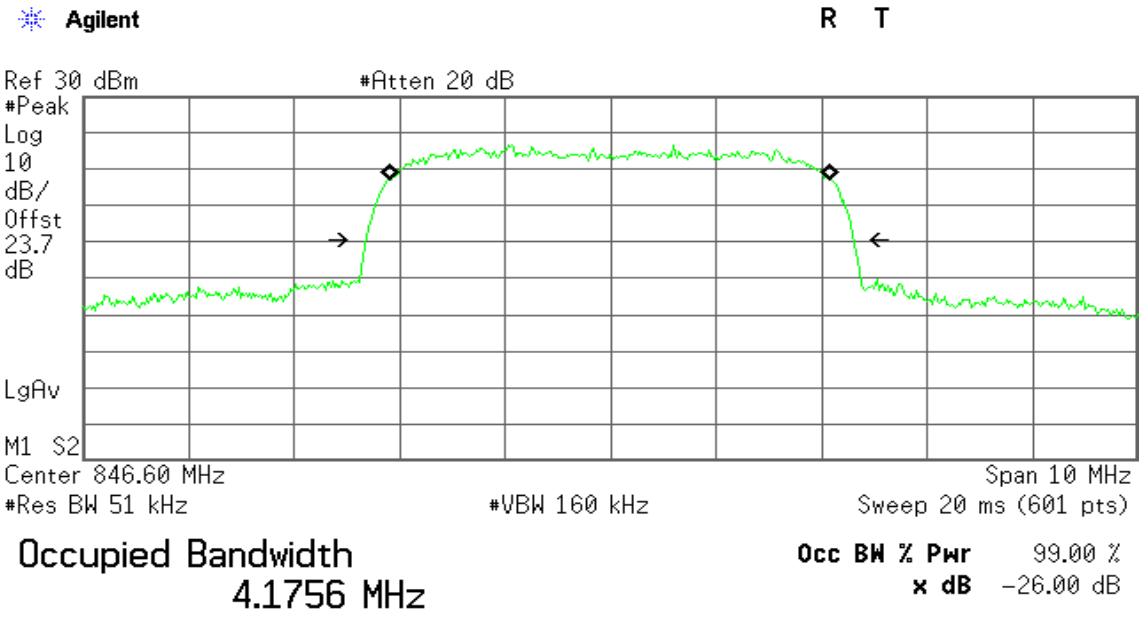
Transmit Freq Error -15.786 kHz
x dB Bandwidth 4.638 MHz

WCDMA / HSDPA Band V (CH Mid)



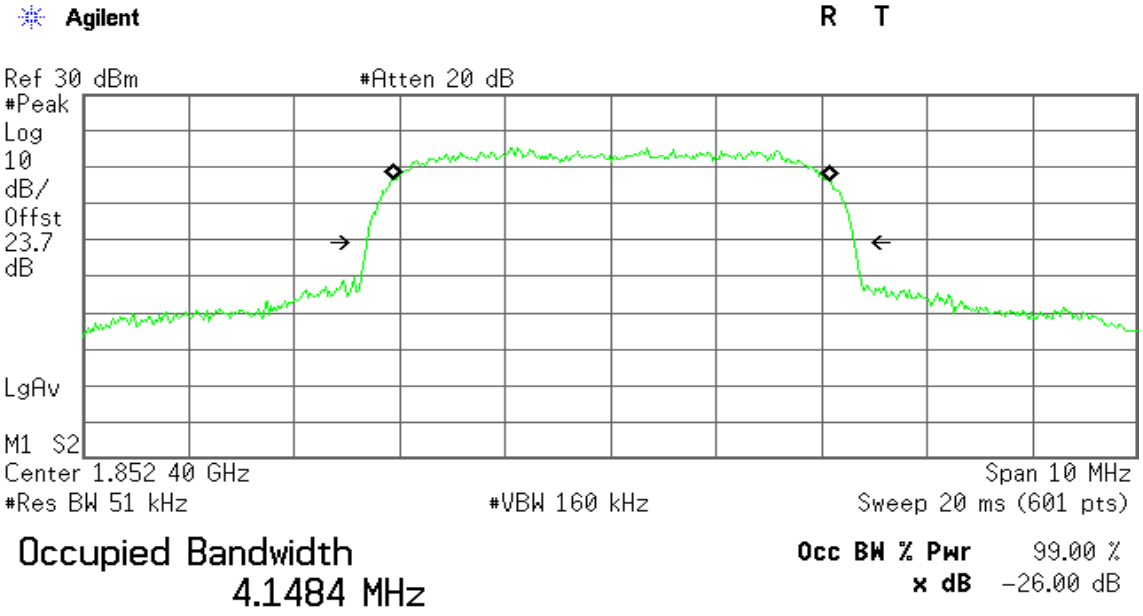
Transmit Freq Error 17.474 kHz
x dB Bandwidth 4.650 MHz

WCDMA / HSDPA Band V (CH High)



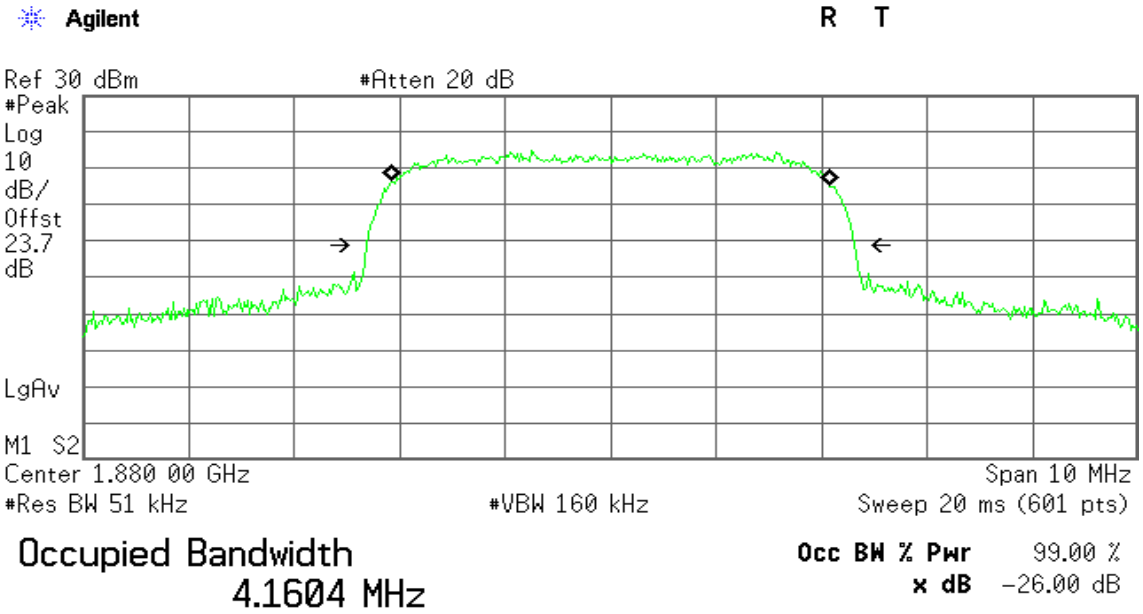
Transmit Freq Error	-4.122 kHz
x dB Bandwidth	4.632 MHz

WCDMA / HSUPA Band II (CH Low)



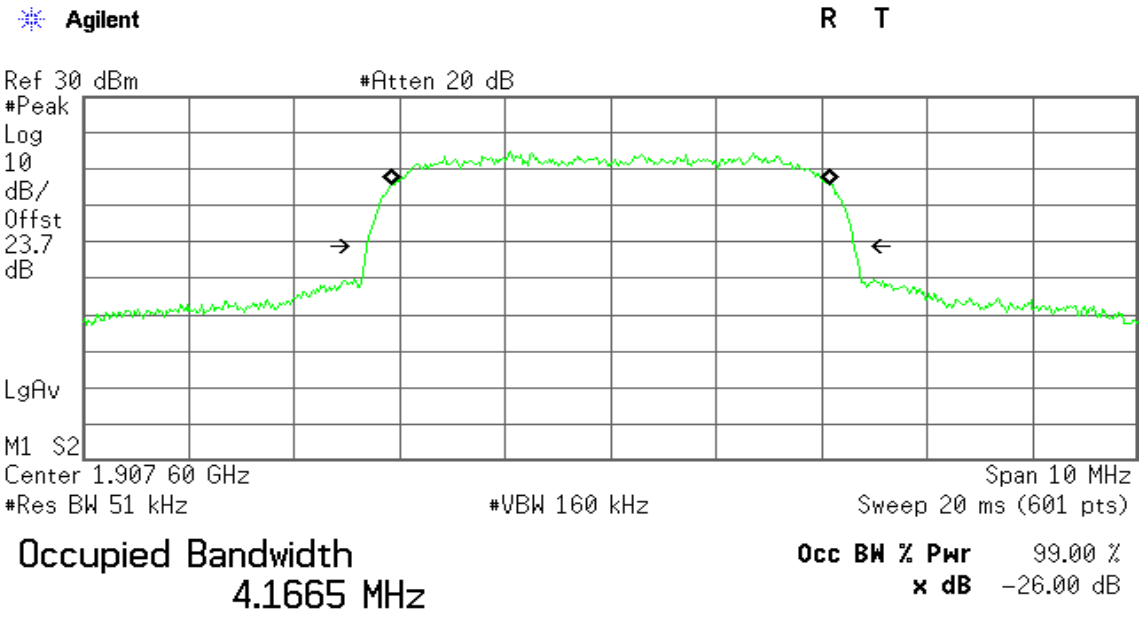
Transmit Freq Error	1.942 kHz
x dB Bandwidth	4.633 MHz

WCDMA / HSUPA Band II (CH Mid)



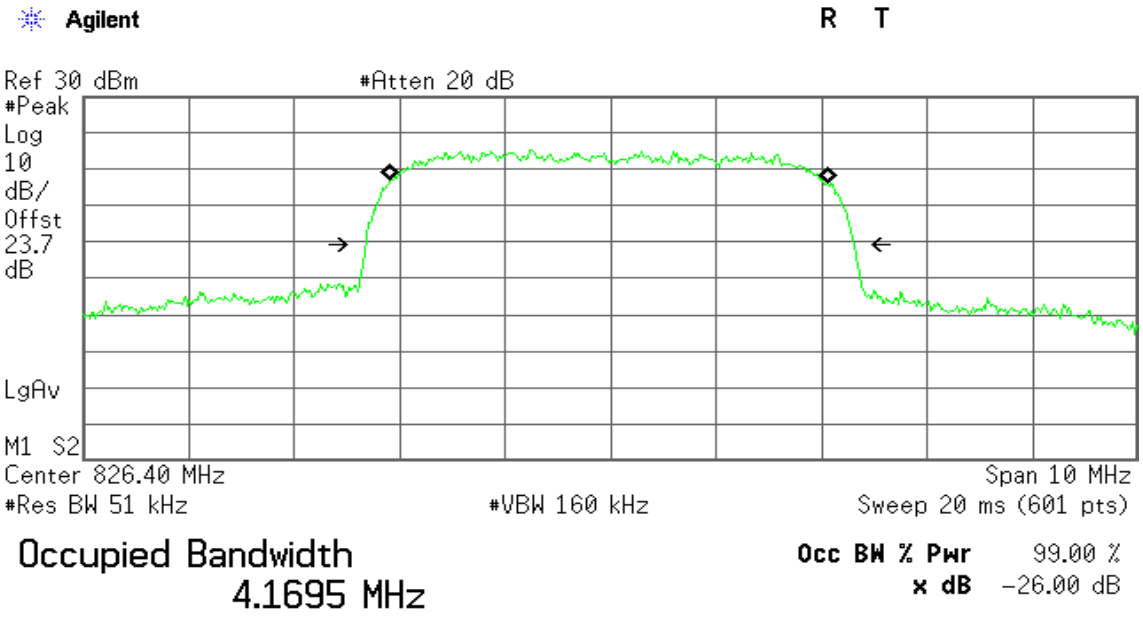
Transmit Freq Error	299.333 Hz
x dB Bandwidth	4.639 MHz

WCDMA / HSUPA Band II (CH High)



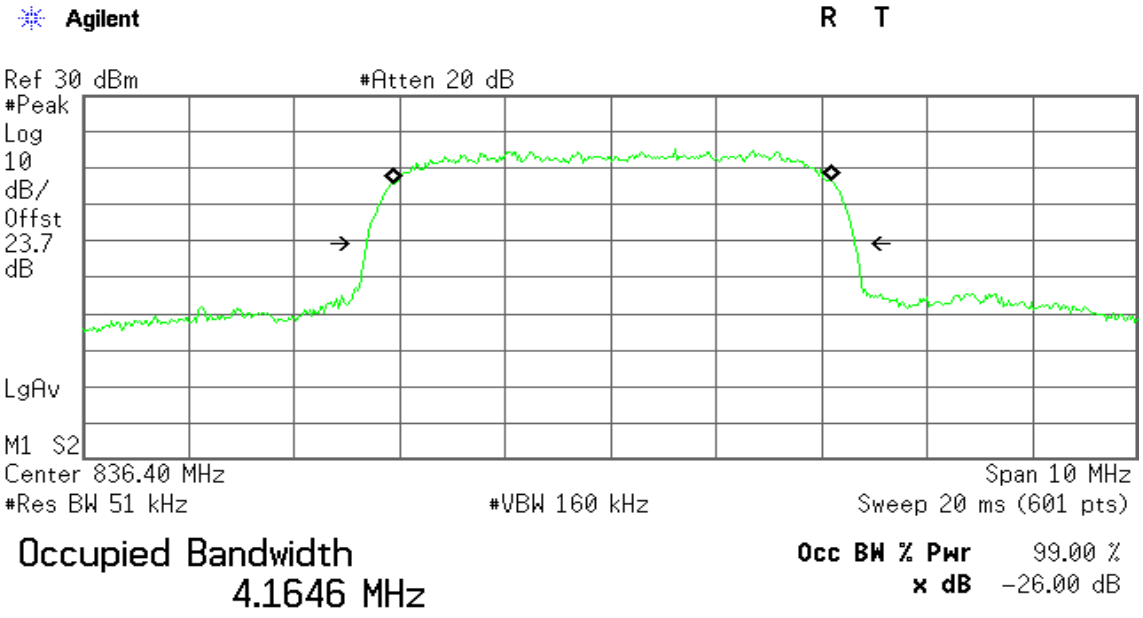
Transmit Freq Error	5.230 kHz
x dB Bandwidth	4.627 MHz

WCDMA / HSUPA Band V (CH Low).



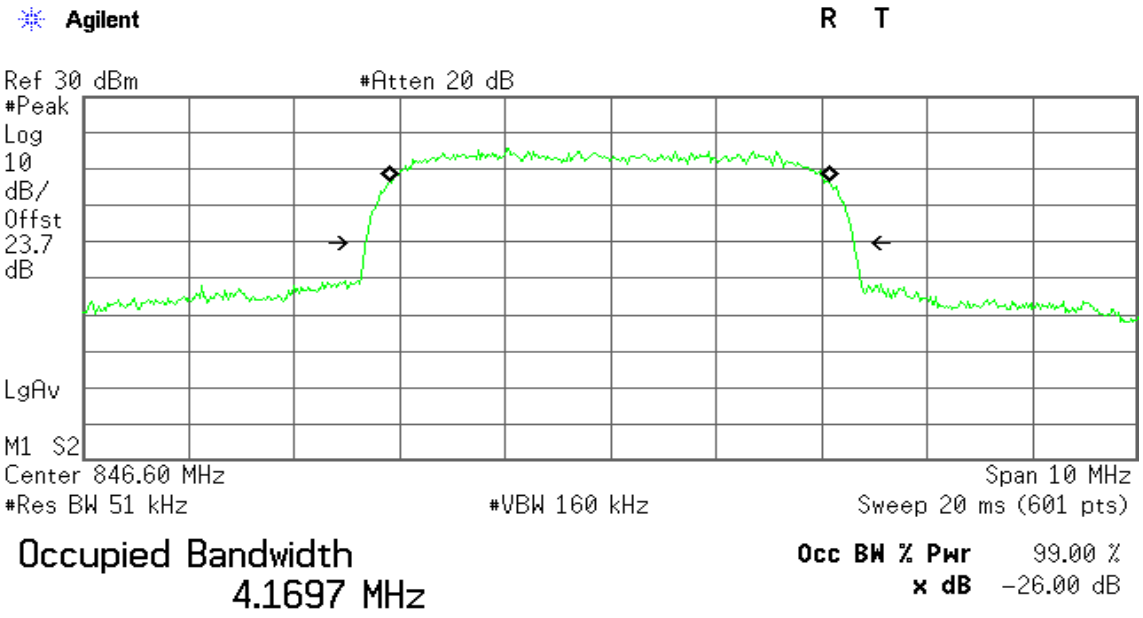
Transmit Freq Error -12.569 kHz
x dB Bandwidth 4.641 MHz

WCDMA / HSUPA Band V (CH Mid)



Transmit Freq Error 16.233 kHz
x dB Bandwidth 4.639 MHz

WCDMA / HSUPA Band V (CH Mid)



Occupied Bandwidth
4.1697 MHz

Occ BW % Pwr	99.00 %
x dB	-26.00 dB

Transmit Freq Error	-9.597 kHz
x dB Bandwidth	4.638 MHz

7.5OUT OF BAND EMISSION AT ANTENNA TERMINALS

LIMIT

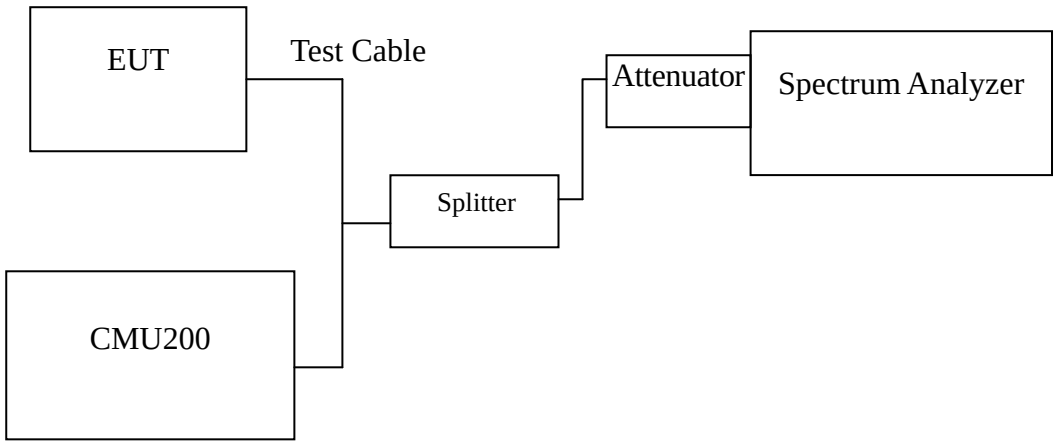
According to FCC §2.1051, FCC §22.917, FCC §24.238(a).

Out of Band Emissions: The mean power of emission must be attenuated below the mean power of the non-modulated carrier (P) on any frequency twice or more than twice the fundamental frequency by at lease 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 lease 1% of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the Out of band Emission

Test Configuration

Out of band emission at antenna terminals:



TEST PROCEDURE

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

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

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

TEST RESULTS

No non-compliance noted.

Test Data

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

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

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

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

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

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

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

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

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

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

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

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

Test Plot

GSM 850

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

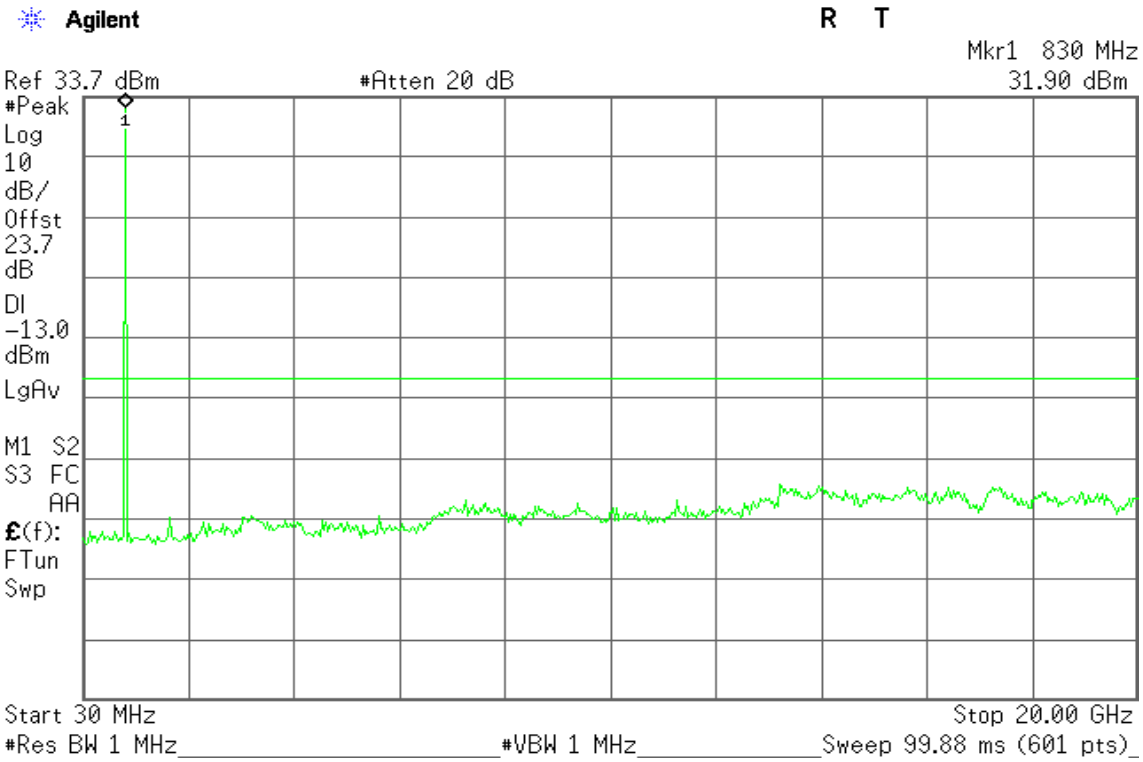


Figure 7-2: Out of Band emission at antenna terminals – GSM CH Mid

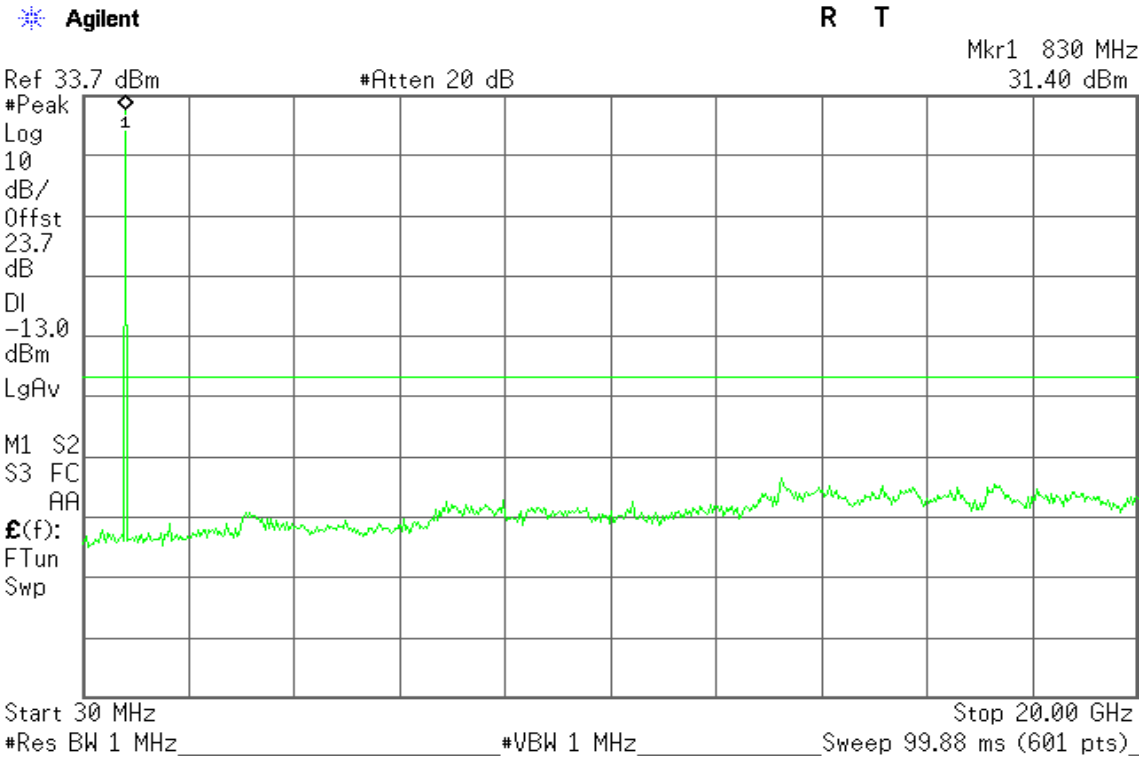
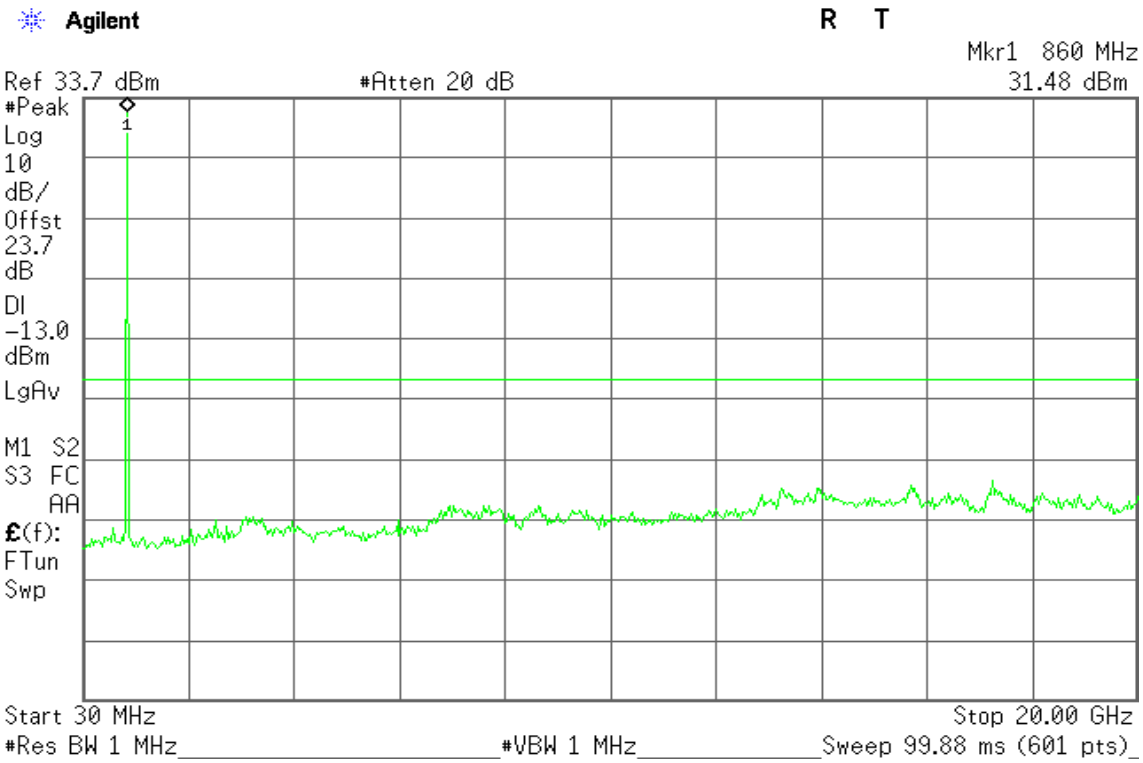


Figure 7-3: Out of Band emission at antenna terminals – GSM CH High



GPRS 850

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

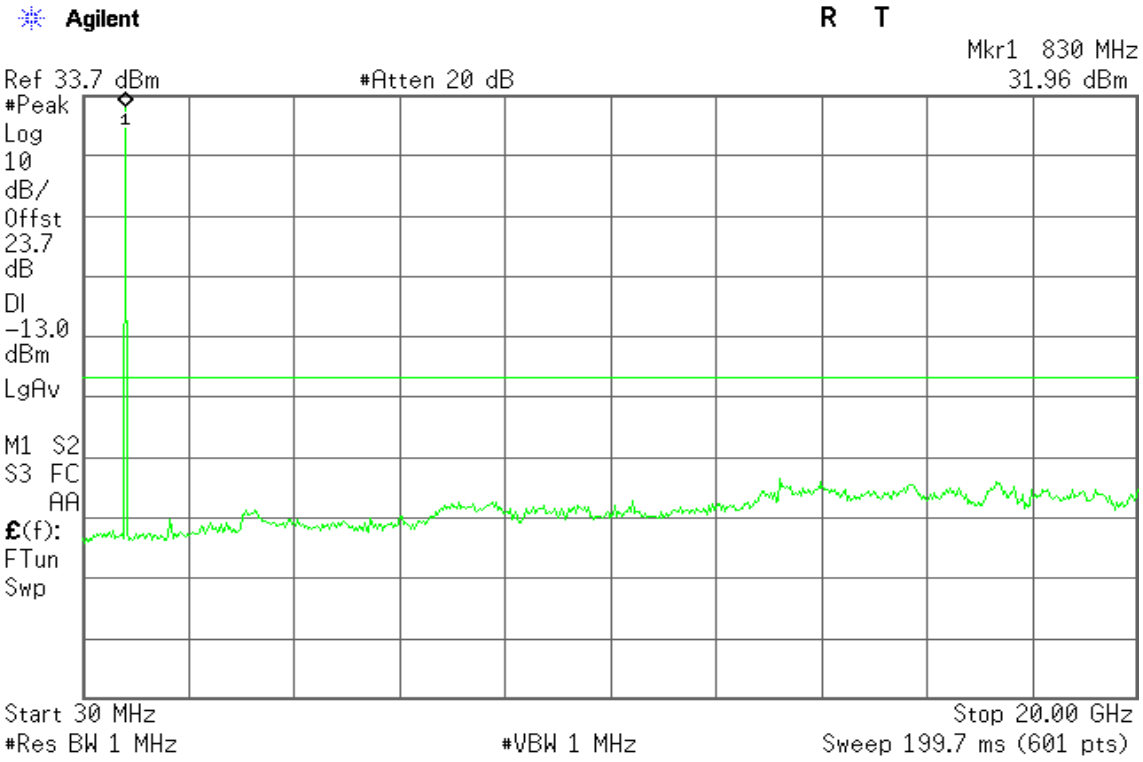


Figure 8-2: Out of Band emission at antenna terminals – GPRS CH Mid

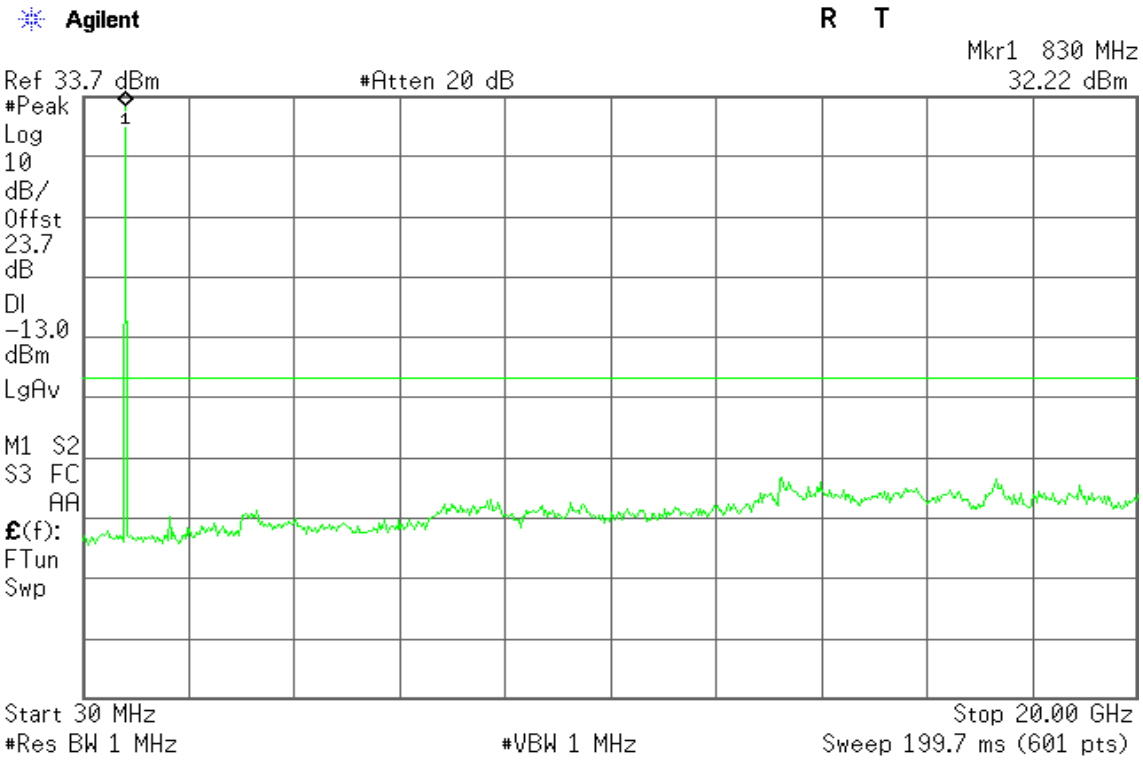
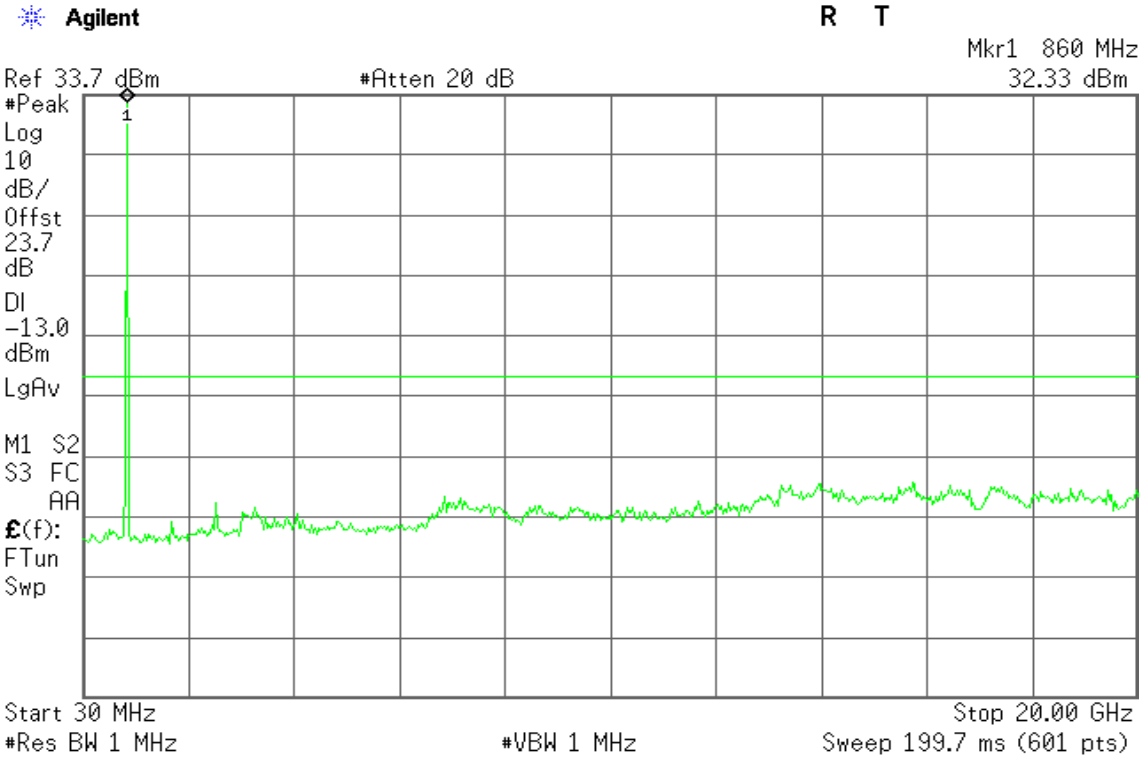


Figure 8-3: Out of Band emission at antenna terminals – GPRS CH High



GSM 1900

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

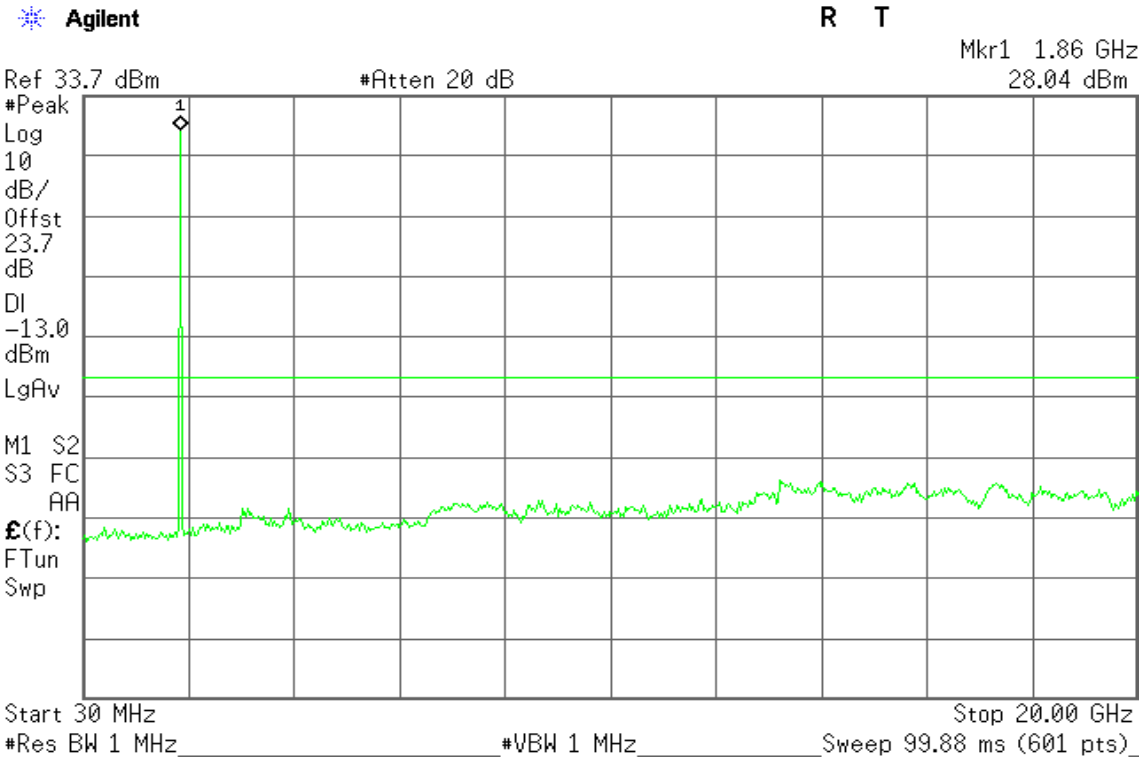


Figure 9-2: Out of Band emission at antenna terminals – GSM CH Mid

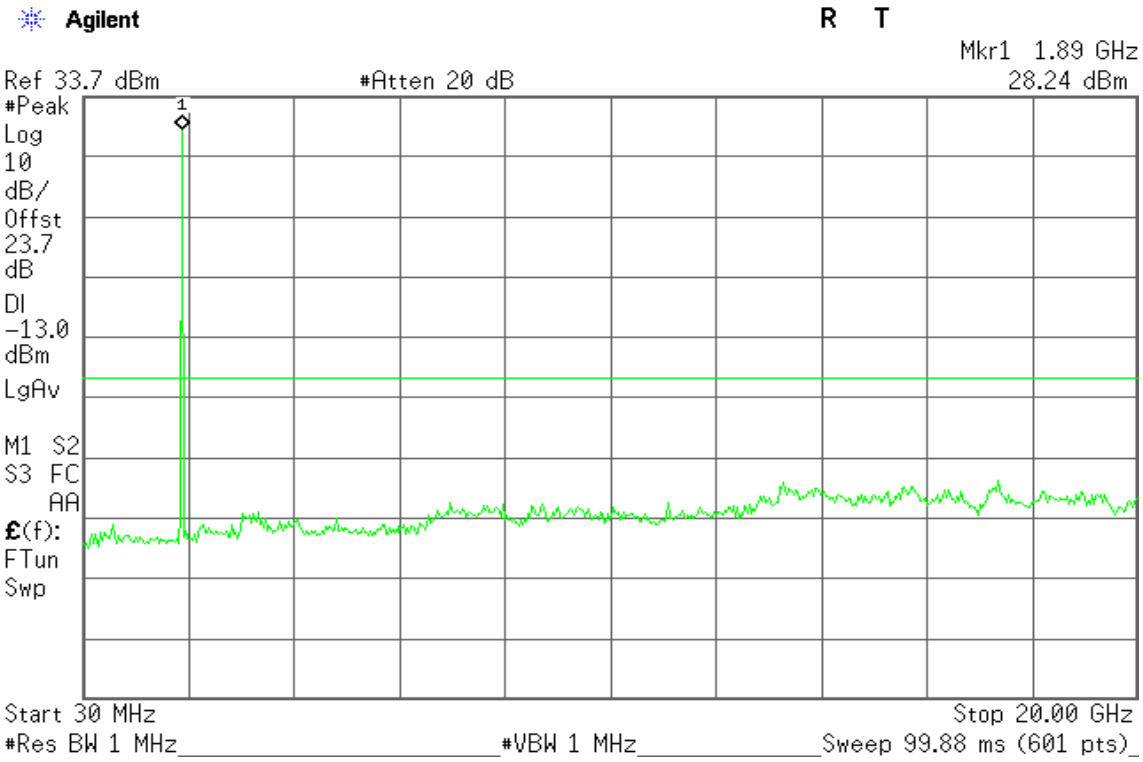
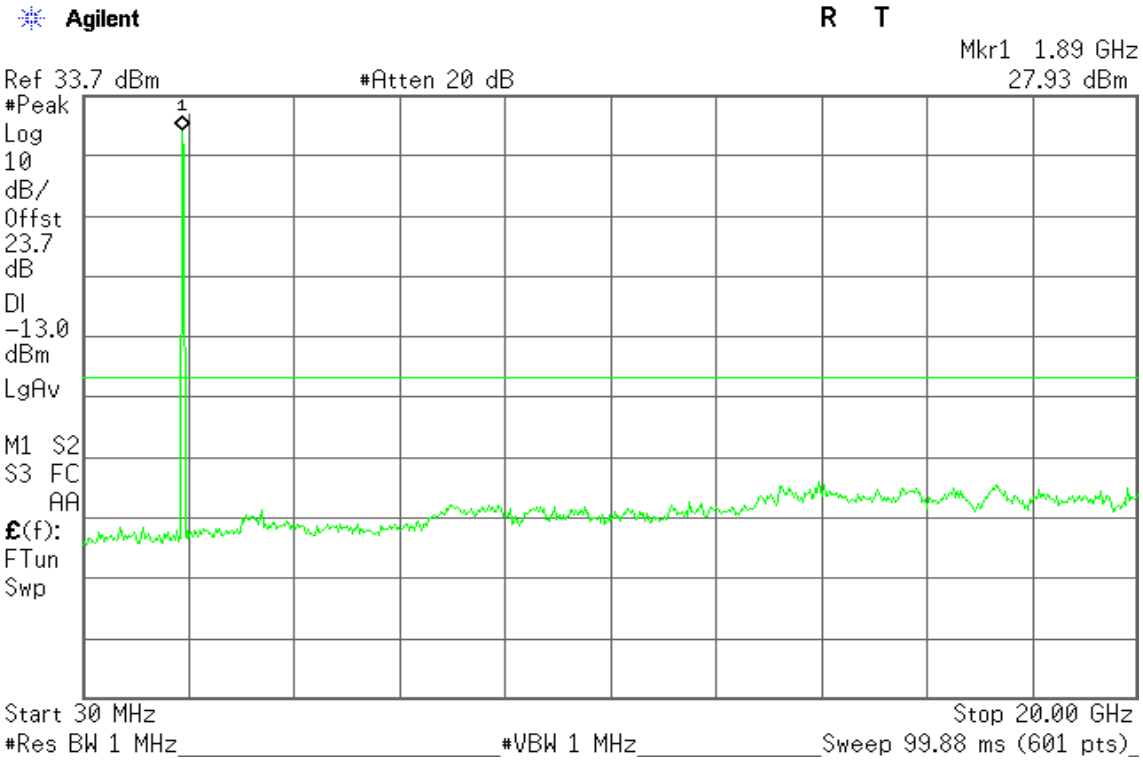


Figure 9-3: Out of Band emission at antenna terminals – GSM CH High



GPRS 1900

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

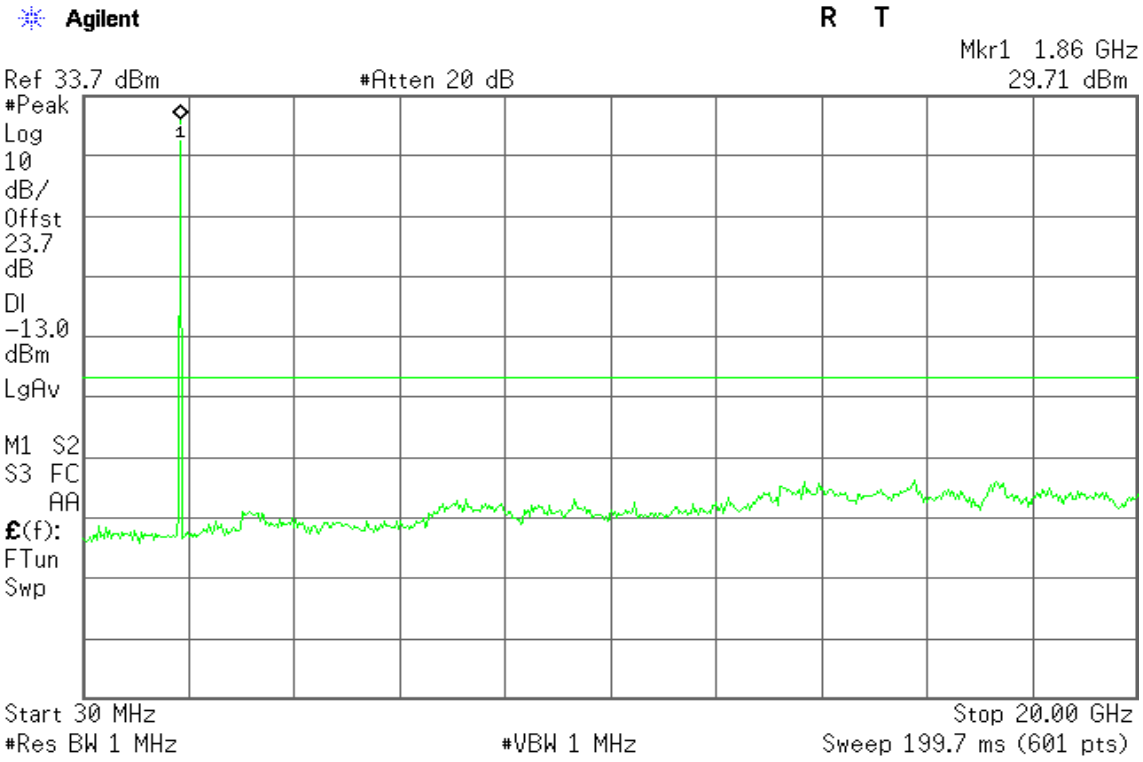


Figure 10-2: Out of Band emission at antenna terminals – GSM CH Mid

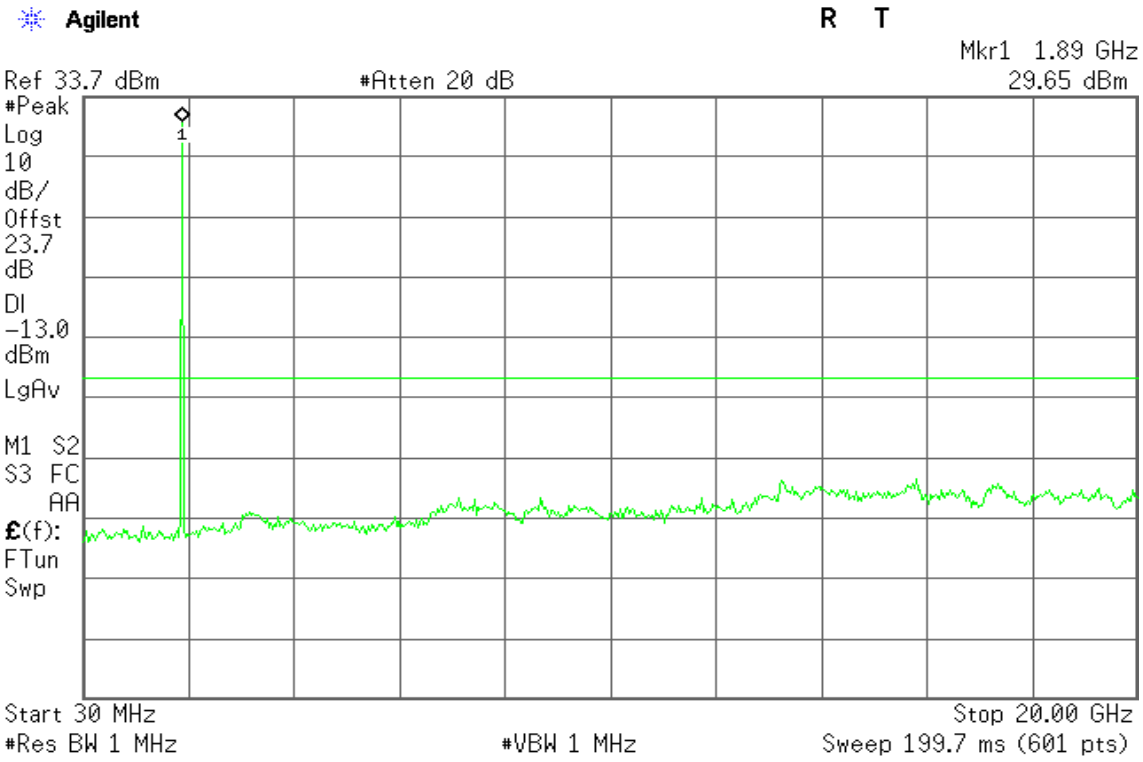
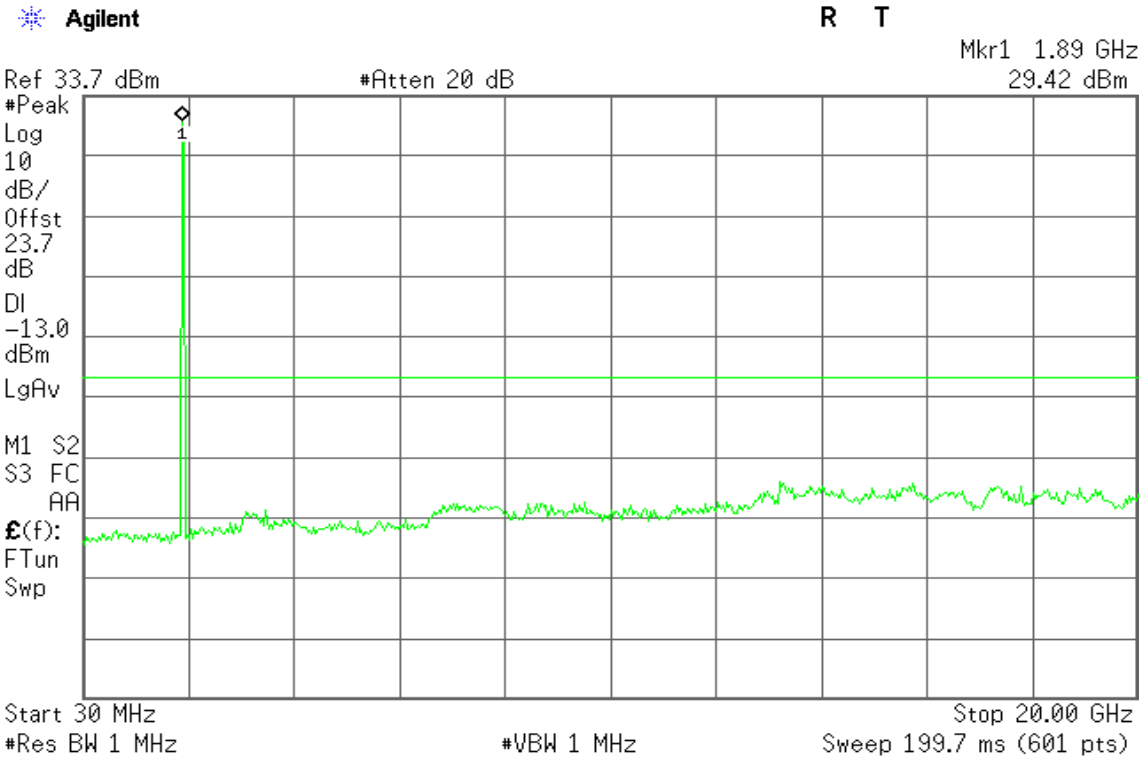


Figure 10-3: Out of Band emission at antenna terminals – GSM CH High



GSM 850

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

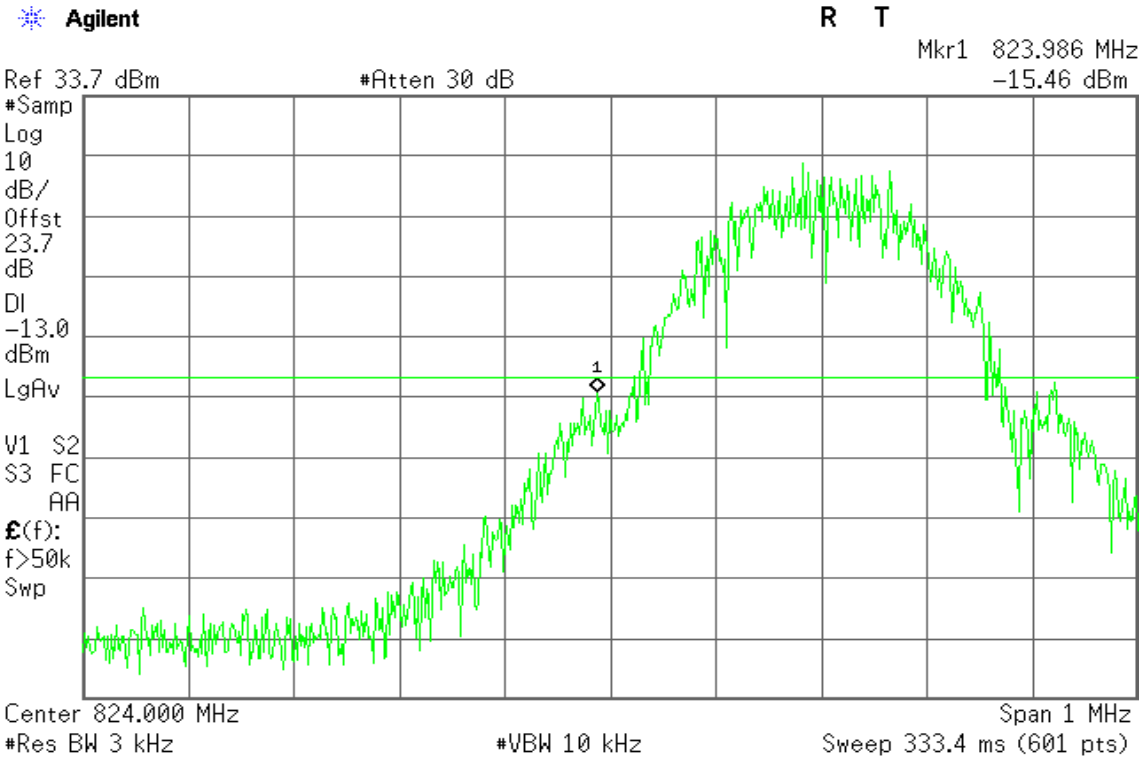
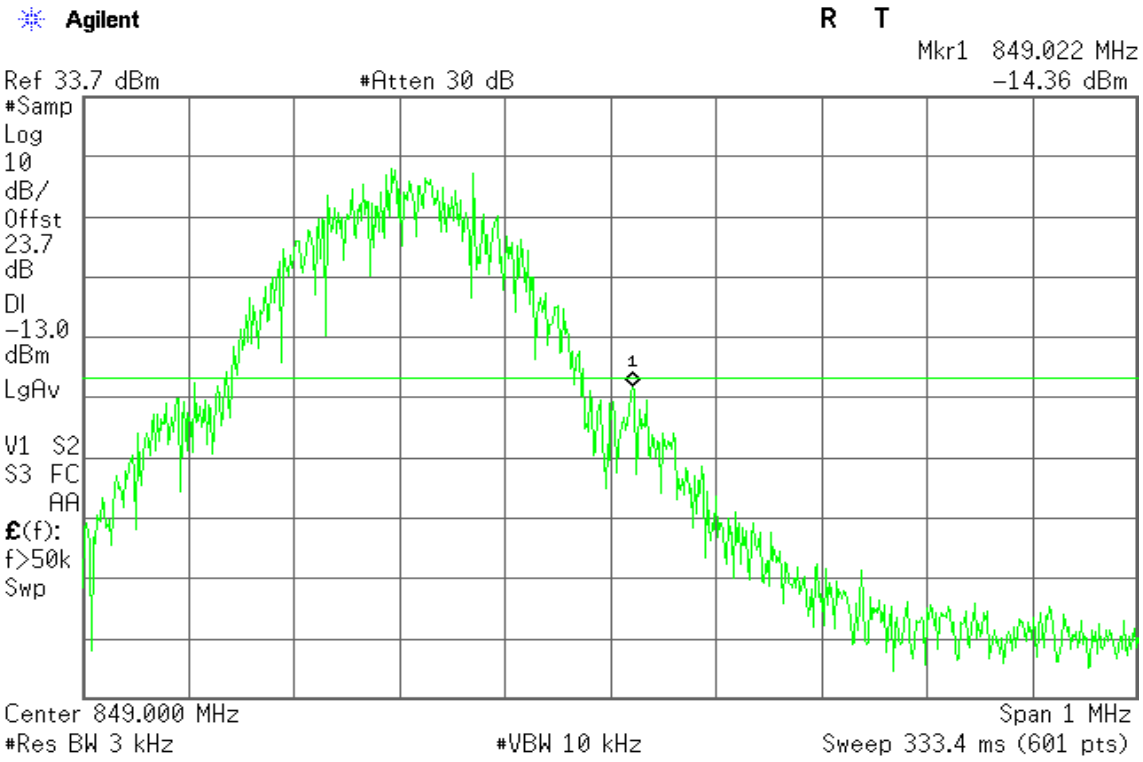


Figure 11-2: Band Edge emissions – GSM CH High



GPRS 850

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

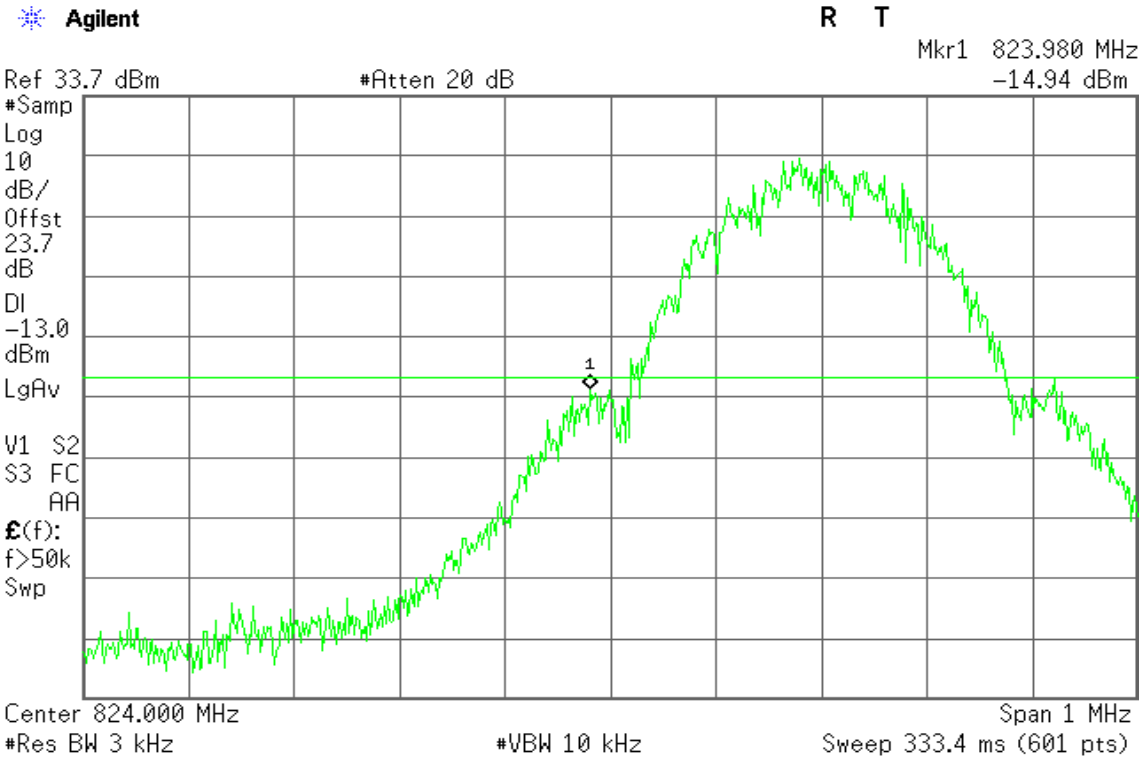
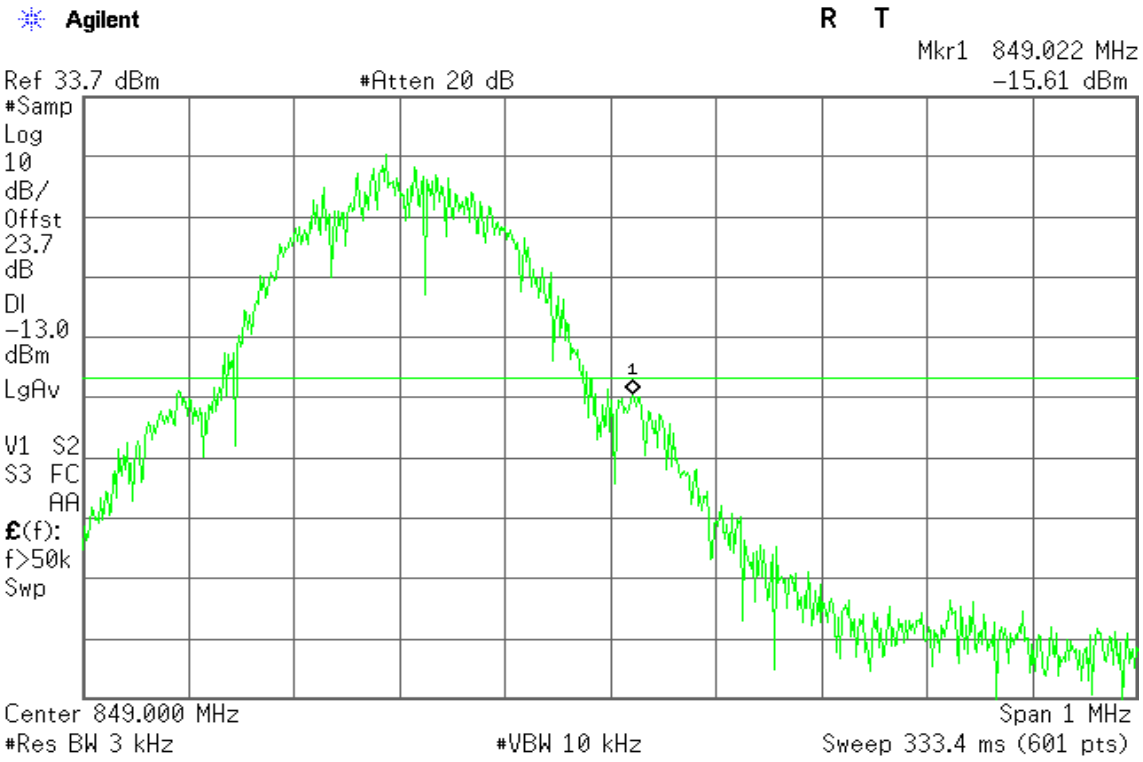


Figure 12-2: Band Edge emissions –GPRS CH High



GSM 1900

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

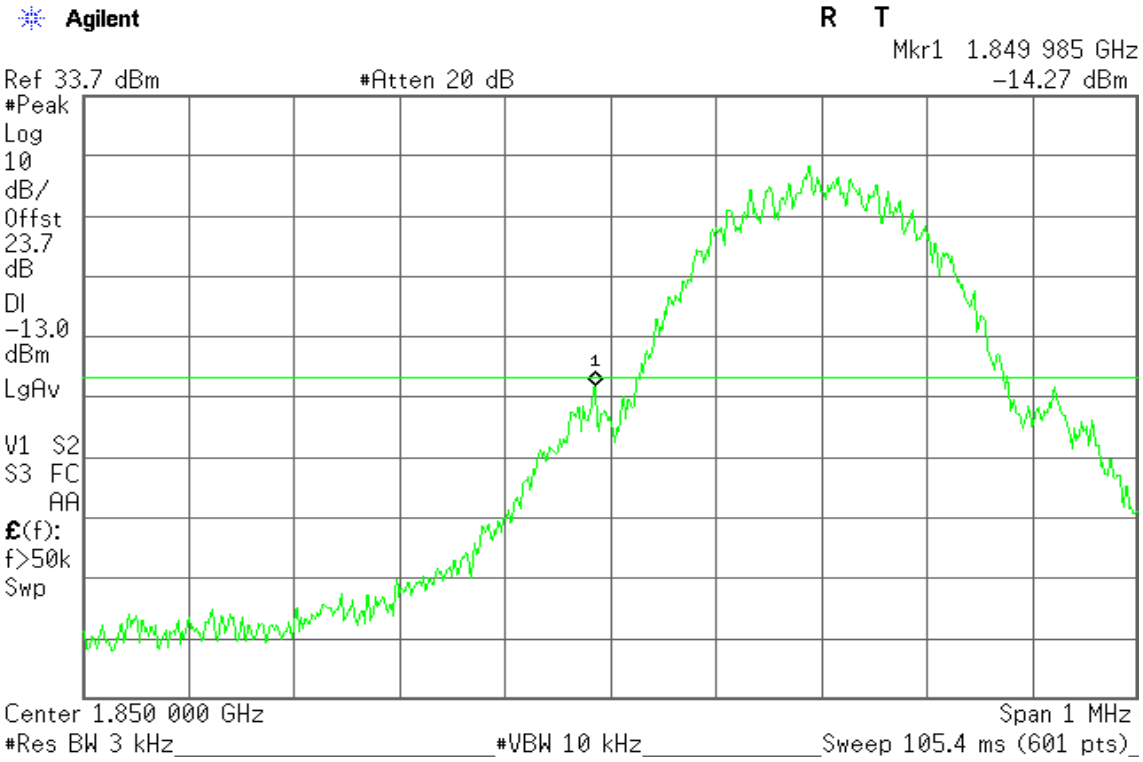
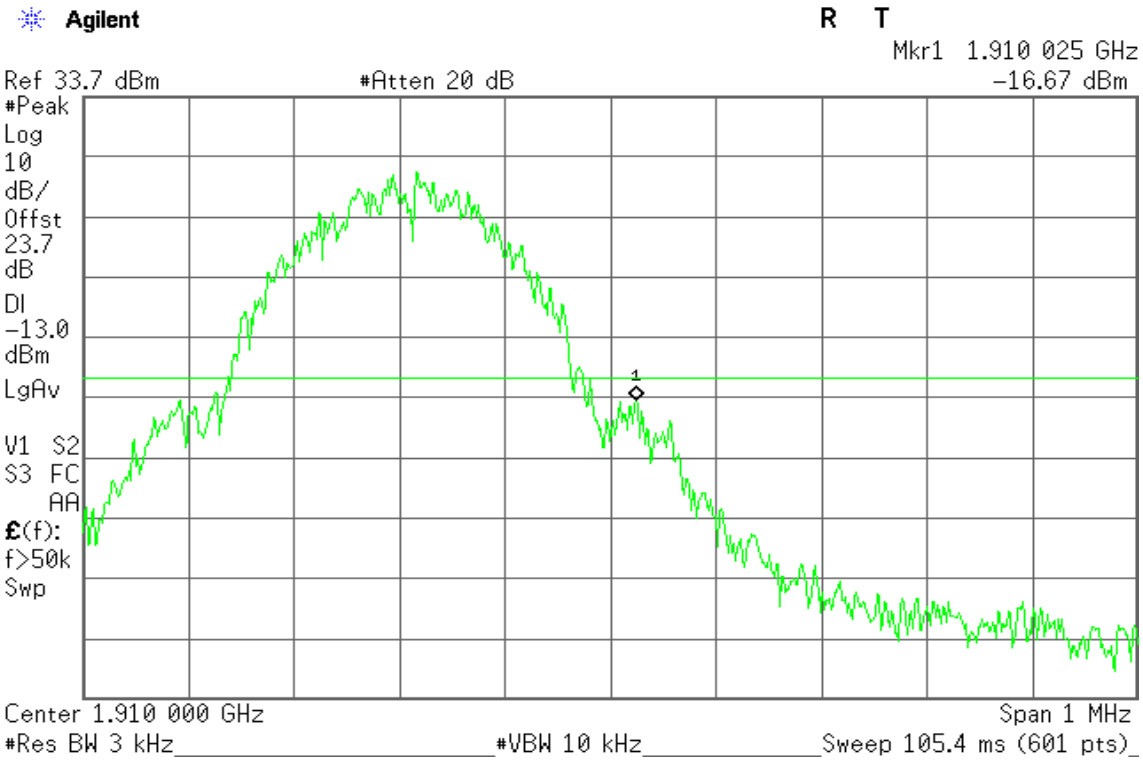


Figure 13-2: Band Edge emissions – GSM CH High



GPRS 1900

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

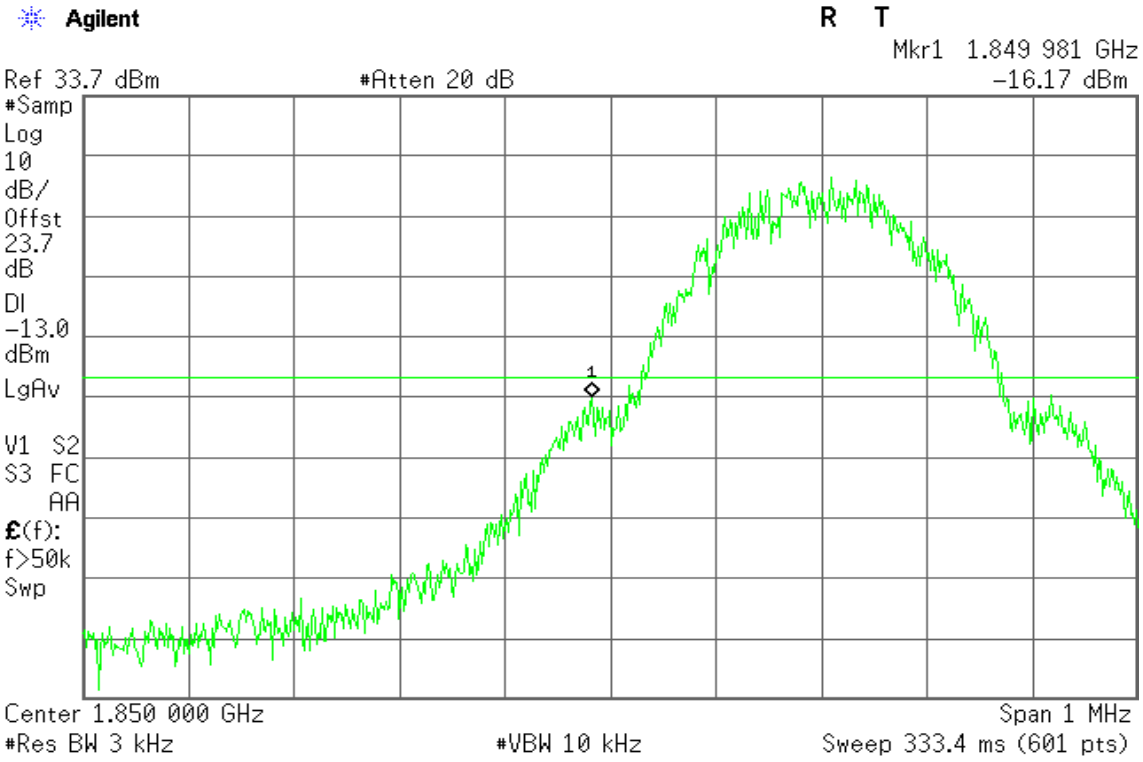
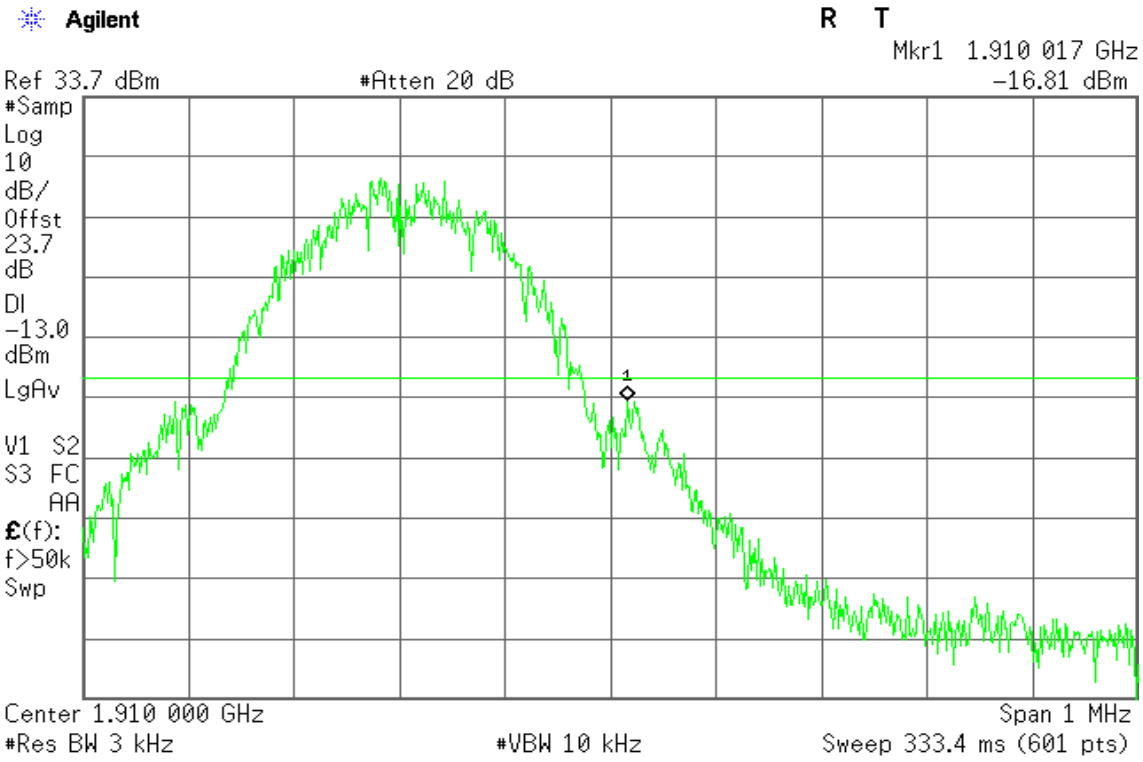


Figure 14-2: Band Edge emissions – GPRS CH High



EDGE 850

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

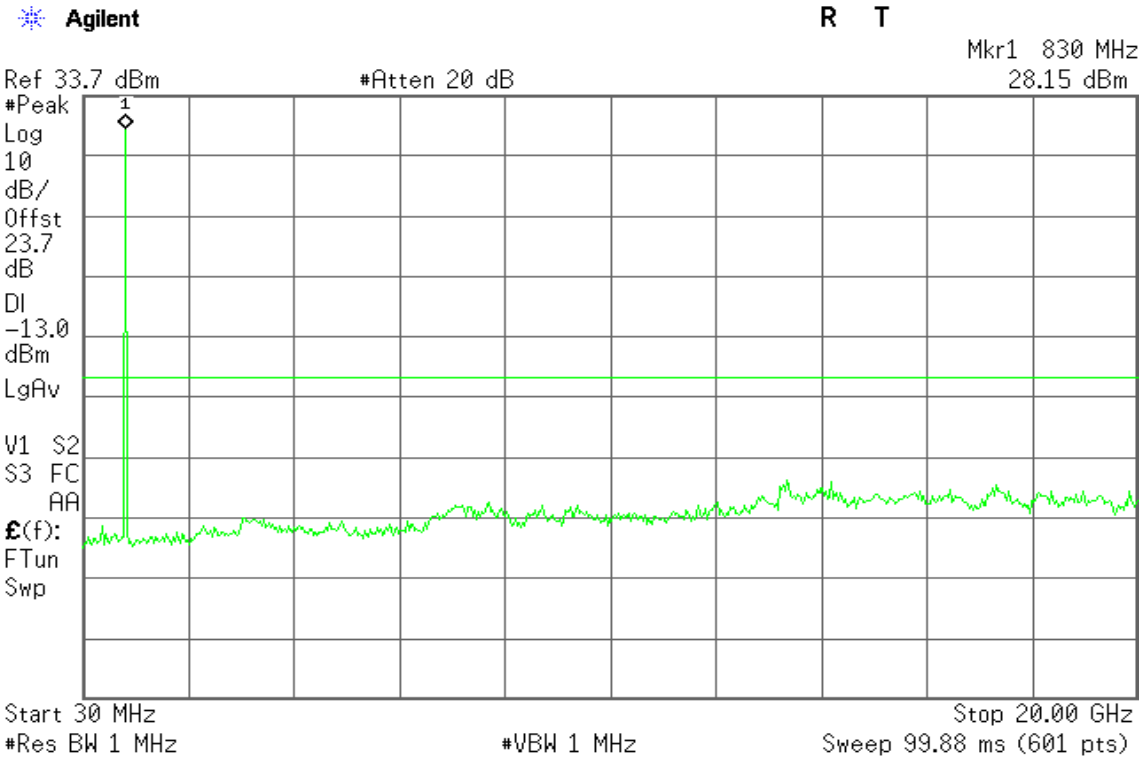


Figure 15-2: Out of Band emission at antenna terminals –EDGE CH Mid

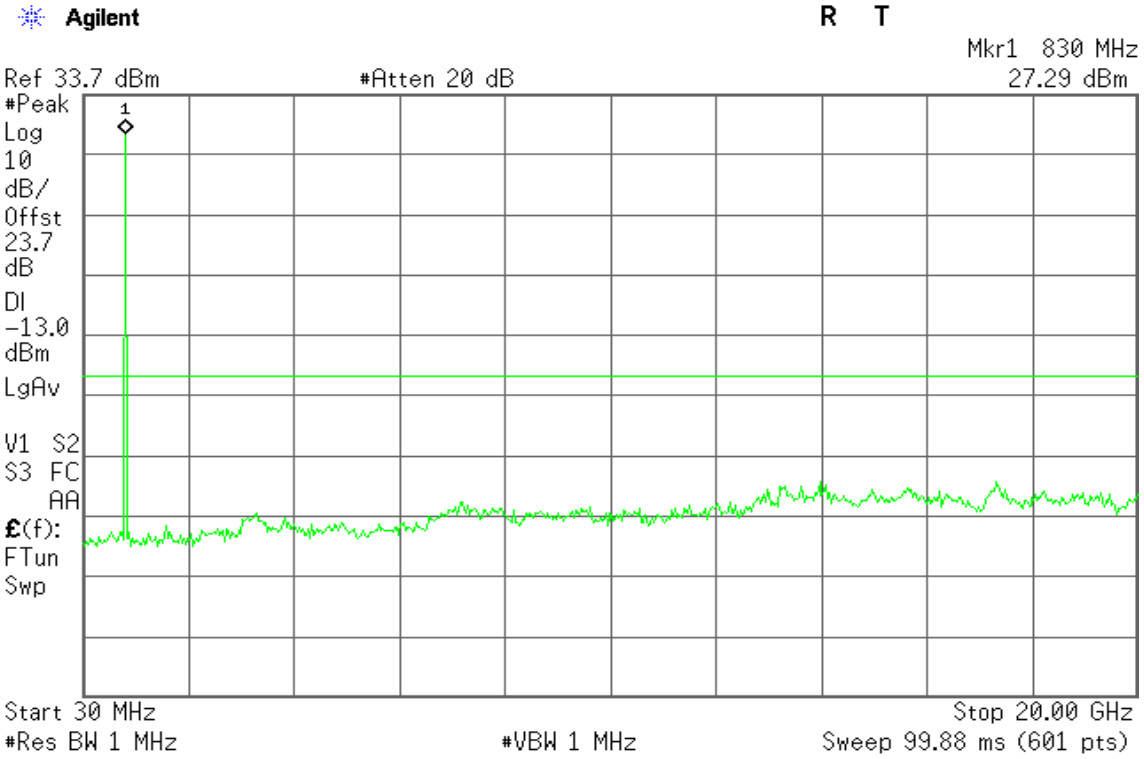
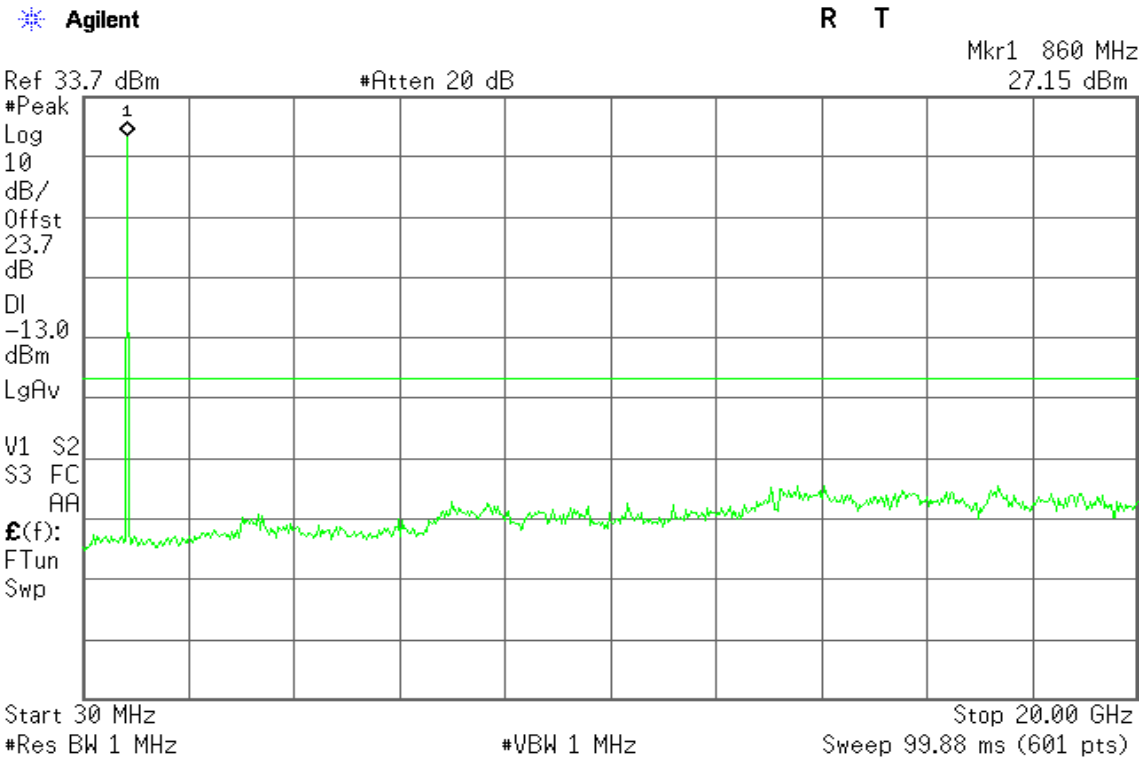


Figure 15-3: Out of Band emission at antenna terminals –EDGE CH High



EDGE 1900

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

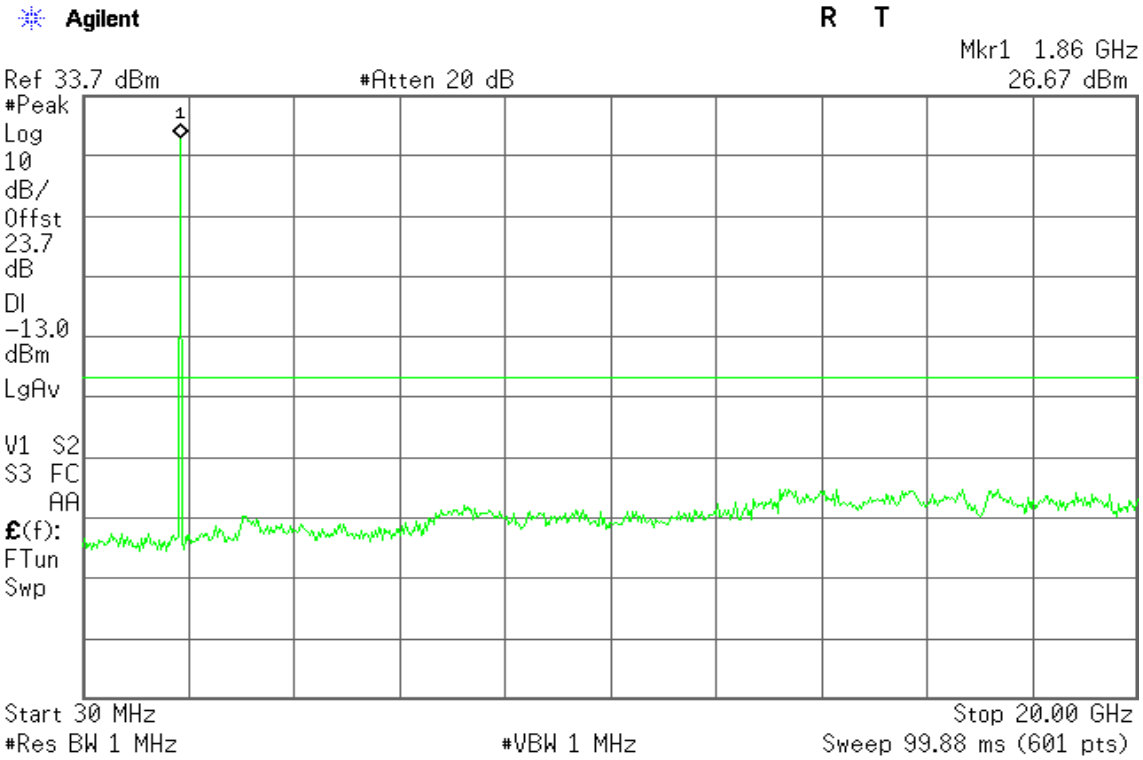


Figure 16-2: Out of Band emission at antenna terminals –EDGE CH Mid

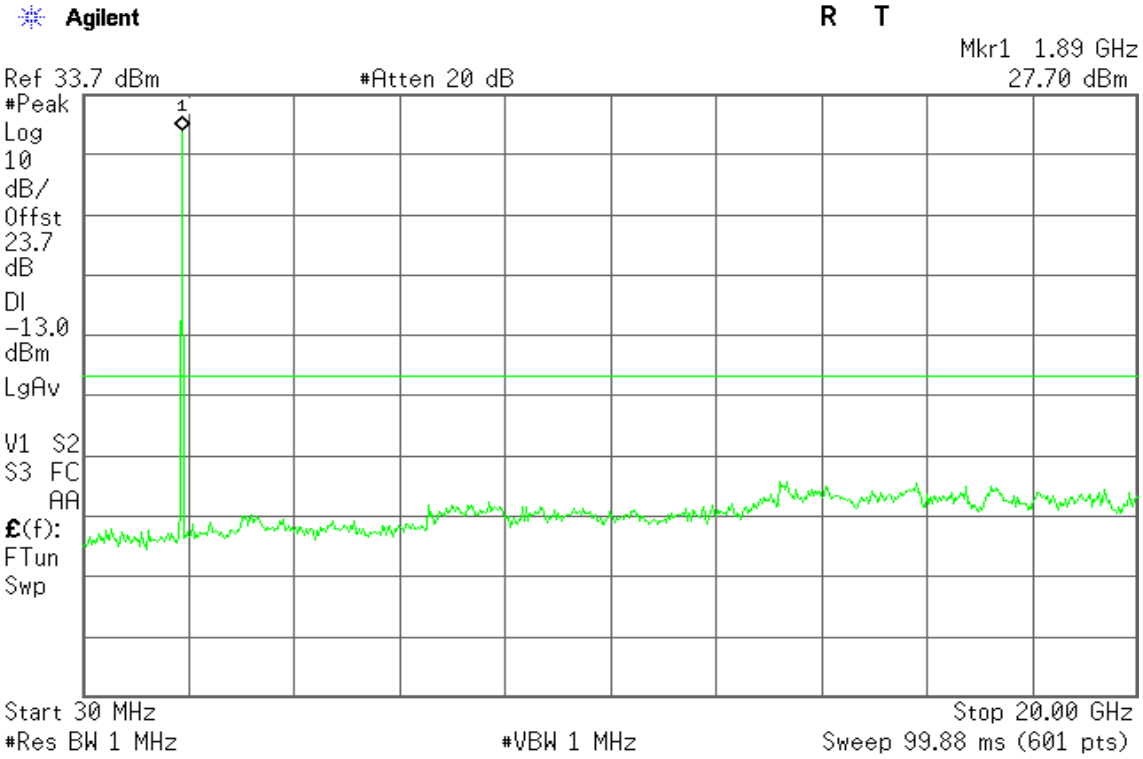
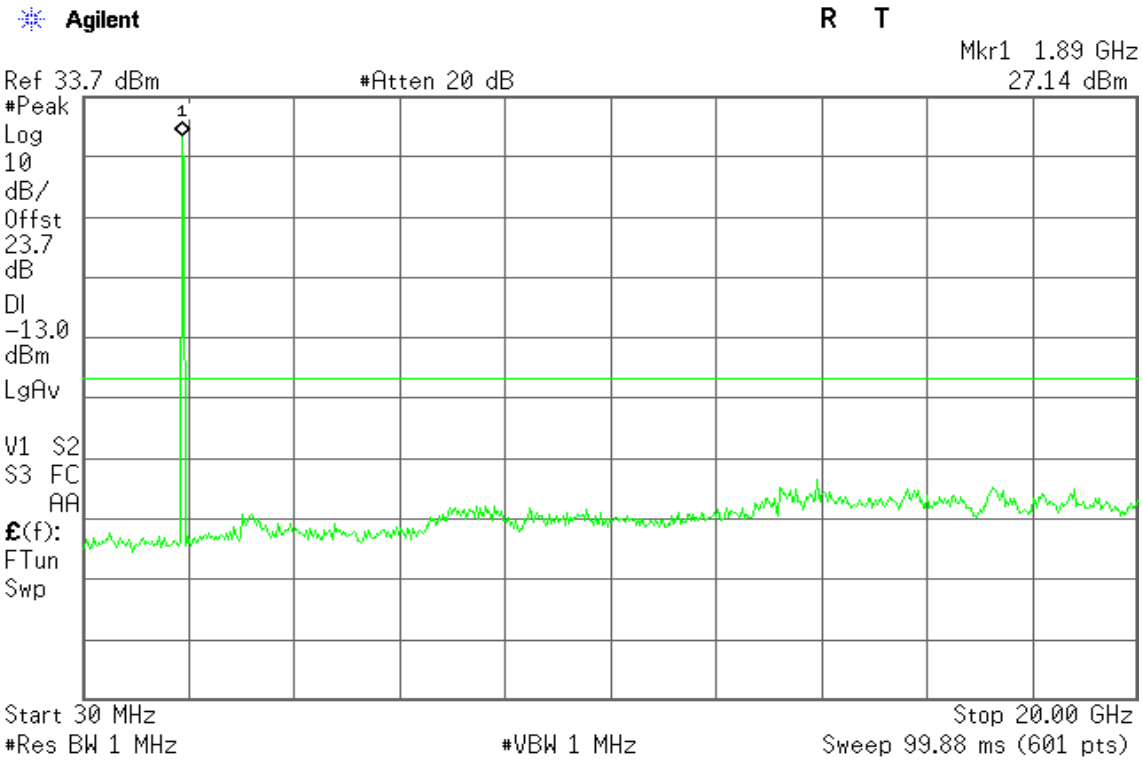


Figure 16-3: Out of Band emission at antenna terminals –EDGE CH High



EDGE 850

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

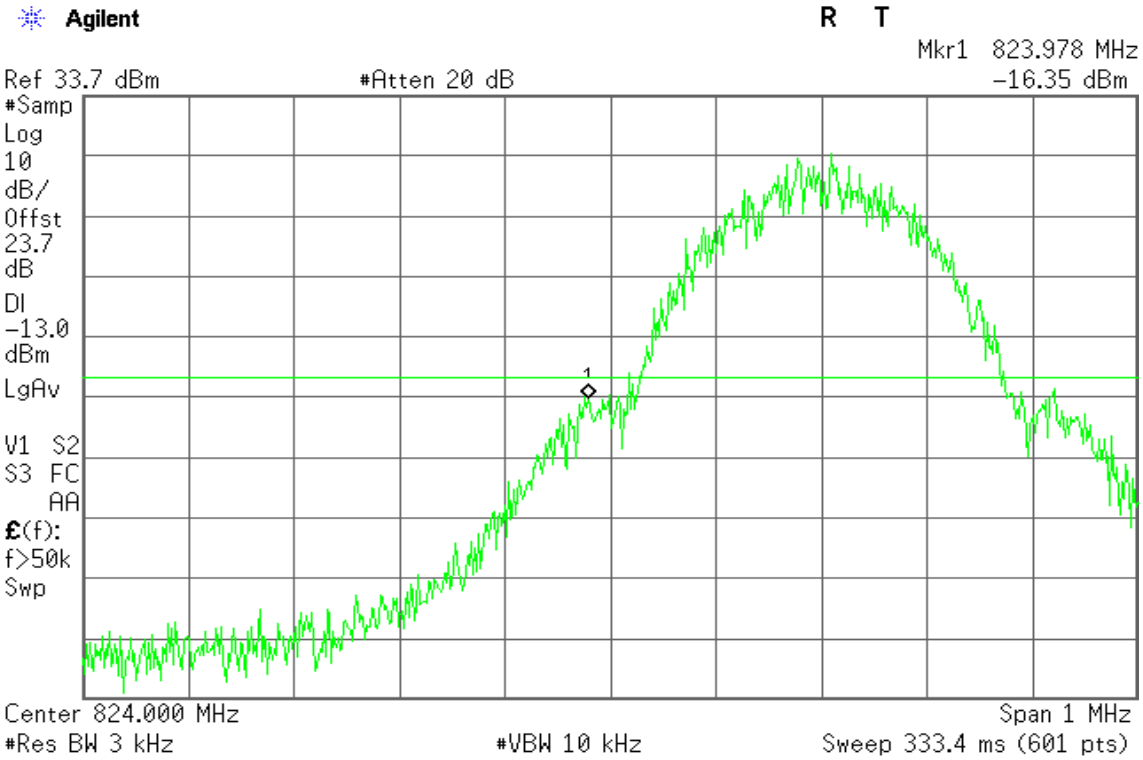
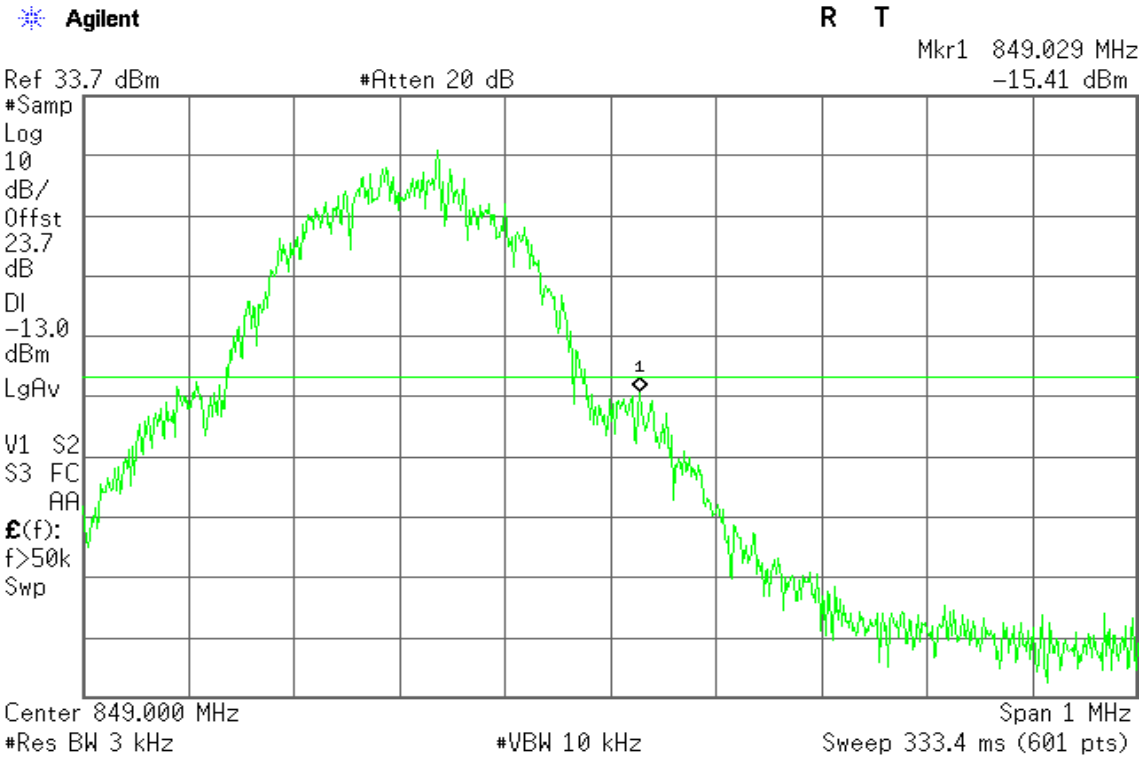


Figure 17-2: Band Edge emissions – EDGE CH High



EDGE 1900

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

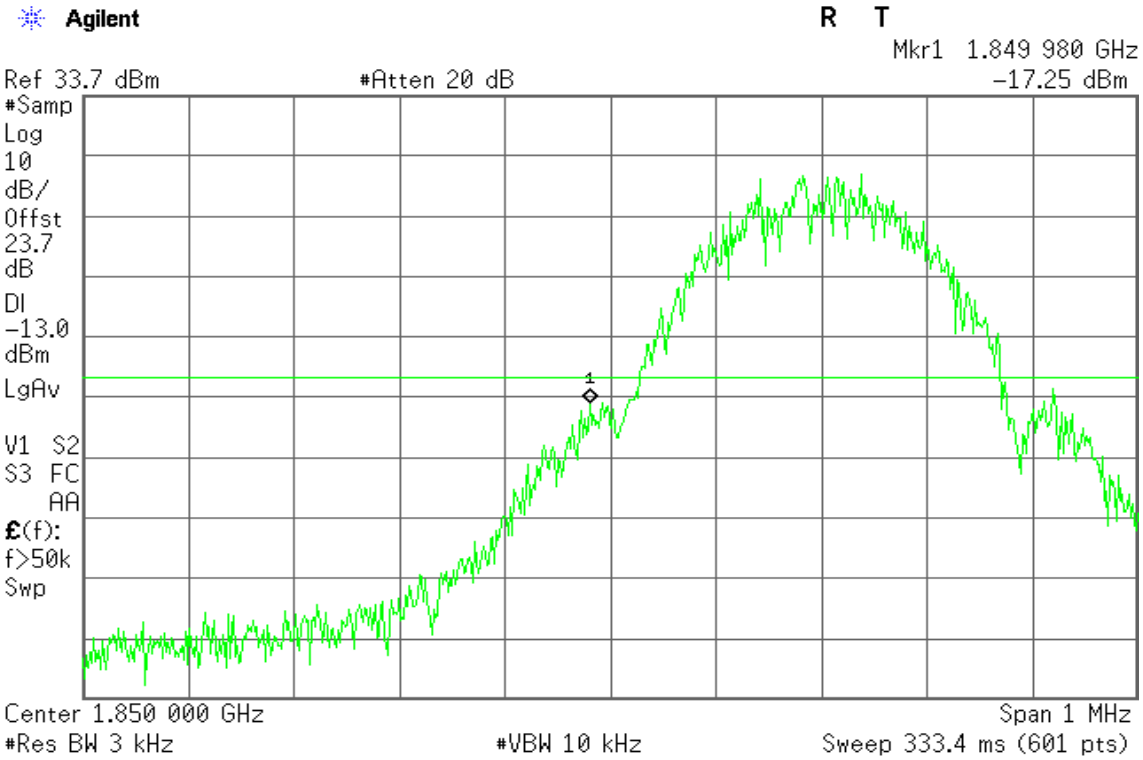
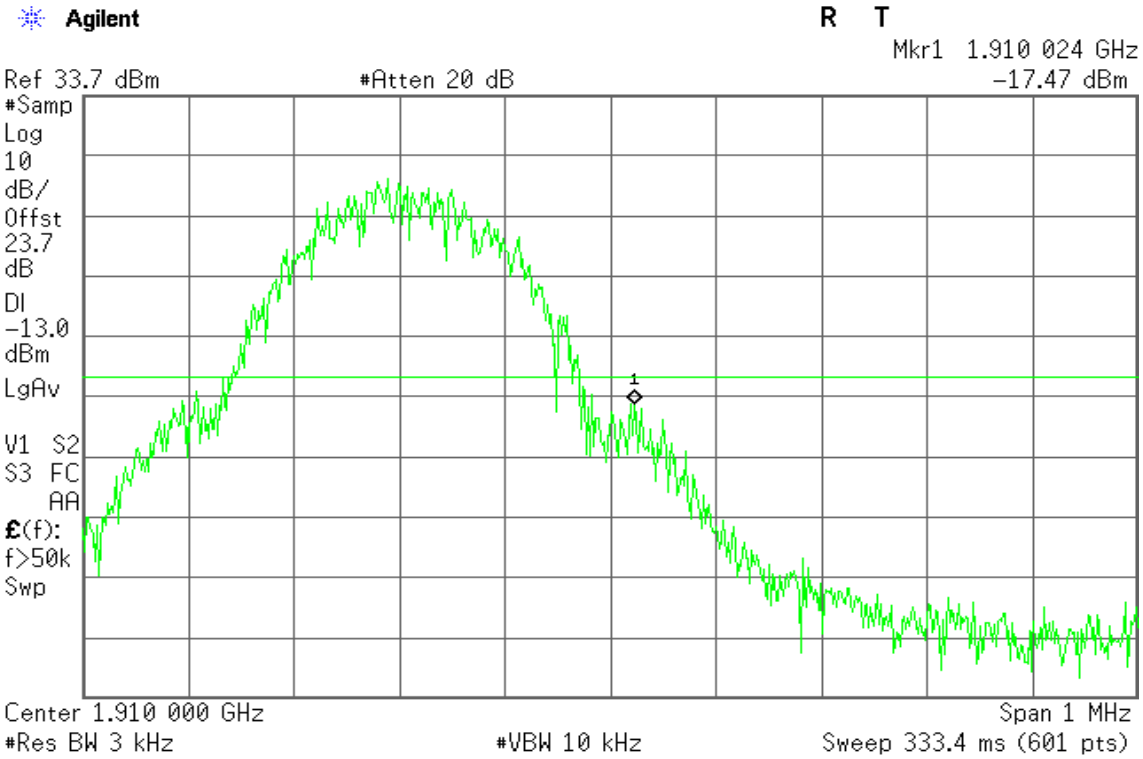


Figure 18-2: Band Edge emissions – EDGE CH High



WCDMA Band II

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

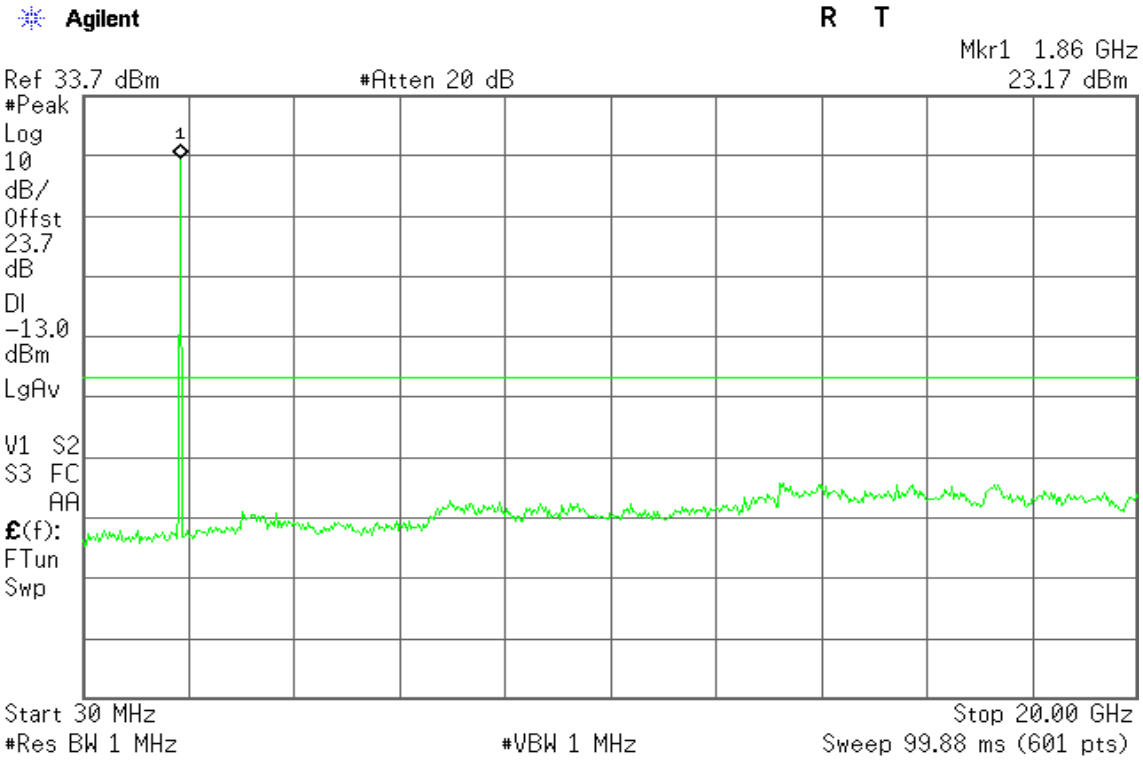


Figure 19-2: Out of Band emission at antenna terminals – WCDMA CH Mid

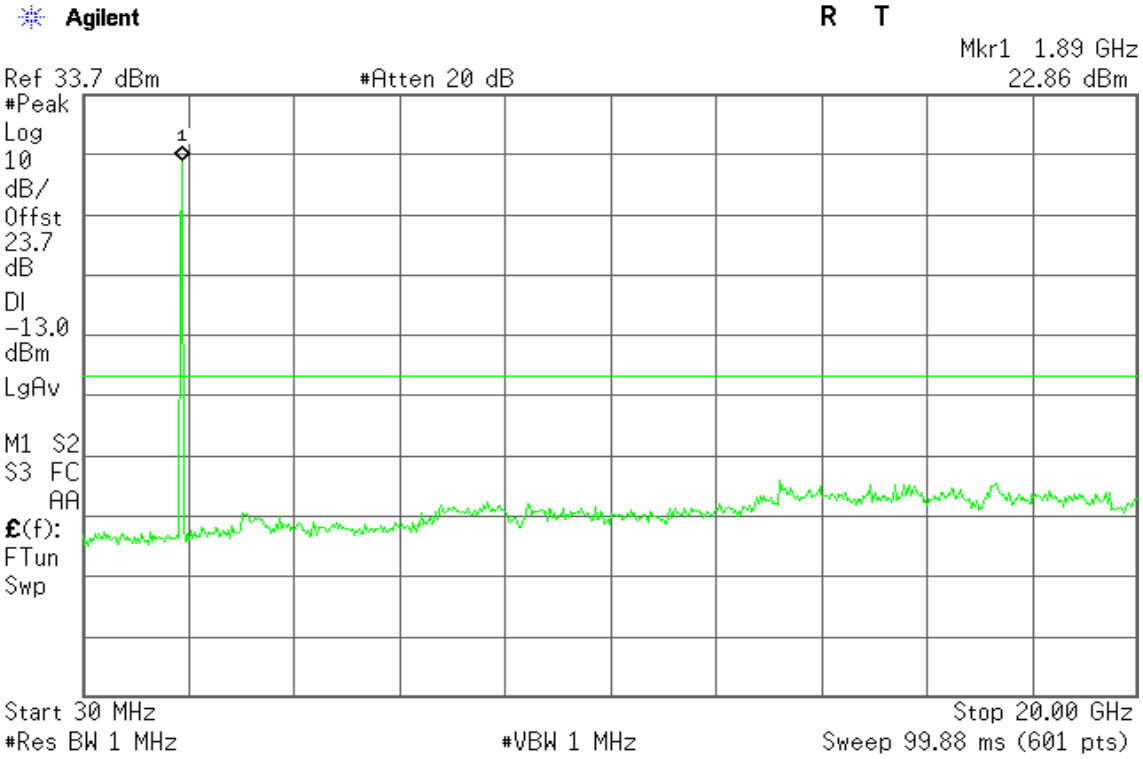
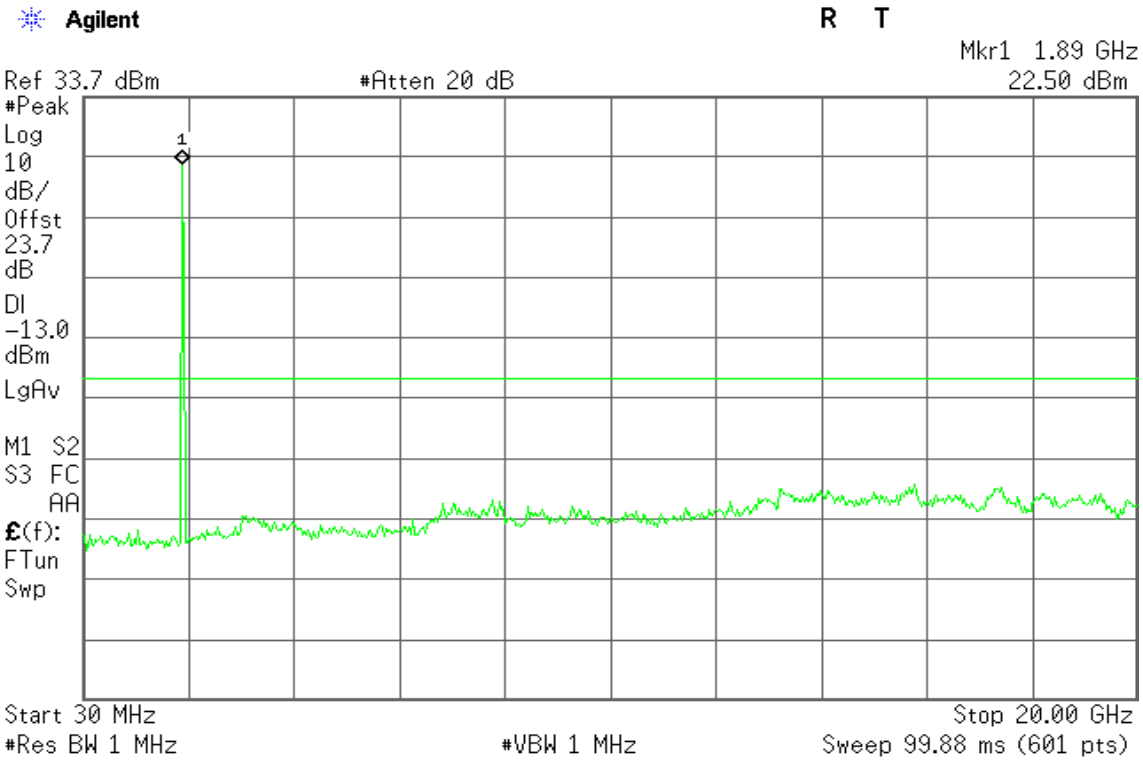


Figure 19-3: Out of Band emission at antenna terminals – WCDMA CH High



WCDMA Band V

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

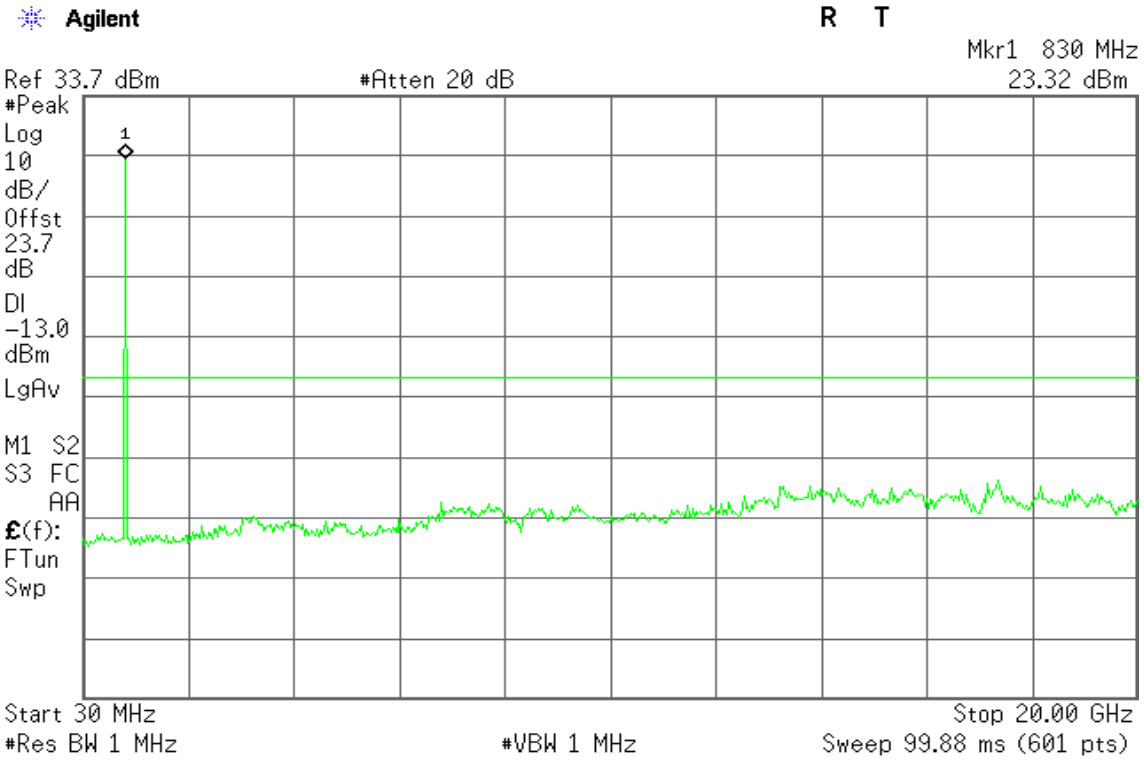


Figure 20-2: Out of Band emission at antenna terminals – WCDMA CH Mid

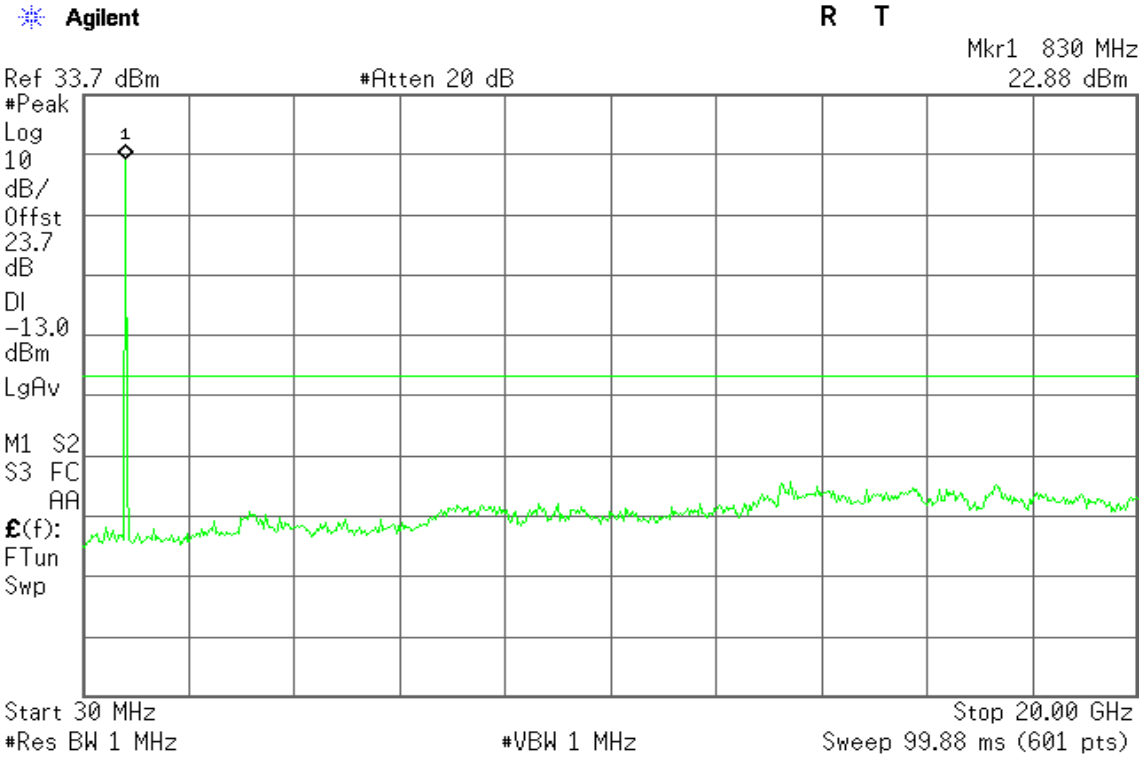
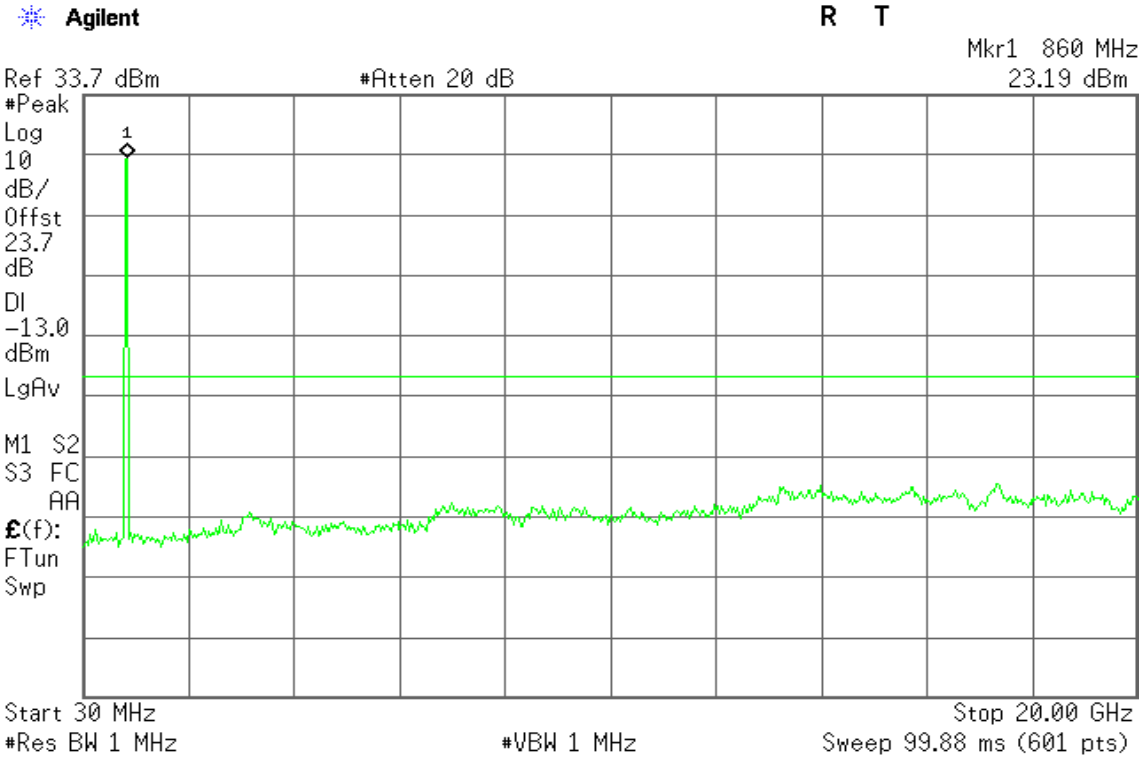


Figure 20-3: Out of Band emission at antenna terminals – WCDMA CH High



WCDMA Band II

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

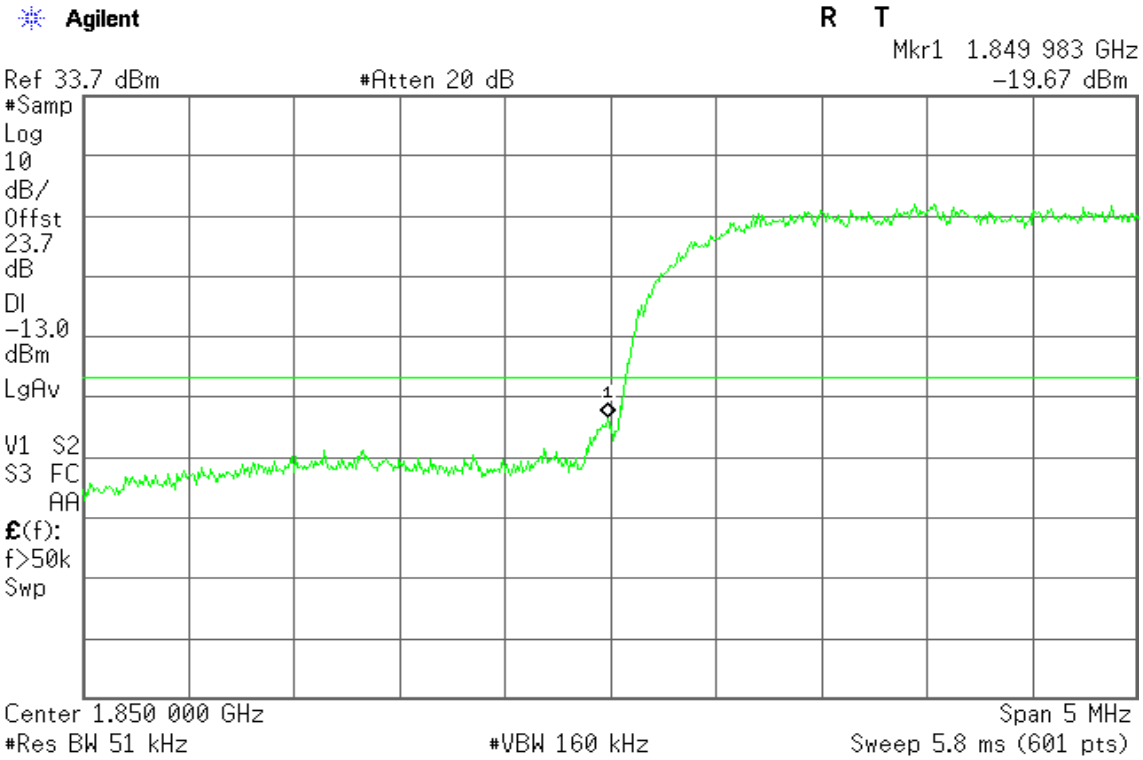
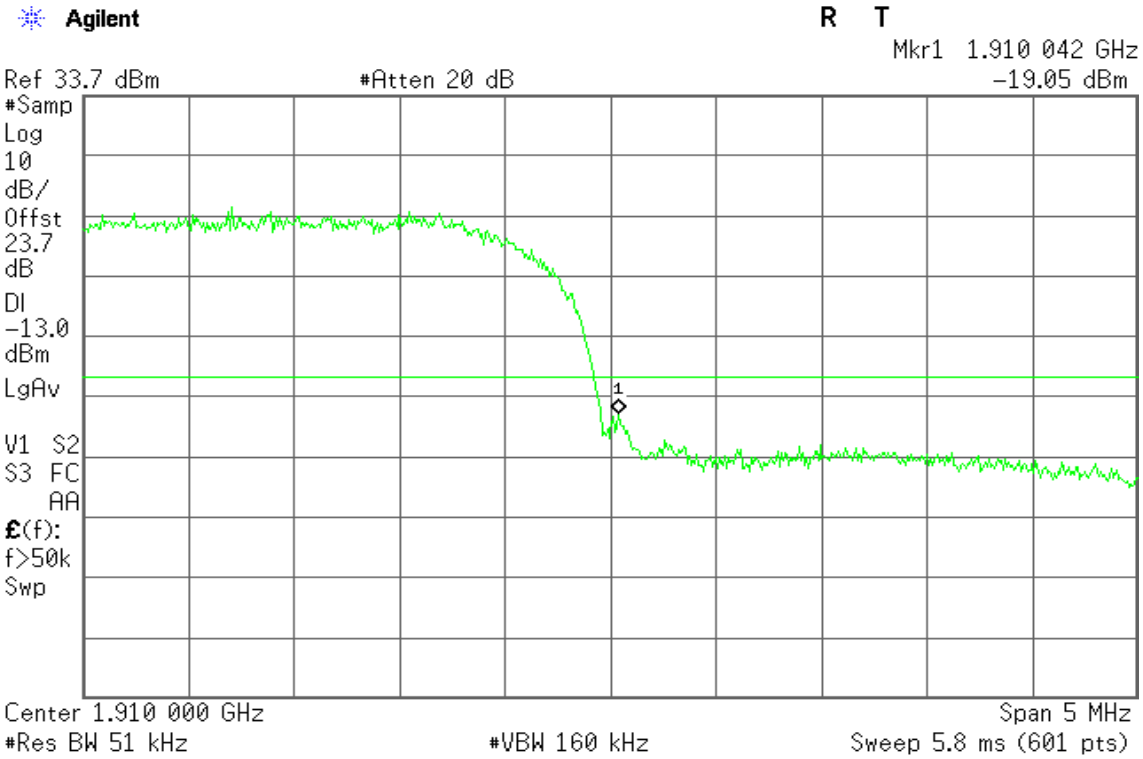


Figure 21-2: Band Edge emissions –WCDMA CH High



WCDMA Band V

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

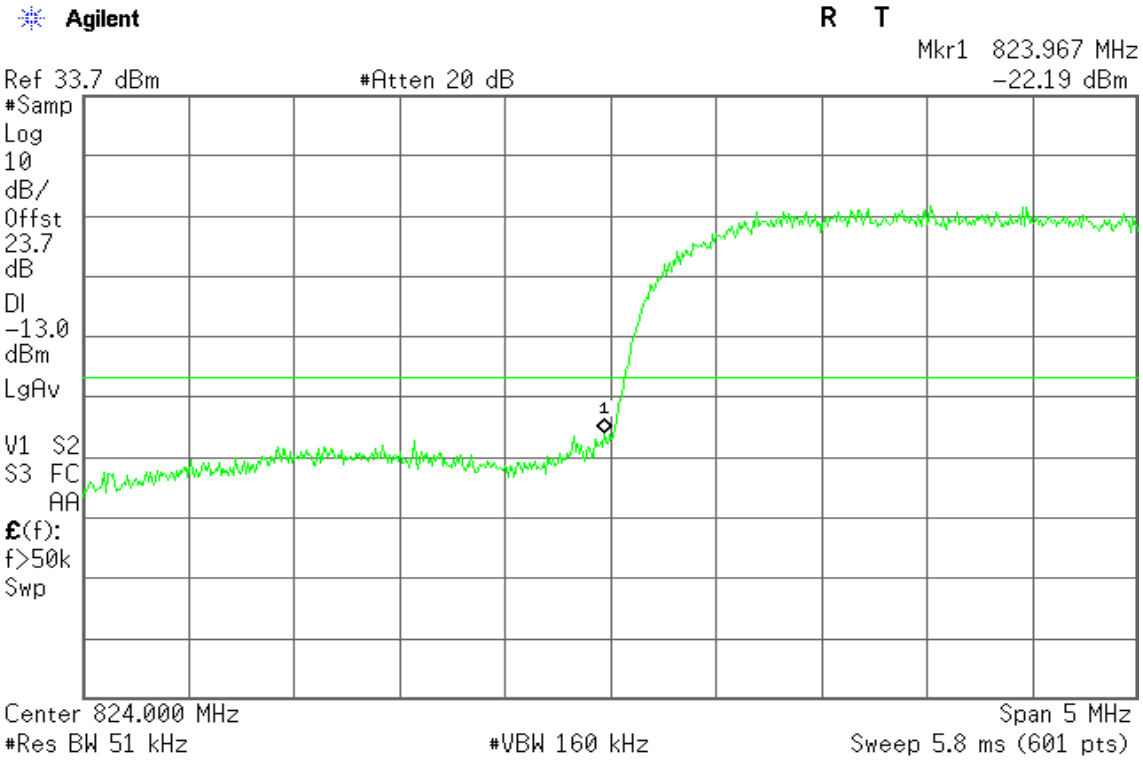
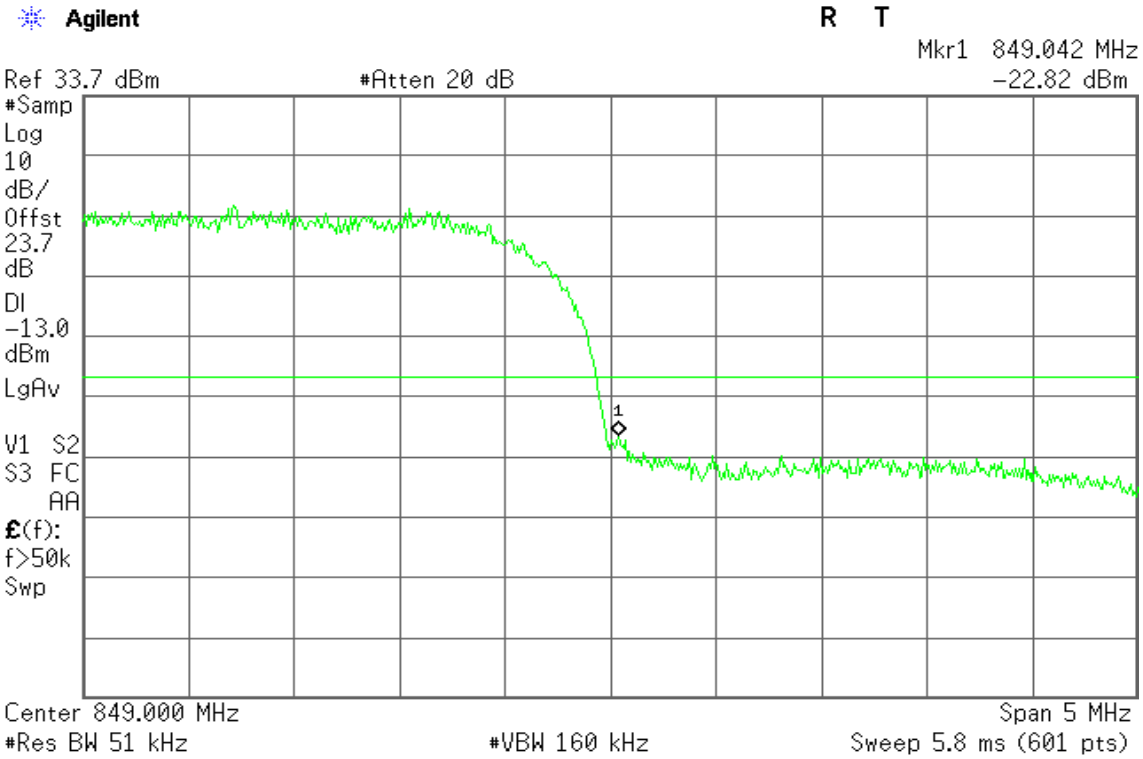


Figure 22-2: Band Edge emissions –WCDMA CH High



WCDMA / HSDPA Band II

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

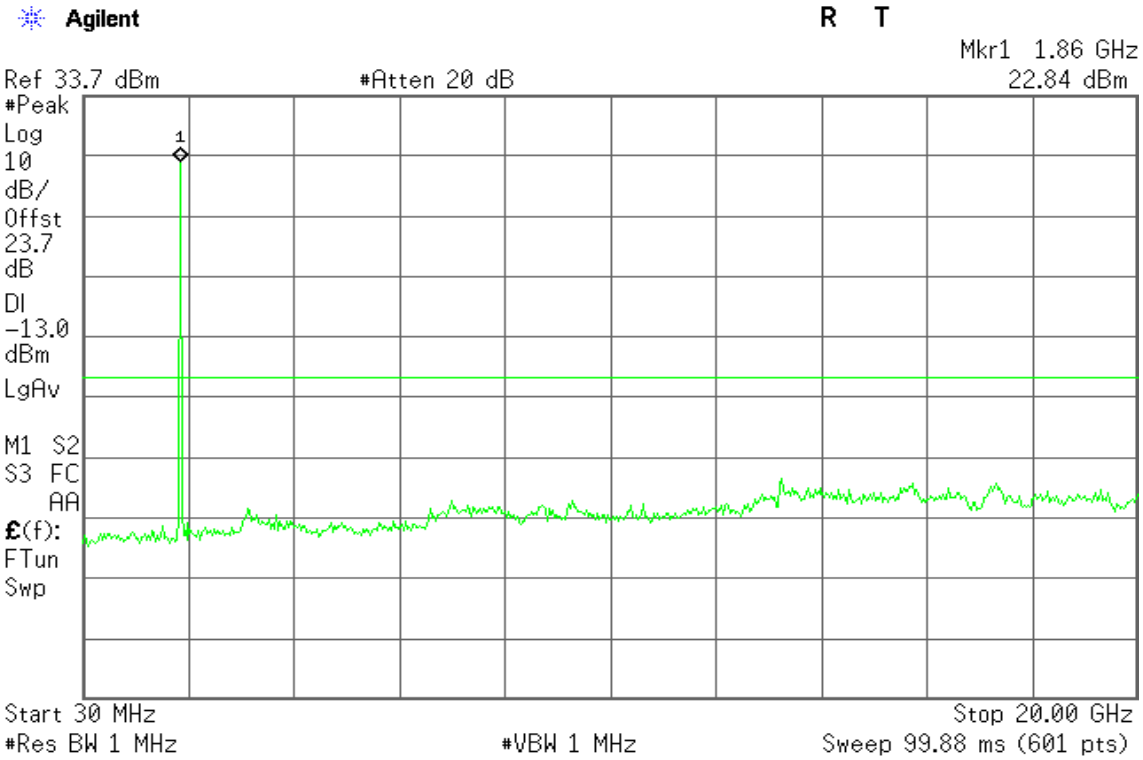


Figure 23-2: Out of Band emission at antenna terminals – HSDPA CH Mid

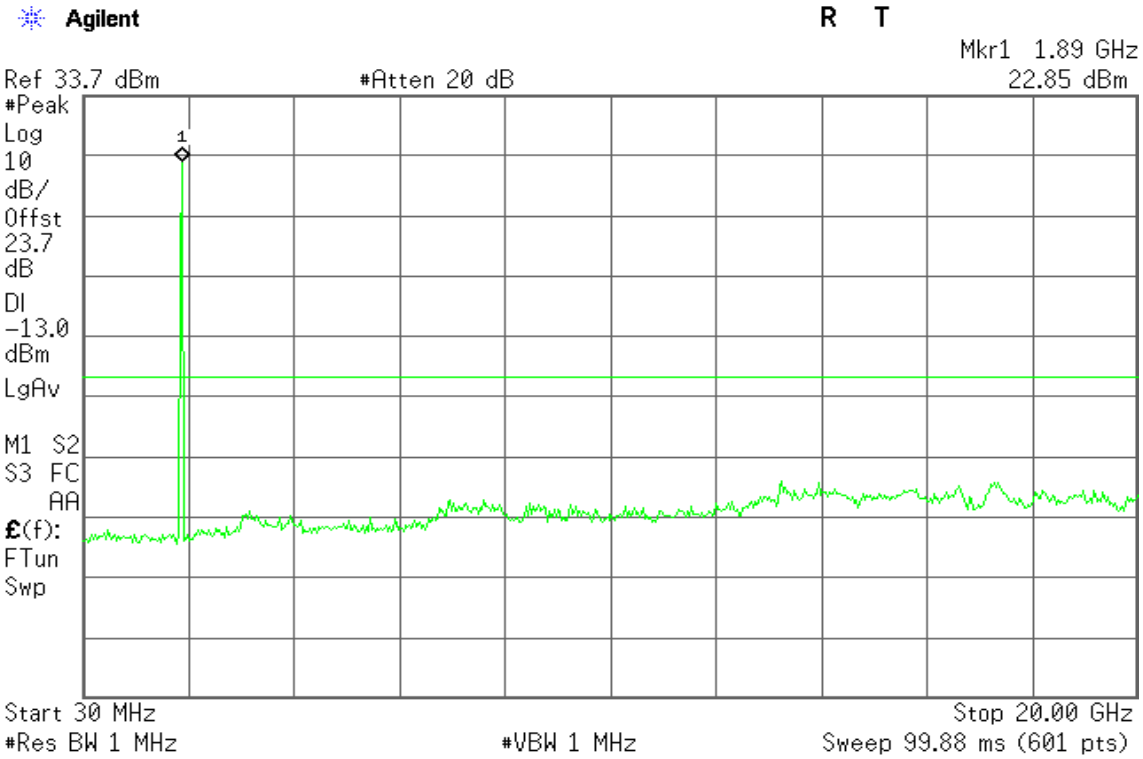
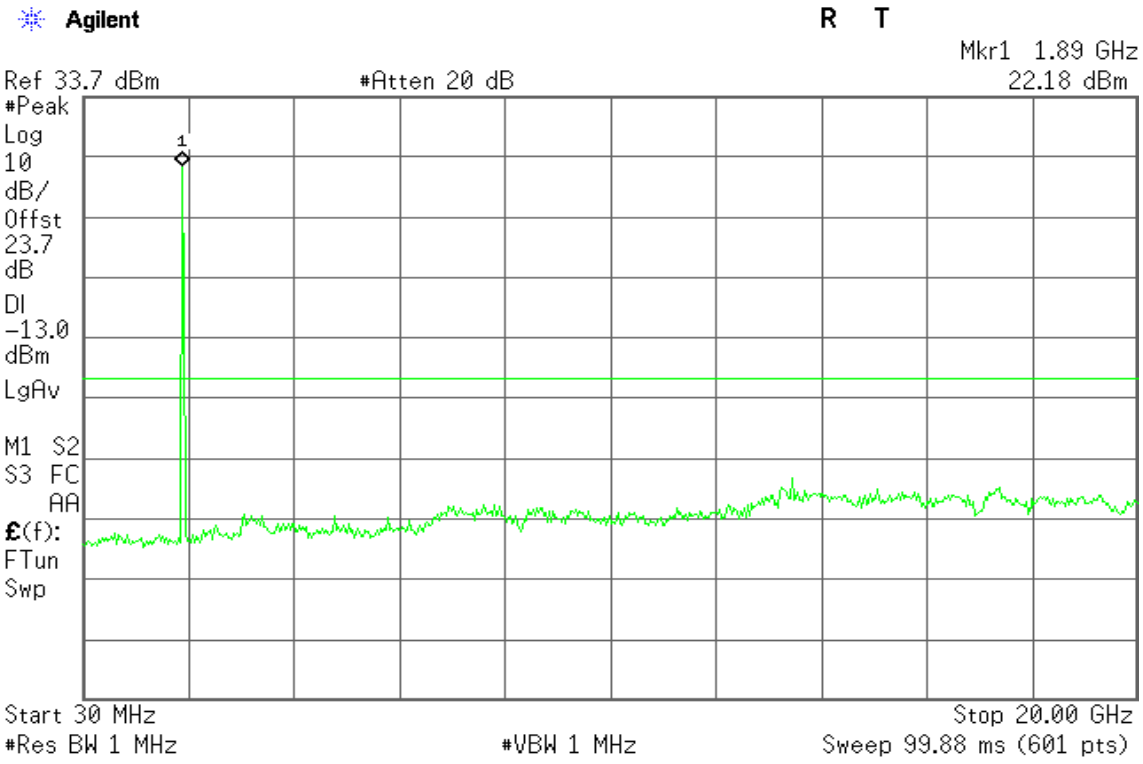


Figure 23-3: Out of Band emission at antenna terminals – HSDPA CH High



WCDMA / HSDPA Band V

Figure 21-1: Out of Band emission at antenna terminals – HSDPA CH Low

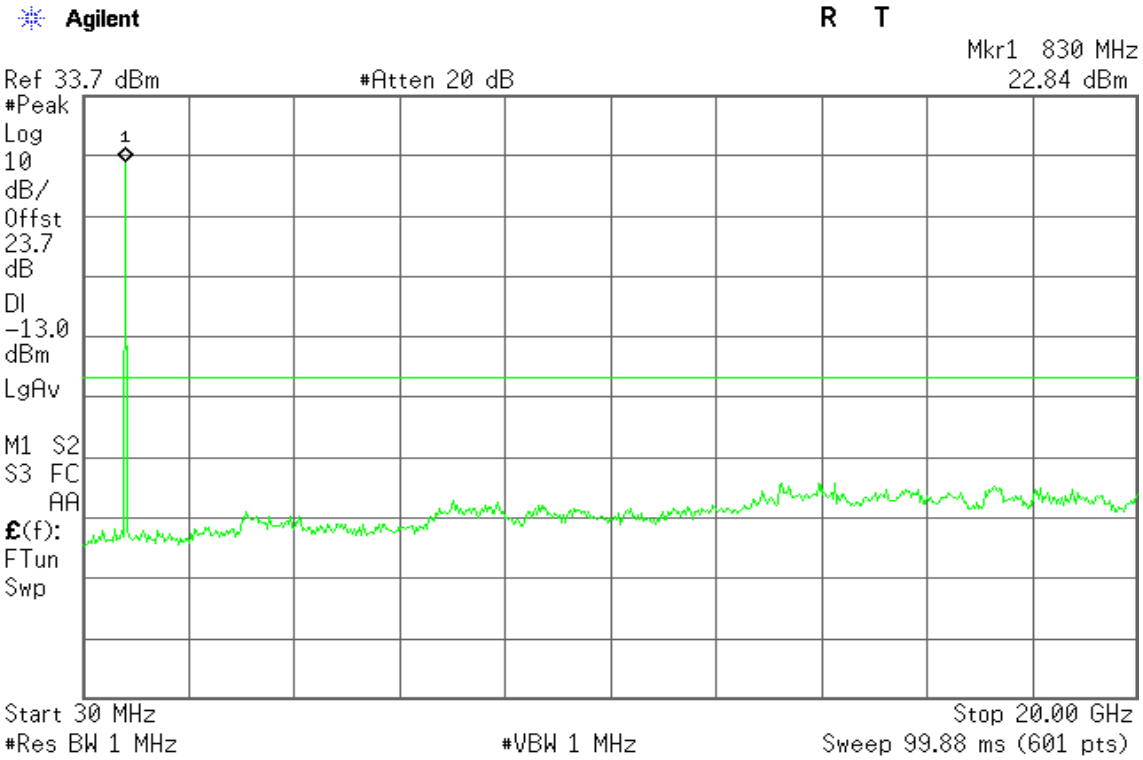


Figure 24-2: Out of Band emission at antenna terminals – HSDPA CH Mid

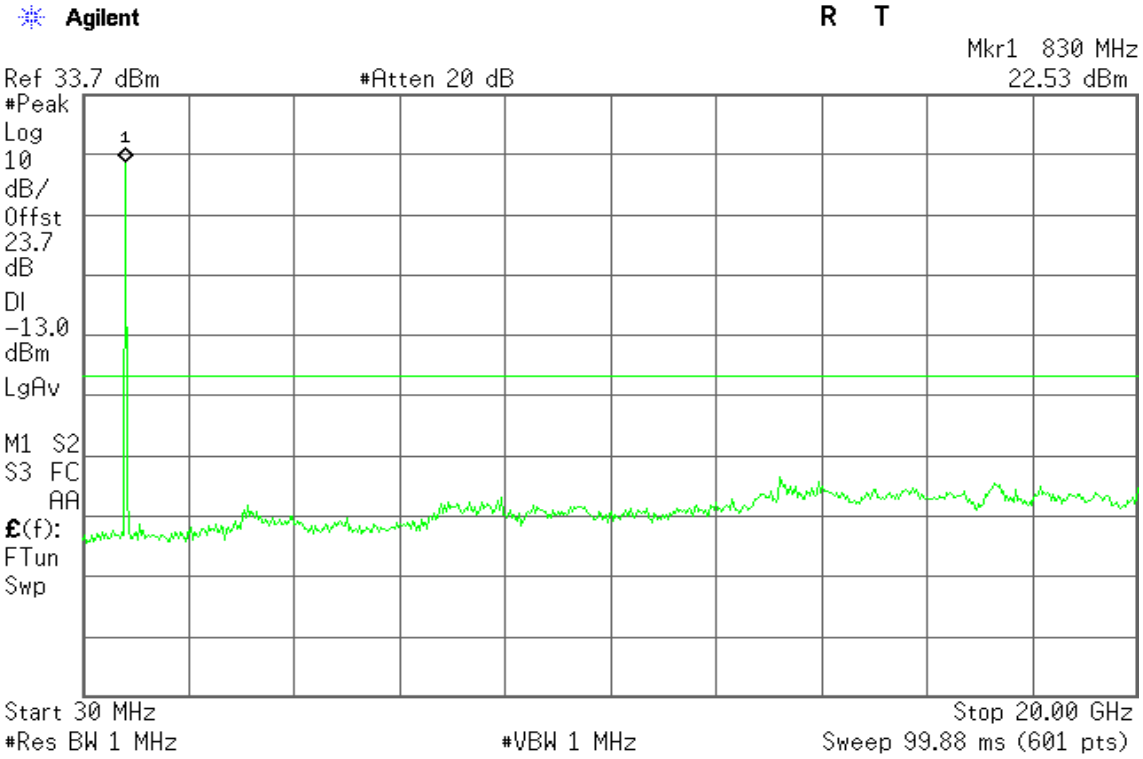
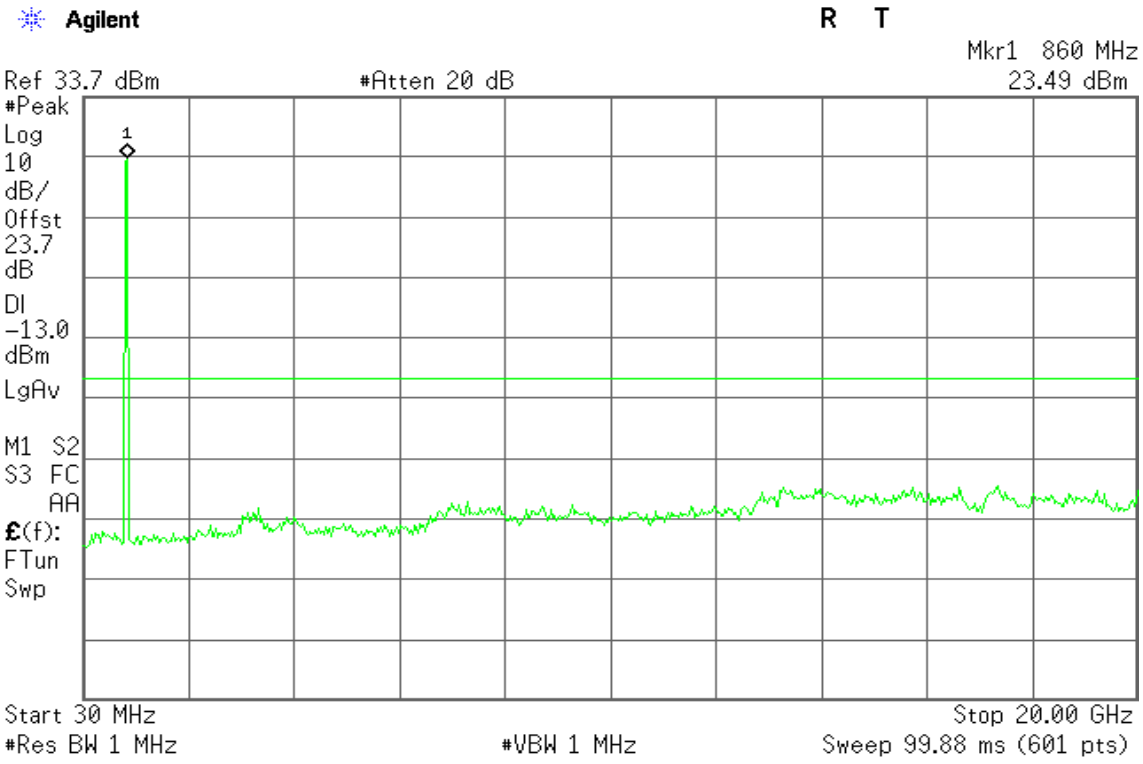


Figure 24-3: Out of Band emission at antenna terminals – HSDPA CH High



WCDMA / HSDPA Band II

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

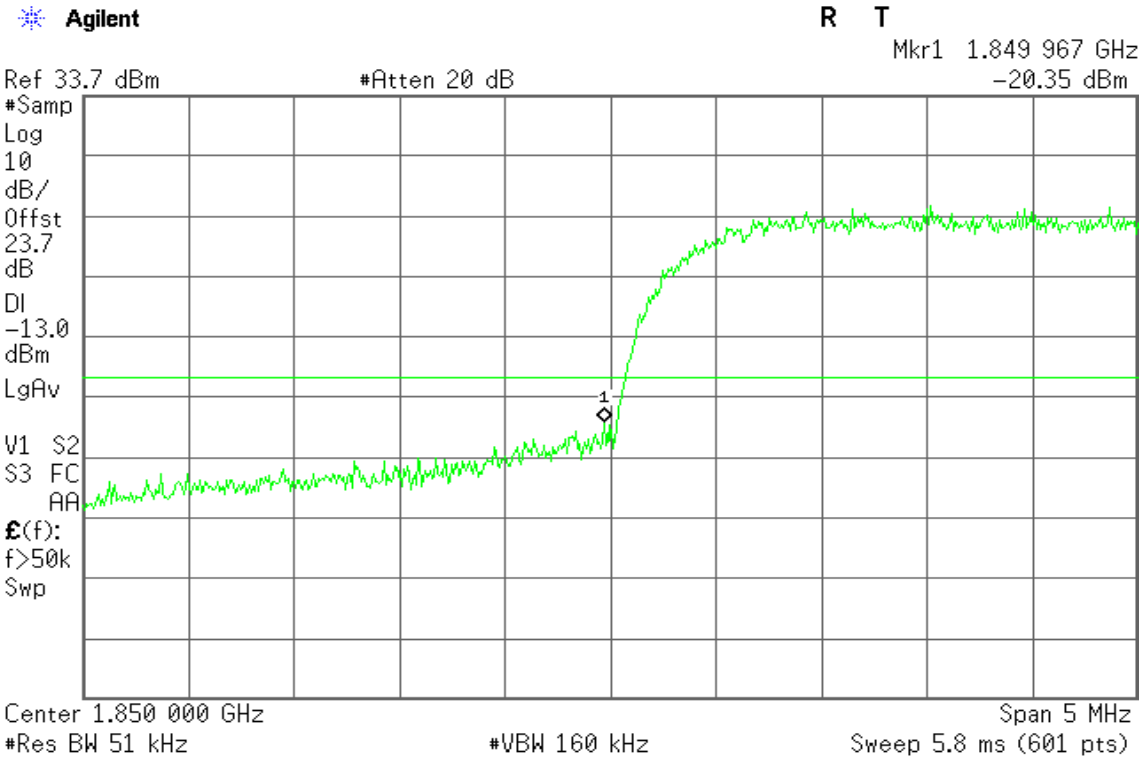
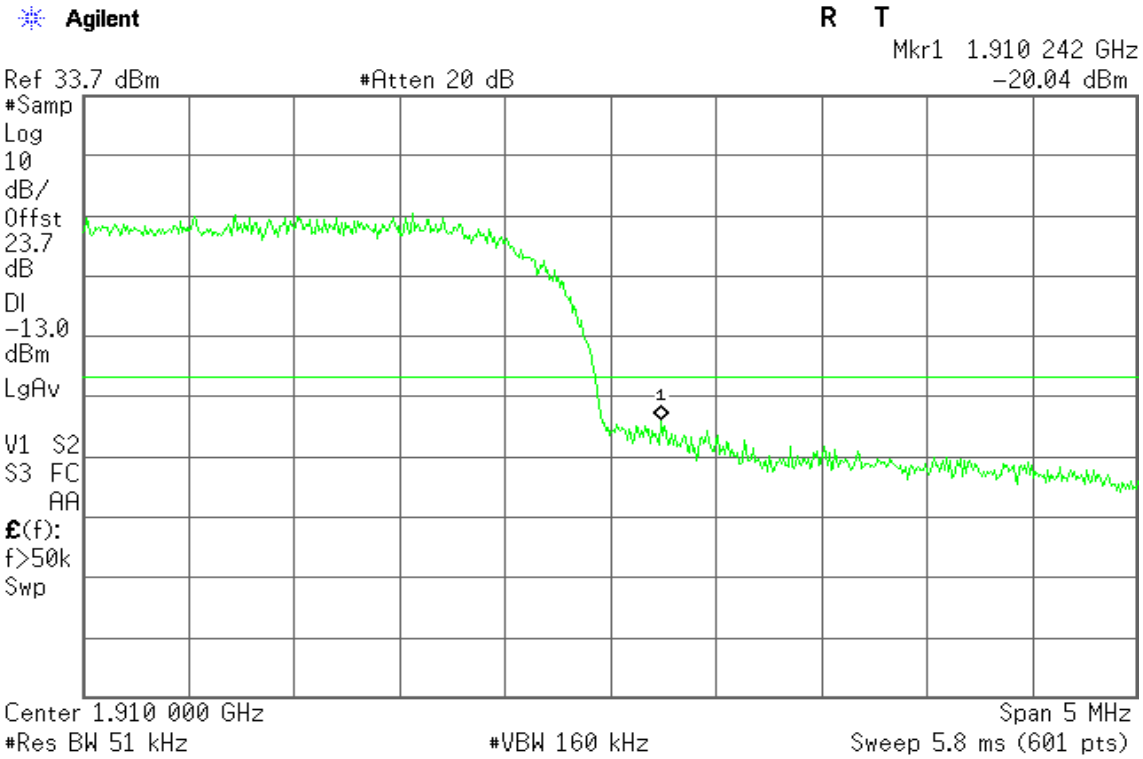


Figure 25-2: Band Edge emissions – HSDPA CH High



WCDMA / HSDPA Band V

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

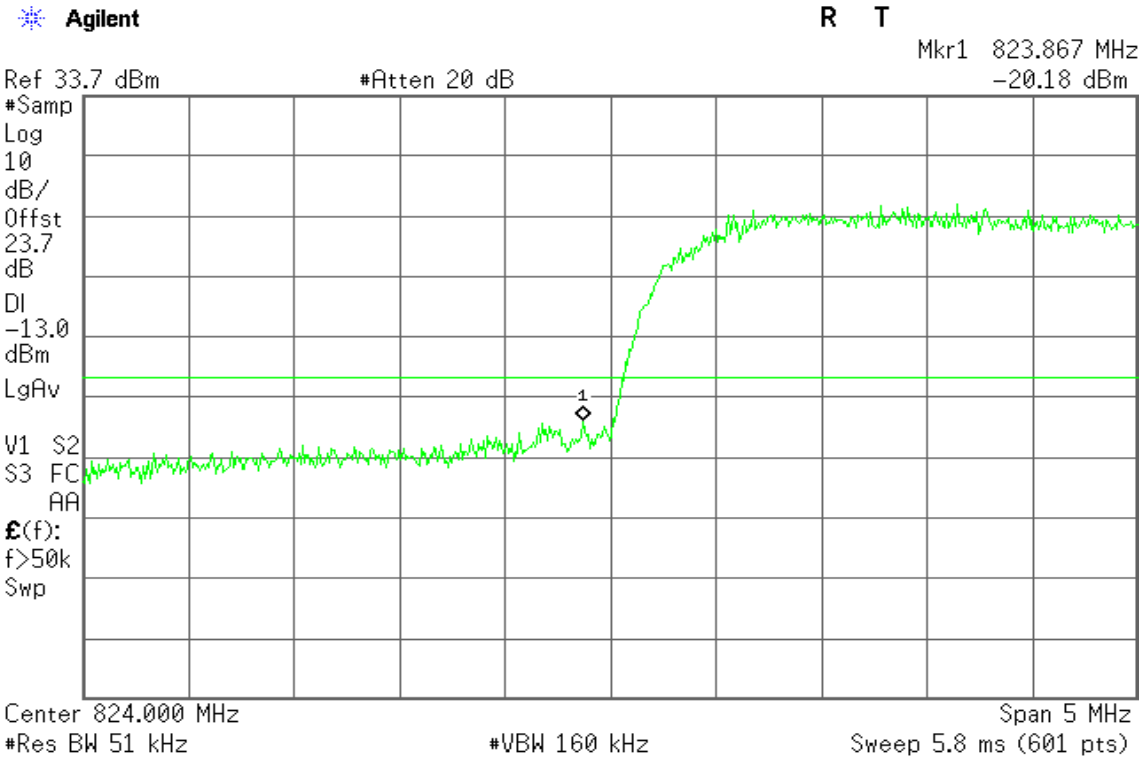
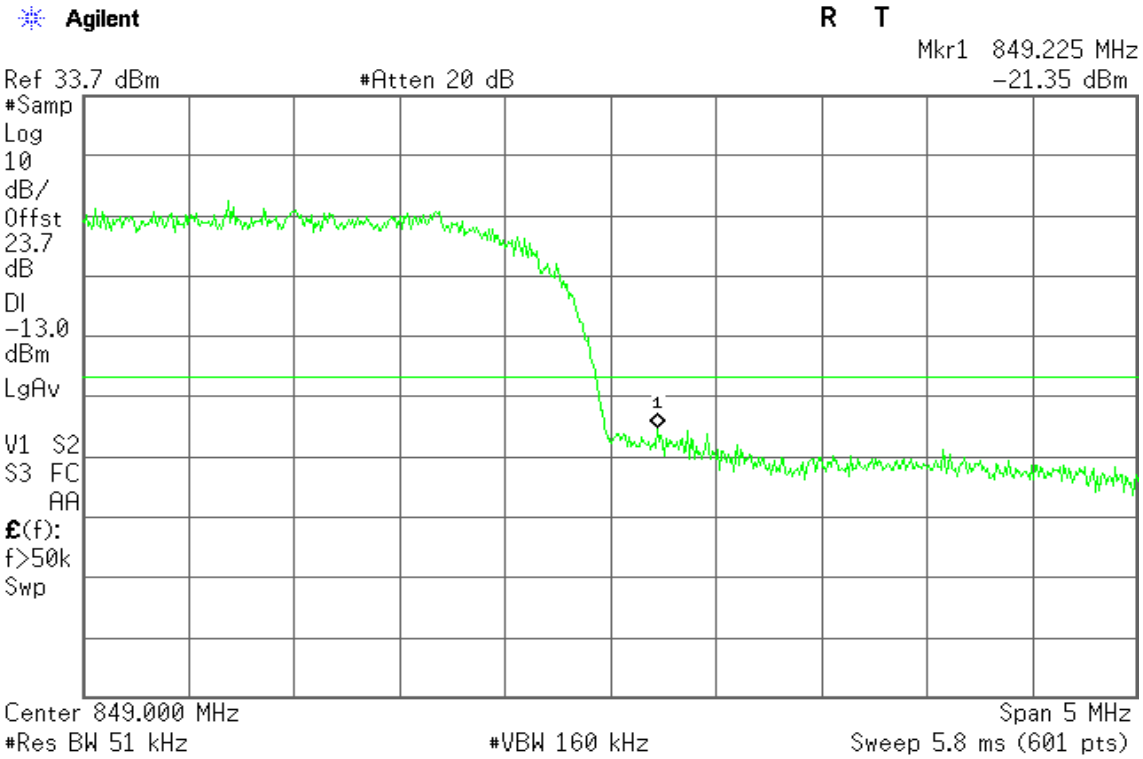


Figure 26-2: Band Edge emissions – HSDPA CH High



WCDMA / HSUPA Band II

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

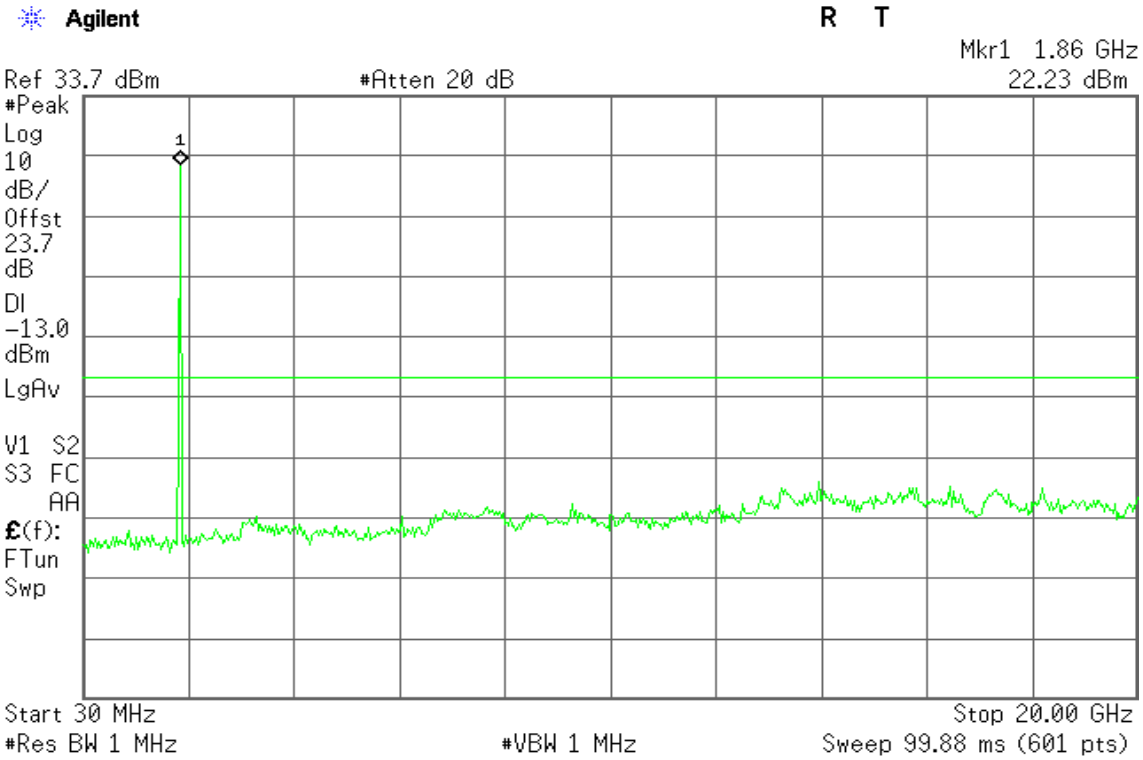


Figure 27-2: Out of Band emission at antenna terminals – HSUPA CH Mid

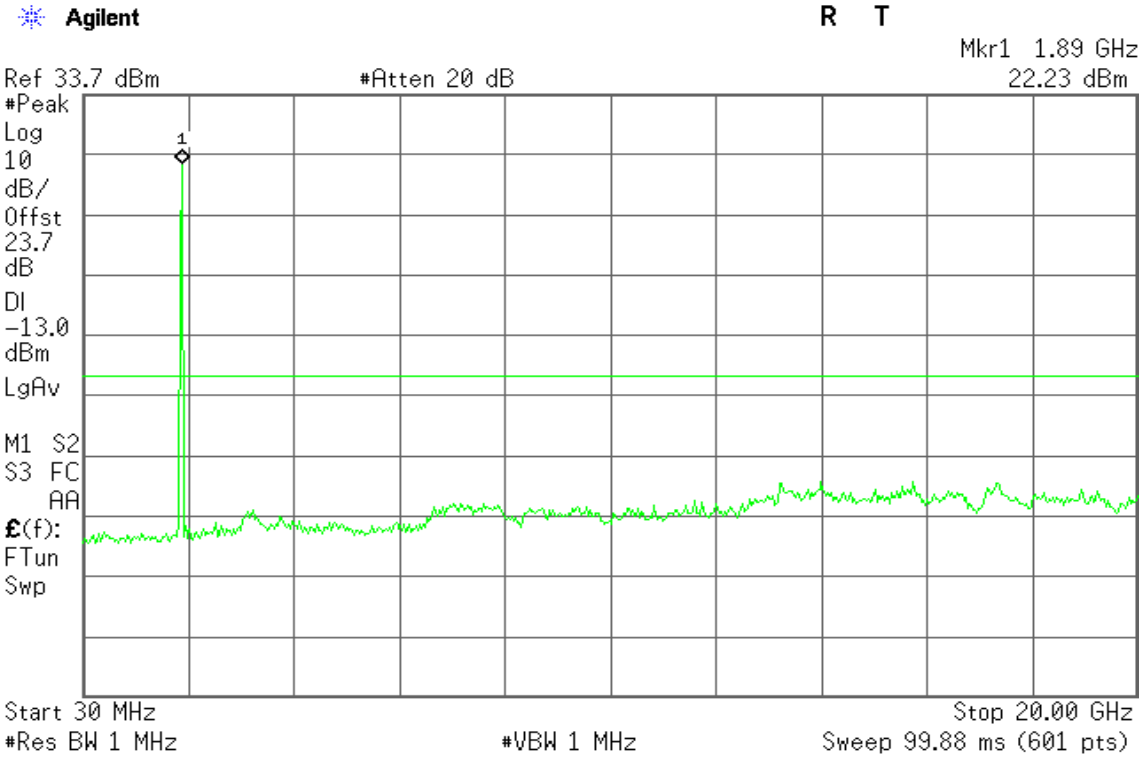
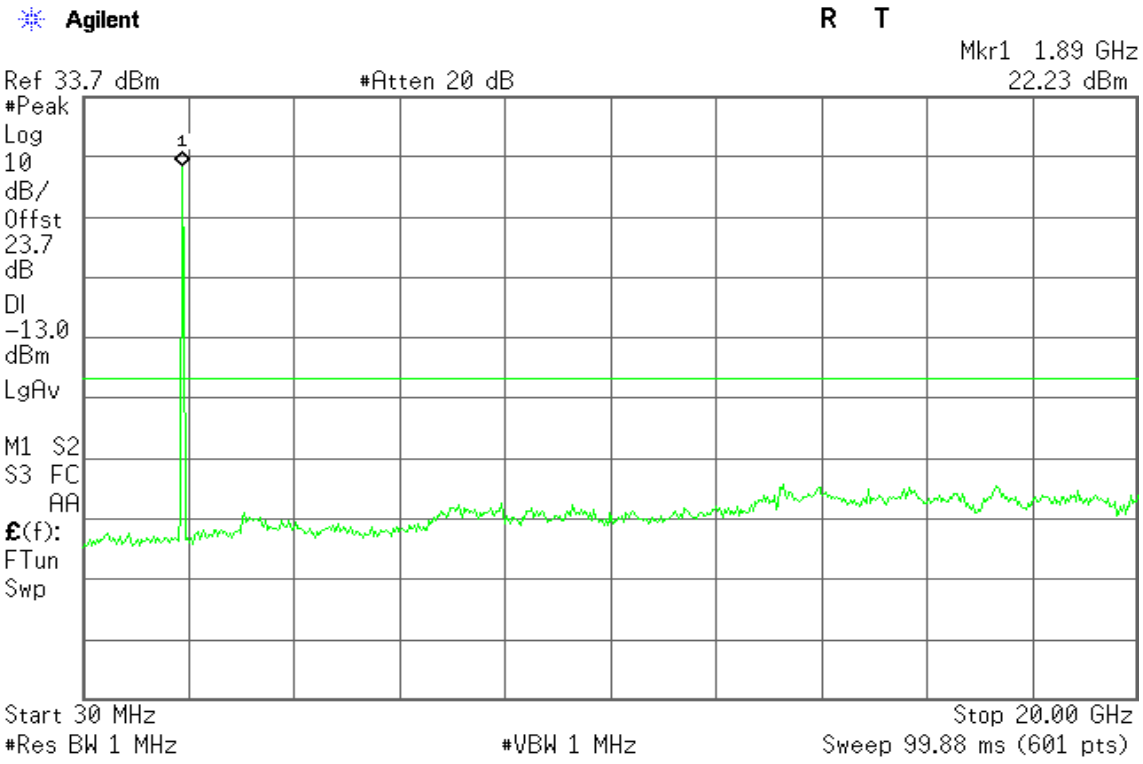


Figure 27-3: Out of Band emission at antenna terminals – HSUPA CH High



HSUPA / WCDMA Band V

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

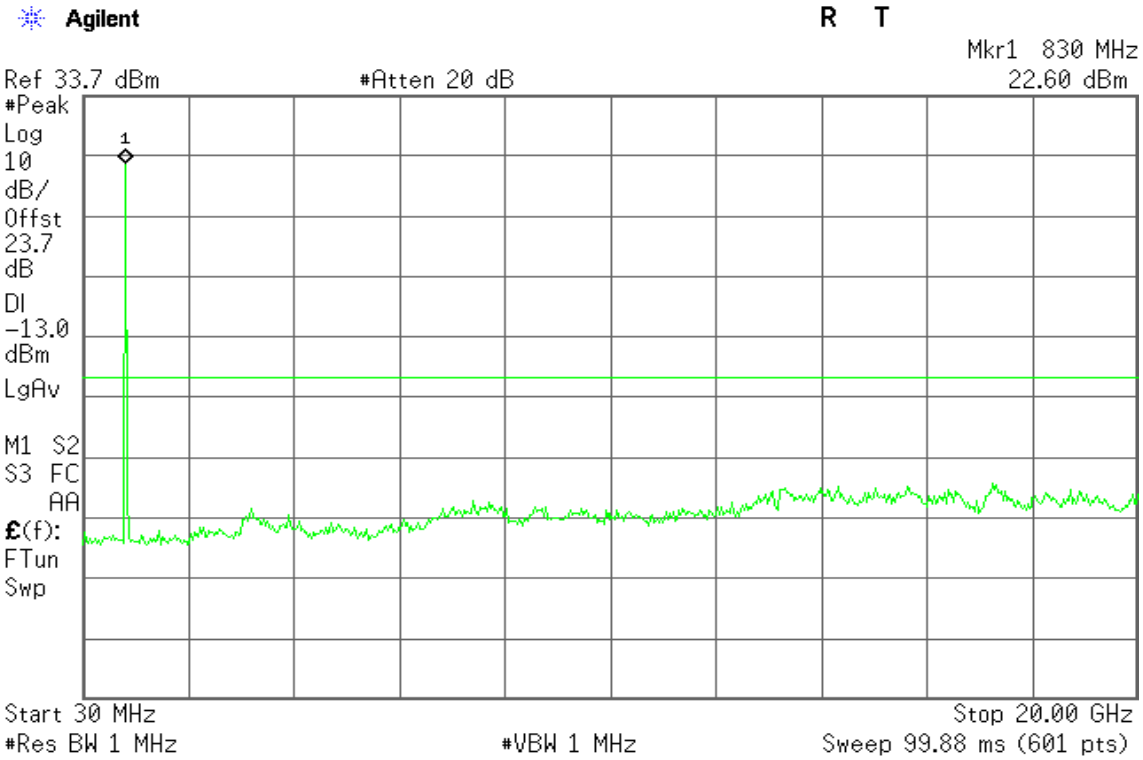


Figure 28-2: Out of Band emission at antenna terminals – HSUPA CH Mid

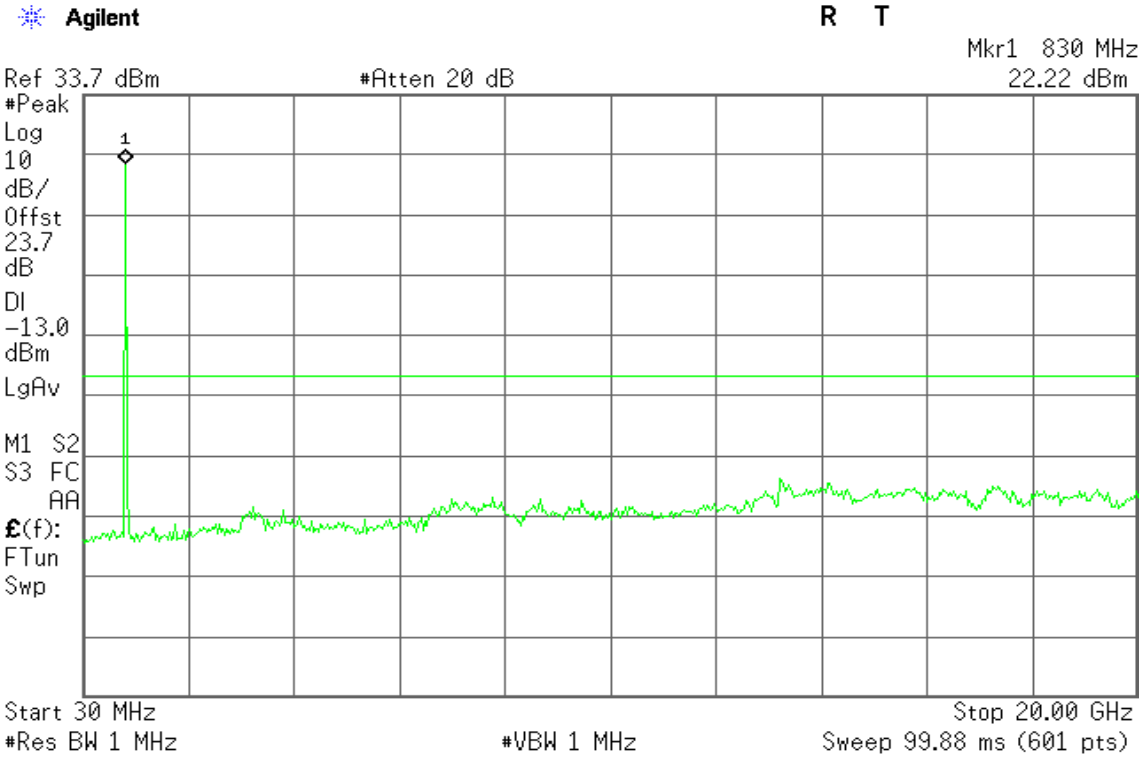
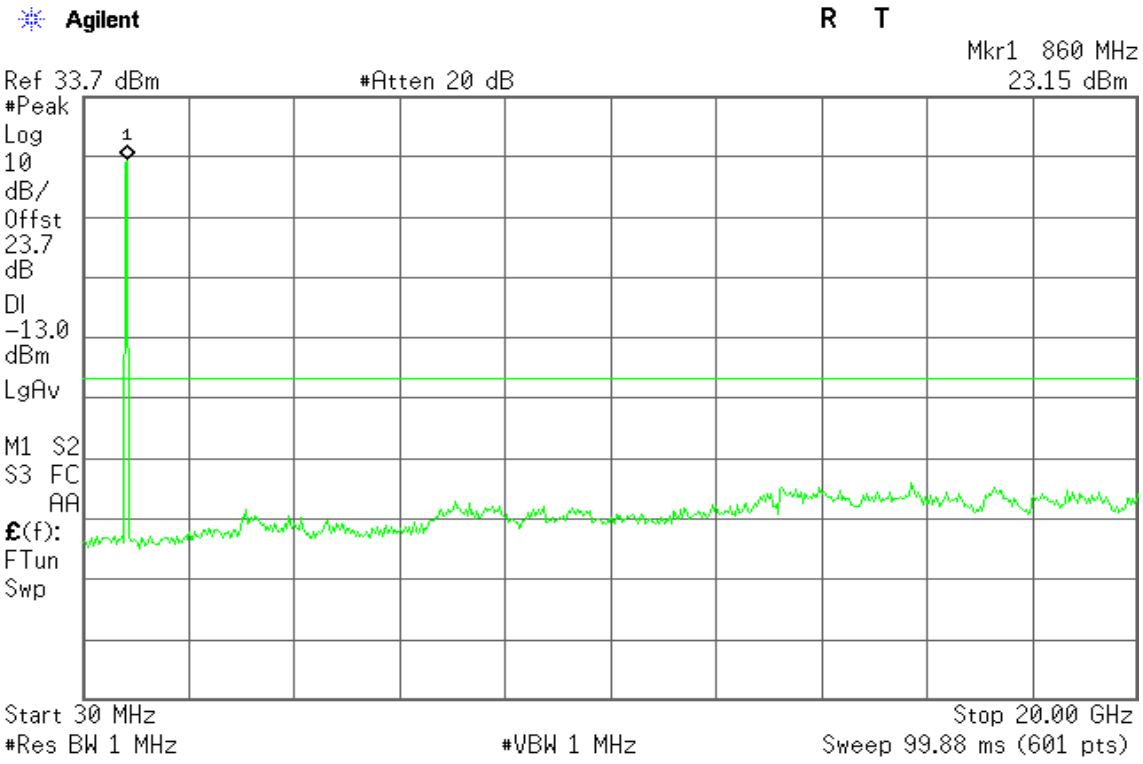


Figure 28-3: Out of Band emission at antenna terminals – HSUPA CH High



WCDMA / HSUPA Band II

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

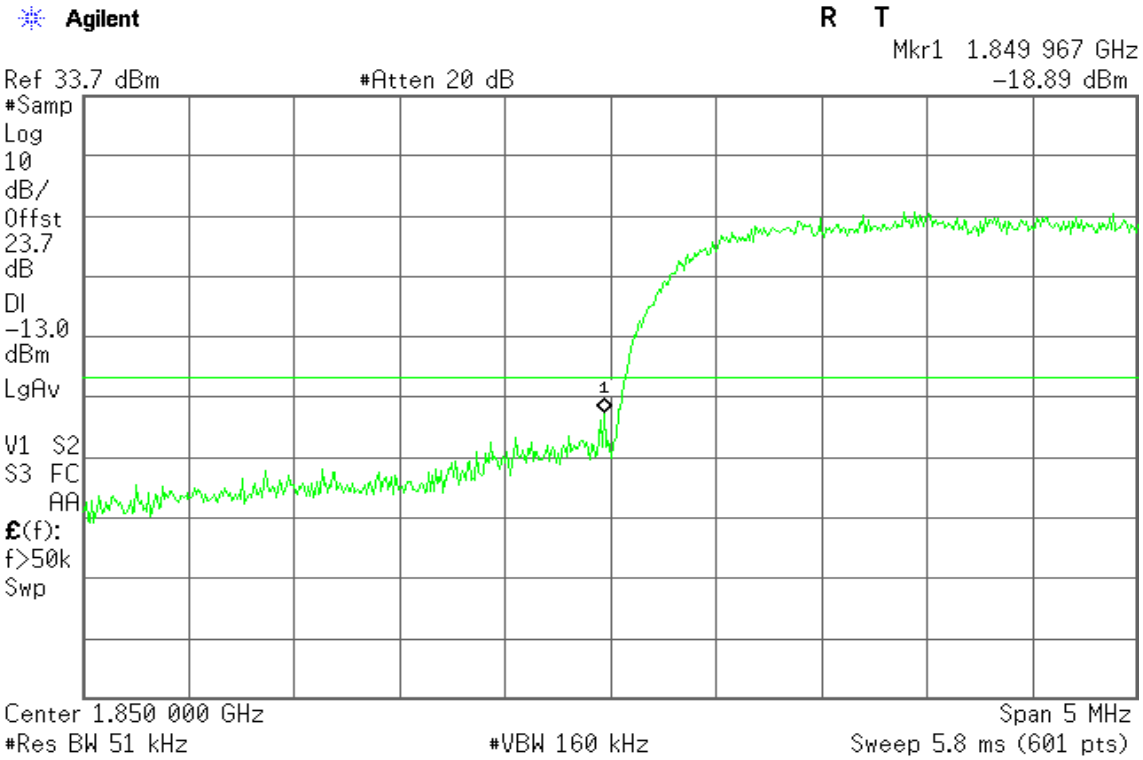
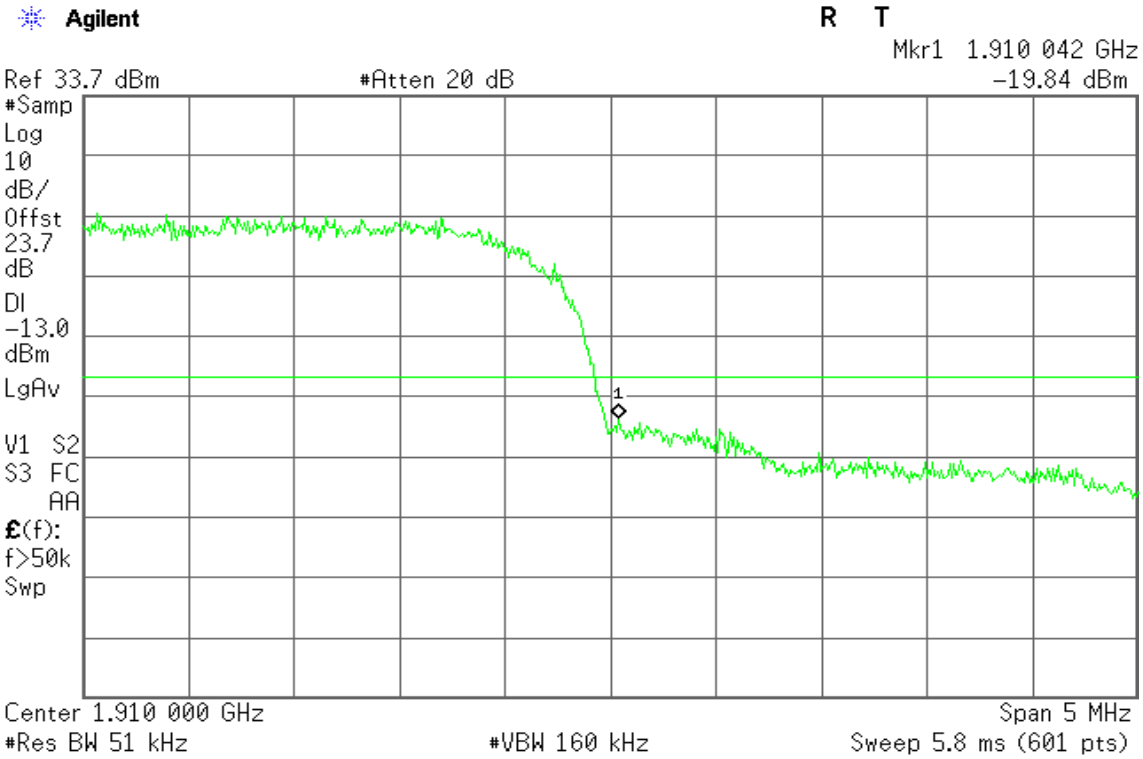


Figure 29-2: Band Edge emissions – HSUPA CH High



WCDMA / HSUPA Band V

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

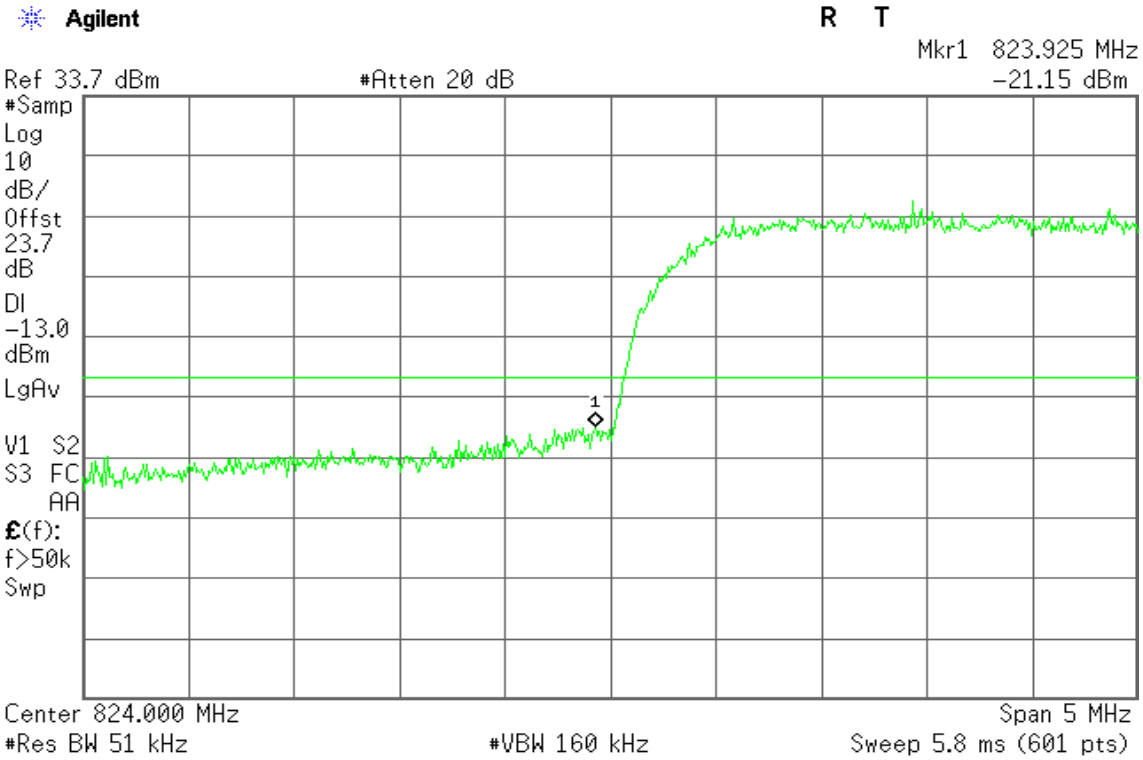
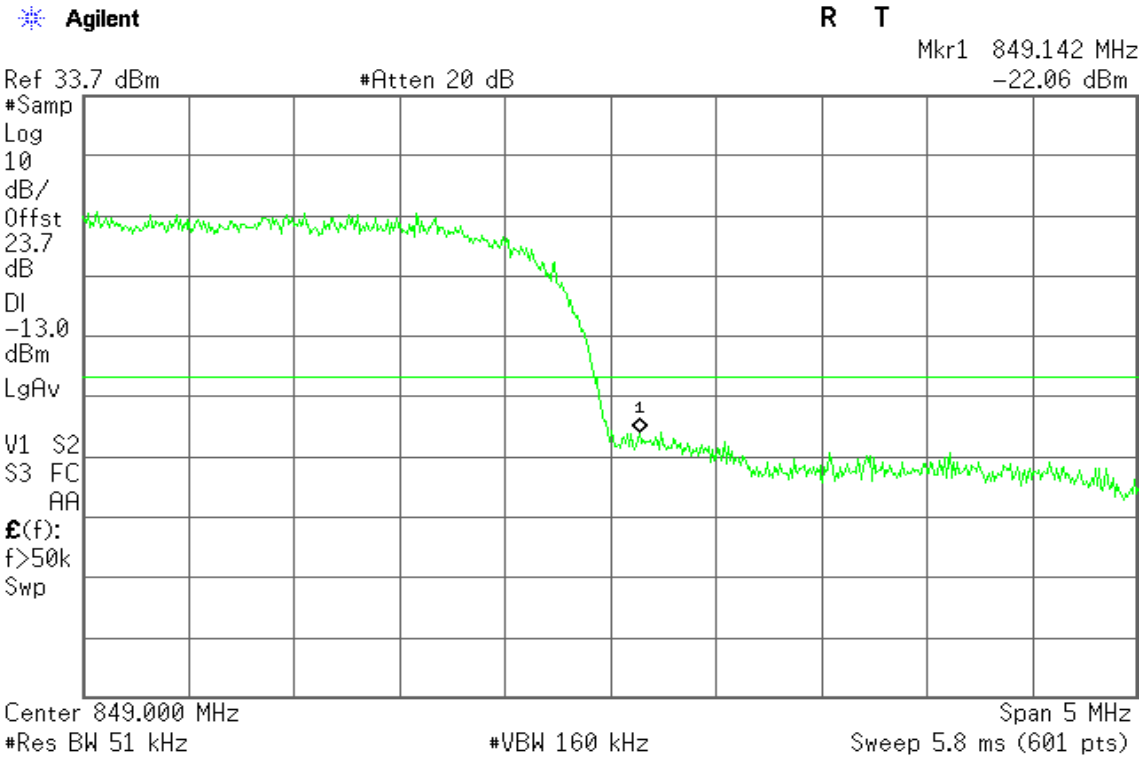


Figure 30-2: Band Edge emissions – HSUPA CH High



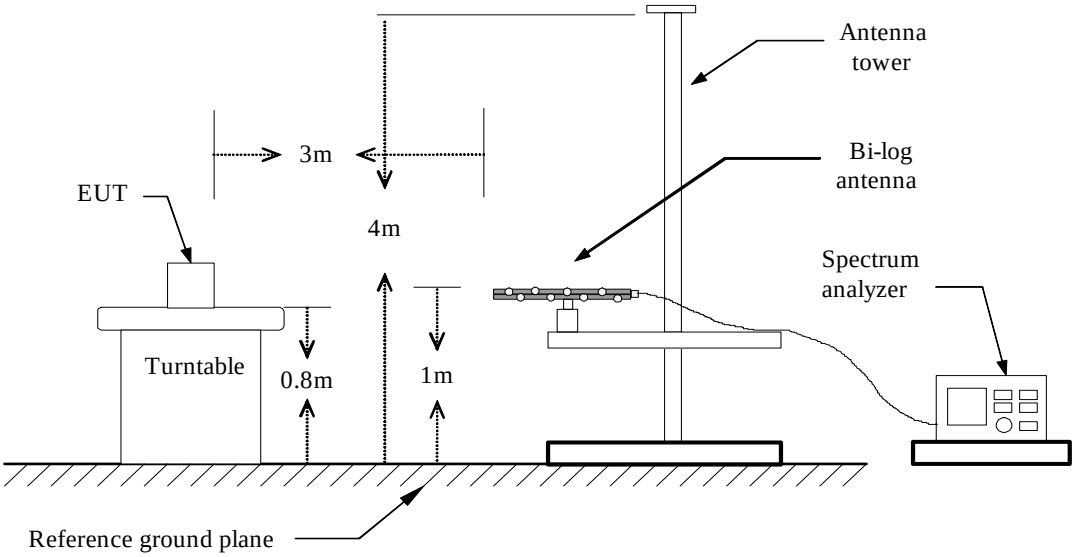
7.6FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

LIMIT

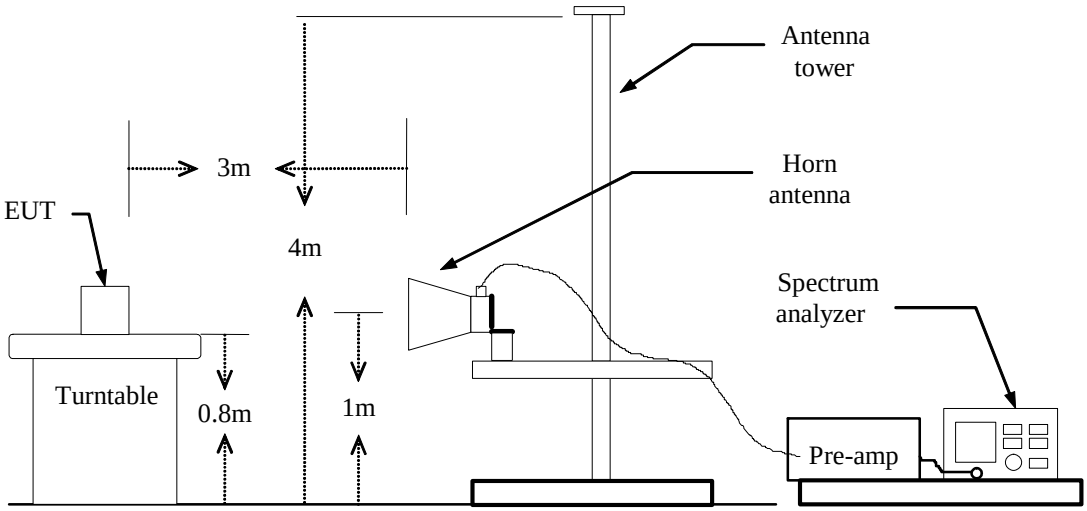
According to FCC §2.1053

Test Configuration

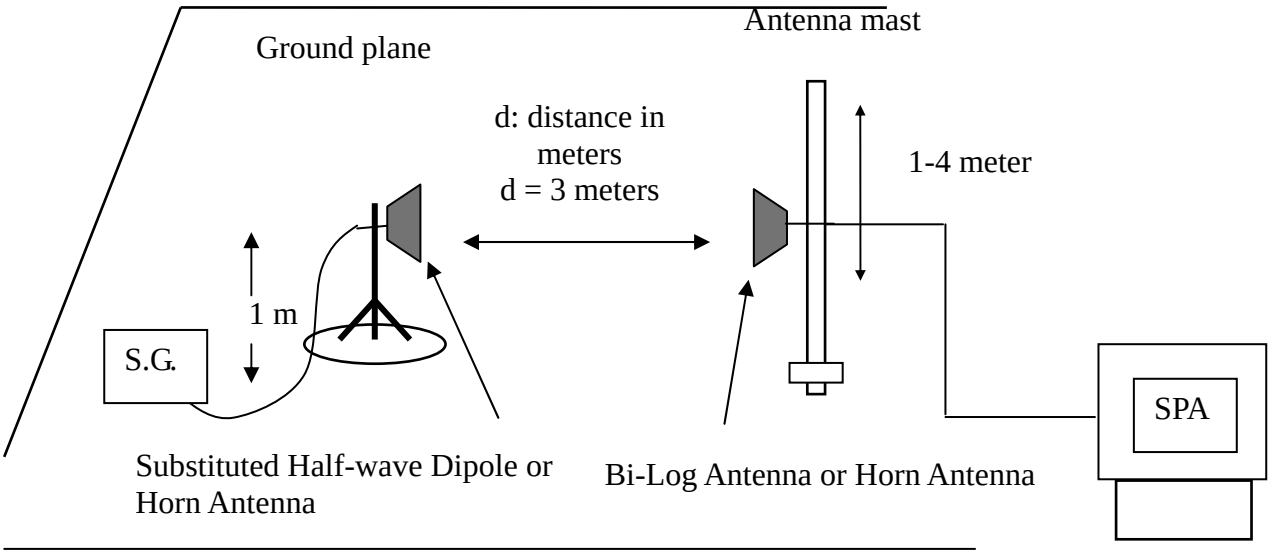
Below 1 GHz



Above 1 GHz



Substituted Method Test Set-up



TEST PROCEDURE

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

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

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

ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable (dB)

EIRP = S.G. output (dBm) + Antenna Gain (dBi) – 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:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
118.2700	-73.33	1.26	-2.03	-76.62	-13.00	-63.62	V
251.1600	-88.02	1.84	5.69	-84.17	-13.00	-71.17	V
377.2600	-85.81	2.31	5.94	-82.18	-13.00	-69.18	V
522.7600	-83.86	2.71	6.07	-80.50	-13.00	-67.50	V
633.3400	-82.66	2.99	6.18	-79.47	-13.00	-66.47	V
717.7300	-82	3.16	6.44	-78.72	-13.00	-65.72	V
126.0300	-73.22	1.32	-1.69	-76.23	-13.00	-63.23	H
211.3900	-75.43	1.7	5.42	-71.71	-13.00	-58.71	H
346.2200	-82.69	2.21	5.8	-79.10	-13.00	-66.10	H
419.9400	-81.15	2.46	5.81	-77.80	-13.00	-64.80	H
561.5600	-79.6	2.85	6	-76.45	-13.00	-63.45	H
701.2400	-78.92	3.12	6.38	-75.66	-13.00	-62.66	H

Remark:

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

Operation Mode: GSM 850 / TX / CH 190 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
120.2100	-72.75	1.27	-2.06	-76.08	-13.00	-63.08	V
176.4700	-82.76	1.59	3.21	-81.14	-13.00	-68.14	V
278.3200	-86.12	2	5.27	-82.85	-13.00	-69.85	V
412.1800	-85.94	2.45	5.89	-82.50	-13.00	-69.50	V
516.9400	-84.55	2.7	6.07	-81.18	-13.00	-68.18	V
644.0100	-82.9	3.02	6.17	-79.75	-13.00	-66.75	V
161.9200	-73.01	1.5	1.61	-72.90	-13.00	-59.90	H
264.7400	-83.03	1.94	5.36	-79.61	-13.00	-66.61	H
401.5100	-81.55	2.4	5.98	-77.97	-13.00	-64.97	H
550.8900	-80.56	2.81	6.17	-77.20	-13.00	-64.20	H
654.6800	-79	3.04	6.3	-75.74	-13.00	-62.74	H
773.9900	-77.39	3.28	6.26	-74.41	-13.00	-61.41	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:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
99.8400	-76.5	1.15	-0.37	-78.02	-13.00	-65.02	V
163.8600	-80.32	1.51	1.83	-80.00	-13.00	-67.00	V
210.4200	-86.62	1.69	5.44	-82.87	-13.00	-69.87	V
359.8000	-86.86	2.27	5.7	-83.43	-13.00	-70.43	V
431.5800	-84.92	2.5	5.81	-81.61	-13.00	-68.61	V
567.3800	-84.28	2.86	6.07	-81.07	-13.00	-68.07	V
126.0300	-72.59	1.32	-1.69	-75.60	-13.00	-62.60	H
194.9000	-80.24	1.63	3.47	-78.40	-13.00	-65.40	H
310.3300	-83.74	2.14	5.77	-80.11	-13.00	-67.11	H
414.1200	-81.87	2.45	5.87	-78.45	-13.00	-65.45	H
520.8200	-80.7	2.71	6.09	-77.32	-13.00	-64.32	H
642.0700	-79.26	3.01	6.14	-76.13	-13.00	-63.13	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:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
99.8400	-75.96	1.15	-0.37	-77.48	-13.00	-64.48	V
205.5700	-87.95	1.66	4.45	-85.16	-13.00	-72.16	V
306.4500	-87.65	2.12	5.73	-84.04	-13.00	-71.04	V
432.5500	-84.62	2.5	5.82	-81.30	-13.00	-68.30	V
546.0400	-84.71	2.8	6.21	-81.30	-13.00	-68.30	V
676.0200	-83.56	3.08	6.42	-80.22	-13.00	-67.22	V
126.0300	-74.35	1.32	-1.69	-77.36	-13.00	-64.36	H
309.3600	-83.71	2.13	5.78	-80.06	-13.00	-67.06	H
399.5700	-81.5	2.39	5.98	-77.91	-13.00	-64.91	H
562.5300	-80.12	2.85	6.01	-76.96	-13.00	-63.96	H
638.1900	-78.88	3	6.14	-75.74	-13.00	-62.74	H
736.1600	-78	3.2	6.23	-74.97	-13.00	-61.97	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:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
120.2100	-74.04	1.27	-2.06	-77.37	-13.00	-64.37	V
216.2400	-86.54	1.74	5.36	-82.92	-13.00	-69.92	V
342.3400	-88.2	2.18	5.8	-84.58	-13.00	-71.58	V
487.8400	-84.91	2.66	5.72	-81.85	-13.00	-68.85	V
585.8100	-83.25	2.89	6.11	-80.03	-13.00	-67.03	V
731.3100	-82.76	3.18	6.37	-79.57	-13.00	-66.57	V
159.9800	-71.18	1.48	1.43	-71.23	-13.00	-58.23	H
240.4900	-84.78	1.81	5.34	-81.25	-13.00	-68.25	H
405.3900	-81.5	2.42	5.94	-77.98	-13.00	-64.98	H
469.4100	-80.99	2.62	5.79	-77.82	-13.00	-64.82	H
584.8400	-79.99	2.89	6.1	-76.78	-13.00	-63.78	H
695.4200	-79.51	3.12	6.44	-76.19	-13.00	-63.19	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:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
120.2100	-74.33	1.27	-2.06	-77.66	-13.00	-64.66	V
269.5900	-88.35	1.98	5.12	-85.21	-13.00	-72.21	V
357.8600	-86.78	2.26	5.72	-83.32	-13.00	-70.32	V
437.4000	-85.38	2.52	5.88	-82.02	-13.00	-69.02	V
545.0700	-85.06	2.79	6.22	-81.63	-13.00	-68.63	V
642.0700	-82.76	3.01	6.14	-79.63	-13.00	-66.63	V
118.2700	-73.23	1.26	-2.03	-76.52	-13.00	-63.52	H
264.7400	-83.89	1.94	5.36	-80.47	-13.00	-67.47	H
408.3000	-82.16	2.44	5.92	-78.68	-13.00	-65.68	H
472.3200	-81.04	2.62	5.72	-77.94	-13.00	-64.94	H
549.9200	-79.89	2.81	6.18	-76.52	-13.00	-63.52	H
730.3400	-77.7	3.18	6.39	-74.49	-13.00	-61.49	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:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
120.2100	-73.21	1.27	-2.06	-76.54	-13.00	-63.54	V
198.7800	-84.98	1.63	3.05	-83.56	-13.00	-70.56	V
342.3400	-86.32	2.18	5.8	-82.70	-13.00	-69.70	V
486.8700	-84.13	2.66	5.69	-81.10	-13.00	-68.10	V
619.7600	-83.4	2.94	6.11	-80.23	-13.00	-67.23	V
768.1700	-81.3	3.26	6.38	-78.18	-13.00	-65.18	V
193.9300	-80.92	1.62	3.58	-78.96	-13.00	-65.96	H
407.3300	-81.6	2.43	5.93	-78.10	-13.00	-65.10	H
461.6500	-79.9	2.6	5.86	-76.64	-13.00	-63.64	H
637.2200	-77.57	3	6.15	-74.42	-13.00	-61.42	H
801.1500	-77.16	3.33	6.55	-73.94	-13.00	-60.94	H
898.1500	-76	3.51	6.63	-72.88	-13.00	-59.88	H

Remark:

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

Operation Mode: GSM 1900 / TX / CH 661 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
119.2400	-71.63	1.27	-2.07	-74.97	-13.00	-61.97	V
157.0700	-79.37	1.47	1.22	-79.62	-13.00	-66.62	V
311.3000	-87.56	2.14	5.76	-83.94	-13.00	-70.94	V
402.4800	-86.37	2.41	5.97	-82.81	-13.00	-69.81	V
525.6700	-85.27	2.73	6.04	-81.96	-13.00	-68.96	V
670.2000	-82.52	3.07	6.3	-79.29	-13.00	-66.29	V
128.9400	-74.81	1.34	-1.5	-77.65	-13.00	-64.65	H
166.7700	-78.52	1.54	2.15	-77.91	-13.00	-64.91	H
275.4100	-83.01	1.99	5.21	-79.79	-13.00	-66.79	H
440.3100	-81.26	2.53	5.89	-77.90	-13.00	-64.90	H
582.9000	-80.23	2.89	6.06	-77.06	-13.00	-64.06	H
771.0800	-77.17	3.27	6.35	-74.09	-13.00	-61.09	H

Remark:

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

Operation Mode: GSM 1900 / TX / CH 810 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
66.8600	-75.23	0.93	-1.89	-78.05	-13.00	-65.05	V
126.0300	-76.6	1.32	-1.69	-79.61	-13.00	-66.61	V
212.3600	-86.3	1.7	5.41	-82.59	-13.00	-69.59	V
345.2500	-83.25	2.2	5.8	-79.65	-13.00	-66.65	V
418.0000	-79.78	2.46	5.83	-76.41	-13.00	-63.41	V
758.4700	-80.79	3.22	6.27	-77.74	-13.00	-64.74	V
126.0300	-74.91	1.32	-1.69	-77.92	-13.00	-64.92	H
223.0300	-84.73	1.77	5.35	-81.15	-13.00	-68.15	H
326.8200	-83.3	2.17	5.71	-79.76	-13.00	-66.76	H
420.9100	-79.99	2.46	5.8	-76.65	-13.00	-63.65	H
527.6100	-79.92	2.74	6.02	-76.64	-13.00	-63.64	H
621.7000	-79.36	2.95	6.13	-76.18	-13.00	-63.18	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:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
57.1600	-66.82	0.86	-2.8	-70.48	-13.00	-57.48	V
120.2100	-71.78	1.27	-2.06	-75.11	-13.00	-62.11	V
208.4800	-85.45	1.67	5.2	-81.92	-13.00	-68.92	V
344.2800	-87.45	2.19	5.8	-83.84	-13.00	-70.84	V
500.4500	-85.22	2.7	5.9	-82.02	-13.00	-69.02	V
616.8500	-83.22	2.94	6.16	-80.00	-13.00	-67.00	V
86.2600	-78.36	1.08	0.62	-78.82	-13.00	-65.82	H
126.0300	-72.09	1.32	-1.69	-75.10	-13.00	-62.10	H
199.7500	-80.44	1.63	2.94	-79.13	-13.00	-66.13	H
314.2100	-83.65	2.15	5.74	-80.06	-13.00	-67.06	H
439.3400	-81.27	2.53	5.9	-77.90	-13.00	-64.90	H
563.5000	-79.9	2.85	6.02	-76.73	-13.00	-63.73	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:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
66.8600	-73.22	0.93	-1.89	-76.04	-13.00	-63.04	V
120.2100	-73.28	1.27	-2.06	-76.61	-13.00	-63.61	V
202.6600	-86.45	1.65	3.69	-84.41	-13.00	-71.41	V
324.8800	-85.9	2.17	5.7	-82.37	-13.00	-69.37	V
436.4300	-85.76	2.52	5.87	-82.41	-13.00	-69.41	V
618.7900	-83.1	2.94	6.12	-79.92	-13.00	-66.92	V
86.2600	-78.77	1.08	0.62	-79.23	-13.00	-66.23	H
128.9400	-73.15	1.34	-1.5	-75.99	-13.00	-62.99	H
200.7200	-81.15	1.63	3.19	-79.59	-13.00	-66.59	H
266.6800	-82.18	1.96	5.27	-78.87	-13.00	-65.87	H
432.5500	-80.44	2.5	5.82	-77.12	-13.00	-64.12	H
625.5800	-78.79	2.96	6.16	-75.59	-13.00	-62.59	H

Remark:

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

Operation Mode: GPRS 1900 / TX / CH 810 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
118.2700	-73.44	1.26	-2.03	-76.73	-13.00	-63.73	V
219.1500	-86.19	1.76	5.32	-82.63	-13.00	-69.63	V
326.8200	-87.63	2.17	5.71	-84.09	-13.00	-71.09	V
419.9400	-85.45	2.46	5.81	-82.10	-13.00	-69.10	V
529.5500	-85.04	2.75	6	-81.79	-13.00	-68.79	V
681.8400	-82.67	3.1	6.5	-79.27	-13.00	-66.27	V
126.0300	-74.54	1.32	-1.69	-77.55	-13.00	-64.55	H
230.7900	-84.55	1.8	5.4	-80.95	-13.00	-67.95	H
385.0200	-83.26	2.31	5.99	-79.58	-13.00	-66.58	H
477.1700	-80.61	2.63	5.61	-77.63	-13.00	-64.63	H
646.9200	-78.67	3.02	6.23	-75.46	-13.00	-62.46	H
796.3000	-77.61	3.33	6.41	-74.53	-13.00	-61.53	H

Remark:

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

Operation Mode: EDGE 850 / TX / CH 128 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
99.8400	-76.17	1.15	-0.37	-77.69	-13.00	-64.69	V
165.8000	-81.89	1.53	2.05	-81.37	-13.00	-68.37	V
265.7100	-87.64	1.95	5.32	-84.27	-13.00	-71.27	V
381.1400	-87.35	2.31	5.98	-83.68	-13.00	-70.68	V
495.6000	-84.93	2.69	5.85	-81.77	-13.00	-68.77	V
614.9100	-83.65	2.94	6.2	-80.39	-13.00	-67.39	V
126.0300	-73.38	1.32	-1.69	-76.39	-13.00	-63.39	H
196.8400	-80.66	1.63	3.26	-79.03	-13.00	-66.03	H
283.1700	-84.47	2.01	5.34	-81.14	-13.00	-68.14	H
376.2900	-82.19	2.31	5.93	-78.57	-13.00	-65.57	H
469.4100	-81.25	2.62	5.79	-78.08	-13.00	-65.08	H
596.4800	-79.57	2.9	6.33	-76.14	-13.00	-63.14	H

Remark:

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

Operation Mode: EDGE 850 / TX / CH 190 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
99.8400	-76.58	1.15	-0.37	-78.10	-13.00	-65.10	V
160.9500	-77.65	1.49	1.5	-77.64	-13.00	-64.64	V
258.9200	-89.17	1.9	5.6	-85.47	-13.00	-72.47	V
369.5000	-86.61	2.3	5.8	-83.11	-13.00	-70.11	V
468.4400	-85.26	2.62	5.8	-82.08	-13.00	-69.08	V
554.7700	-83.49	2.82	6.11	-80.20	-13.00	-67.20	V
126.0300	-74.29	1.32	-1.69	-77.30	-13.00	-64.30	H
191.0200	-82.25	1.62	3.89	-79.98	-13.00	-66.98	H
260.8600	-84.25	1.91	5.56	-80.60	-13.00	-67.60	H
376.2900	-83.33	2.31	5.93	-79.71	-13.00	-66.71	H
459.7100	-81.49	2.6	5.88	-78.21	-13.00	-65.21	H
600.3600	-79.75	2.9	6.4	-76.25	-13.00	-63.25	H

Remark:

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

Operation Mode: EDGE 850 / TX / CH 251 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
120.2100	-73.65	1.27	-2.06	-76.98	-13.00	-63.98	V
196.8400	-86.15	1.63	3.26	-84.52	-13.00	-71.52	V
318.0900	-87.71	2.17	5.72	-84.16	-13.00	-71.16	V
444.1900	-85.59	2.56	5.81	-82.34	-13.00	-69.34	V
562.5300	-83.51	2.85	6.01	-80.35	-13.00	-67.35	V
691.5400	-82.7	3.13	6.48	-79.35	-13.00	-66.35	V
126.0300	-74.97	1.32	-1.69	-77.98	-13.00	-64.98	H
200.7200	-80.77	1.63	3.19	-79.21	-13.00	-66.21	H
283.1700	-83.4	2.01	5.34	-80.07	-13.00	-67.07	H
377.2600	-81.9	2.31	5.94	-78.27	-13.00	-65.27	H
468.4400	-81.15	2.62	5.8	-77.97	-13.00	-64.97	H
610.0600	-80.04	2.94	6.29	-76.69	-13.00	-63.69	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: EDGE 1900 / TX / CH 512 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
120.2100	-71.63	1.27	-2.06	-74.96	-13.00	-61.96	V
276.3800	-86.74	1.99	5.23	-83.50	-13.00	-70.50	V
404.4200	-86.34	2.42	5.95	-82.81	-13.00	-69.81	V
526.6400	-85.14	2.74	6.03	-81.85	-13.00	-68.85	V
648.8600	-82.95	3.03	6.26	-79.72	-13.00	-66.72	V
804.0600	-80.46	3.33	6.45	-77.34	-13.00	-64.34	V
126.0300	-74.69	1.32	-1.69	-77.70	-13.00	-64.70	H
251.1600	-83.68	1.84	5.69	-79.83	-13.00	-66.83	H
381.1400	-81.94	2.31	5.98	-78.27	-13.00	-65.27	H
574.1700	-79.73	2.88	6.07	-76.54	-13.00	-63.54	H
746.8300	-78.18	3.2	6.1	-75.28	-13.00	-62.28	H
900.0900	-68.82	3.52	6.61	-65.73	-13.00	-52.73	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:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
120.2100	-74.66	1.27	-2.06	-77.99	-13.00	-64.99	V
203.6300	-84	1.65	3.94	-81.71	-13.00	-68.71	V
277.3500	-84.72	2	5.25	-81.47	-13.00	-68.47	V
472.3200	-84.58	2.62	5.72	-81.48	-13.00	-68.48	V
621.7000	-82.66	2.95	6.13	-79.48	-13.00	-66.48	V
770.1100	-80.1	3.27	6.38	-76.99	-13.00	-63.99	V
126.0300	-74.47	1.32	-1.69	-77.48	-13.00	-64.48	H
224.0000	-83.84	1.78	5.35	-80.27	-13.00	-67.27	H
364.6500	-83.06	2.28	5.75	-79.59	-13.00	-66.59	H
459.7100	-80.9	2.6	5.88	-77.62	-13.00	-64.62	H
595.5100	-79.22	2.9	6.31	-75.81	-13.00	-62.81	H
770.1100	-77.75	3.27	6.38	-74.64	-13.00	-61.64	H

Remark:

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

Operation Mode: EDGE 1900 / TX / CH 810 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
120.2100	-72.38	1.27	-2.06	-75.71	-13.00	-62.71	V
176.4700	-83.98	1.59	3.21	-82.36	-13.00	-69.36	V
267.6500	-87.68	1.96	5.22	-84.42	-13.00	-71.42	V
439.3400	-85.32	2.53	5.9	-81.95	-13.00	-68.95	V
609.0900	-83.53	2.94	6.31	-80.16	-13.00	-67.16	V
804.0600	-80.76	3.33	6.45	-77.64	-13.00	-64.64	V
126.0300	-73.76	1.32	-1.69	-76.77	-13.00	-63.77	H
230.7900	-84.57	1.8	5.4	-80.97	-13.00	-67.97	H
368.5300	-83.02	2.3	5.79	-79.53	-13.00	-66.53	H
505.3000	-81.38	2.69	5.95	-78.12	-13.00	-65.12	H
631.4000	-78.81	2.98	6.2	-75.59	-13.00	-62.59	H
731.3100	-77.23	3.18	6.37	-74.04	-13.00	-61.04	H

Remark:

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

Operation Mode: WCDMA Band II / TX / CH 9262 **Test Date:** June 19, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
99.8400	-72.08	1.15	-0.37	-73.60	-13.00	-60.60	V
215.2700	-85.17	1.73	5.37	-81.53	-13.00	-68.53	V
377.2600	-86.44	2.31	5.94	-82.81	-13.00	-69.81	V
500.4500	-82.95	2.7	5.9	-79.75	-13.00	-66.75	V
659.5300	-82.51	3.06	6.3	-79.27	-13.00	-66.27	V
804.0600	-80.76	3.33	6.45	-77.64	-13.00	-64.64	V
122.1500	-74.35	1.29	-1.93	-77.57	-13.00	-64.57	H
234.6700	-83.02	1.8	5.38	-79.44	-13.00	-66.44	H
416.0600	-80.95	2.46	5.85	-77.56	-13.00	-64.56	H
526.6400	-80.28	2.74	6.03	-76.99	-13.00	-63.99	H
651.7700	-78.77	3.03	6.3	-75.50	-13.00	-62.50	H
856.4400	-76.62	3.42	6.4	-73.64	-13.00	-60.64	H

Remark:

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

Operation Mode: WCDMA Band II / TX / CH 9400 **Test Date:** June 19, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
99.8400	-70.94	1.15	-0.37	-72.46	-13.00	-59.46	V
133.7900	-76.78	1.36	-0.95	-79.09	-13.00	-66.09	V
215.2700	-83.72	1.73	5.37	-80.08	-13.00	-67.08	V
460.6800	-83.45	2.6	5.87	-80.18	-13.00	-67.18	V
535.3700	-83.17	2.77	6.16	-79.78	-13.00	-66.78	V
769.1400	-80.4	3.27	6.39	-77.28	-13.00	-64.28	V
191.0200	-78.11	1.62	3.89	-75.84	-13.00	-62.84	H
304.5100	-80.81	2.11	5.69	-77.23	-13.00	-64.23	H
404.4200	-79.6	2.42	5.95	-76.07	-13.00	-63.07	H
528.5800	-78.59	2.75	6.01	-75.33	-13.00	-62.33	H
700.2700	-75.97	3.11	6.39	-72.69	-13.00	-59.69	H
865.1700	-74.68	3.44	6.46	-71.66	-13.00	-58.66	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:** June 19, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
99.8400	-71.52	1.15	-0.37	-73.04	-13.00	-60.04	V
176.4700	-81.74	1.59	3.21	-80.12	-13.00	-67.12	V
272.5000	-86.04	1.99	5.15	-82.88	-13.00	-69.88	V
429.6400	-83.95	2.49	5.8	-80.64	-13.00	-67.64	V
711.9100	-82.36	3.15	6.35	-79.16	-13.00	-66.16	V
901.0600	-78.74	3.52	6.6	-75.66	-13.00	-62.66	V
128.9400	-74.03	1.34	-1.5	-76.87	-13.00	-63.87	H
200.7200	-79.02	1.63	3.19	-77.46	-13.00	-64.46	H
338.4600	-83.09	2.17	5.78	-79.48	-13.00	-66.48	H
438.3700	-80.56	2.52	5.89	-77.19	-13.00	-64.19	H
620.7300	-78.59	2.94	6.12	-75.41	-13.00	-62.41	H
656.6200	-77.24	3.05	6.3	-73.99	-13.00	-60.99	H

Remark:

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

Operation Mode: WCDMA Band V / TX / CH 4132 **Test Date:** June 19, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
99.8400	-71.79	1.15	-0.37	-73.31	-13.00	-60.31	V
293.8400	-87.17	2.05	5.48	-83.74	-13.00	-70.74	V
361.7400	-86.14	2.28	5.72	-82.70	-13.00	-69.70	V
475.2300	-84.78	2.63	5.65	-81.76	-13.00	-68.76	V
622.6700	-83.26	2.95	6.14	-80.07	-13.00	-67.07	V
669.2300	-82.25	3.07	6.3	-79.02	-13.00	-66.02	V
128.9400	-74.42	1.34	-1.5	-77.26	-13.00	-64.26	H
191.0200	-80.1	1.62	3.89	-77.83	-13.00	-64.83	H
372.4100	-81.32	2.3	5.85	-77.77	-13.00	-64.77	H
526.6400	-79.59	2.74	6.03	-76.30	-13.00	-63.30	H
653.7100	-78.68	3.04	6.3	-75.42	-13.00	-62.42	H
730.3400	-76.77	3.18	6.39	-73.56	-13.00	-60.56	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 Band V / TX / CH 4182 **Test Date:** June 19, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
99.8400	-71.44	1.15	-0.37	-72.96	-13.00	-59.96	V
164.8300	-82.58	1.52	1.94	-82.16	-13.00	-69.16	V
359.8000	-87.19	2.27	5.7	-83.76	-13.00	-70.76	V
500.4500	-83.87	2.7	5.9	-80.67	-13.00	-67.67	V
627.5200	-83.32	2.97	6.17	-80.12	-13.00	-67.12	V
773.0200	-81.35	3.28	6.29	-78.34	-13.00	-65.34	V
128.9400	-75.24	1.34	-1.5	-78.08	-13.00	-65.08	H
256.0100	-83.59	1.88	5.63	-79.84	-13.00	-66.84	H
380.1700	-82.84	2.31	5.98	-79.17	-13.00	-66.17	H
439.3400	-81.27	2.53	5.9	-77.90	-13.00	-64.90	H
575.1400	-79.86	2.88	6.06	-76.68	-13.00	-63.68	H
711.9100	-79	3.15	6.35	-75.80	-13.00	-62.80	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:** June 19, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
99.8400	-71.65	1.15	-0.37	-73.17	-13.00	-60.17	V
226.9100	-85.76	1.79	5.37	-82.18	-13.00	-69.18	V
416.0600	-84.38	2.46	5.85	-80.99	-13.00	-67.99	V
500.4500	-79.86	2.7	5.9	-76.66	-13.00	-63.66	V
620.7300	-82.33	2.94	6.12	-79.15	-13.00	-66.15	V
725.4900	-80.18	3.17	6.45	-76.90	-13.00	-63.90	V
128.9400	-73.72	1.34	-1.5	-76.56	-13.00	-63.56	H
224.9700	-82.93	1.78	5.36	-79.35	-13.00	-66.35	H
418.0000	-80.2	2.46	5.83	-76.83	-13.00	-63.83	H
523.7300	-79.44	2.72	6.06	-76.10	-13.00	-63.10	H
622.6700	-78.04	2.95	6.14	-74.85	-13.00	-61.85	H
723.5500	-77.32	3.17	6.47	-74.02	-13.00	-61.02	H

Remark:

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

Operation Mode:	WCDMA / HSDPA Band II / TX / CH 9262	**Test Date:**	June 26, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
66.8600	-69.1	0.93	-1.89	-71.92	-13.00	-58.92	V
168.7100	-72.99	1.55	2.37	-72.17	-13.00	-59.17	V
252.1300	-78.42	1.85	5.68	-74.59	-13.00	-61.59	V
326.8200	-82.28	2.17	5.71	-78.74	-13.00	-65.74	V
487.8400	-84.22	2.66	5.72	-81.16	-13.00	-68.16	V
654.6800	-82.1	3.04	6.3	-78.84	-13.00	-65.84	V
56.1900	-66.89	0.85	-3.09	-70.83	-13.00	-57.83	H
161.9200	-70.31	1.5	1.61	-70.20	-13.00	-57.20	H
215.2700	-76.38	1.73	5.37	-72.74	-13.00	-59.74	H
322.9400	-79.4	2.18	5.7	-75.88	-13.00	-62.88	H
446.1300	-79.91	2.57	5.78	-76.70	-13.00	-63.70	H
542.1600	-78.94	2.79	6.25	-75.48	-13.00	-62.48	H

Remark:

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

Operation Mode:	WCDMA / HSDPA Band II / TX / CH 9400	**Test Date:**	June 26, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
66.8600	-70.14	0.93	-1.89	-72.96	-13.00	-59.96	V
166.7700	-74.23	1.54	2.15	-73.62	-13.00	-60.62	V
252.1300	-78.33	1.85	5.68	-74.50	-13.00	-61.50	V
339.4300	-84.16	2.17	5.79	-80.54	-13.00	-67.54	V
539.2500	-84.83	2.78	6.27	-81.34	-13.00	-68.34	V
647.8900	-82.47	3.02	6.25	-79.24	-13.00	-66.24	V
48.4300	-63.47	0.79	-5.83	-70.09	-13.00	-57.09	H
162.8900	-73.12	1.51	1.72	-72.91	-13.00	-59.91	H
248.2500	-79.88	1.83	5.61	-76.10	-13.00	-63.10	H
399.5700	-78.94	2.39	5.98	-75.35	-13.00	-62.35	H
532.4600	-80.22	2.76	6.08	-76.90	-13.00	-63.90	H
657.5900	-78.05	3.05	6.3	-74.80	-13.00	-61.80	H

Remark:

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

Operation Mode:	WCDMA / HSDPA Band II / TX / CH 9538	**Test Date:**	June 26, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
66.8600	-71.27	0.93	-1.89	-74.09	-13.00	-61.09	V
170.6500	-74.11	1.57	2.59	-73.09	-13.00	-60.09	V
250.1900	-81.03	1.84	5.68	-77.19	-13.00	-64.19	V
335.5500	-84.11	2.17	5.75	-80.53	-13.00	-67.53	V
474.2600	-84.22	2.63	5.68	-81.17	-13.00	-68.17	V
622.6700	-82.8	2.95	6.14	-79.61	-13.00	-66.61	V
161.9200	-72.06	1.5	1.61	-71.95	-13.00	-58.95	H
249.2200	-80.74	1.84	5.65	-76.93	-13.00	-63.93	H
348.1600	-82.28	2.22	5.8	-78.70	-13.00	-65.70	H
490.7500	-80.01	2.67	5.8	-76.88	-13.00	-63.88	H
565.4400	-79.5	2.86	6.04	-76.32	-13.00	-63.32	H
667.2900	-78.56	3.07	6.3	-75.33	-13.00	-62.33	H

Remark:

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

Operation Mode:	WCDMA / HSDPA Band V / TX / CH 4132	**Test Date:**	June 26, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
66.8600	-64.92	0.93	-1.89	-67.74	-13.00	-54.74	V
166.7700	-70.88	1.54	2.15	-70.27	-13.00	-57.27	V
249.2200	-77.47	1.84	5.65	-73.66	-13.00	-60.66	V
326.8200	-82.12	2.17	5.71	-78.58	-13.00	-65.58	V
458.7400	-83.02	2.6	5.87	-79.75	-13.00	-66.75	V
633.3400	-80.14	2.99	6.18	-76.95	-13.00	-63.95	V
57.1600	-66.96	0.86	-2.8	-70.62	-13.00	-57.62	H
162.8900	-70.26	1.51	1.72	-70.05	-13.00	-57.05	H
256.0100	-77.59	1.88	5.63	-73.84	-13.00	-60.84	H
334.5800	-78.87	2.16	5.75	-75.28	-13.00	-62.28	H
450.0100	-78.77	2.59	5.72	-75.64	-13.00	-62.64	H
599.3900	-77.32	2.9	6.39	-73.83	-13.00	-60.83	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:	WCDMA / HSDPA Band V / TX / CH 4182	**Test Date:**	June 26, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
66.8600	-69.04	0.93	-1.89	-71.86	-13.00	-58.86	V
170.6500	-75.41	1.57	2.59	-74.39	-13.00	-61.39	V
326.8200	-84.57	2.17	5.71	-81.03	-13.00	-68.03	V
425.7600	-84.3	2.48	5.8	-80.98	-13.00	-67.98	V
527.6100	-84.55	2.74	6.02	-81.27	-13.00	-68.27	V
600.3600	-82.46	2.9	6.4	-78.96	-13.00	-65.96	V
125.0600	-67.97	1.31	-1.75	-71.03	-13.00	-58.03	H
213.3300	-72.46	1.71	5.4	-68.77	-13.00	-55.77	H
311.3000	-77.07	2.14	5.76	-73.45	-13.00	-60.45	H
414.1200	-80.45	2.45	5.87	-77.03	-13.00	-64.03	H
525.6700	-78.36	2.73	6.04	-75.05	-13.00	-62.05	H
659.5300	-78.36	3.06	6.3	-75.12	-13.00	-62.12	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 / HSDPA Band V / TX / CH 4233	**Test Date:**	June 26, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
63.9500	-65.48	0.91	-2.02	-68.41	-13.00	-55.41	V
143.4900	-73.52	1.4	0.08	-74.84	-13.00	-61.84	V
170.6500	-74.18	1.57	2.59	-73.16	-13.00	-60.16	V
326.8200	-85.02	2.17	5.71	-81.48	-13.00	-68.48	V
479.1100	-83.71	2.64	5.56	-80.79	-13.00	-67.79	V
563.5000	-83.33	2.85	6.02	-80.16	-13.00	-67.16	V
66.8600	-72.57	0.93	-1.89	-75.39	-13.00	-62.39	H
128.9400	-74.25	1.34	-1.5	-77.09	-13.00	-64.09	H
240.4900	-81.95	1.81	5.34	-78.42	-13.00	-65.42	H
360.7700	-81.52	2.27	5.71	-78.08	-13.00	-65.08	H
470.3800	-80.1	2.62	5.77	-76.95	-13.00	-63.95	H
582.9000	-79.53	2.89	6.06	-76.36	-13.00	-63.36	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	**Test Date:**	June 25, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
66.8600	-69.15	0.93	-1.89	-71.97	-13.00	-58.97	V
170.6500	-75.43	1.57	2.59	-74.41	-13.00	-61.41	V
275.4100	-87.81	1.99	5.21	-84.59	-13.00	-71.59	V
399.5700	-85.2	2.39	5.98	-81.61	-13.00	-68.61	V
499.4800	-83.29	2.7	5.89	-80.10	-13.00	-67.10	V
657.5900	-81.57	3.05	6.3	-78.32	-13.00	-65.32	V
132.8200	-70.41	1.36	-1.07	-72.84	-13.00	-59.84	H
191.0200	-79.53	1.62	3.89	-77.26	-13.00	-64.26	H
353.0100	-82.41	2.24	5.77	-78.88	-13.00	-65.88	H
462.6200	-80.94	2.61	5.85	-77.70	-13.00	-64.70	H
561.5600	-79.7	2.85	6	-76.55	-13.00	-63.55	H
718.7000	-78.97	3.16	6.46	-75.67	-13.00	-62.67	H

Remark:

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

Operation Mode:	WCDMA / HSUPA Band II / TX / CH 9400	**Test Date:**	June 25, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
66.8600	-67.64	0.93	-1.89	-70.46	-13.00	-57.46	V
170.6500	-75.53	1.57	2.59	-74.51	-13.00	-61.51	V
326.8200	-87.18	2.17	5.71	-83.64	-13.00	-70.64	V
429.6400	-82.86	2.49	5.8	-79.55	-13.00	-66.55	V
561.5600	-83.88	2.85	6	-80.73	-13.00	-67.73	V
687.6600	-83.14	3.12	6.5	-79.76	-13.00	-66.76	V
86.2600	-78.45	1.08	0.62	-78.91	-13.00	-65.91	H
128.9400	-74.43	1.34	-1.5	-77.27	-13.00	-64.27	H
191.0200	-78.66	1.62	3.89	-76.39	-13.00	-63.39	H
375.3200	-82.83	2.31	5.91	-79.23	-13.00	-66.23	H
529.5500	-80.59	2.75	6	-77.34	-13.00	-64.34	H
709.0000	-78.82	3.14	6.3	-75.66	-13.00	-62.66	H

Remark:

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

Operation Mode:	WCDMA / HSUPA Band II / TX / CH 9538	**Test Date:**	June 25, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
51.3400	-65.29	0.81	-4.51	-70.61	-13.00	-57.61	V
169.6800	-75.64	1.56	2.48	-74.72	-13.00	-61.72	V
305.4800	-87.55	2.12	5.71	-83.96	-13.00	-70.96	V
475.2300	-84.56	2.63	5.65	-81.54	-13.00	-68.54	V
655.6500	-82	3.04	6.3	-78.74	-13.00	-65.74	V
769.1400	-80.29	3.27	6.39	-77.17	-13.00	-64.17	V
49.4000	-66.33	0.8	-5.08	-72.21	-13.00	-59.21	H
128.9400	-73.7	1.34	-1.5	-76.54	-13.00	-63.54	H
191.0200	-78.85	1.62	3.89	-76.58	-13.00	-63.58	H
384.0500	-82.59	2.31	5.99	-78.91	-13.00	-65.91	H
500.4500	-77.49	2.7	5.9	-74.29	-13.00	-61.29	H
743.9200	-77.93	3.21	6.1	-75.04	-13.00	-62.04	H

Remark:

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

Operation Mode:	WCDMA / HSUPA Band V / TX / CH 4132	**Test Date:**	June 25, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
47.4600	-65.61	0.78	-6.58	-72.97	-13.00	-59.97	V
99.8400	-76.93	1.15	-0.37	-78.45	-13.00	-65.45	V
166.7700	-75.77	1.54	2.15	-75.16	-13.00	-62.16	V
263.7700	-87.95	1.93	5.41	-84.47	-13.00	-71.47	V
353.9800	-86.46	2.25	5.76	-82.95	-13.00	-69.95	V
467.4700	-84.39	2.61	5.81	-81.19	-13.00	-68.19	V
159.0100	-78.16	1.48	1.36	-78.28	-13.00	-65.28	H
261.8300	-82.95	1.92	5.51	-79.36	-13.00	-66.36	H
375.3200	-82.03	2.31	5.91	-78.43	-13.00	-65.43	H
436.4300	-80.82	2.52	5.87	-77.47	-13.00	-64.47	H
560.5900	-78.43	2.85	6.01	-75.27	-13.00	-62.27	H
715.7900	-78.08	3.16	6.41	-74.83	-13.00	-61.83	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:	WCDMA / HSUPA Band V / TX / CH 4182	**Test Date:**	June 25, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
66.8600	-70.81	0.93	-1.89	-73.63	-13.00	-60.63	V
167.7400	-76.96	1.55	2.26	-76.25	-13.00	-63.25	V
268.6200	-86.78	1.97	5.17	-83.58	-13.00	-70.58	V
366.5900	-86.77	2.29	5.77	-83.29	-13.00	-70.29	V
477.1700	-84.27	2.63	5.61	-81.29	-13.00	-68.29	V
598.4200	-83.91	2.9	6.37	-80.44	-13.00	-67.44	V
57.1600	-71.19	0.86	-2.8	-74.85	-13.00	-61.85	H
122.1500	-75.44	1.29	-1.93	-78.66	-13.00	-65.66	H
191.0200	-79.22	1.62	3.89	-76.95	-13.00	-63.95	H
321.9700	-83.1	2.18	5.7	-79.58	-13.00	-66.58	H
466.5000	-80.52	2.61	5.82	-77.31	-13.00	-64.31	H
621.7000	-79.23	2.95	6.13	-76.05	-13.00	-63.05	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 / HSUPA Band V / TX / CH 4233	**Test Date:**	June 25, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
66.8600	-72.53	0.93	-1.89	-75.35	-13.00	-62.35	V
103.7200	-79.34	1.17	-0.89	-81.40	-13.00	-68.40	V
200.7200	-84.01	1.63	3.19	-82.45	-13.00	-69.45	V
376.2900	-86.15	2.31	5.93	-82.53	-13.00	-69.53	V
518.8800	-84.96	2.7	6.09	-81.57	-13.00	-68.57	V
689.6000	-83.23	3.13	6.5	-79.86	-13.00	-66.86	V
57.1600	-70.49	0.86	-2.8	-74.15	-13.00	-61.15	H
122.1500	-75.14	1.29	-1.93	-78.36	-13.00	-65.36	H
200.7200	-80.02	1.63	3.19	-78.46	-13.00	-65.46	H
402.4800	-81.31	2.41	5.97	-77.75	-13.00	-64.75	H
525.6700	-80.25	2.73	6.04	-76.94	-13.00	-63.94	H
681.8400	-77.59	3.1	6.5	-74.19	-13.00	-61.19	H

Remark:

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

Above 1GHz

Operation Mode: GSM 850 / TX / CH 128 **Test Date:** June 17, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-38.01	5.05	6.03	-37.03	-13.00	-24.03	V
4948.000	-40.55	9.33	10.52	-39.36	-13.00	-26.36	V
N/A							
1651.000	-35.62	5.05	6.03	-34.64	-13.00	-21.64	H
4948.000	-36.63	9.33	10.52	-35.44	-13.00	-22.44	H
N/A							

Remark:

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

Operation Mode: GSM 850 / TX / CH 190 **Test Date:** June 17, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-38.71	5.07	5.99	-37.79	-13.00	-24.79	V
5018.000	-38.53	9.42	10.61	-37.34	-13.00	-24.34	V
N/A							
1672.000	-36.52	5.07	5.99	-35.60	-13.00	-22.60	H
5018.000	-34.84	9.42	10.61	-33.65	-13.00	-20.65	H
N/A							

Remark:

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

Operation Mode: GSM 850 / TX / CH 251 **Test Date:** June 17, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-34.4	5.11	5.94	-33.57	-13.00	-20.57	V
5095.000	-33.3	9.45	10.64	-32.11	-13.00	-19.11	V
N/A							
1700.000	-35.6	5.11	5.94	-34.77	-13.00	-21.77	H
5095.000	-32.94	9.45	10.64	-31.75	-13.00	-18.75	H
N/A							

Remark:

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

Operation Mode: GPRS 850 / TX / CH 128 **Test Date:** June 17, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-38.53	5.05	6.03	-37.55	-13.00	-24.55	V
4948.000	-40.32	9.33	10.52	-39.13	-13.00	-26.13	V
N/A							
1651.000	-35.38	5.05	6.03	-34.40	-13.00	-21.40	H
4948.000	-36.3	9.33	10.52	-35.11	-13.00	-22.11	H
N/A							

Remark:

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

Operation Mode: GPRS 850 / TX / CH 190 **Test Date:** June 17, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-39.24	5.07	5.99	-38.32	-13.00	-25.32	V
5018.000	-39.29	9.42	10.61	-38.10	-13.00	-25.10	V
N/A							
1672.000	-37.27	5.07	5.99	-36.35	-13.00	-23.35	H
5018.000	-35.63	9.42	10.61	-34.44	-13.00	-21.44	H
N/A							

Remark:

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

Operation Mode: GPRS 850 / TX / CH 251 **Test Date:** June 17, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-38.4	5.11	5.94	-37.57	-13.00	-24.57	V
5095.000	-36.83	9.45	10.64	-35.64	-13.00	-22.64	V
N/A							
1700.000	-37.48	5.11	5.94	-36.65	-13.00	-23.65	H
5095.000	-33.46	9.45	10.64	-32.27	-13.00	-19.27	H
N/A							

Remark:

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

Operation Mode: GSM 1900 / TX / CH 512 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-40.21	8.2	9.1	-39.31	-13.00	-26.31	V
5550.000	-37.63	10.06	10.81	-36.88	-13.00	-23.88	V
N/A							
3702.000	-36.74	8.2	9.1	-35.84	-13.00	-22.84	H
5550.000	-37.51	10.06	10.81	-36.76	-13.00	-23.76	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:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-40.02	8.23	9.16	-39.09	-13.00	-26.09	V
5641.000	-38.13	10.18	10.83	-37.48	-13.00	-24.48	V
N/A							
3758.000	-37.71	8.23	9.16	-36.78	-13.00	-23.78	H
5641.000	-37.47	10.18	10.83	-36.82	-13.00	-23.82	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:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-35.36	8.29	9.22	-34.43	-13.00	-21.43	V
5732.000	-38.57	10.24	10.85	-37.96	-13.00	-24.96	V
N/A							
3821.000	-37.67	8.29	9.22	-36.74	-13.00	-23.74	H
5732.000	-37.43	10.24	10.85	-36.82	-13.00	-23.82	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:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-42.75	8.2	9.1	-41.85	-13.00	-28.85	V
5550.000	-39.39	10.06	10.81	-38.64	-13.00	-25.64	V
N/A							
3702.000	-37.43	8.2	9.1	-36.53	-13.00	-23.53	H
5550.000	-38.59	10.06	10.81	-37.84	-13.00	-24.84	H
N/A							

Remark:

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

Operation Mode: GPRS 1900 / TX / CH 661 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-39.56	8.23	9.16	-38.63	-13.00	-25.63	V
5641.000	-38.42	10.18	10.83	-37.77	-13.00	-24.77	V
N/A							
3758.000	-37.7	8.23	9.16	-36.77	-13.00	-23.77	H
5641.000	-37.89	10.18	10.83	-37.24	-13.00	-24.24	H
N/A							

Remark:

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

Operation Mode: GPRS 1900 / TX / CH 810 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-36.43	8.29	9.22	-35.50	-13.00	-22.50	V
5732.000	-39.3	10.24	10.85	-38.69	-13.00	-25.69	V
N/A							
3821.000	-37.33	8.29	9.22	-36.40	-13.00	-23.40	H
5732.000	-37.02	10.24	10.85	-36.41	-13.00	-23.41	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 850 / TX / CH 128 **Test Date:** June 17, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-38.66	5.05	6.03	-37.68	-13.00	-24.68	V
4948.000	-41.14	9.33	10.52	-39.95	-13.00	-26.95	V
N/A							
1651.000	-36.03	5.05	6.03	-35.05	-13.00	-22.05	H
4948.000	-37	9.33	10.52	-35.81	-13.00	-22.81	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:** June 17, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-41.04	5.07	5.99	-40.12	-13.00	-27.12	V
5018.000	-39.26	9.42	10.61	-38.07	-13.00	-25.07	V
N/A							
1672.000	-38.26	5.07	5.99	-37.34	-13.00	-24.34	H
5018.000	-36.07	9.42	10.61	-34.88	-13.00	-21.88	H
N/A							

Remark:

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

Operation Mode: EDGE 850 / TX / CH 251 **Test Date:** June 17, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-40.55	5.11	5.94	-39.72	-13.00	-26.72	V
5095.000	-37.6	9.45	10.64	-36.41	-13.00	-23.41	V
N/A							
1700.000	-37.6	5.11	5.94	-36.77	-13.00	-23.77	H
5095.000	-33.86	9.45	10.64	-32.67	-13.00	-19.67	H
N/A							

Remark:

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

Operation Mode: EDGE 1900 / TX / CH 512 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-44.38	8.2	9.1	-43.48	-13.00	-30.48	V
5550.000	-41.37	10.06	10.81	-40.62	-13.00	-27.62	V
N/A							
3702.000	-40.24	8.2	9.1	-39.34	-13.00	-26.34	H
5550.000	-40.13	10.06	10.81	-39.38	-13.00	-26.38	H
N/A							

Remark:

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

Operation Mode: EDGE 1900 / TX / CH 661 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-42.07	8.23	9.16	-41.14	-13.00	-28.14	V
5641.000	-40.95	10.18	10.83	-40.30	-13.00	-27.30	V
N/A							
3758.000	-40.38	8.23	9.16	-39.45	-13.00	-26.45	H
5641.000	-38.95	10.18	10.83	-38.30	-13.00	-25.30	H
N/A							

Remark:

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

Operation Mode: EDGE 1900 / TX / CH 810 **Test Date:** June 18, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-39.05	8.29	9.22	-38.12	-13.00	-25.12	V
5732.000	-41.15	10.24	10.85	-40.54	-13.00	-27.54	V
N/A							
3821.000	-38.27	8.29	9.22	-37.34	-13.00	-24.34	H
5732.000	-38.66	10.24	10.85	-38.05	-13.00	-25.05	H
N/A							

Remark:

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

Operation Mode: WCDMA Band II / TX / CH 9262 **Test Date:** June 19, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-27.03	8.2	9.1	-26.13	-13.00	-13.13	V
N/A							
3702.000	-30.22	8.2	9.1	-29.32	-13.00	-16.32	H
5284.000	-53.23	9.64	10.71	-52.16	-13.00	-39.16	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:** June 19, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
3765.000	-25.97	8.24	9.16	-25.05	-13.00	-12.05	V
5641.000	-49.46	10.18	10.83	-48.81	-13.00	-35.81	V
N/A							
3765.000	-32.34	8.24	9.16	-31.42	-13.00	-18.42	H
5025.000	-51.87	9.42	10.61	-50.68	-13.00	-37.68	H
N/A							

Remark:

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

Operation Mode: WCDMA Band II / TX / CH 9538 **Test Date:** June 19, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-35.19	8.28	9.21	-34.26	-13.00	-21.26	V
5032.000	-54.01	9.42	10.61	-52.82	-13.00	-39.82	V
N/A							
3814.000	-38.73	8.28	9.21	-37.80	-13.00	-24.80	H
6033.000	-51.56	10.76	10.93	-51.39	-13.00	-38.39	H
N/A							

Remark:

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

Operation Mode: WCDMA Band V / TX / CH 4132 **Test Date:** June 19, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
2267.000	-56.95	6.03	5.77	-57.21	-13.00	-44.21	V
3877.000	-54.04	8.36	9.28	-53.12	-13.00	-40.12	V
N/A							
1651.000	-57.84	5.05	6.03	-56.86	-13.00	-43.86	H
1952.000	-54.53	5.59	5.49	-54.63	-13.00	-41.63	H
N/A							

Remark:

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

Operation Mode: WCDMA Band V / TX / CH 4182 **Test Date:** June 19, 2014

Temperature: 26°C **Tested by:** Dennis Li

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)
1749.000	-45.9	5.2	5.85	-45.25	-13.00	-32.25	V
1945.000	-51.56	5.57	5.5	-51.63	-13.00	-38.63	V
N/A							
1672.000	-49.29	5.07	5.99	-48.37	-13.00	-35.37	H
4073.000	-52.87	8.43	9.46	-51.84	-13.00	-38.84	H
N/A							

Remark:

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

Operation Mode: WCDMA Band V / TX / CH 4233 **Test Date:** June 19, 2014

Temperature: 26°C **Tested by:** Dennis Li

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	-44.9	5.1	5.95	-44.05	-13.00	-31.05	V
1749.000	-45.6	5.2	5.85	-44.95	-13.00	-31.95	V
N/A							
1693.000	-44.72	5.1	5.95	-43.87	-13.00	-30.87	H
1952.000	-48.33	5.59	5.49	-48.43	-13.00	-35.43	H
N/A							

Remark:

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

Operation Mode:	WCDMA / HSDPA Band II / TX / CH 9262	**Test Date:**	June 26, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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	-32.61	8.2	9.1	-31.71	-13.00	-18.71	V
5235.000	-54.45	9.59	10.69	-53.35	-13.00	-40.35	V
N/A							
3702.000	-36.22	8.2	9.1	-35.32	-13.00	-22.32	H
5151.000	-53.92	9.51	10.66	-52.77	-13.00	-39.77	H
N/A							

Remark:

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

Operation Mode:	WCDMA / HSDPA Band II / TX / CH 9400	**Test Date:**	June 26, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
3765.000	-34.72	8.24	9.16	-33.80	-13.00	-20.80	V
4983.000	-54.48	9.38	10.57	-53.29	-13.00	-40.29	V
N/A							
3765.000	-38.96	8.24	9.16	-38.04	-13.00	-25.04	H
5193.000	-54.36	9.55	10.68	-53.23	-13.00	-40.23	H
N/A							

Remark:

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

Operation Mode:	WCDMA / HSDPA Band II / TX / CH 9538	**Test Date:**	June 26, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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	-39.11	8.28	9.21	-38.18	-13.00	-25.18	V
5718.000	-50.03	10.21	10.84	-49.40	-13.00	-36.40	V
N/A							
3814.000	-42.91	8.28	9.21	-41.98	-13.00	-28.98	H
5718.000	-53.56	10.21	10.84	-52.93	-13.00	-39.93	H
N/A							

Remark:

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

Operation Mode:	WCDMA / HSDPA Band V / TX / CH 4132	**Test Date:**	June 26, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
1749.000	-43.46	5.2	5.85	-42.81	-13.00	-29.81	V
3576.000	-55.66	8.05	8.98	-54.73	-13.00	-41.73	V
N/A							
1749.000	-46.98	5.2	5.85	-46.33	-13.00	-33.33	H
3667.000	-54.71	8.17	9.07	-53.81	-13.00	-40.81	H
N/A							

Remark:

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

Operation Mode:	WCDMA / HSDPA Band V / TX / CH 4182	**Test Date:**	June 26, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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	-49.57	5.07	5.99	-48.65	-13.00	-35.65	V
3751.000	-56.28	8.23	9.15	-55.36	-13.00	-42.36	V
N/A							
1672.000	-54.09	5.07	5.99	-53.17	-13.00	-40.17	H
3667.000	-54.7	8.17	9.07	-53.80	-13.00	-40.80	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:**	June 26, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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	-44.36	5.1	5.95	-43.51	-13.00	-30.51	V
2848.000	-57.57	6.97	7	-57.54	-13.00	-44.54	V
N/A							
1693.000	-48.68	5.1	5.95	-47.83	-13.00	-34.83	H
2540.000	-54.89	6.41	6.2	-55.10	-13.00	-42.10	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 / HSUPA Band II / TX / CH 9262	**Test Date:**	June 25, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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	-28.71	8.2	9.1	-27.81	-13.00	-14.81	V
5529.000	-54.97	10.01	10.81	-54.17	-13.00	-41.17	V
N/A							
3702.000	-32.16	8.2	9.1	-31.26	-13.00	-18.26	H
5424.000	-54.57	9.85	10.77	-53.65	-13.00	-40.65	H
N/A							

Remark:

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

Operation Mode:	WCDMA / HSUPA Band II / TX / CH 9400	**Test Date:**	June 25, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
3765.000	-33.66	8.24	9.16	-32.74	-13.00	-19.74	V
5410.000	-55.98	9.83	10.76	-55.05	-13.00	-42.05	V
N/A							
3765.000	-39.36	8.24	9.16	-38.44	-13.00	-25.44	H
5480.000	-53.79	9.92	10.79	-52.92	-13.00	-39.92	H
N/A							

Remark:

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

Operation Mode:	WCDMA / HSUPA Band II / TX / CH 9538	**Test Date:**	June 25, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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	-39.04	8.28	9.21	-38.11	-13.00	-25.11	V
5151.000	-54.5	9.51	10.66	-53.35	-13.00	-40.35	V
N/A							
3814.000	-42.38	8.28	9.21	-41.45	-13.00	-28.45	H
5095.000	-53.99	9.45	10.64	-52.80	-13.00	-39.80	H
N/A							

Remark:

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

Operation Mode:	WCDMA / HSUPA Band V / TX / CH 4132	**Test Date:**	June 25, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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)
1952.000	-46.72	5.59	5.49	-46.82	-13.00	-33.82	V
2932.000	-56.31	7.11	7.22	-56.20	-13.00	-43.20	V
N/A							
1952.000	-55.71	5.59	5.49	-55.81	-13.00	-42.81	H
2862.000	-55.92	7.02	7.04	-55.90	-13.00	-42.90	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:	WCDMA / HSUPA Band V / TX / CH 4182	**Test Date:**	June 25, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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	-49.81	5.07	5.99	-48.89	-13.00	-35.89	V
1945.000	-48.51	5.57	5.5	-48.58	-13.00	-35.58	V
N/A							
1672.000	-51.35	5.07	5.99	-50.43	-13.00	-37.43	H
1952.000	-53.93	5.59	5.49	-54.03	-13.00	-41.03	H
N/A							

Remark:

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

Operation Mode:	WCDMA / HSUPA Band V / TX / CH 4233	**Test Date:**	June 25, 2014
Temperature:	26°C	**Tested by:**	Dennis Li
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	-45.18	5.1	5.95	-44.33	-13.00	-31.33	V
1959.000	-55.95	5.61	5.47	-56.09	-13.00	-43.09	V
N/A							
1693.000	-45.87	5.1	5.95	-45.02	-13.00	-32.02	H
2540.000	-53.88	6.41	6.2	-54.09	-13.00	-41.09	H
N/A							

Remark:

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

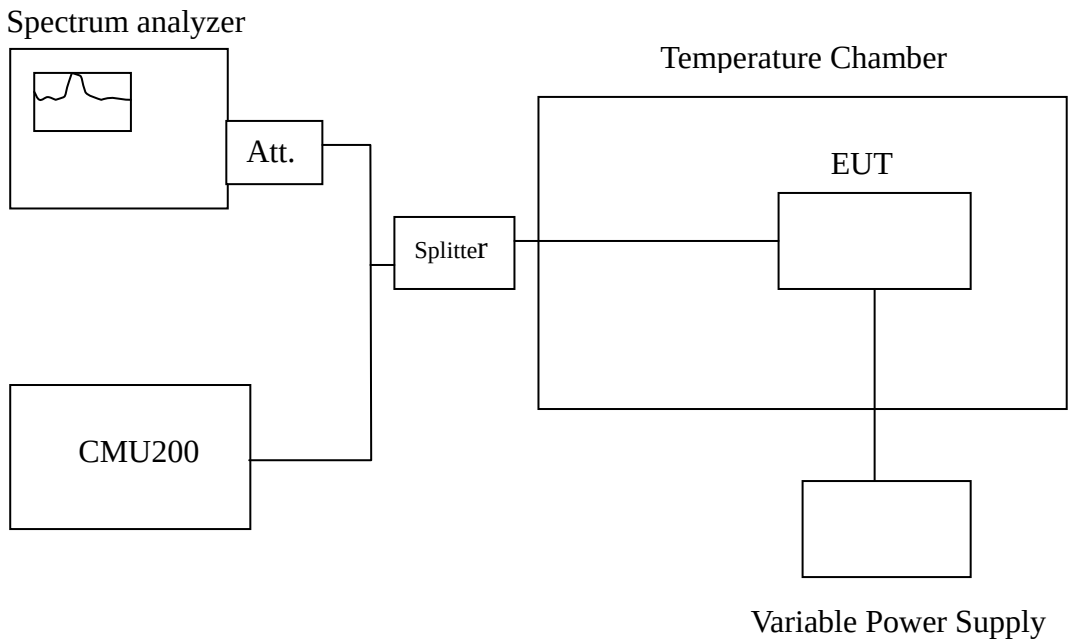
7.7FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

LIMIT

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

Frequency Tolerance: 2.5 ppm

Test Configuration



Remark: *Measurement setup for testing on Antenna connector*

TEST PROCEDURE

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

TEST RESULTS

No non-compliance noted.

Reference Frequency: GSM Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2091 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
230	50	836600025	29	2091
	40	836600007	11	
	30	836599989	-7	
	20	836599996	0	
	10	836599993	-3	
	0	836599996	0	
	-10	836600016	20	
	-20	836599979	-17	
	-30	836600010	14	

Reference Frequency: GSM Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
230	50	1880000023	31	4700
	40	1880000019	27	
	30	1879999984	-8	
	20	1879999992	0	
	10	1880000012	20	
	0	1879999977	-15	
	-10	1880000011	19	
	-20	1880000015	23	
	-30	1879999976	-16	

Reference Frequency: GPRS Mid Channel 836.6 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2091 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
230	50	836599986	-7	2091
	40	836600001	8	
	30	836599987	-6	
	20	836599993	0	
	10	836600014	21	
	0	836599982	-11	
	-10	836599995	2	
	-20	836599982	-11	
	-30	836599983	-10	

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
230	50	1880000021	25	4700
	40	1880000016	20	
	30	1880000001	5	
	20	1879999996	0	
	10	1880000000	4	
	0	1880000007	11	
	-10	1880000024	28	
	-20	1879999999	3	
	-30	1880000001	5	

Reference Frequency: EDGE Mid Channel 836.6 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2091 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
230	50	836600009	15	2091
	40	836599980	-14	
	30	836599982	-12	
	20	836599994	0	
	10	836599999	5	
	0	836599988	-6	
	-10	836600012	18	
	-20	836599983	-11	
	-30	836599994	0	

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
230	50	1879999998	-8	4700
	40	1879999993	-13	
	30	1879999989	-17	
	20	1880000006	0	
	10	1880000015	9	
	0	1880000021	15	
	-10	1880000019	13	
	-20	1880000008	2	
	-30	1880000002	-4	

Reference Frequency: WCDMA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
230	50	1880000018	9	4700
	40	1879999992	-17	
	30	1879999999	-10	
	20	1880000009	0	
	10	1880000009	0	
	0	1879999995	-14	
	-10	1879999989	-20	
	-20	1879999982	-27	
	-30	1879999994	-15	

Reference Frequency: WCDMA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2091 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
230	50	836399988	-11	2091
	40	836399987	-12	
	30	836400002	3	
	20	836399999	0	
	10	836399982	-17	
	0	836400020	21	
	-10	836400021	22	
	-20	836400021	22	
	-30	836399985	-14	

Reference Frequency: WCDMA / HSDPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
230	50	1880000004	-5	4700
	40	1880000006	-3	
	30	1880000000	-9	
	20	1880000009	0	
	10	1880000004	-5	
	0	1879999979	-30	
	-10	1880000021	12	
	-20	1880000020	11	
	-30	1880000003	-6	

Reference Frequency: WCDMA / HSDPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2091 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
230	50	836399985	-20	2091
	40	836399985	-20	
	30	836400017	12	
	20	836400005	0	
	10	836400013	8	
	0	836400001	-4	
	-10	836399981	-24	
	-20	836400009	4	
	-30	836400021	16	

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)
230	50	1880000015	11	4700
	40	1879999989	-15	
	30	1880000011	7	
	20	1880000004	0	
	10	1880000015	11	
	0	1880000017	13	
	-10	1879999978	-26	
	-20	1880000015	11	
	-30	1880000005	1	

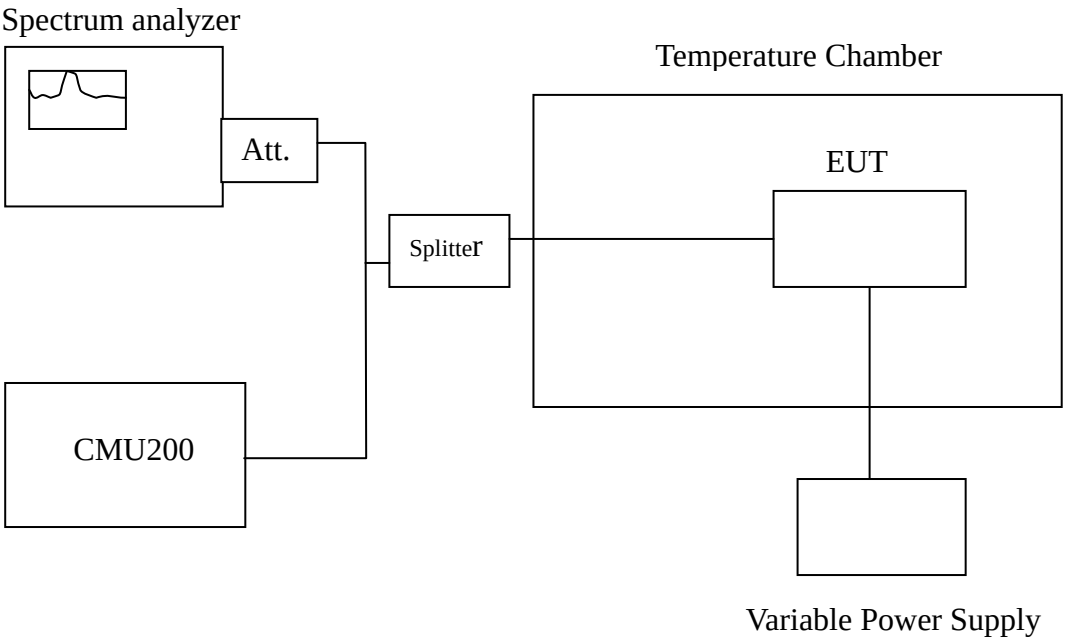
Reference Frequency: WCDMA / HSUPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2091 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
230	50	836400001	9	2091
	40	836400003	11	
	30	836400003	11	
	20	836399992	0	
	10	836400002	10	
	0	836400019	27	
	-10	836399993	1	
	-20	836400023	31	
	-30	836400016	24	

7.8FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

LIMIT

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

Test Configuration



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

TEST PROCEDURE

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

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

TEST RESULTS

No non-compliance noted.

Reference Frequency: GSM Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2091Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
253	20	836600001	-1	2091
230		836600002	0	
207		836600012	10	

Reference Frequency: GSM Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
253	20	1879999984	-24	4700
230		1880000008	0	
207		1880000003	-5	

Reference Frequency: GPRS Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2091Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
253	20	836600008	1	2091
230		836600007	0	
207		836600004	-3	

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
253	20	1879999986	-24	4700
230		1880000010	0	
207		1880000008	-2	

Reference Frequency: EDGE Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2091Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
253	20	836600007	12	2091
230		836599995	0	
207		836600012	17	

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
253	20	1880000008	4	4700
230		1880000004	0	
207		1880000016	12	

Reference Frequency: WCDMA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
253	20	1879999987	-21	4700
230		1880000008	0	
207		1880000006	-2	

Reference Frequency: WCDMA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2091Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
253	20	836400019	16	2091
230		836400003	0	
207		836400020	17	

Reference Frequency: WCDMA HSDPA Band II Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
253	20	1880000018	21	4700
230		1879999997	0	
207		1879999985	-12	

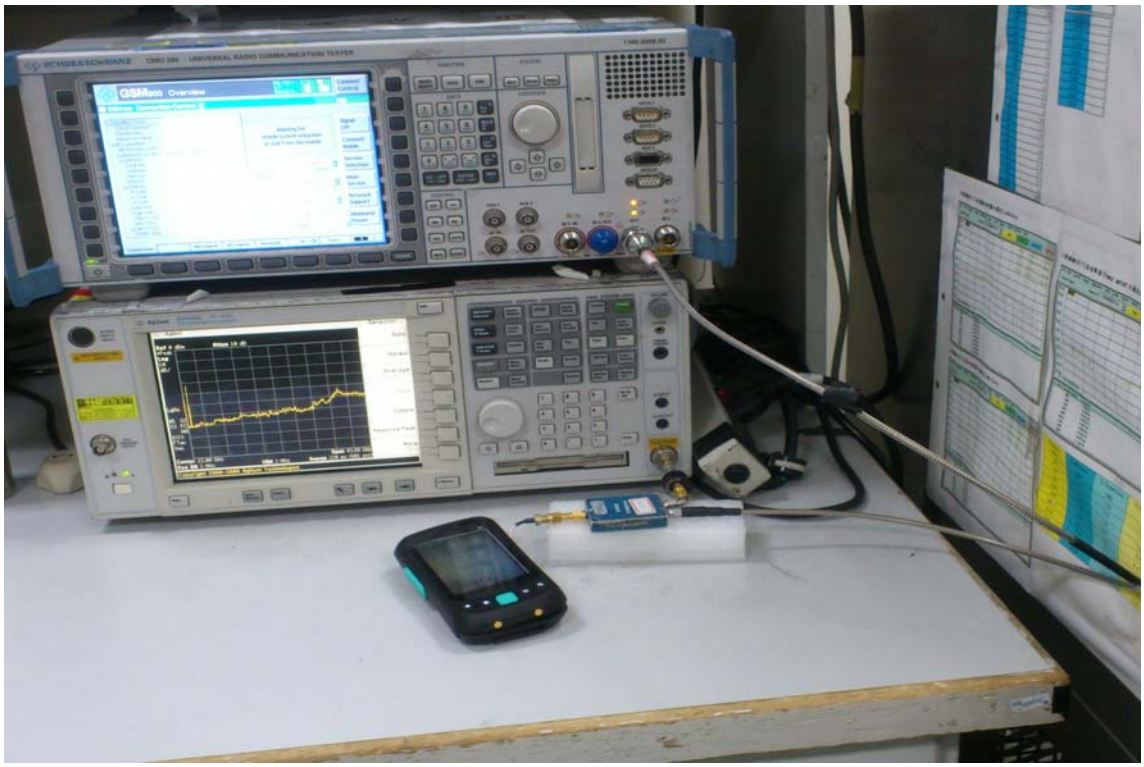
Reference Frequency: WCDMA HSDPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
253	20	836400017	14	2090
230		836400003	0	
207		836400019	16	

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)
253	20	1879999990	-6	4700
230		1879999996	0	
207		1880000018	22	

Reference Frequency: WCDMA HSUPA Band V Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2091Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
253	20	836400010	6	2091
230		836400004	0	
207		836399996	-8	

APPENDIX I
PHOTOGRAPHS OF TEST SETUP

Conducted Emission Set Up Photo



Radiated Emission Set up Photos

Stand-up (Z axis) for GSM850 / GPRS 850 / EDGE 850 / HSDPA Band V / HSUPA Band V slide mode

Lie-down (Y axis) for GSM1900 / GPRS1900 / EDGE 1900 / WCDMA Band II / WCDMA Band V / HSDPA Band II / HSUPA Band II slide mode.