



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

For

Product Name: Mobile Phone

Brand Name: Innos

Model No.: Innos a35

Series Model: N/A

**Test Report Number:
KS121018A05-RP1**

Issued for

JSR Limited

Room 8, 12/F, Lucida Industrial Building, No. 43-4 Wang Lung Street, Tsuen Wan, HongKong

Issued by

Compliance Certification Services Inc.

Kun shan Laboratory

**No.10 Weiye Rd., Innovation park, Eco&Tec,
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TESTING CERT #2541.01

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REVISION HISTORY

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	November 6, 2012	Initial Issue	ALL	Hadiif Hoo



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1 TEST RESULT CERTIFICATION

Product Name:	Mobile Phone
Trade Name:	Innos
Model Name.:	Innos a35
Series Model:	N/A
Applicant Discrepancy:	Initial
Devices supporting GPRS:	Class B
GPRS /EDGE Level:	Multi-Class 12
Multi-slot Class:	1 Uplink +4 Downlink
Device Category:	PORTABLE DEVICES
Exposure Category:	GENERAL POPULATION/UNCONTROLLED EXPOSURE
Date of Test:	November 1, 2012
Applicant:	JSR Limited Room 8, 12/F, Lucida Industrial Building, No. 43-4 Wang Lung Street, Tsuen Wan, HongKong
Manufacturer:	JSR Limited Room 8, 12/F, Lucida Industrial Building, No. 43-4 Wang Lung Street, Tsuen Wan, HongKong
Application Type:	Certification

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

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 ANSI C63.4: 2003 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:

Tested by:

Hadiif Hoo
RF Manager
Compliance Certification Service Inc.

Sean.Yu
Test Engineer
Compliance Certification Service Inc.



2 EUT DESCRIPTION

Product Name:	Mobile Phone
Brand Name:	Innos
Model Name:	Innos a35
Series Model:	N/A
Model Discrepancy:	N/A
Power Adapter Power Rating :	Power supply and ADP (rating): Brand: innos Model: DGL-C01-01 INPUT:100~240V---50/60Hz 0.2A OUTPUT:5.0V --- 700mA Battery (rating): Brand: innos Model:BL-5H-i Capacitance:63.5x34x5.7mm 3.7V 1350mAh
Frequency Range:	GSM/GPRS/EDGE 850: 824.20 ~ 848.80 MHz GSM/GPRS/EDGE1900: 1850.20 ~ 1909.80 MHz WCDMA/HSDPA Band V:826.40 ~ 846.60 MHz WCDMA/HSDPA Band II:1852.40~1907.60 MHz Bluetooth:2402 ~ 2480 MHz WIFI:2412~2462 MHz
Transmit Power:	GSM 850: 30.09 dBm GSM 1900: 27.66 dBm GPRS 850: 30.06 dBm GPRS 1900: 27.64 dBm EDGE 850: 30.05 dBm EDGE 1900: 27.65 dBm WCDMA BAND V:21.30 dBm HSDPA BAND V: 21.50dBm WCDMA BAND II:20.49dBm HSDPA BAND II: 21.09dBm
Modulation Technique:	GSM/GPRS: GMSK WCDMA/HSDPA: QPSK IEEE 802.11b mode: DSSS (1, 2, 5.5 and 11 Mbps) IEEE 802.11g mode: DSSS /OFDM (6, 9, 12, 18, 24, 36, 48 and 54 Mbps) Bluetooth:GFSK(1 Mbps),π/4-DQPSK(2 Mbps),8-DPSK(3 Mbps)
Antenna Gain:	GSM/WCDMA : 2 dBi
Antenna Type:	GSM/WCDMA: PIFA Antenna BT,WIFI: 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: COYA35** filing to comply with Part 22 and Part 24 of the FCC 47 CFR Rules.



3 TEST METHODOLOGY

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

3.1. EUT CONFIGURATION

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner that intends to maximize its emission characteristics in a continuous normal application.

3.2. EUT EXERCISE

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

3.3. GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4: 2003. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

RADIATED EMISSIONS

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

3.4. DESCRIPTION OF TEST MODES

The EUT (model: Gobi2) had been tested under operating condition.

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.

EUT staying in continuous transmitting mode was programmed.

GSM/GPRS / 850:

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

GSM/GPRS / 1900:

Channel Low (CH512), Channel Mid (CH661) and Channel High (CH810) were chosen for full testing.

WCDMA Band V:

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

HSDPA Band V:

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

WCDMA Band II:

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

HSDPA Band II:

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



4 INSTRUMENT CALIBRATION

4.1. MEASURING INSTRUMENT CALIBRATION

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

4.2. MEASUREMENT EQUIPMENT USED

Conducted Emissions Test Site				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY44020154	2013-5-12
DETECTOR NEGATIVE	Agilent	8473B	MY42240176	2013-5-12
OSCILLOSCOPE	Agilent	DSO6104A	MY44002585	2013-3-25
Peak and Avg Power Sensor	Agilent	E9327A	US40441788	2013-3-25
EPM-P Series Power Meter	Agilent	E4416A	GB41292714	2013-5-12
Power SPLITTER	Mini-Circuits	ZN2PD-9G	SF078500430	2013-5-12
DC POWER SUPPLY	GW instek	GPS-3303C	E903131	2013-5-12
Temp. / Humidity Chamber	Kingson	THS-M1	242	2013-3-13
Test Software	EZ-EMC			

977 Chamber				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY44020154	2013-5-12
EMI Test Receiver	R&S	ESPI3	101026	2013-3-16
Pre-Amplifier	MINI	ZFL-1000VH2	d041703	2013-6-30
Pre-Amplifier	Miteq	NSP4000-NF	870629	2013-6-30
Bilog Antenna	Sunol	JB1	A110204-2	2013-6-24
Horn-antenna	SCHWARZBECK	BBHA9120D	D:266	2013-5-12
Turn Table	CT	CT123	4165	N.C.R
Antenna Tower	CT	CTERG23	3256	N.C.R
Controller	CT	CT100	95637	N.C.R
Test Software	EZ-EMC			



Conducted Emission				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI TEST RECEIVER	R&S	ESCI3	100781	2013-3-16
V (V-LISN)	Schwarzbeck	NNLK 8129	8129-143	2013-3-16
LISN (EUT)	FCC	FCC-LISN-50/250-50-2-02	SN:05012	2013-3-16
TRANSIENT LIMITER	SCHAFFNER	CFL9206	1710	2013-4-9
Test Software	EZ-EMC			

Remark: Each piece of equipment is scheduled for calibration once a year.

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

Measurement	Frequency		Uncertainty
Conducted emissions	0.15MHz~30MHz		± 3.43 dB
Measurement	Polarity	Frequency	Uncertainty
Radiated emissions (below 1GHz)	H	30MHz ~ 200MHz	+/- 4.72dB
		200MHz ~1000MHz	+/- 4.72dB
	V	30MHz ~ 200MHz	+/- 4.83dB
		200MHz ~1000MHz	+/- 4.70dB
Radiated emissions (above 1GHz)	H	1000MHz ~5000MHz	+/- 3.94dB
		5000MHz ~6000MHz	+/- 3.94dB
	V	1000MHz ~5000MHz	+/- 3.94dB
		5000MHz ~6000MHz	+/- 3.94dB

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



5 FACILITIES AND ACCREDITATIONS

5.1. FACILITIES

☒ No.10Weiye Rd, Innovation park, Eco&Tec, Development Zone, Kunshan City, Jiangsu, China.

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

5.2. EQUIPMENT

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

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

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

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

5.3. ACCREDITATIONS

Our laboratories are accredited and approved by the following accreditation body according to ISO/IEC 17025.

USA	A2LA
China	CNAS

The measuring facility of laboratories has been authorized or registered by the following approval agencies.

Canada	Industry Canada
Japan	VCCI
Taiwan	BSMI
USA	FCC

Copies of granted accreditation certificates are available for downloading from our web site, <http://www.ccsrf.com>



6 SETUP OF EQUIPMENT UNDER TEST

6.1. SETUP CONFIGURATION OF EUT

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

6.2. SUPPORT EQUIPMENT

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

Remark:

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



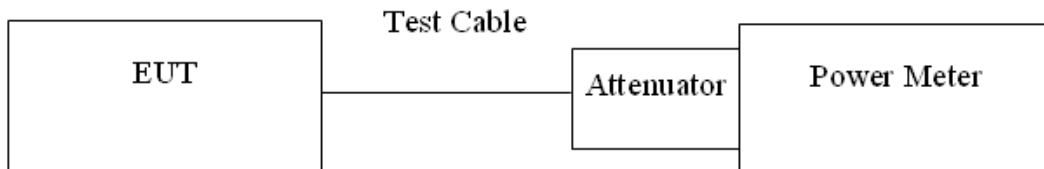
7 FCC PART 22 & 24 REQUIREMENTS

7.1. PEAK POWER

LIMIT

According to FCC §2.1046.

Test Configuration



Remark: Measurement setup for testing on Antenna connector

TEST PROCEDURE

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

TEST RESULTS

No non-compliance noted.

Test Data

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)
GPRS 850 (Class 12)	128	824.20	30.06
	190	836.40	29.94
	251	848.80	29.92
EDGE 850 (Class 12)	128	824.20	30.05
	190	836.40	29.69
	251	848.80	29.91
GSM 850	128	824.20	30.09
	190	836.40	29.94
	251	848.80	30.07

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)
GPRS 1900 (Class 12)	512	1850.20	27.64
	661	1880.00	27.47
	810	1909.80	26.90
EDGE 1900 (Class 12)	512	1850.20	27.65
	661	1880.00	27.50
	810	1909.80	26.96



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GSM 1900	512	1850.20	27.66
	661	1880.00	27.48
	810	1909.80	26.94

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)
WCDMA (BAND V)	4132	826.40	21.30
	4182	836.40	20.00
	4233	846.60	20.84
HSDPA (BAND V)	4132	826.40	21.50
	4182	836.40	21.81
	4233	846.60	20.38

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)
HSDPA (BAND II)	9262	1852.40	20.29
	9400	1880.00	20.00
	9538	1907.60	20.49
WCDMA (BAND II)	9262	1852.40	20.79
	9400	1880.00	20.46
	9538	1907.60	21.09

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

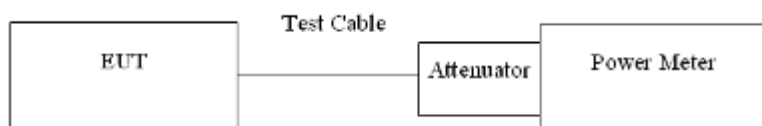


7.2. AVERAGE POWER

LIMIT

For reporting purposes only.

TEST CONFIGURATION



Remark: Measurement setup for testing on Antenna connector

TEST PROCEDURE

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

TEST RESULTS

No non-compliance noted.

Test Data

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)
GPRS 850 (Class 12)	128	824.20	29.99
	190	836.40	29.85
	251	848.80	29.75
EDGE 850 (Class 12)	128	824.20	29.86
	190	836.40	29.42
	251	848.80	29.12
GSM 850	128	824.20	30.01
	190	836.40	29.65
	251	848.80	30.12

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)
GPRS 1900 (Class 12)	512	1850.20	27.55
	661	1880.00	27.41
	810	1909.80	26.25
EDGE 1900 (Class 12)	512	1850.20	27.35
	661	1880.00	27.42
	810	1909.80	26.26
GSM 1900	512	1850.20	27.24



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	661	1880.00	27.25
	810	1909.80	26.62

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)
WCDMA (BAND V)	4132	826.40	21.01
	4182	836.40	19.85
	4233	846.60	20.32
HSDPA (BAND V)	4132	826.40	21.10
	4182	836.40	21.41
	4233	846.60	20.23

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)
HSDPA (BAND II)	9262	1852.40	20.21
	9400	1880.00	19.68
	9538	1907.60	20.01
WCDMA (BAND II)	9262	1852.40	20.02
	9400	1880.00	20.14
	9538	1907.60	21.03

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



7.3. ERP & EIRP MEASUREMENT

LIMIT

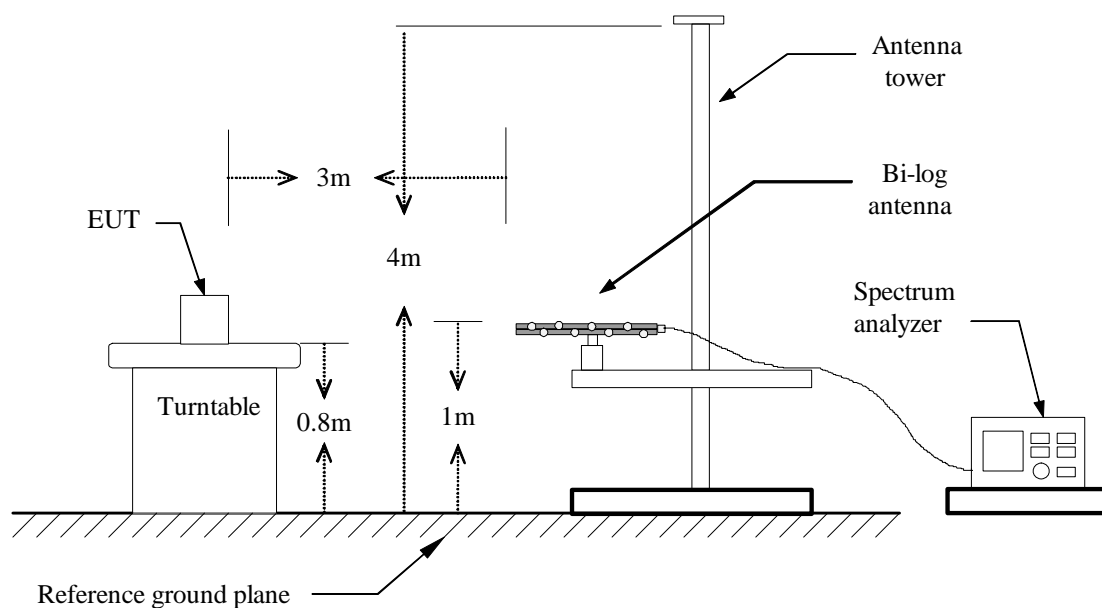
According to FCC §2.1046

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

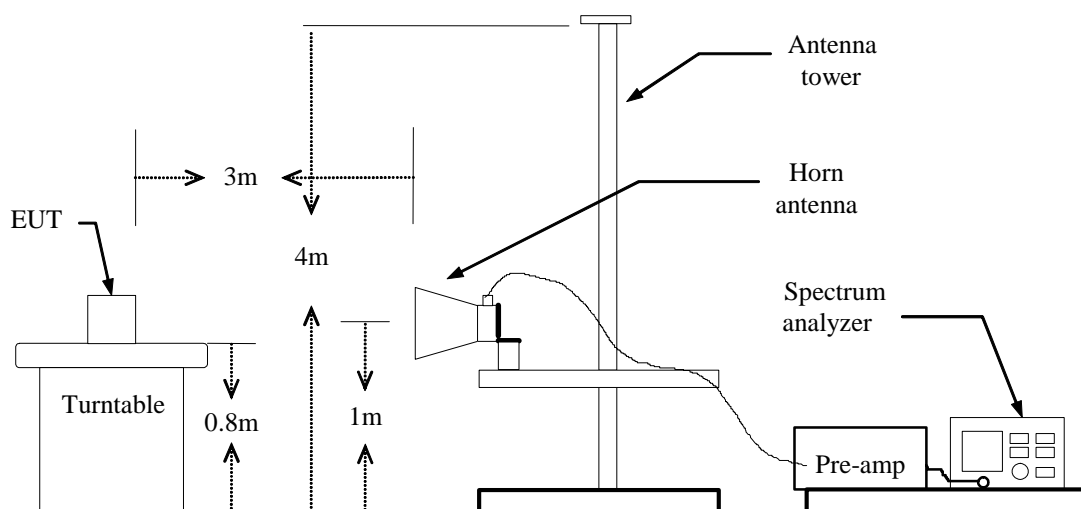
FCC 24.232(b): The equivalent Isotropic Radiated Power (EIRP) must not exceed 2 Watts.

TEST CONFIGURATION

Below 1 GHz

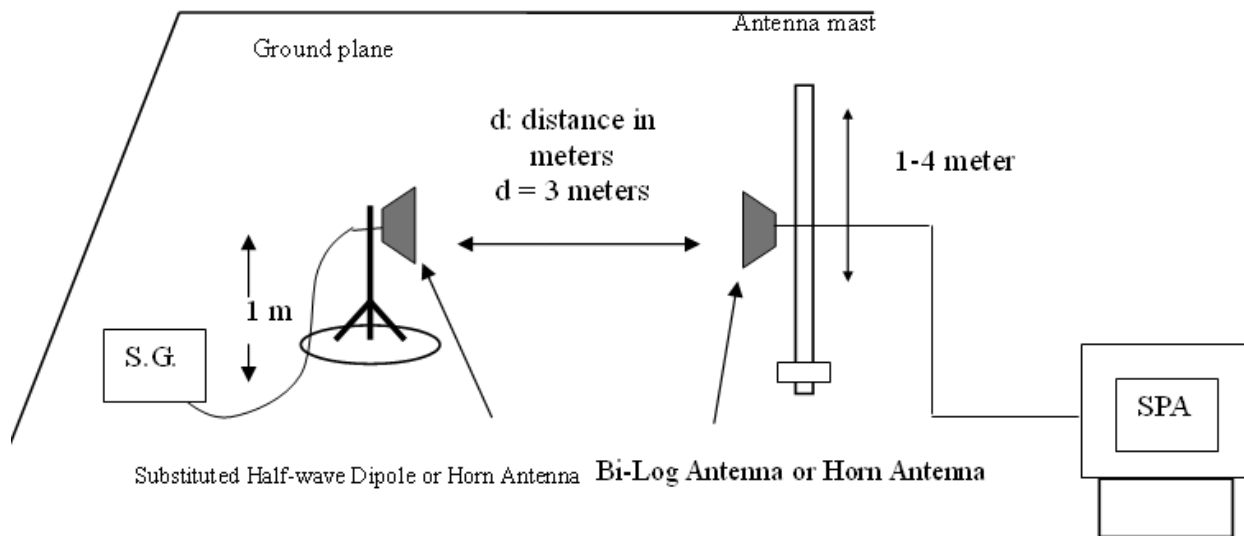


Above 1 GHz





FOR SUBSTITUTED METHOD TEST SET-UP



TEST PROCEDURE

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

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

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

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

TEST RESULTS

No non-compliance noted.



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GSM 850 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	rection Fa (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.18	V	-9.36	34.61	25.25	38.5	-13.25
	824.3	H	-3.89	34.26	30.37	38.5	-8.13
190	836.66	V	-10.36	34.45	24.09	38.5	-14.41
	836.78	H	-6.36	34.26	27.9	38.5	-10.6
251	848.84	V	-6.98	34.64	27.66	38.5	-10.84
	848.84	H	-6.32	34.44	28.12	38.5	-10.38

GSM 1900 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	rection Fa (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.1	V	-11.36	41.19	29.83	33	-3.17
	1850	H	-13.26	40.29	27.03	33	-5.97
661	1880	V	-12.69	41.19	28.5	33	-4.5
	1879.8	H	-15.36	41.75	26.39	33	-6.61
810	1909.9	V	-16.35	41.35	25	33	-8
	1909.9	H	-15.69	41.16	25.47	33	-7.53

GPRS 850 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	rection Fa (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.18	V	-8.36	34.61	26.25	38.5	-12.25
	824.18	H	-5.23	34.26	29.03	38.5	-9.47
190	836.54	V	-12.36	34.45	22.09	38.5	-16.41
	836.54	H	-6.85	34.26	27.41	38.5	-11.09
251	848.78	V	-9.68	34.64	24.96	38.5	-13.54
	849.08	H	-10.34	34.44	24.1	38.5	-14.4



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GPRS 1900 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	rection Fa (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.2	V	-10.36	41.17	30.81	33	-2.19
	1850.2	H	-11.36	40.79	29.43	33	-3.57
661	1879.8	V	-12.35	41.23	28.88	33	-4.12
	1879.8	H	-11.36	41.14	29.78	33	-3.22
810	1909.7	V	-12.36	41.3	28.94	33	-4.06
	1909.7	H	-12.34	41.38	29.04	33	-3.96

EDGE 850 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	rection Fa (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.18	V	-12.69	34.61	21.92	38.5	-16.58
	824.18	H	-10.65	34.26	23.61	38.5	-14.89
190	836.54	V	-10.69	34.45	23.76	38.5	-14.74
	836.54	H	-11.23	34.26	23.03	38.5	-15.47
251	848.78	V	-12.39	34.64	22.25	38.5	-16.25
	849.08	H	-13.65	34.44	20.79	38.5	-17.71

EDGE 1900 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	rection Fa (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.2	V	-12.15	41.17	29.02	33	-3.98
	1850.2	H	-12.36	40.79	28.43	33	-4.57
661	1879.8	V	-16.11	41.23	25.12	33	-7.88
	1879.8	H	-16.11	41.14	25.03	33	-7.97
810	1909.7	V	-11.01	41.3	30.29	33	-2.71
	1909.7	H	-13.62	41.38	27.76	33	-5.24



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WCDMA BAND V Test Data

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	rection Fa (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	826.4	V	-17.26	34.59	17.33	38.5	-21.17
	826.4	H	-14.36	37.66	23.3	38.5	-15.2
4182	836.4	V	-15.69	34.54	18.85	38.5	-19.65
	836.4	H	-14.36	34.63	20.27	38.5	-18.23
4233	846.6	V	-15.62	34.58	18.96	38.5	-19.54
	846.6	H	-14.36	34.7	20.34	38.5	-18.16

HSDPA BAND V Test Data

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	rection Fa (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	826.4	V	-16.35	34.59	18.24	38.5	-20.26
	826.4	H	-15.26	37.66	22.4	38.5	-16.1
4182	836.4	V	-15.36	34.54	19.18	38.5	-19.32
	836.4	H	-16.34	34.63	18.29	38.5	-20.21
4233	846.6	V	-16.36	34.58	18.22	38.5	-20.28
	846.6	H	-14.26	34.7	20.44	38.5	-18.06

WCDMA BAND II Test Data

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	rection Fa (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
9262	1852.4	V	-15.62	41.17	25.55	33	-7.45
	1852.4	H	-16.23	40.79	24.56	33	-8.44
9400	1880	V	-18.69	41.23	22.54	33	-10.46
	1880	H	-17.36	41.14	23.78	33	-9.22
9538	1907.6	V	-19.25	41.3	22.05	33	-10.95
	1907.6	H	-17.36	41.38	24.02	33	-8.98



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

HSDPA BAND II Test Data

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	rection Fa (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
9262	1852.4	V	-19.01	41.17	22.16	33	-10.84
	1852.4	H	-19.16	40.79	21.63	33	-11.37
9400	1880	V	-19.52	41.23	21.71	33	-11.29
	1880	H	-19.19	41.14	21.95	33	-11.05
9538	1907.6	V	-19.49	41.3	21.81	33	-11.19
	1907.6	H	-19.27	41.38	22.11	33	-10.89

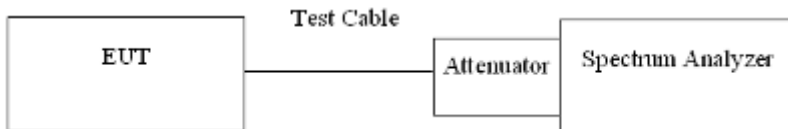


7.4. OCCUPIED BANDWIDTH MEASUREMENT

LIMIT

According to §FCC 2.1049.

TEST CONFIGURATION



Remark: Measurement setup for testing on Antenna connector

TEST PROCEDURE

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

TEST RESULTS

No non-compliance noted

Test Data

Test Mode	CH	Frequency (MHz)	99% Bandwidth (kHz)	26dB Bandwidth KHz
GPRS 850	128	824.20	247.4782	308.334
	190	836.40	252.1836	314.103
	251	848.80	246.0193	316.971
EDGE 850	128	824.20	244.9208	317.403
	190	836.40	241.7320	311.321
	251	848.80	242.7511	318.500
GSM 850	128	824.20	241.8861	313.169
	190	836.40	245.0211	311.413
	251	848.80	241.8861	313.169



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Test Mode	CH	Frequency (MHz)	99% Bandwidth (kHz)	26dB Bandwidth KHz
GPRS 1900	512	1850.20	243.9609	313.211
	661	1880.00	244.3364	317.308
	810	1909.80	248.5638	316.638
EDGE 1900	512	1850.20	245.5962	315.067
	661	1880.00	243.7942	318.615
	810	1909.80	243.1749	314.401
GSM 1900	512	1850.20	248.6729	315.666
	661	1880.00	246.4801	323.454
	810	1909.80	250.6187	316.859

Test Mode	CH	Frequency (MHz)	99% Bandwidth (MHz)	26dB Bandwidth MHz
WCDMA (Band V)	4132	826.40	4.1606	4.640
	4182	836.40	4.1704	4.649
	4233	846.60	4.2074	4.706
HSDPA (BAND V)	4132	826.40	4.1578	4.655
	4182	836.40	4.1802	4.648
	4233	846.60	4.2213	4.683

Test Mode	CH	Frequency (MHz)	99% Bandwidth (MHz)	26dB Bandwidth MHz
WCDMA (Band II)	9262	1852.40	4.1636	4.666
	9400	1880.00	4.1968	4.664
	9538	1907.60	4.1639	4.662
HSDPA (BAND II)	9262	1852.40	4.1636	4.666
	9400	1880.00	4.1822	4.655
	9538	1907.60	4.1518	4.662

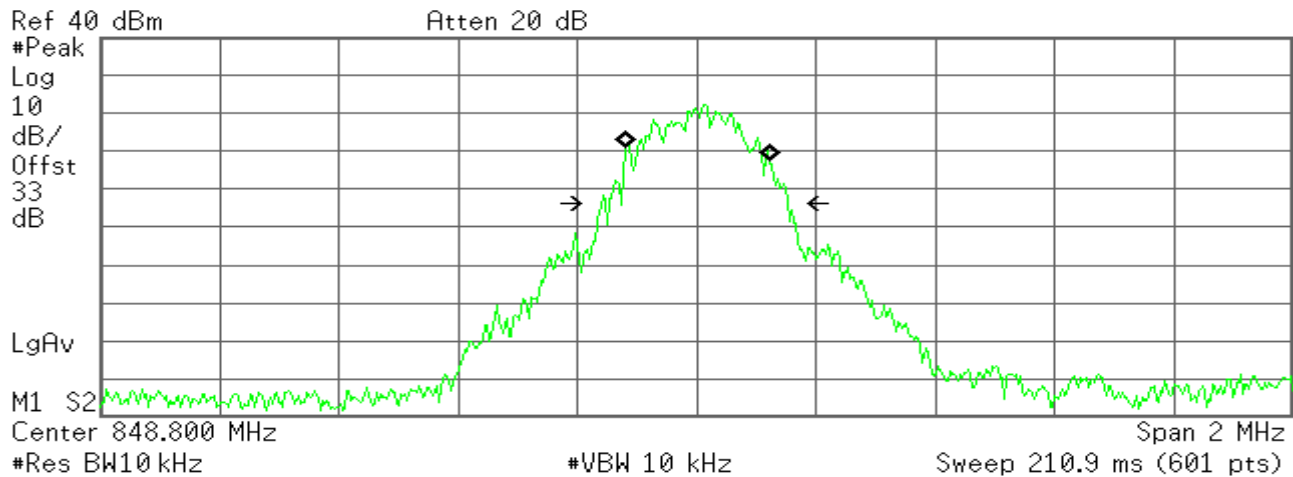


Test Plot

GSM 850 (CH Low)

* Agilent

R T



Occupied Bandwidth
241.8861 kHz

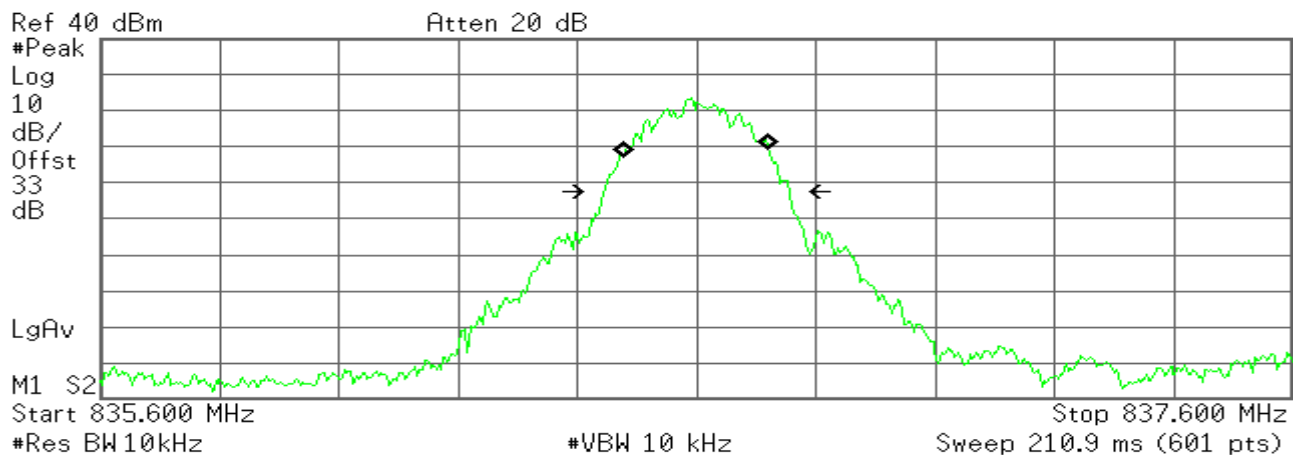
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 1.517 kHz
x dB Bandwidth 313.169 kHz

GSM 850 (CH Mid)

* Agilent

R T



Occupied Bandwidth
245.0211 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

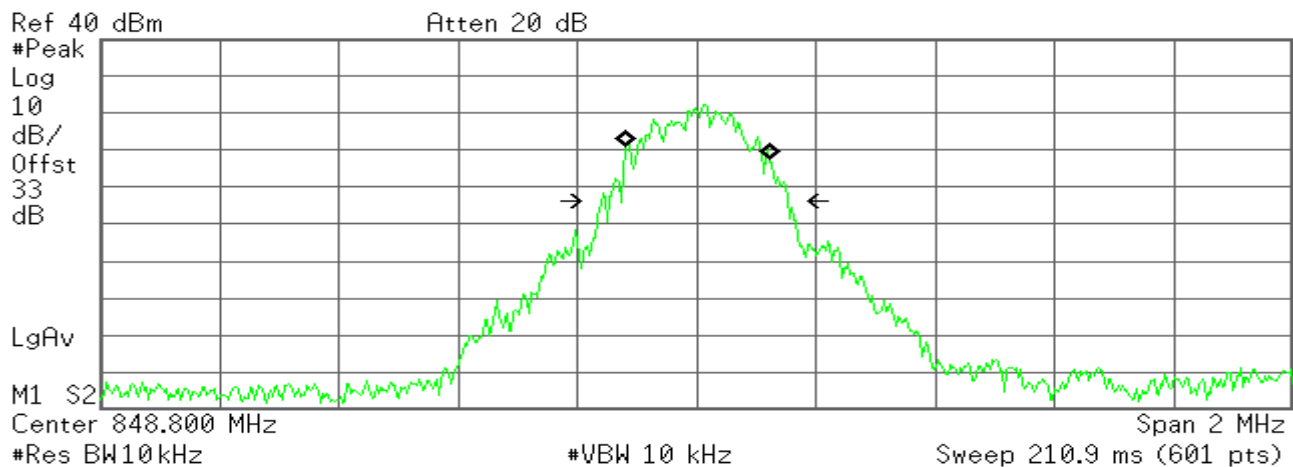
Transmit Freq Error -990.960 Hz
x dB Bandwidth 311.413 kHz



GSM 850(CH High)

* Agilent

R T



Occupied Bandwidth
241.8861 kHz

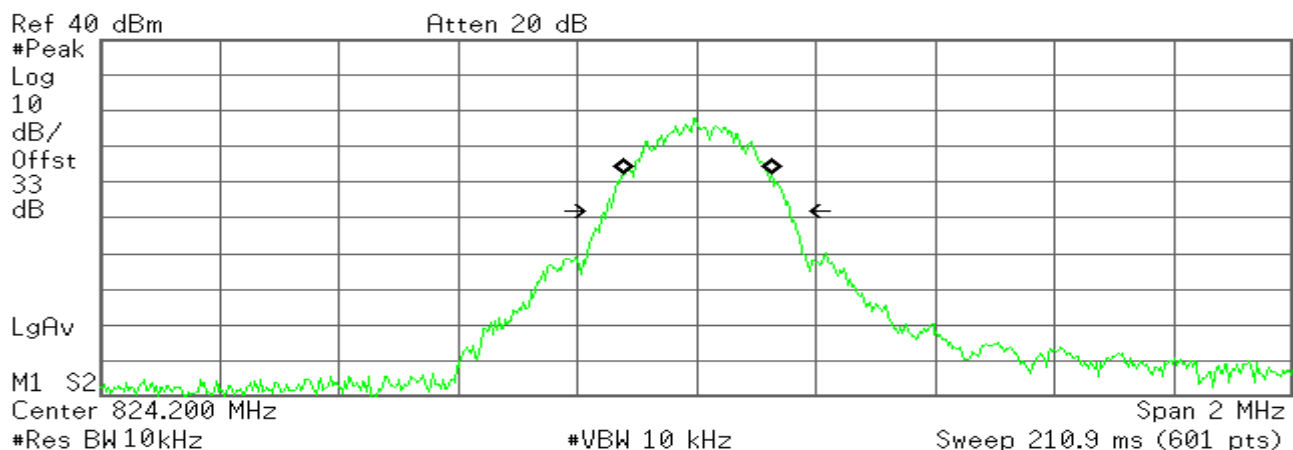
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 1.517 kHz
x dB Bandwidth 313.169 kHz

GPRS 850 (CH Low)

* Agilent

R T



Occupied Bandwidth
247.4782 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

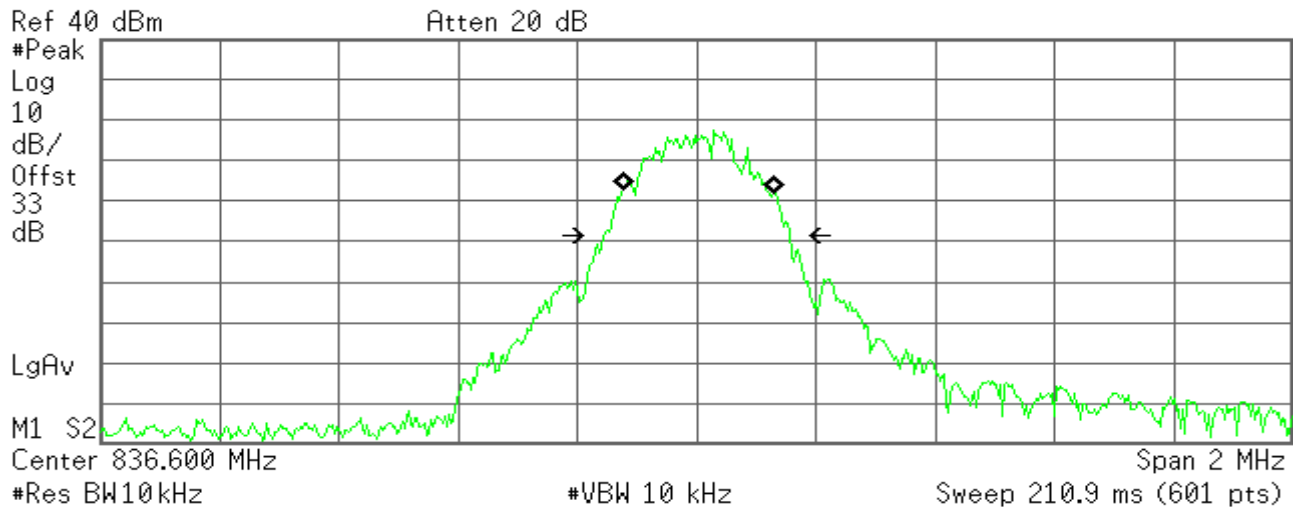
Transmit Freq Error 1.648 kHz
x dB Bandwidth 308.334 kHz



GPRS 850 (CH Mid)

* Agilent

R T



Occupied Bandwidth
252.1836 kHz

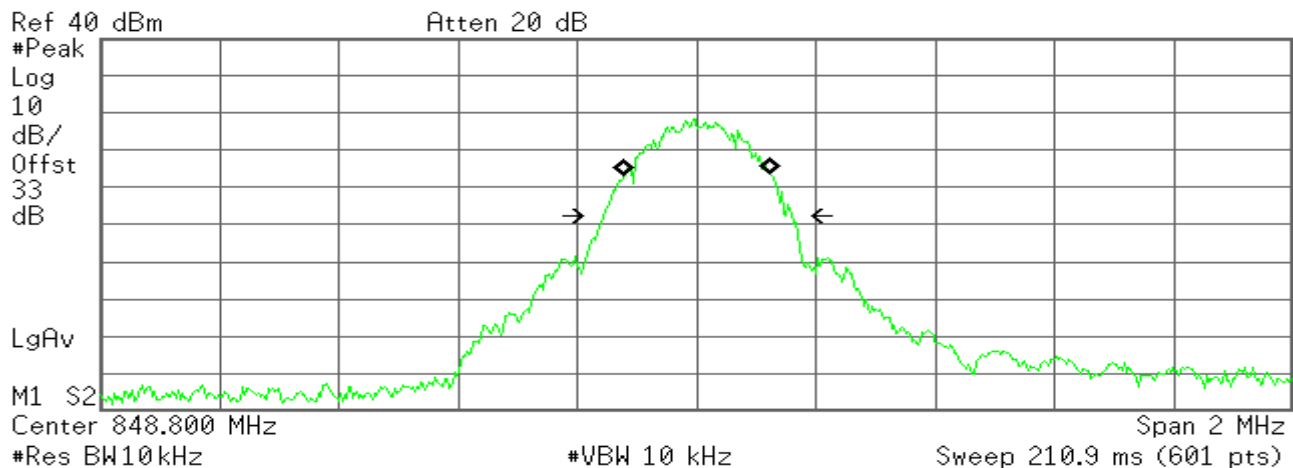
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 2.254 kHz
x dB Bandwidth 314.103 kHz

GPRS 850(CH High)

* Agilent

R T



Occupied Bandwidth
246.0193 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

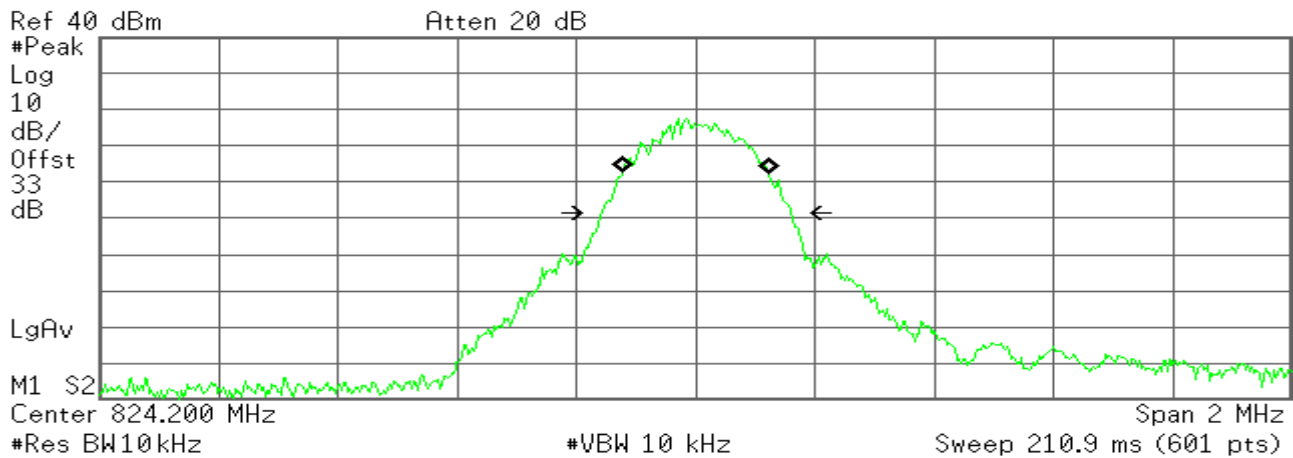
Transmit Freq Error 604.204 Hz
x dB Bandwidth 316.971 kHz



EGPRS 850(CH Low)

* Agilent

R T



Occupied Bandwidth
244.9208 kHz

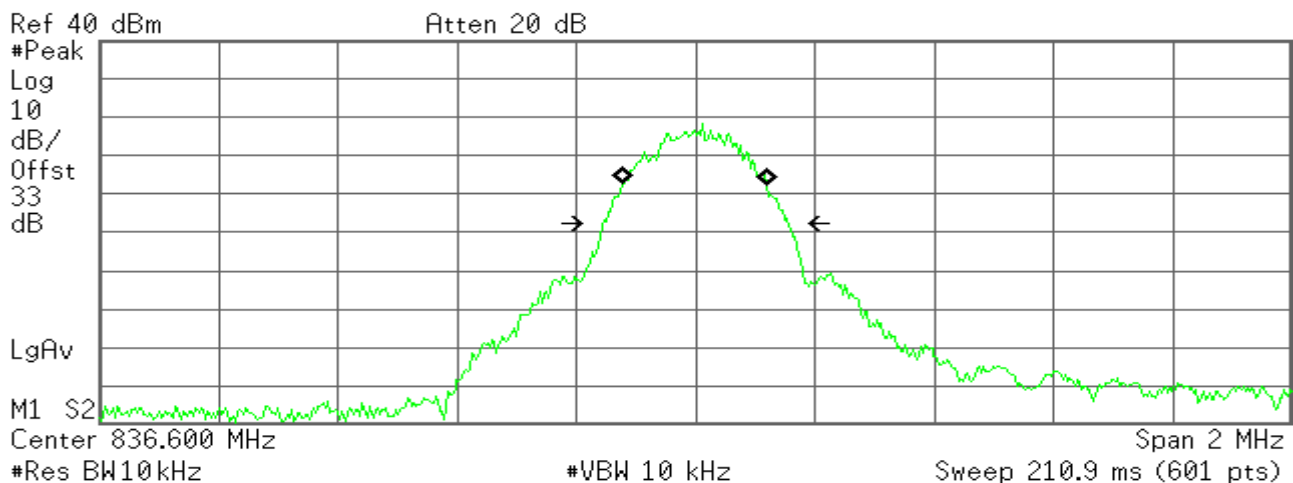
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 225.861 Hz
x dB Bandwidth 317.403 kHz

EGPRS 850(CH Mid)

* Agilent

R T



Occupied Bandwidth
241.7320 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

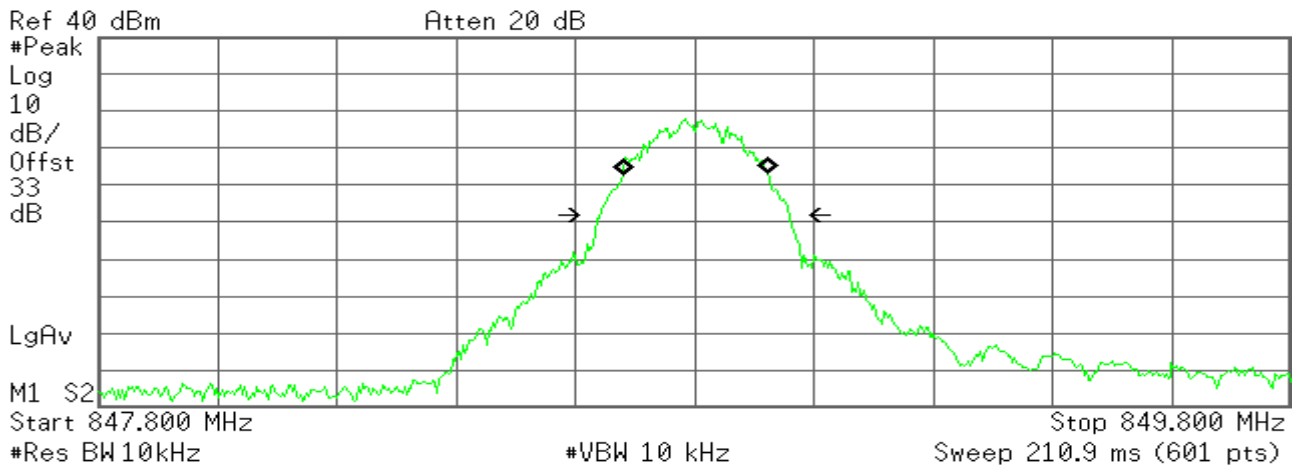
Transmit Freq Error -1.191 kHz
x dB Bandwidth 311.321 kHz



EGPRS 850(CH High)

* Agilent

R T



Occupied Bandwidth
242.7511 kHz

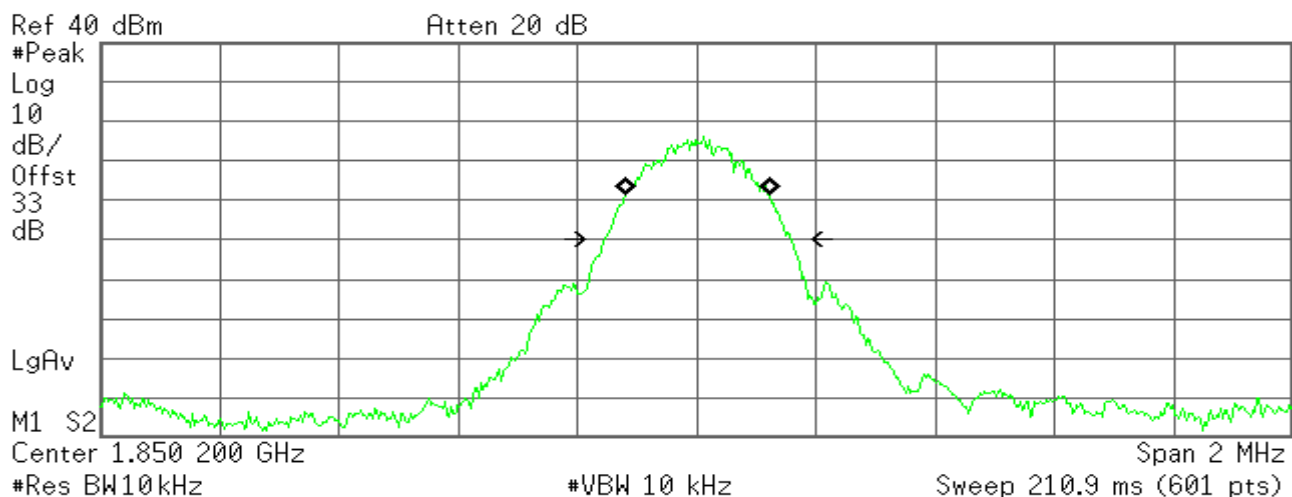
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 493.708 Hz
x dB Bandwidth 318.500 kHz

GPRS 1900 (CH Low)

* Agilent

R T



Occupied Bandwidth
243.9609 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

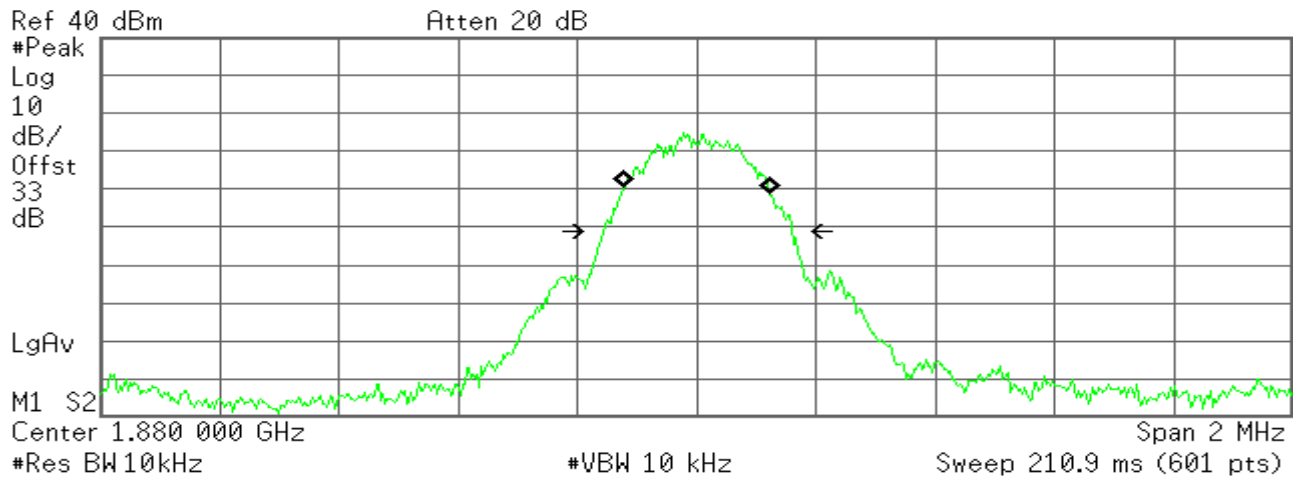
Transmit Freq Error 820.931 Hz
x dB Bandwidth 313.211 kHz



GPRS 1900 (CH Mid)

Agilent

R T



Occupied Bandwidth
244.3364 kHz

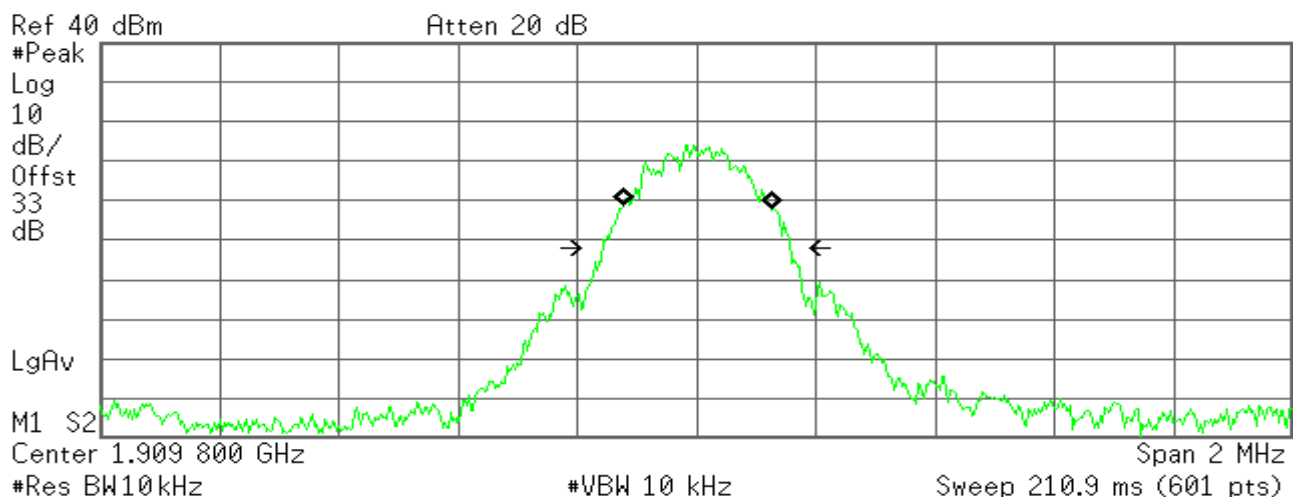
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 328.284 Hz
x dB Bandwidth 317.308 kHz

GPRS 1900 (CH High)

Agilent

R T



Occupied Bandwidth
248.5638 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

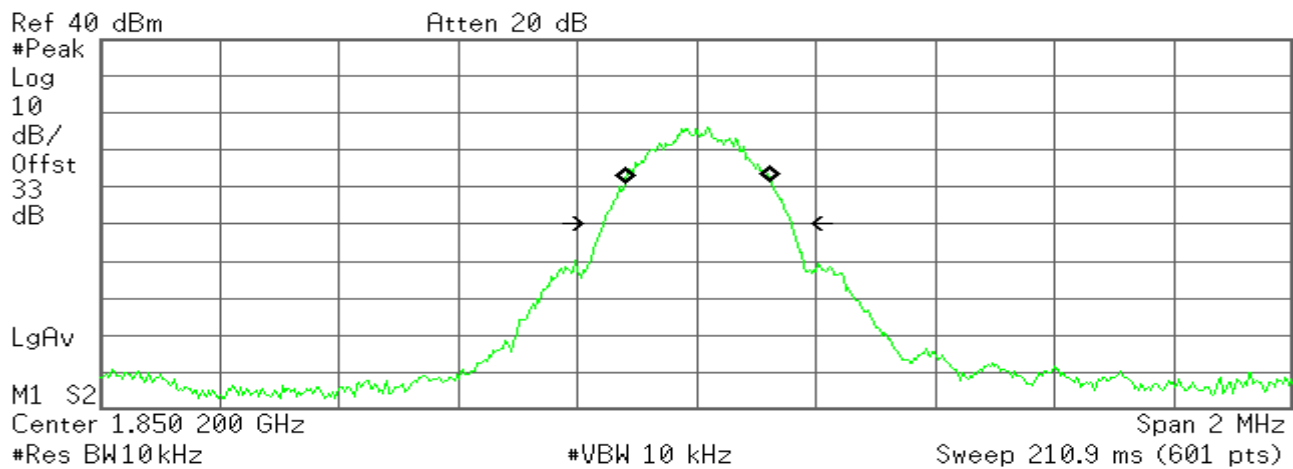
Transmit Freq Error 1.365 kHz
x dB Bandwidth 316.638 kHz



EDGE 1900 (CH Low)

* Agilent

R T



Occupied Bandwidth
245.5962 kHz

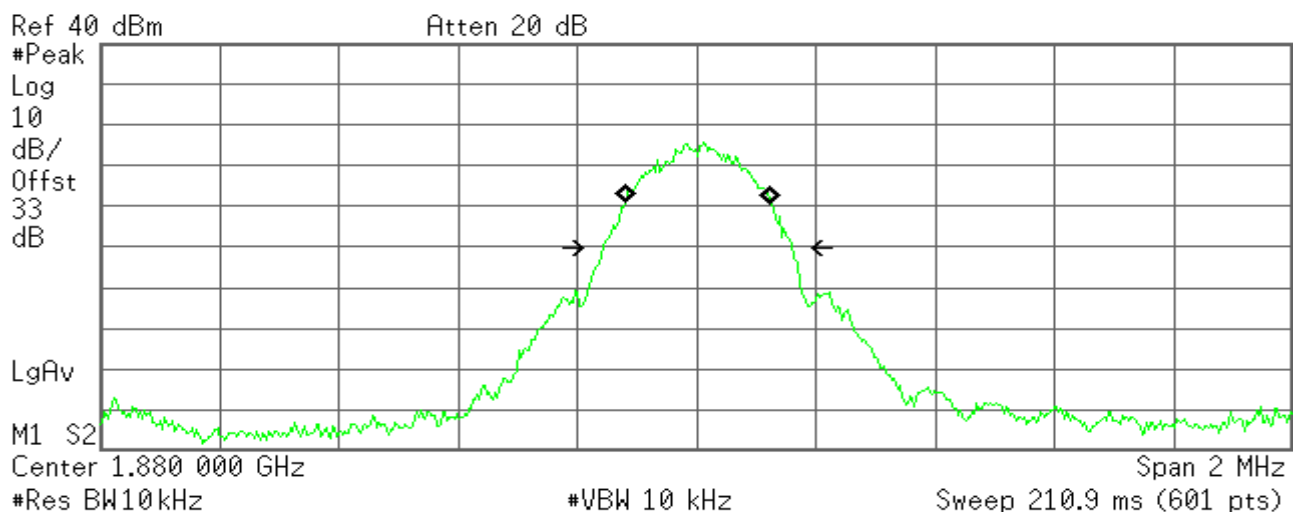
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 1.999 kHz
x dB Bandwidth 315.067 kHz

EDGE 1900 (CH Mid)

* Agilent

R T



Occupied Bandwidth
243.7942 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

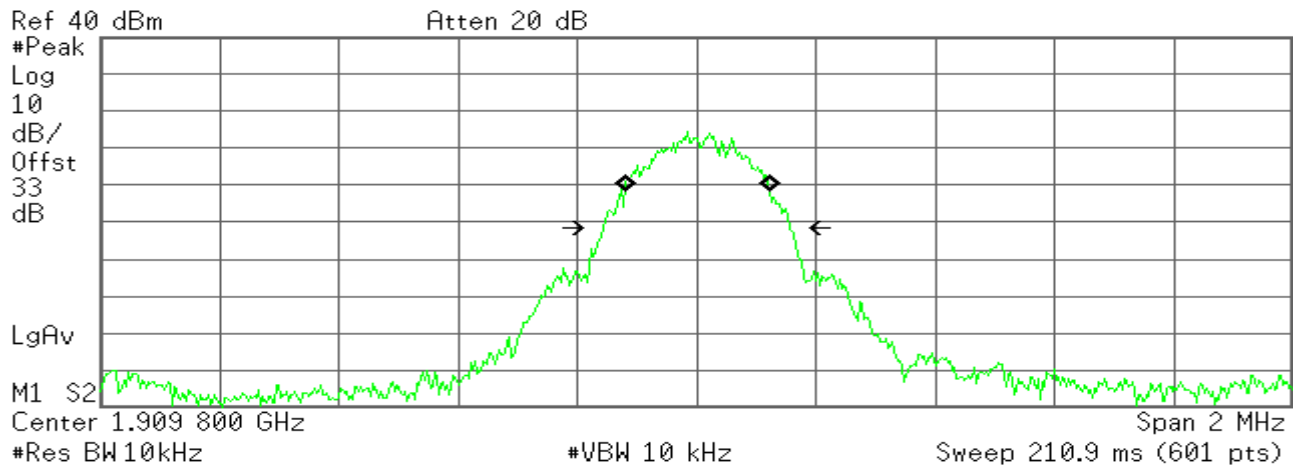
Transmit Freq Error 1.905 kHz
x dB Bandwidth 318.625 kHz



EDGE 1900 (CH High)

* Agilent

R T



Occupied Bandwidth
243.1749 kHz

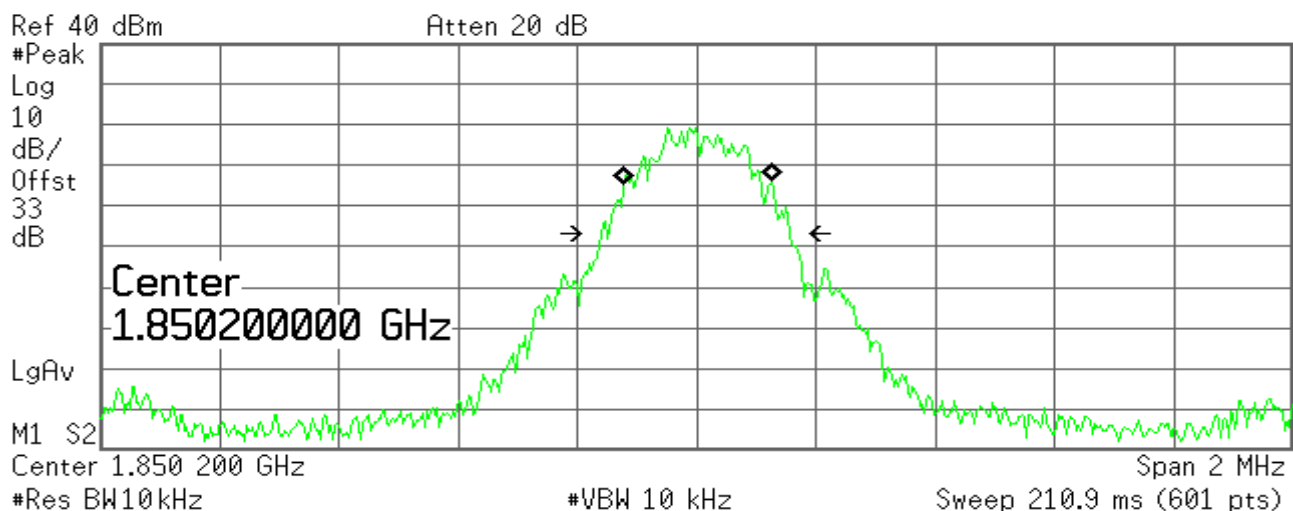
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 215.171 Hz
x dB Bandwidth 314.401 kHz

GSM 1900 (CH Low)

* Agilent

R T



Occupied Bandwidth
248.6729 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

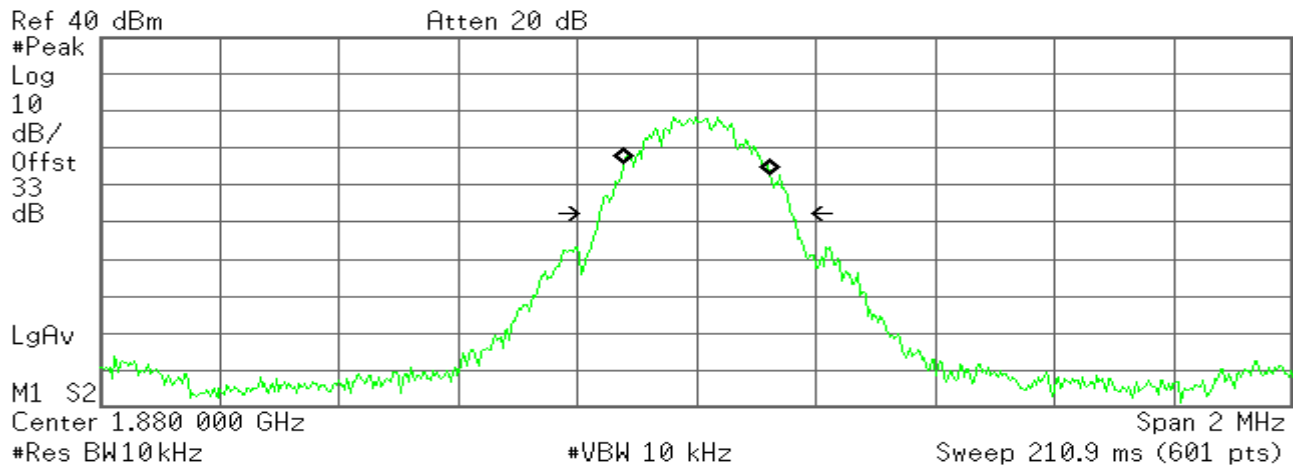
Transmit Freq Error 2.046 kHz
x dB Bandwidth 315.666 kHz



GSM 1900 (CH Mid)

* Agilent

R T



Occupied Bandwidth
246.4801 kHz

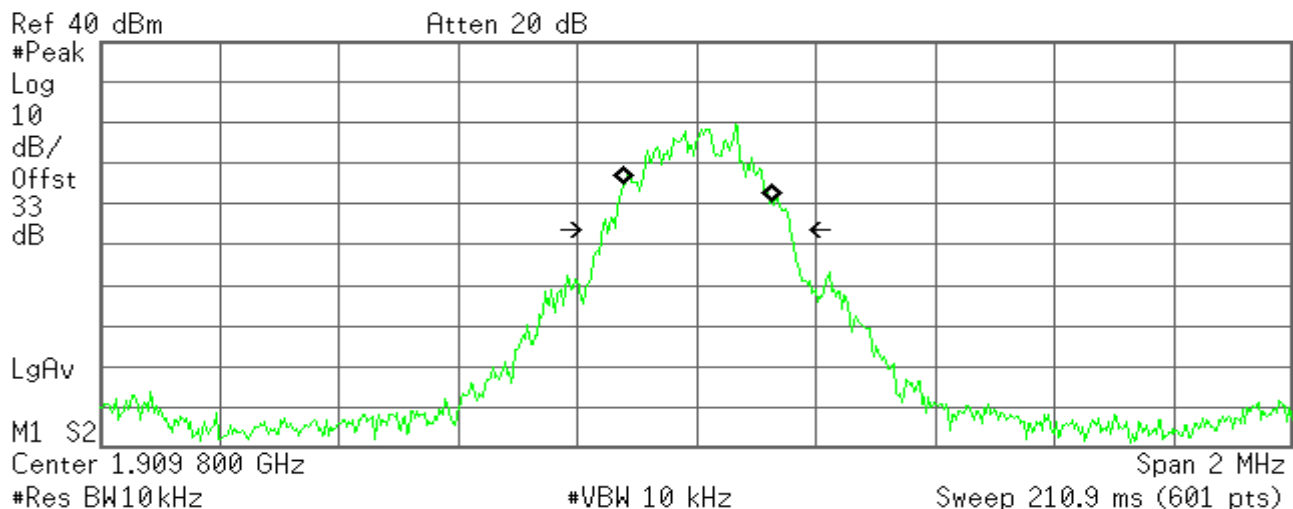
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 49.447 Hz
x dB Bandwidth 323.454 kHz

GSM 1900 (CH High)

* Agilent

R T



Occupied Bandwidth
250.6187 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

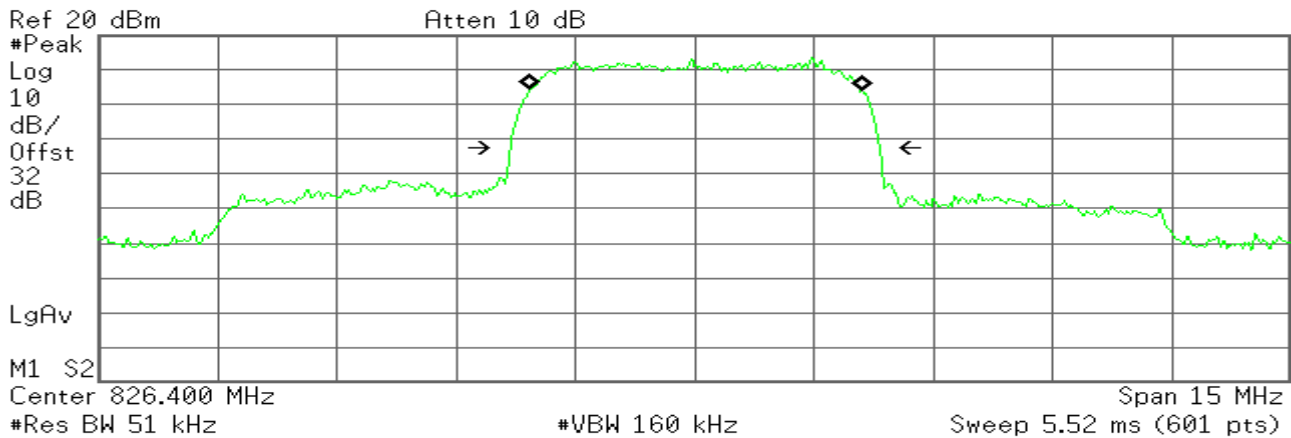
Transmit Freq Error 2.218 kHz
x dB Bandwidth 316.859 kHz



WCDMA Band V (CH Low)

* Agilent

R T



Occupied Bandwidth
4.1606 MHz

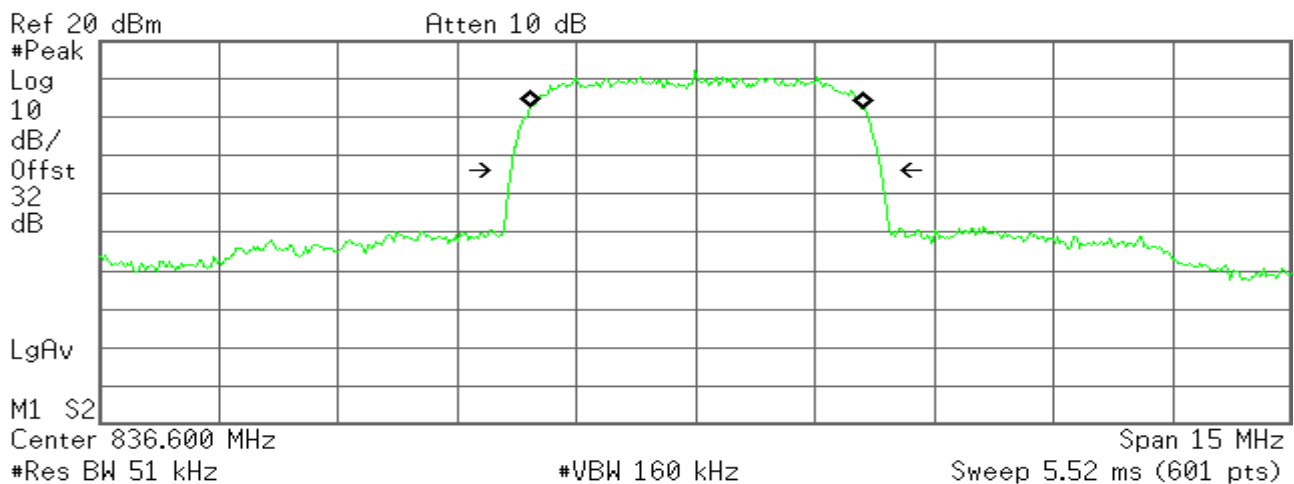
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 13.420 kHz
x dB Bandwidth 4.640 MHz

WCDMA Band V (CH Mid)

* Agilent

R T



Occupied Bandwidth
4.1704 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 9.273 kHz
x dB Bandwidth 4.649 MHz



WCDMA Band V (CH High)

* Agilent

R T

Ref 20 dBm

Atten 10 dB

#Peak
Log
10
dB/
Offst
32
dB

LgAv

M1 S2

Center 846.600 MHz

#Res BW 51 kHz

#VBW 160 kHz

Span 15 MHz
Sweep 5.52 ms (601 pts)**Occupied Bandwidth**
4.2074 MHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** 5.319 kHz
x dB Bandwidth 4.706 MHz

HSDPA Band V (CH Low)

* Agilent

R T

Ref 20 dBm

Atten 10 dB

#Peak
Log
10
dB/
Offst
32
dB

LgAv

M1 S2

Center 826.400 MHz

#Res BW 51 kHz

#VBW 160 kHz

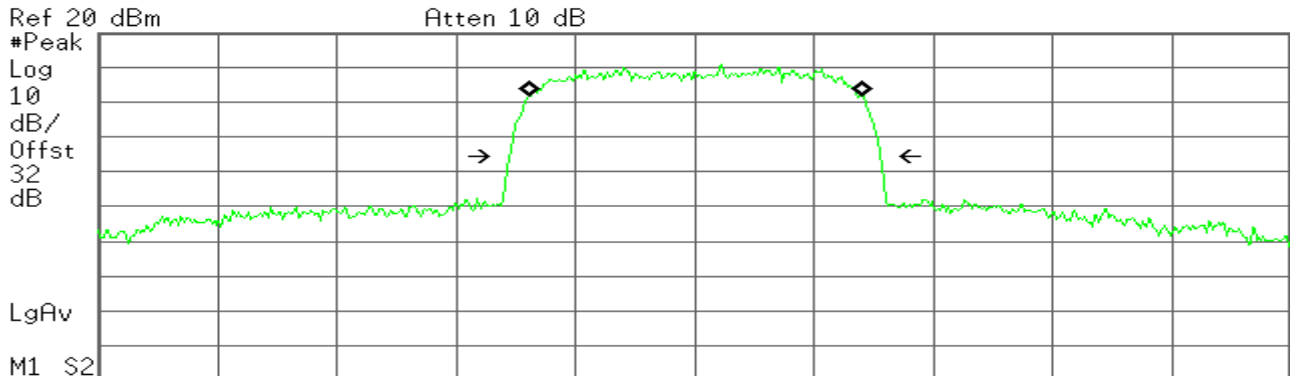
Span 15 MHz
Sweep 5.52 ms (601 pts)**Occupied Bandwidth**
4.1578 MHz**Occ BW % Pwr** 99.00 %
x dB -26.00 dB**Transmit Freq Error** -2.246 kHz
x dB Bandwidth 4.655 MHz



HSDPA Band V (CH Mid)

Agilent

R T



Center 836.600 MHz

Span 15 MHz

#Res BW 51 kHz

#VBW 160 kHz

Sweep 5.52 ms (601 pts)

Occupied Bandwidth
4.1802 MHz

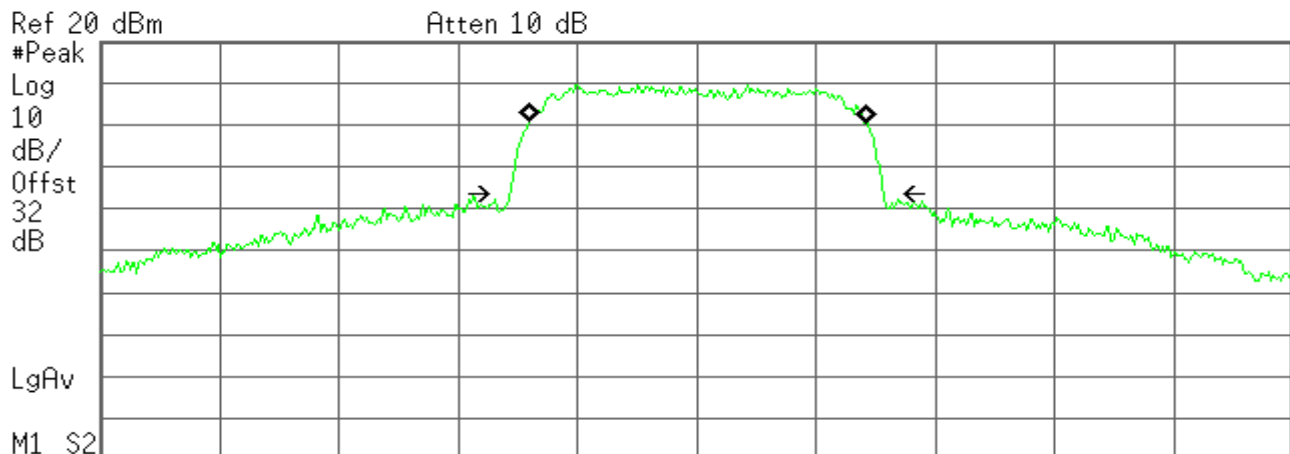
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 8.176 kHz
x dB Bandwidth 4.648 MHz

HSDPA Band V (CH High)

Agilent

R T



Center 846.600 MHz

Span 15 MHz

#Res BW 51 kHz

#VBW 160 kHz

Sweep 5.52 ms (601 pts)

Occupied Bandwidth
4.2213 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

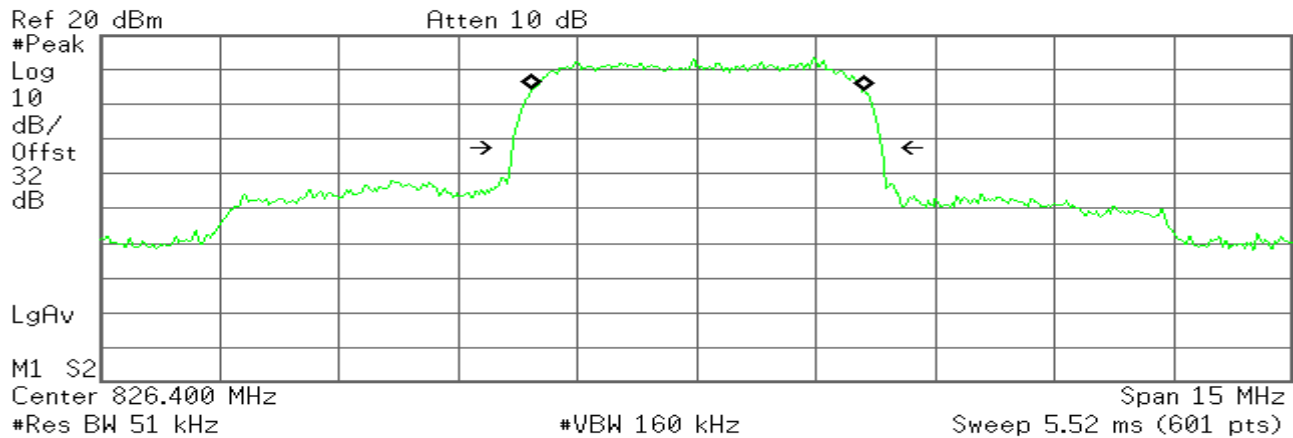
Transmit Freq Error 7.350 kHz
x dB Bandwidth 4.683 MHz



WCDMA Band II (CH Low)

* Agilent

R T



Occupied Bandwidth
4.1606 MHz

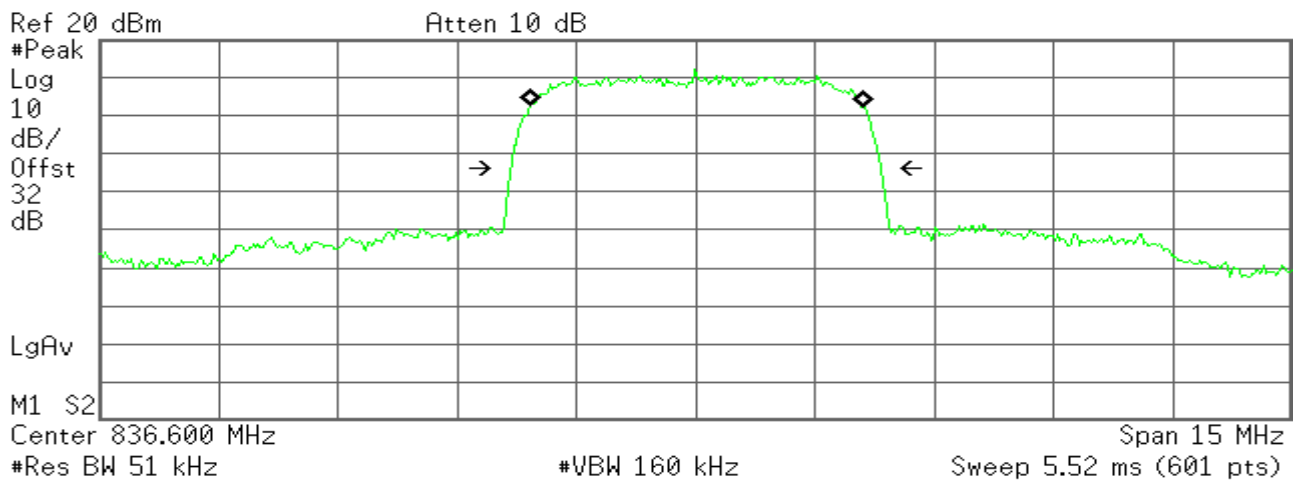
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 13.420 kHz
x dB Bandwidth 4.640 MHz

WCDMA Band II (CH Mid)

* Agilent

R T



Occupied Bandwidth
4.1704 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

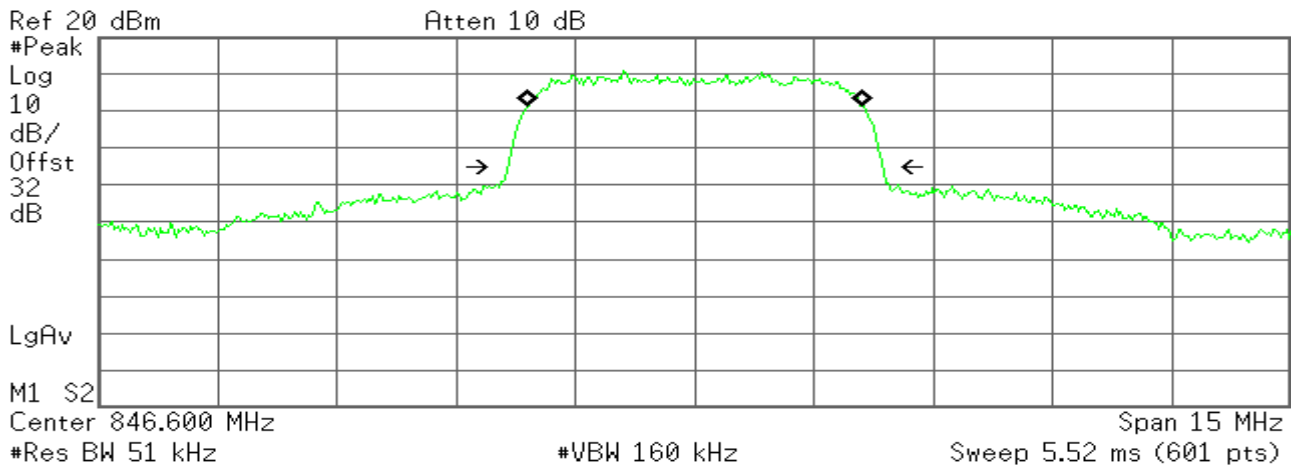
Transmit Freq Error 9.273 kHz
x dB Bandwidth 4.649 MHz



WCDMA Band II (CH High)

* Agilent

R T



Occupied Bandwidth
4.2074 MHz

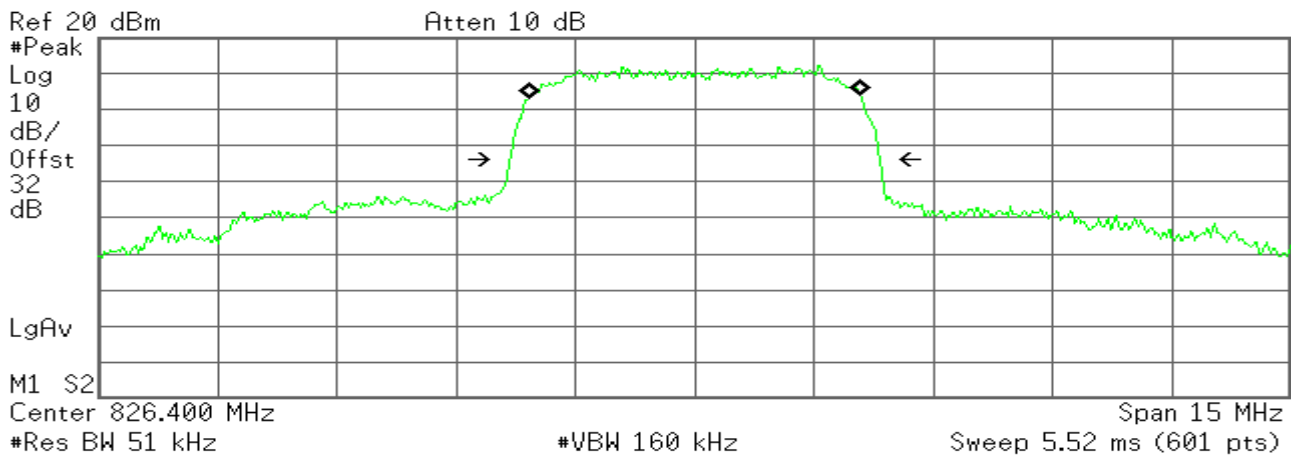
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 5.319 kHz
x dB Bandwidth 4.706 MHz

HSDPA Band II (CH Low)

* Agilent

R T



Occupied Bandwidth
4.1578 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

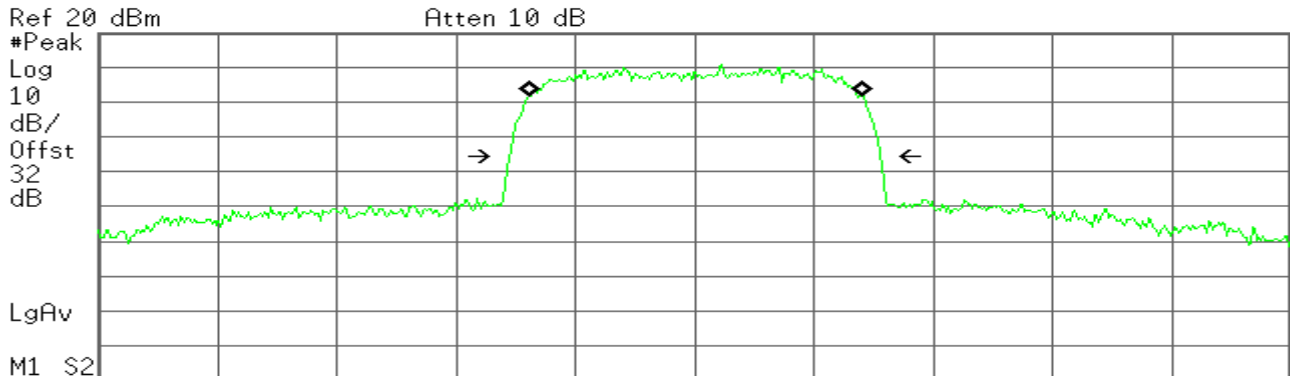
Transmit Freq Error -2.246 kHz
x dB Bandwidth 4.655 MHz



HSDPA Band II (CH Mid)

Agilent

R T



Center 836.600 MHz

Span 15 MHz

#Res BW 51 kHz

#VBW 160 kHz

Sweep 5.52 ms (601 pts)

Occupied Bandwidth
4.1802 MHz

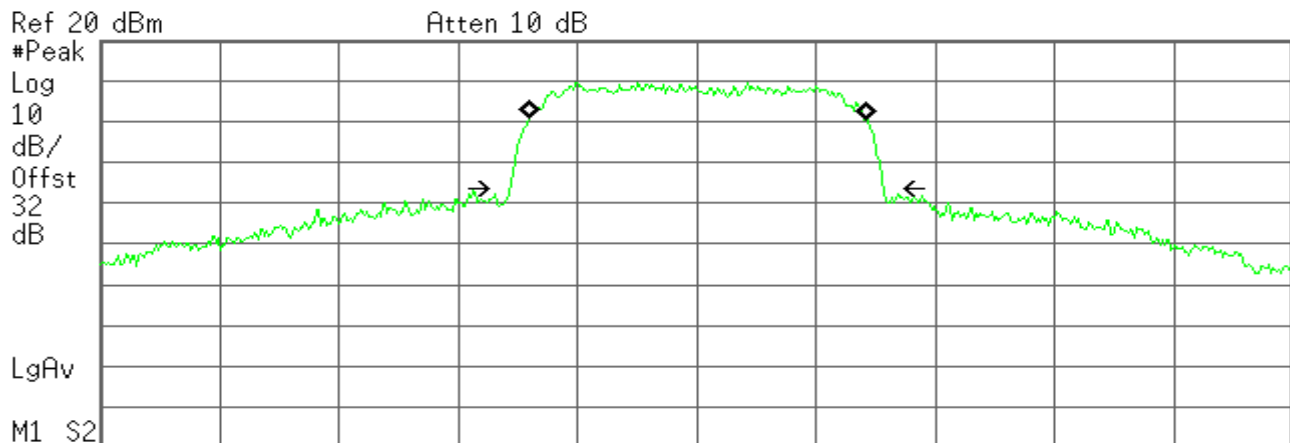
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 8.176 kHz
x dB Bandwidth 4.648 MHz

HSDPA Band II (CH High)

Agilent

R T



Center 846.600 MHz

Span 15 MHz

#Res BW 51 kHz

#VBW 160 kHz

Sweep 5.52 ms (601 pts)

Occupied Bandwidth
4.2213 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 7.350 kHz
x dB Bandwidth 4.683 MHz



7.5. OUT OF BAND EMISSION AT ANTENNA TERMINALS

LIMIT

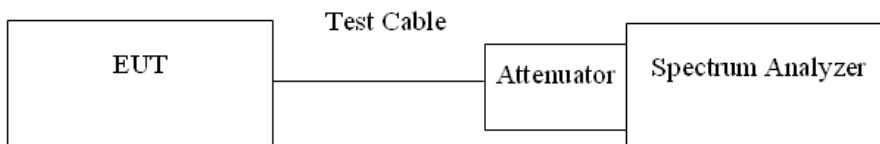
According to FCC §2.1051, FCC §22.917, FCC §24.238(a).

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

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

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

TEST CONFIGURATION



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 3-1	Band Edge emissions
	251	Figure 3-2	Band Edge emissions

Mode	CH	Location	Description
GSM 1900	512	Figure 4-1	Band Edge emissions
	810	Figure 4-2	Band Edge emissions

Mode	CH	Location	Description
GSM 850	128	Figure 5-1	Conducted spurious emissions, 30MHz - 20GHz
	190	Figure 5-2	Conducted spurious emissions, 30MHz - 20GHz
	251	Figure 5-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
GSM 1900	512	Figure 6-1	Conducted spurious emissions, 30MHz - 20GHz
	661	Figure 6-2	Conducted spurious emissions, 30MHz - 20GHz
	810	Figure 6-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
GPRS 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

Mode	CH	Location	Description
GPRS 1900	512	Figure 8-1	Conducted spurious emissions, 30MHz - 20GHz
	661	Figure 8-2	Conducted spurious emissions, 30MHz - 20GHz
	810	Figure 8-3	Conducted spurious emissions, 30MHz - 20GHz



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Mode	CH	Location	Description
GPRS 850	128	Figure 9-1	Band Edge emissions
	251	Figure 9-2	Band Edge emissions

Mode	CH	Location	Description
GPRS 1900	512	Figure 10-1	Band Edge emissions
	810	Figure 10-2	Band Edge emissions

Mode	CH	Location	Description
WCDMA (Band V)	4132	Figure 11-1	Conducted spurious emissions, 30MHz - 20GHz
	4182	Figure 11-2	Conducted spurious emissions, 30MHz - 20GHz
	4233	Figure 11-3	Conducted spurious emissions, 30MHz - 20GHz
WCDMA (Band V)	4132	Figure 11-4	Band Edge emissions
	4233	Figure 11-5	Band Edge emissions

Mode	CH	Location	Description
HSDPA (Band V)	4132	Figure 12-1	Conducted spurious emissions, 30MHz - 20GHz
	4182	Figure 12-2	Conducted spurious emissions, 30MHz - 20GHz
	4233	Figure 12-3	Conducted spurious emissions, 30MHz - 20GHz
HSDPA (Band V)	4132	Figure 12-4	Band Edge emissions
	4233	Figure 12-5	Band Edge emissions

Mode	CH	Location	Description
EDGE 850	128	Figure 13-1	Conducted spurious emissions, 30MHz - 20GHz
	190	Figure 13-2	Conducted spurious emissions, 30MHz - 20GHz
	251	Figure 13-3	Conducted spurious emissions, 30MHz - 20GHz
EDGE 1900	512	Figure 13-4	Conducted spurious emissions, 30MHz - 20GHz
	661	Figure 13-5	Conducted spurious emissions, 30MHz - 20GHz
	810	Figure 13-6	Conducted spurious emissions, 30MHz - 20GHz

Mode	CH	Location	Description
EDGE 850	128	Figure 14-1	Band Edge emissions
	251	Figure 14-2	Band Edge emissions



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EDGE 1900	512	Figure 14-3	Band Edge emissions
	810	Figure 14-4	Band Edge emissions

Mode	CH	Location	Description
HSDPA (Band II)	9262	Figure 15-1	Conducted spurious emissions, 30MHz - 20GHz
	9400	Figure 15-2	Conducted spurious emissions, 30MHz - 20GHz
	9538	Figure 15-3	Conducted spurious emissions, 30MHz - 20GHz
HSDPA (Band II)	9262	Figure 15-4	Band Edge emissions
	9538	Figure 15-5	Band Edge emissions



Test Plot

GSM 850

Figure 5-1: Out of Band emission at antenna terminals – GSM CH Low

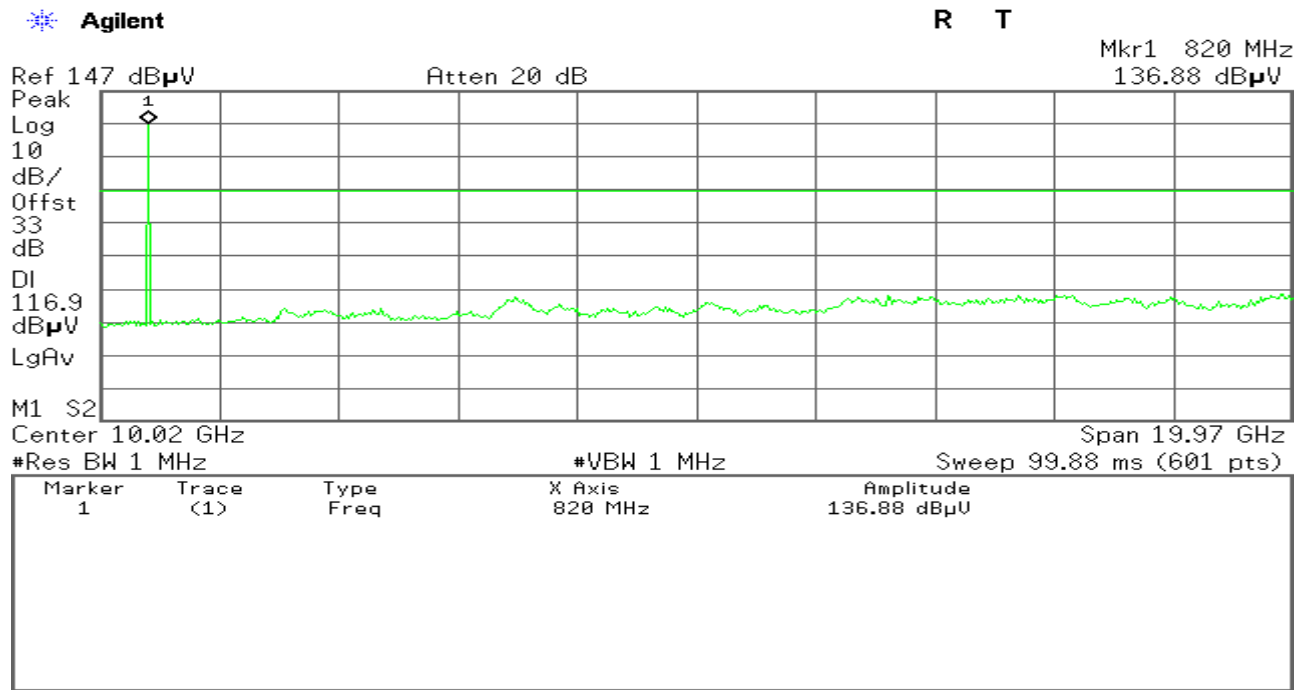


Figure 5-2: Out of Band emission at antenna terminals – GSM CH Mid

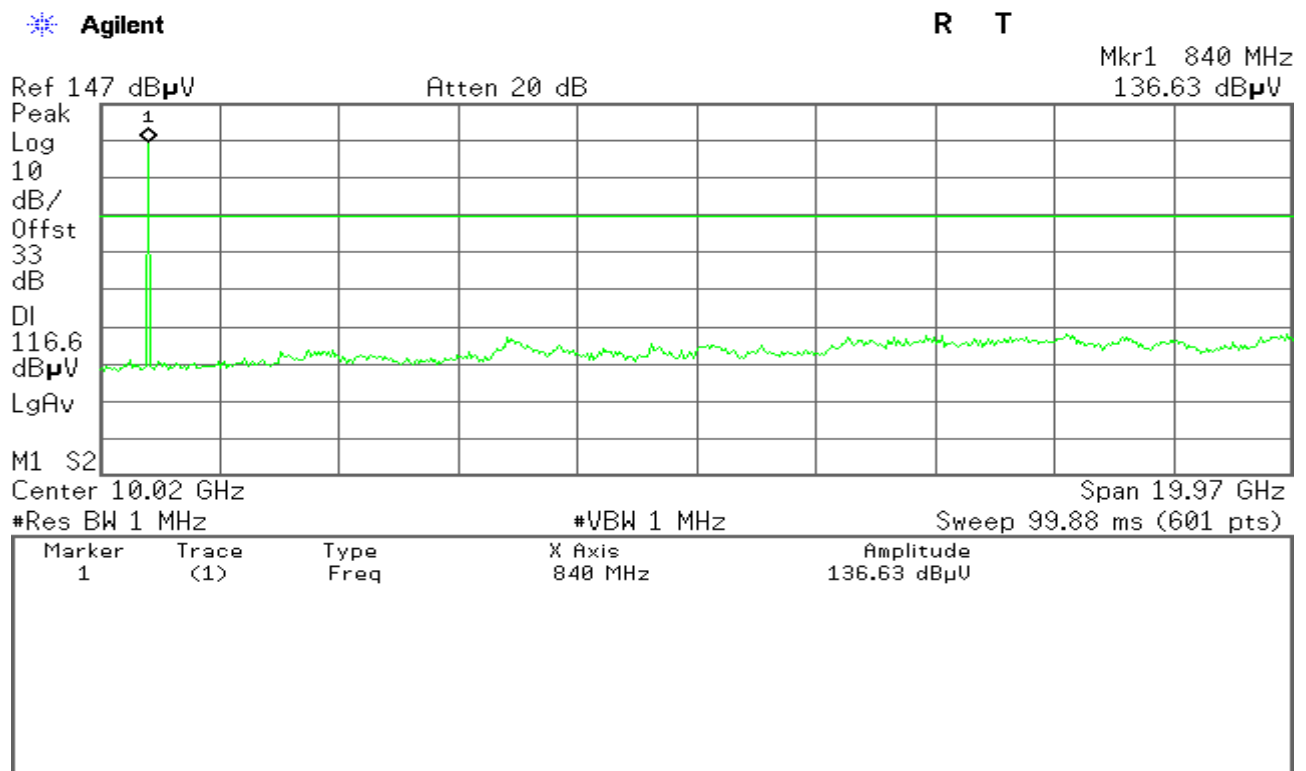
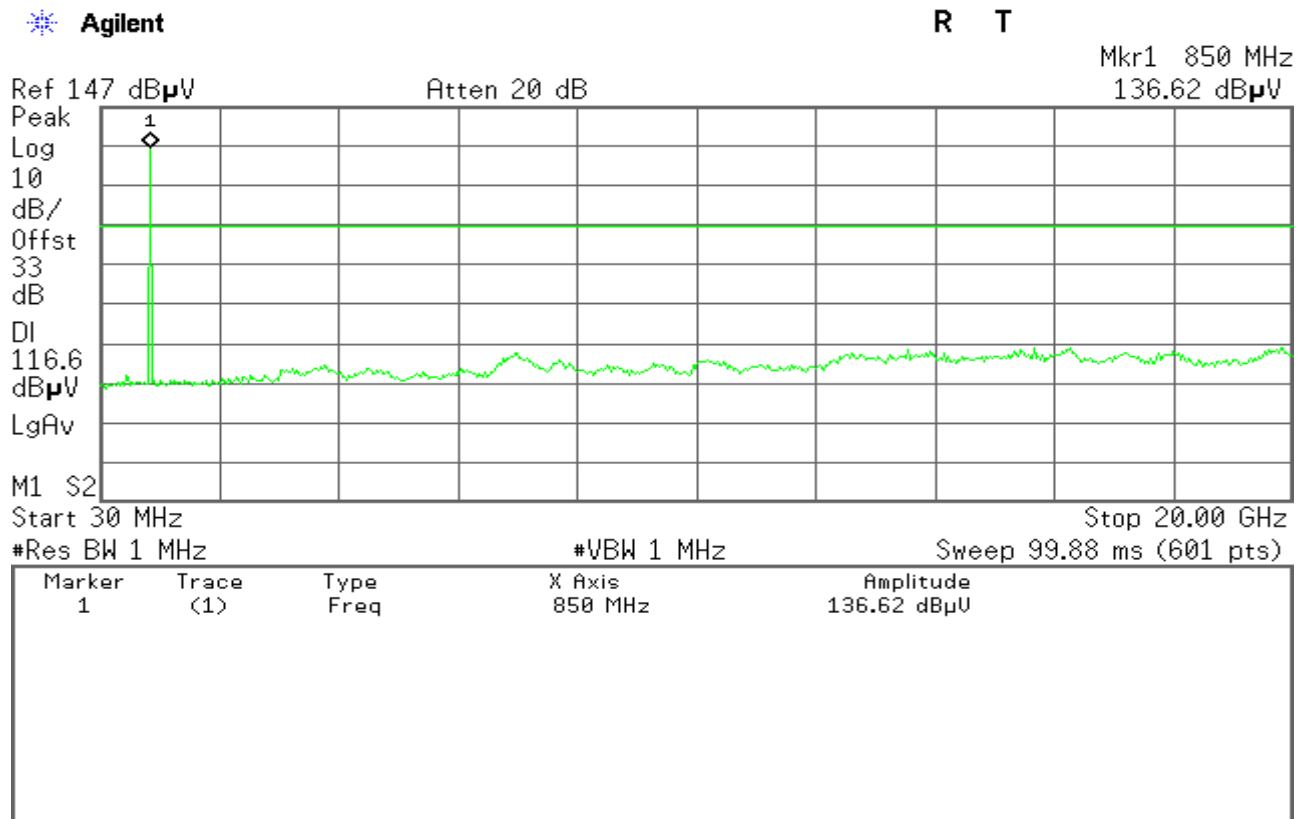




Figure 5-3: Out of Band emission at antenna terminals – GSM CH High



GSM 1900

Figure 6-1: Out of Band emission at antenna terminals – GSM CH Low

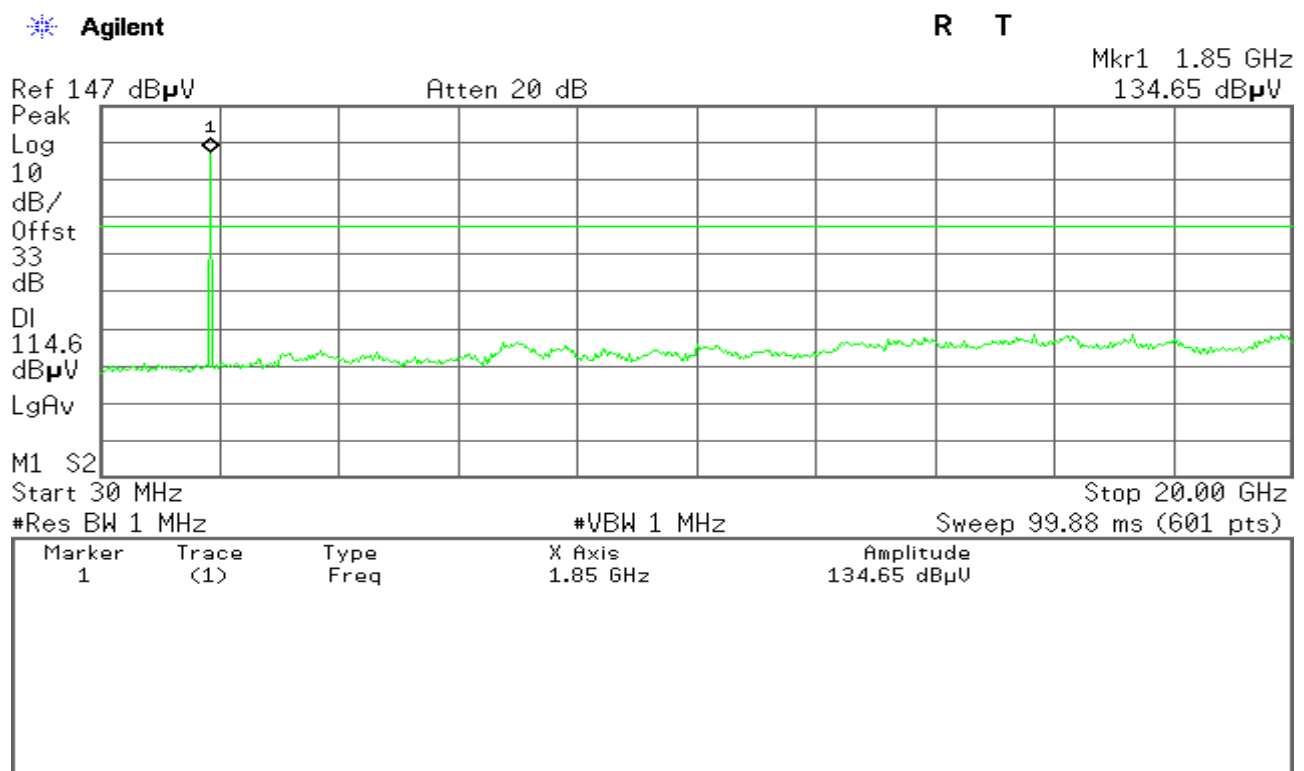




Figure 6-2: Out of Band emission at antenna terminals – GSM CH Mid

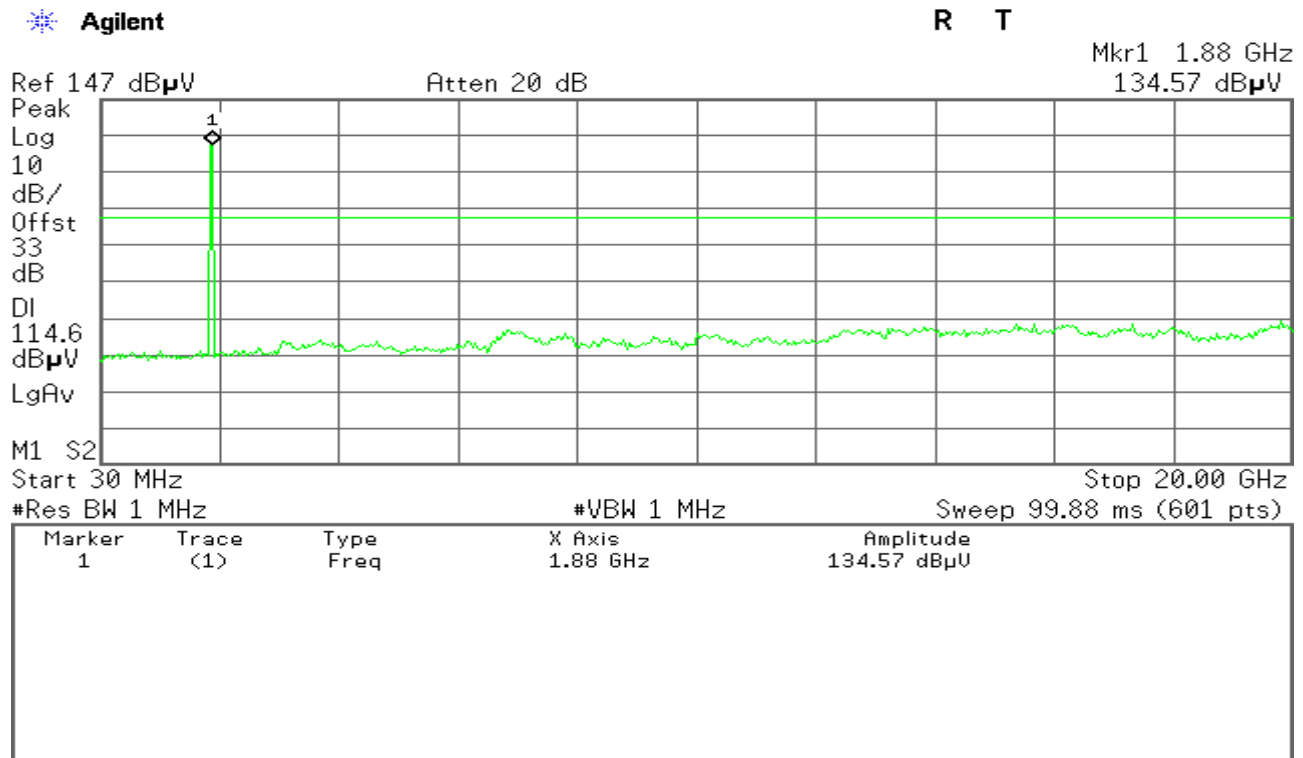
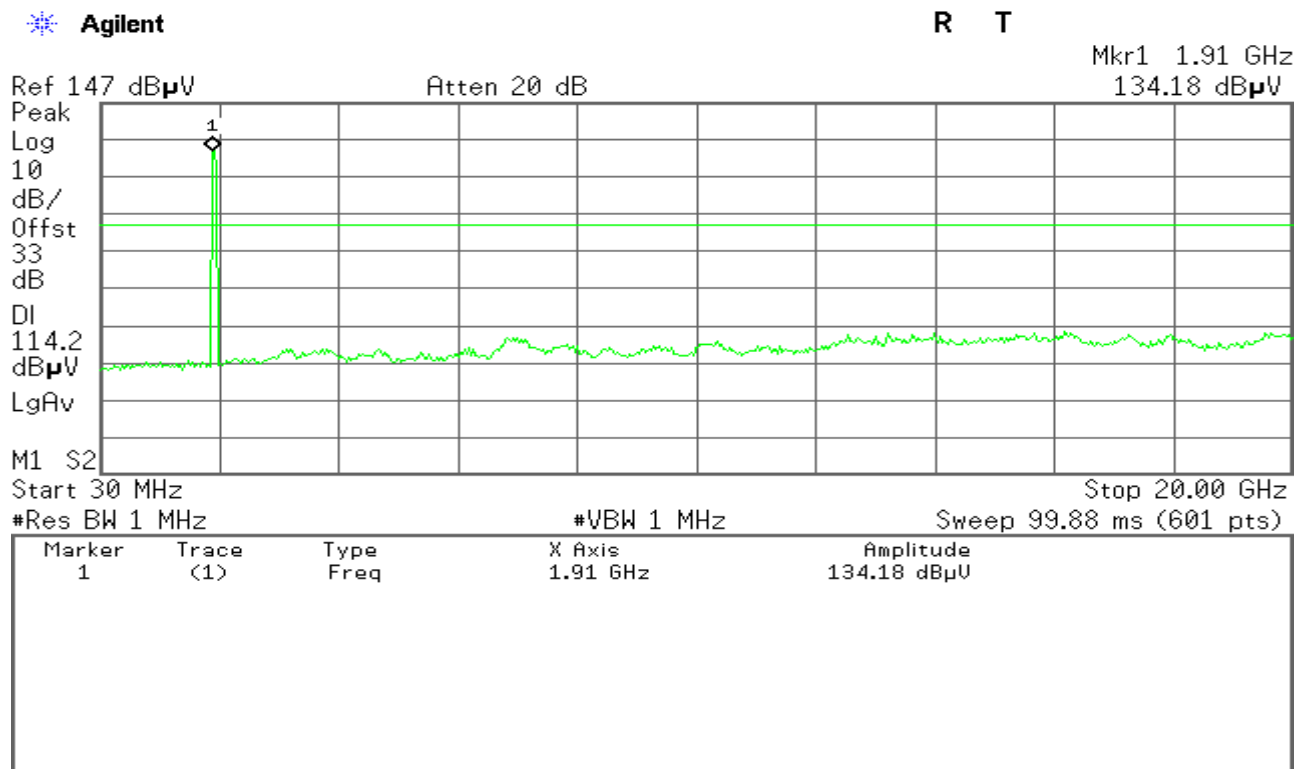


Figure 6-3: Out of Band emission at antenna terminals – GSM CH High





GSM 850

Figure 3-1: Band Edge emissions – GSM CH Low

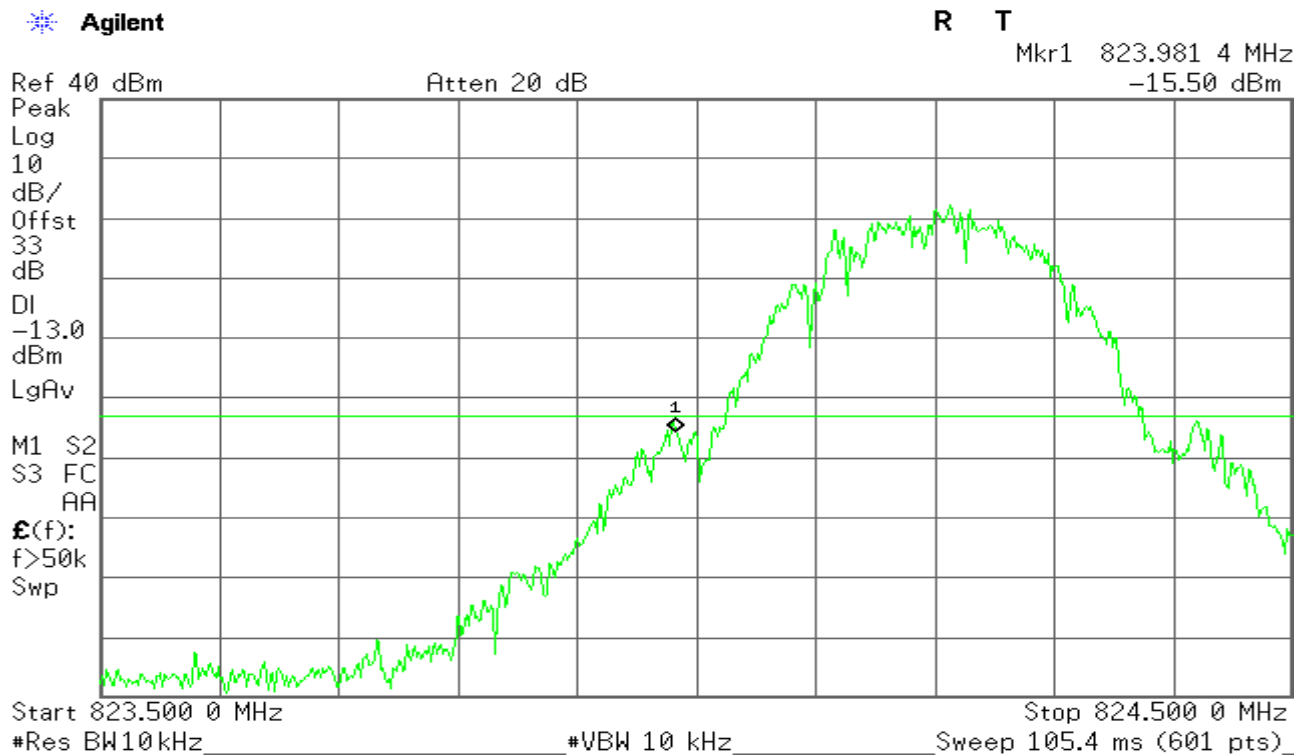
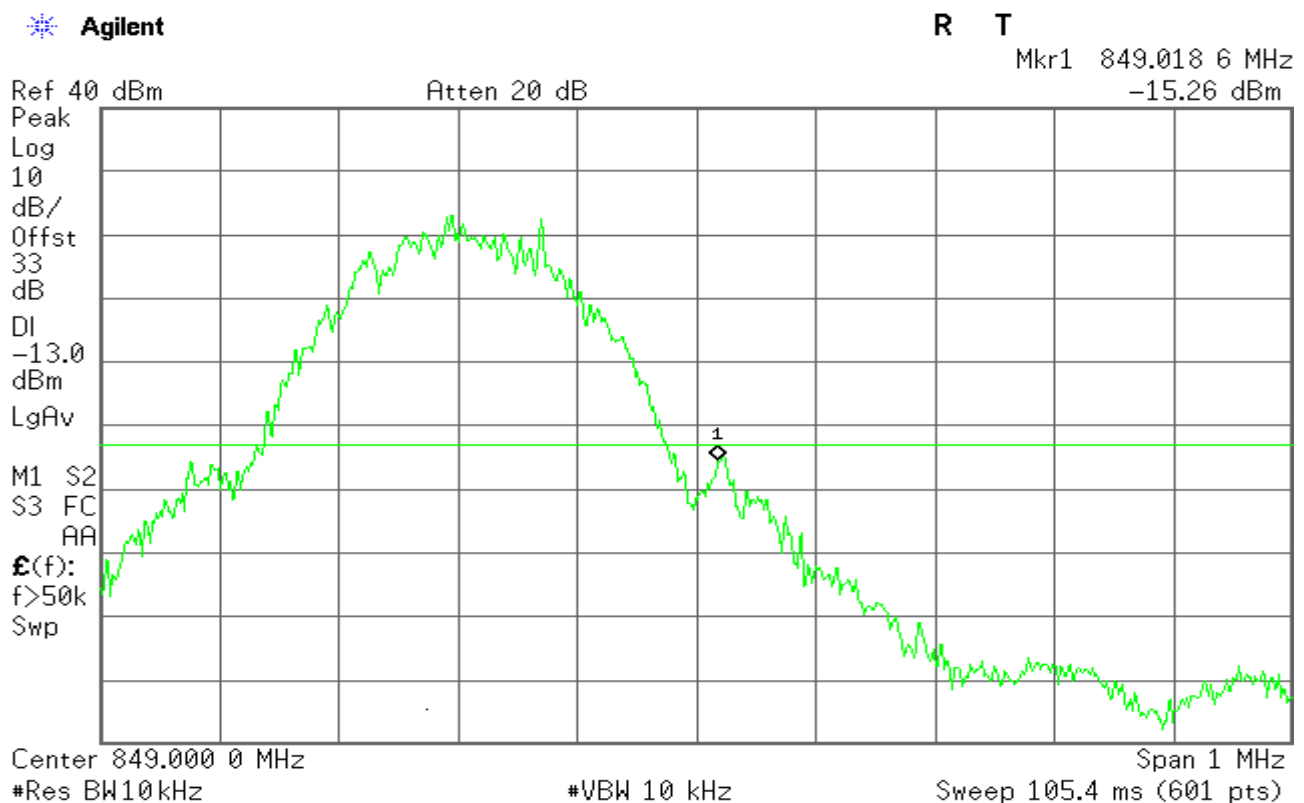


Figure 3-2: Band Edge emissions –GSM CH High





GSM 1900

Figure 4-1: Band Edge emissions – GSM CH Low

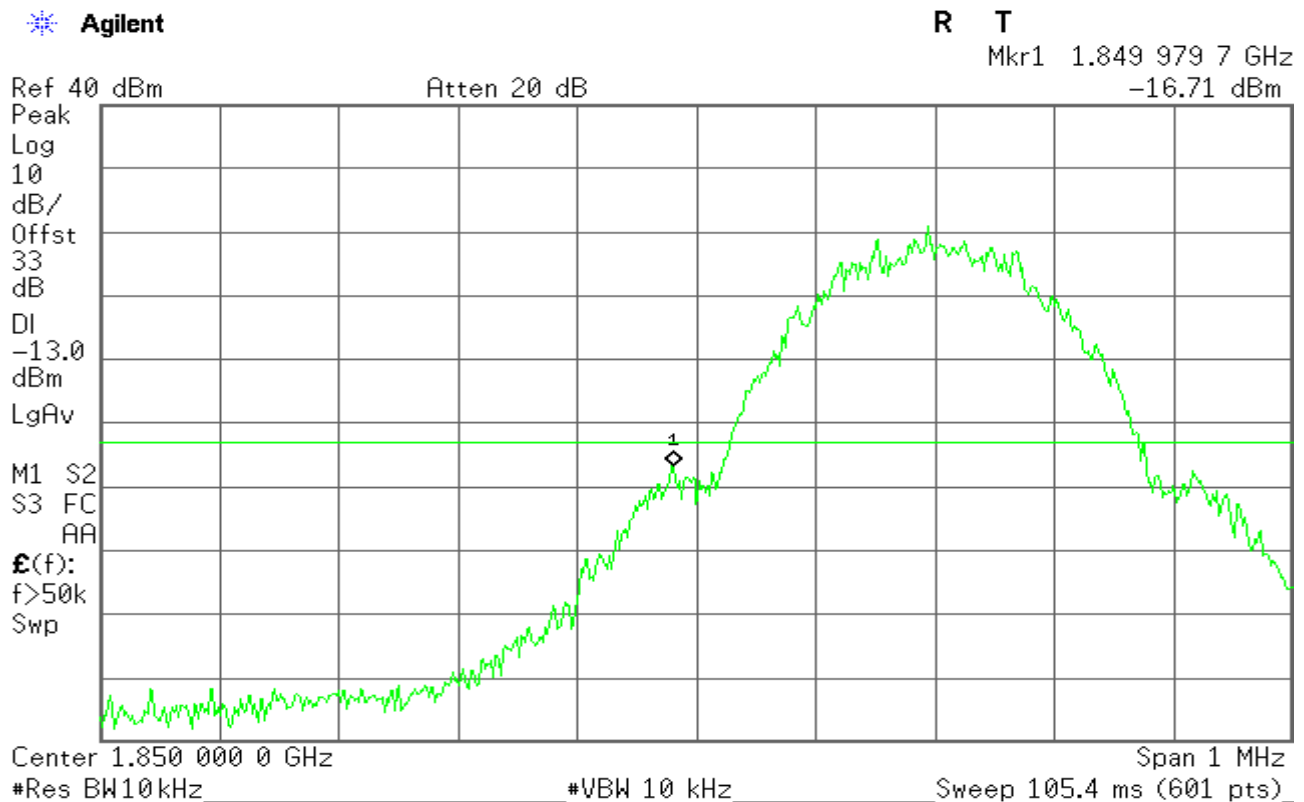
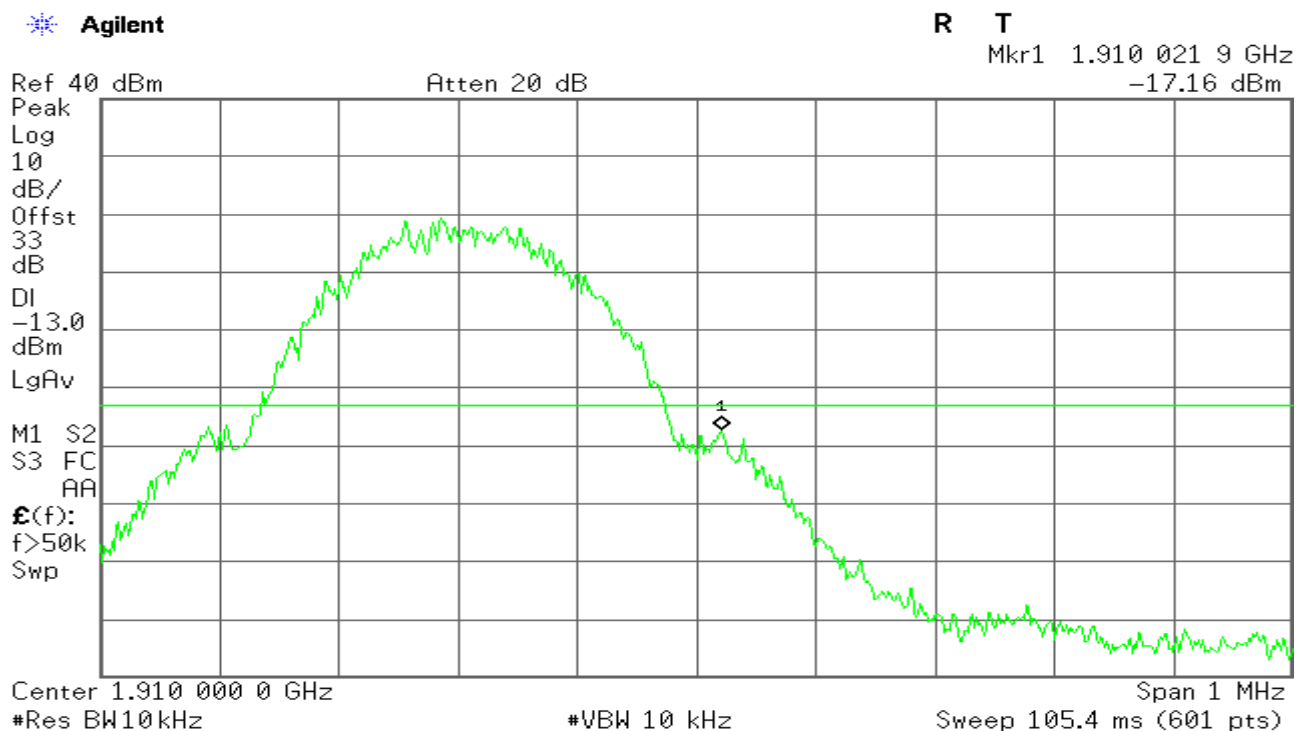


Figure 4-2: Band Edge emissions – GSM CH High





GPRS 850

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

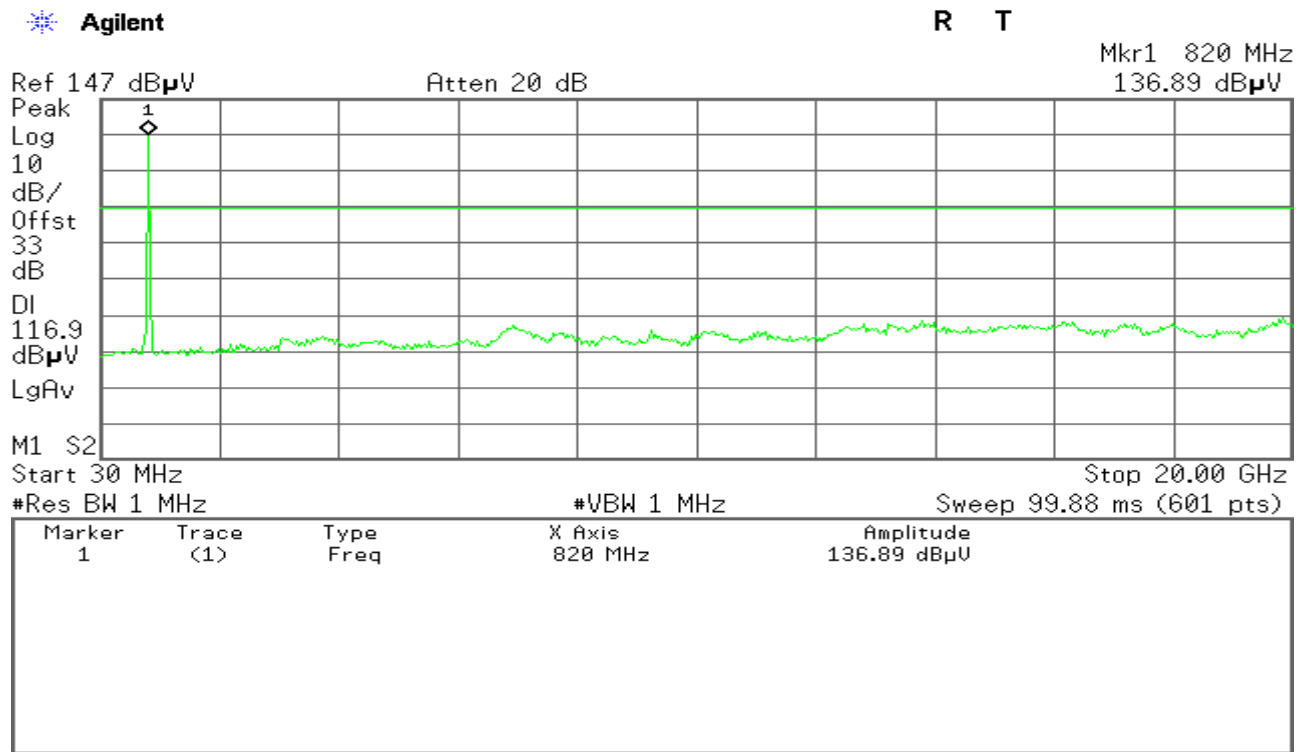


Figure 7-2: Out of Band emission at antenna terminals – GPRS CH Mid

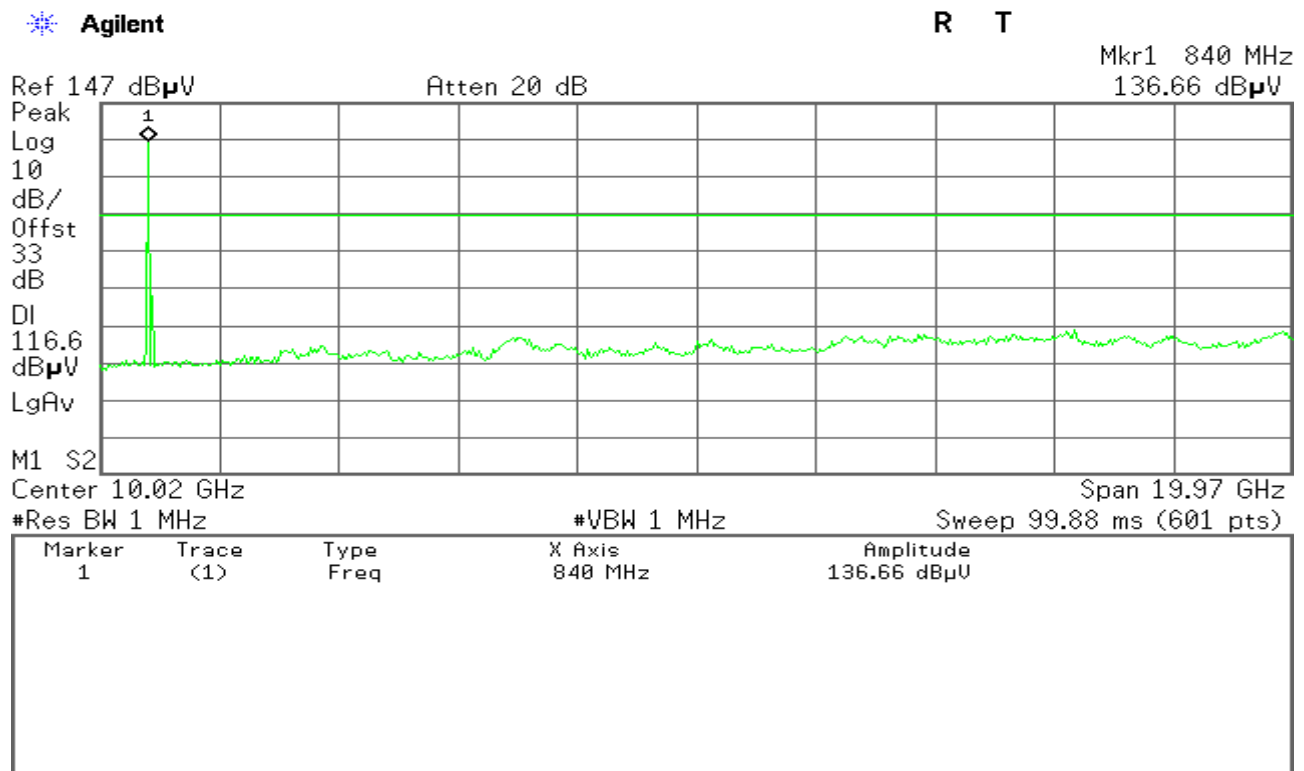
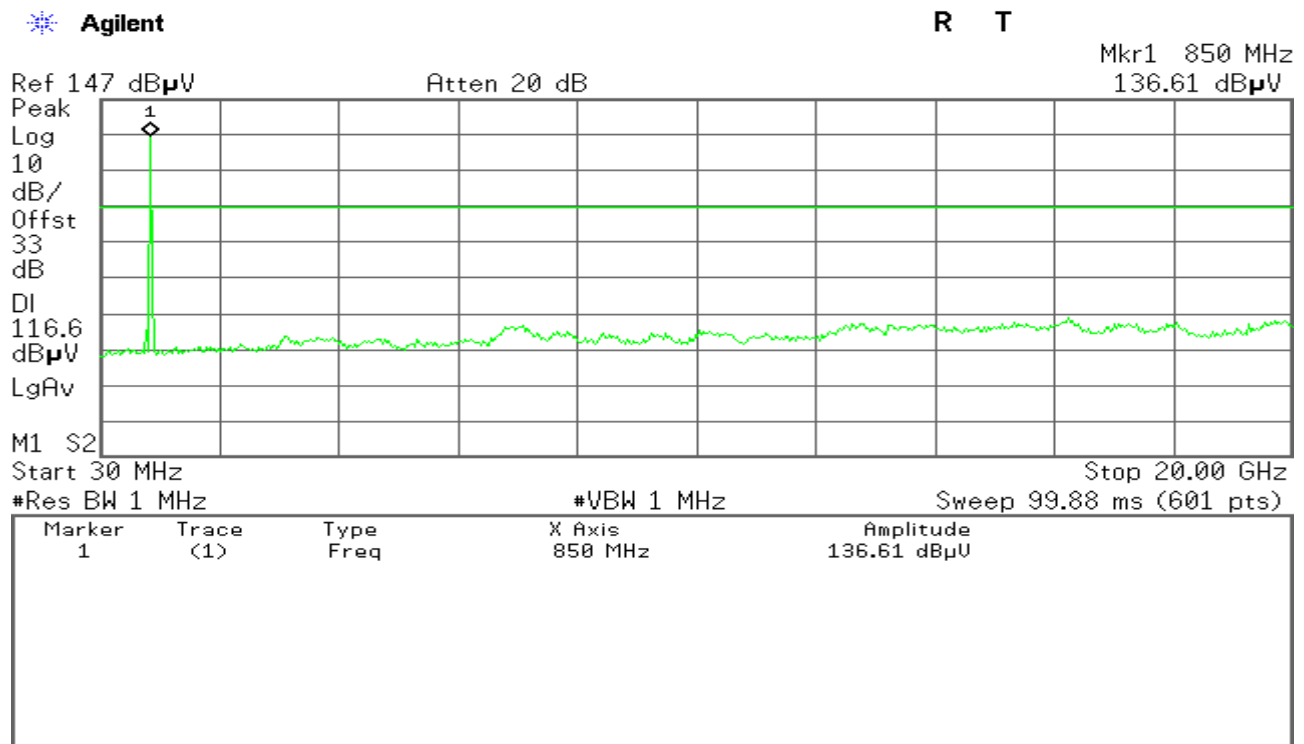




Figure 7-3: Out of Band emission at antenna terminals – GPRS CH High



GPRS 1900

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

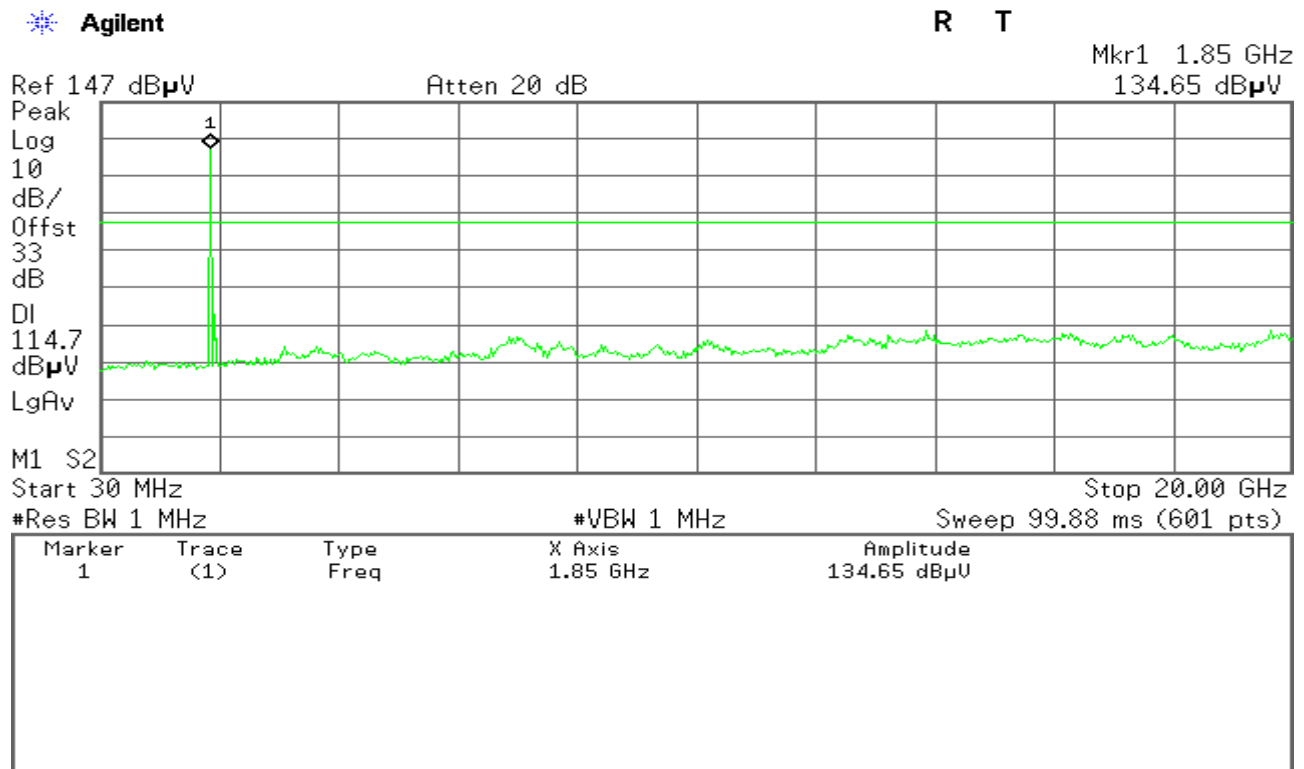




Figure 8-2: Out of Band emission at antenna terminals – GPRS CH Mid

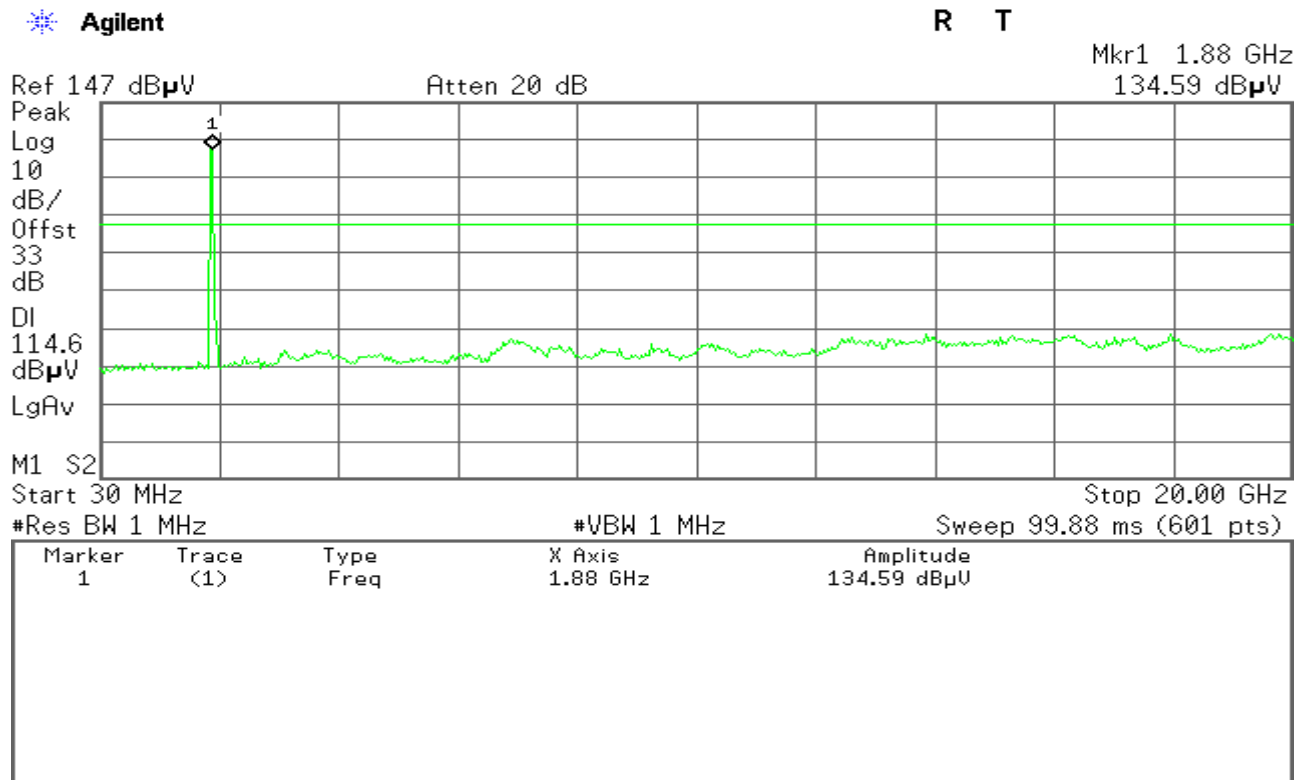
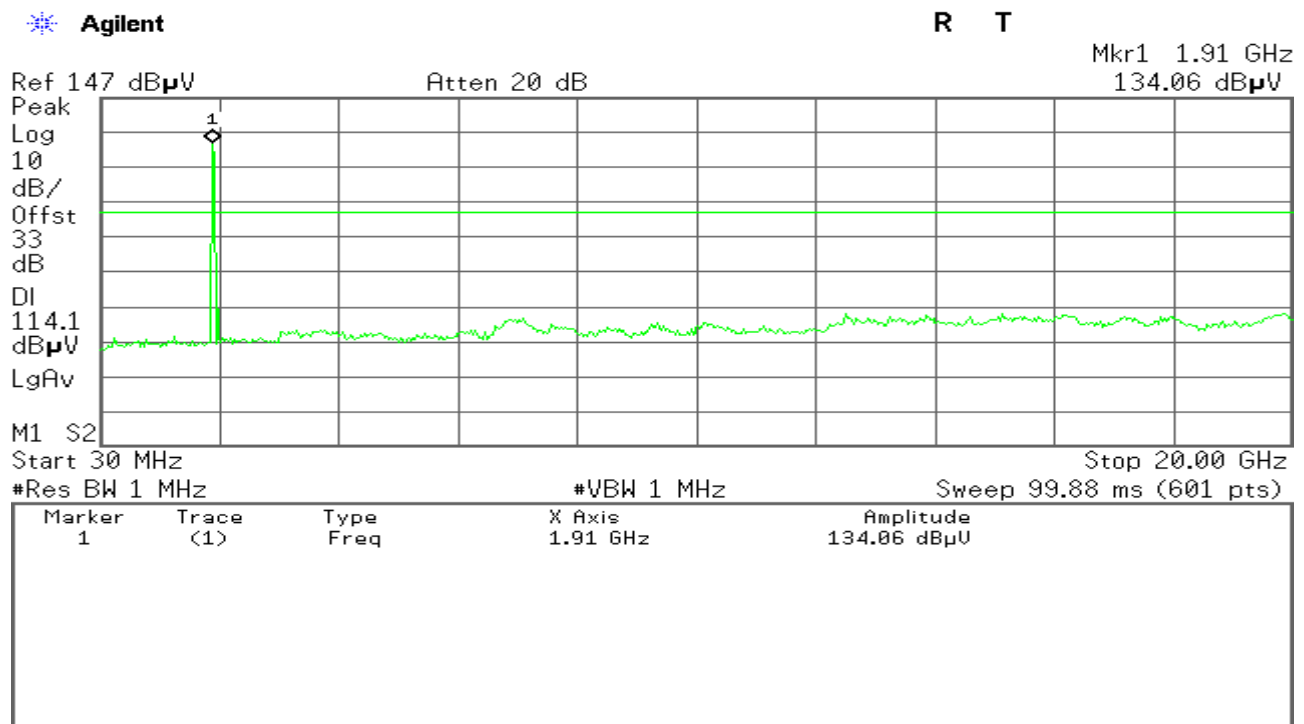


Figure 8-3: Out of Band emission at antenna terminals – GPRS CH High





GPRS 850

Figure 9-1: Band Edge emissions – GPRS CH Low

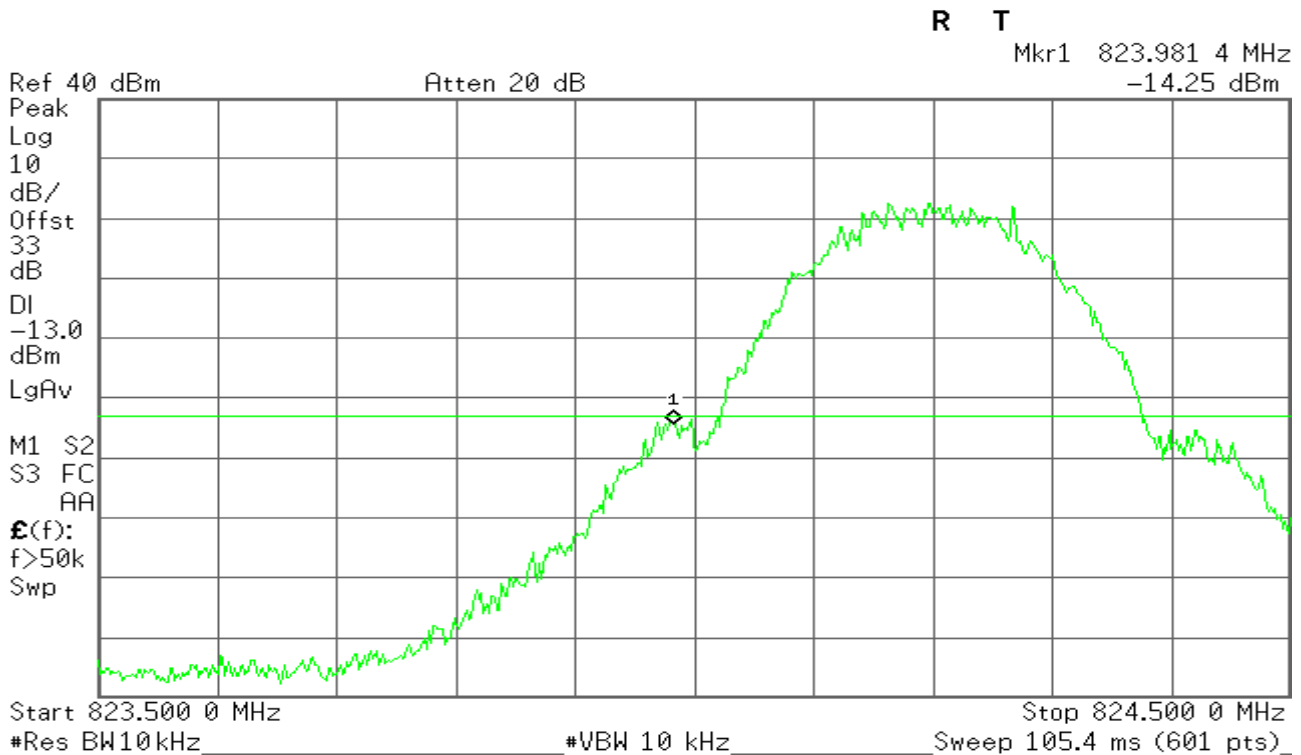
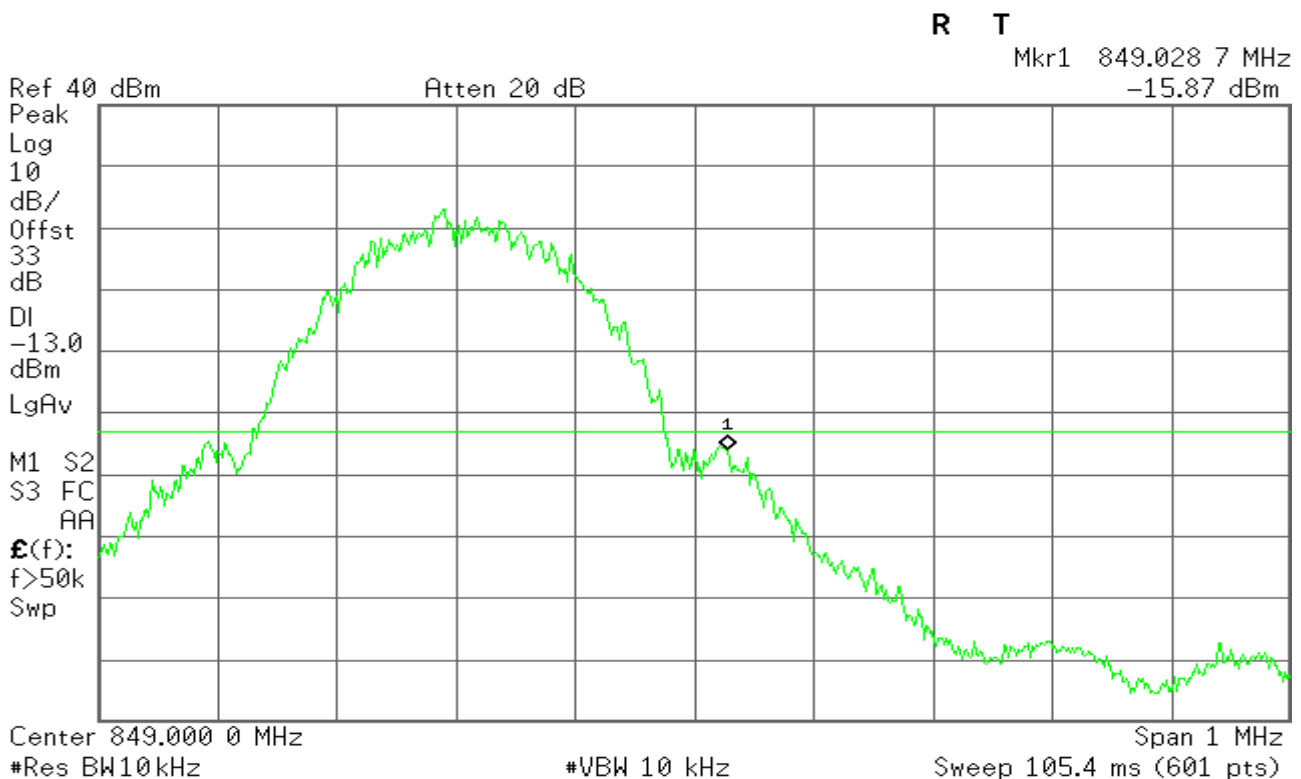


Figure 9-2: Band Edge emissions –GPRS CH High





GPRS 1900

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

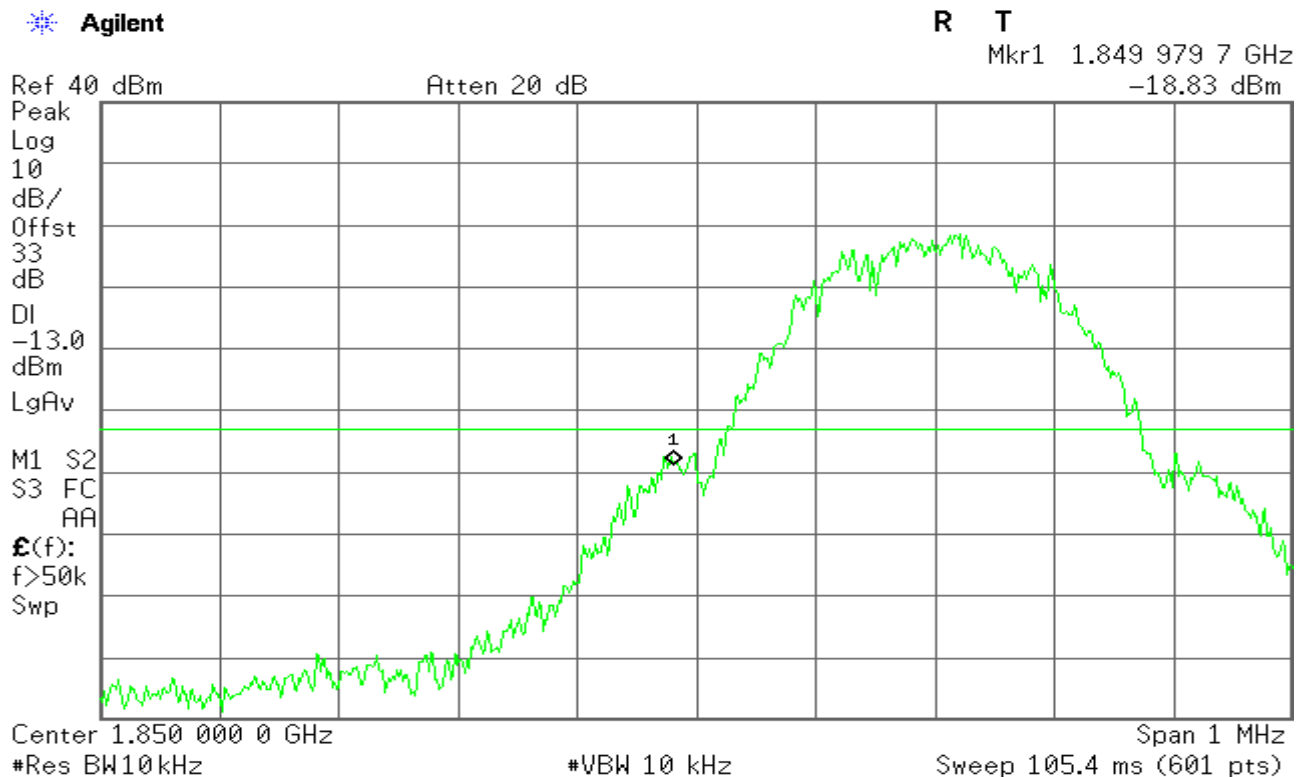
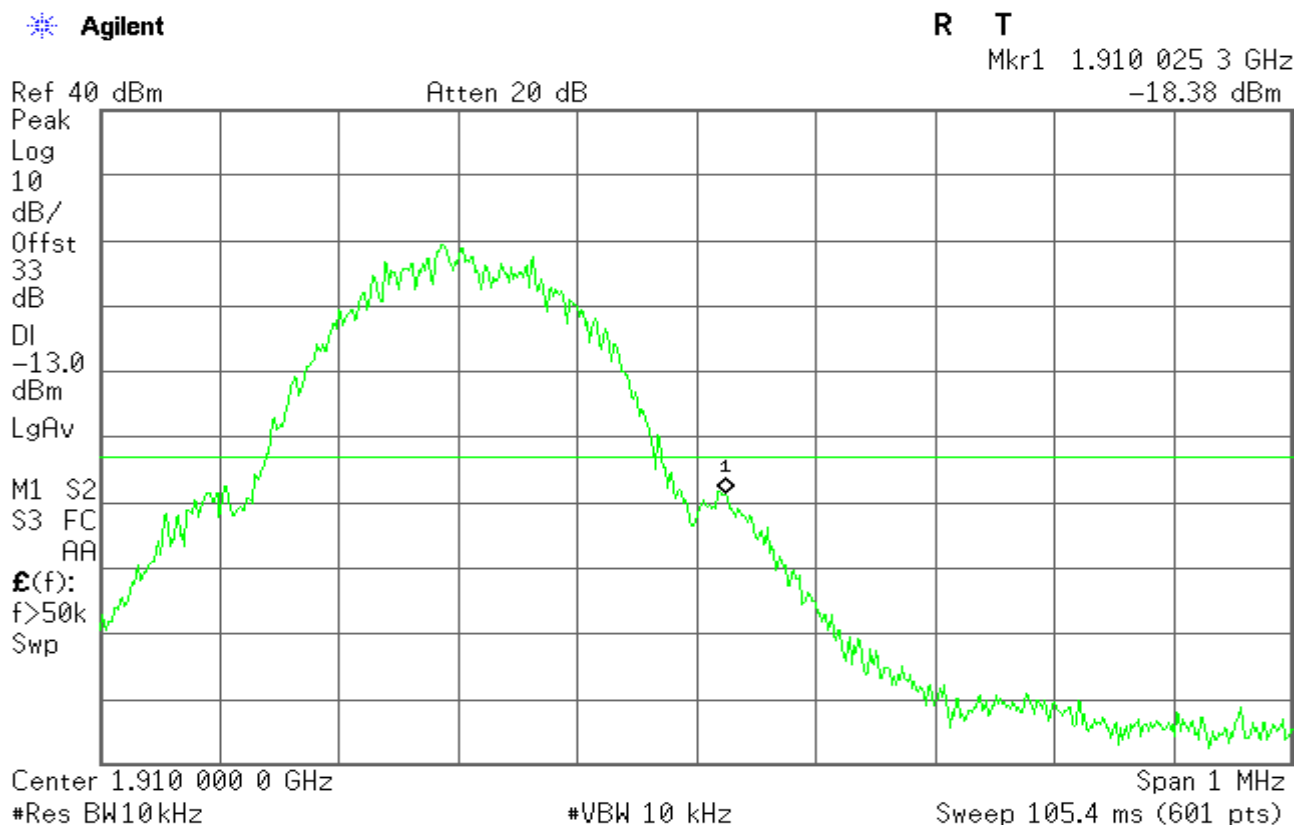


Figure 10-2: Band Edge emissions – GPRS CH High





WCDMA Band V

Figure 11-1: Out of Band emission at antenna terminals – WCDMA CH Low

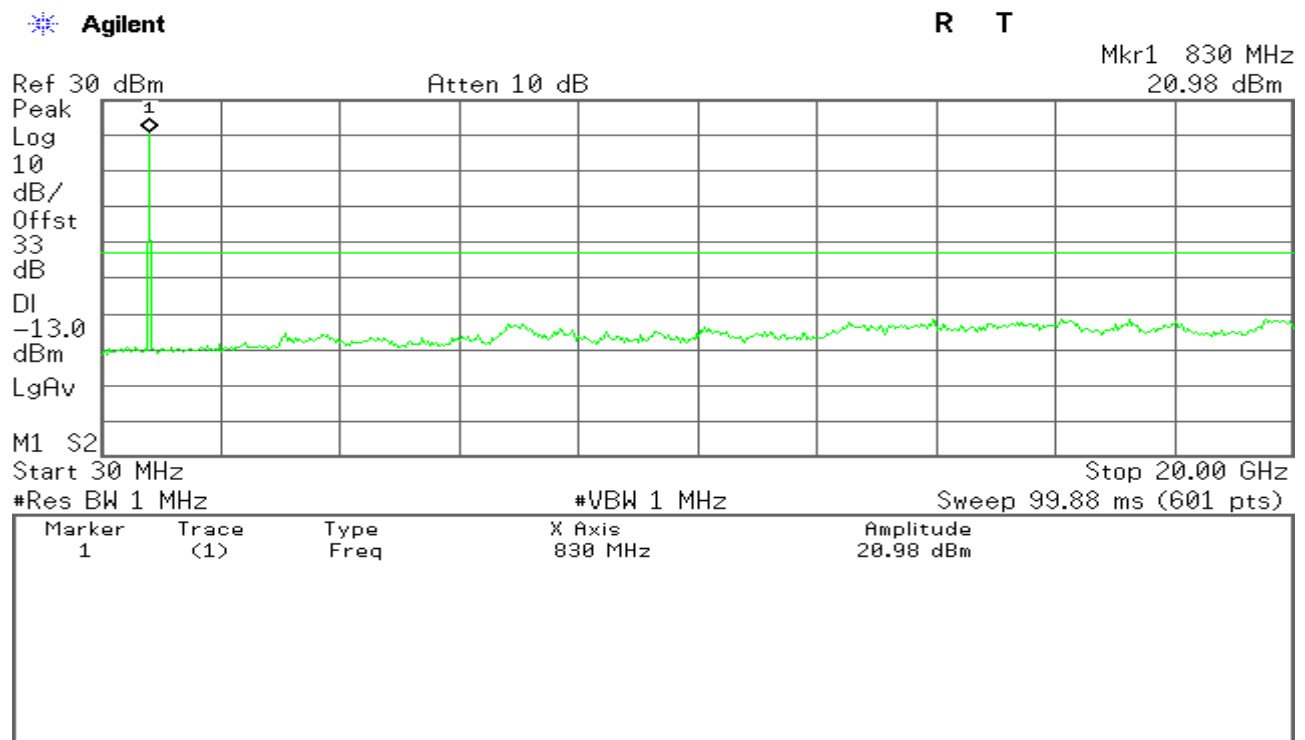


Figure 11-2: Out of Band emission at antenna terminals – WCDMA CH Mid

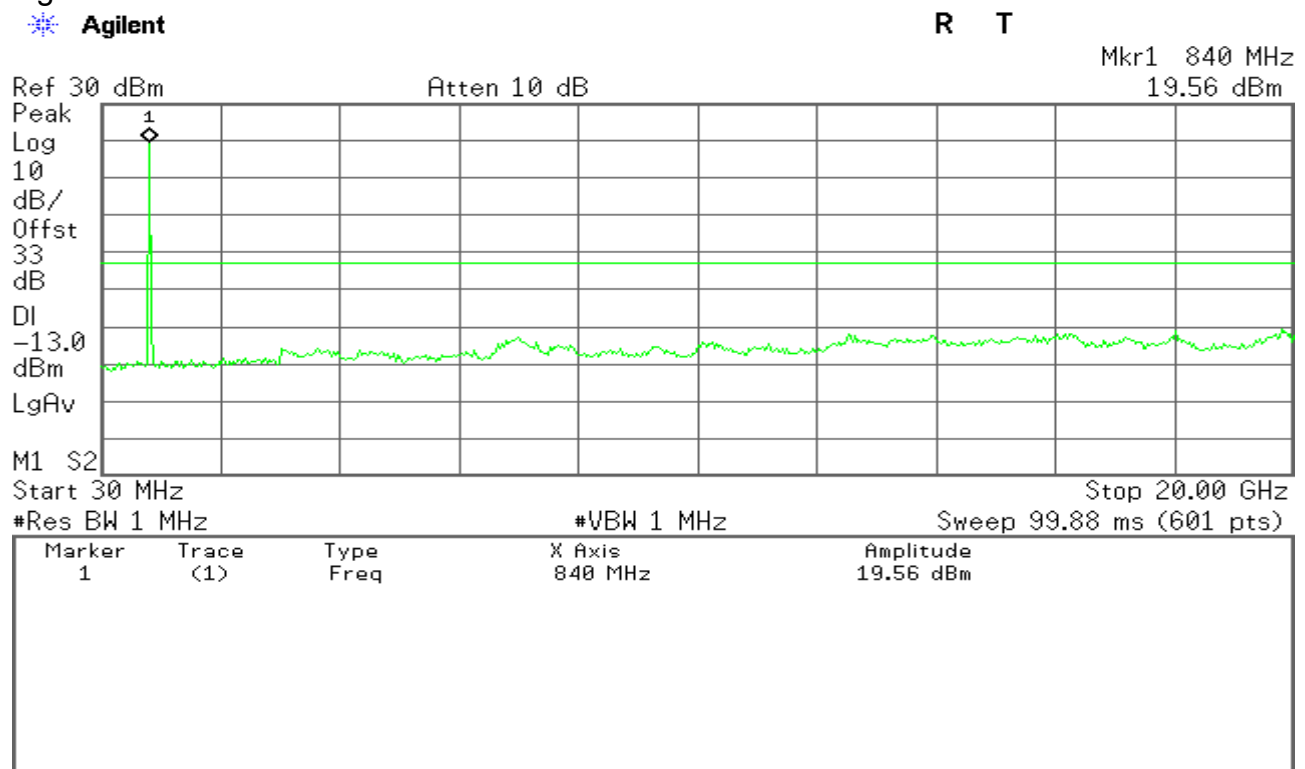
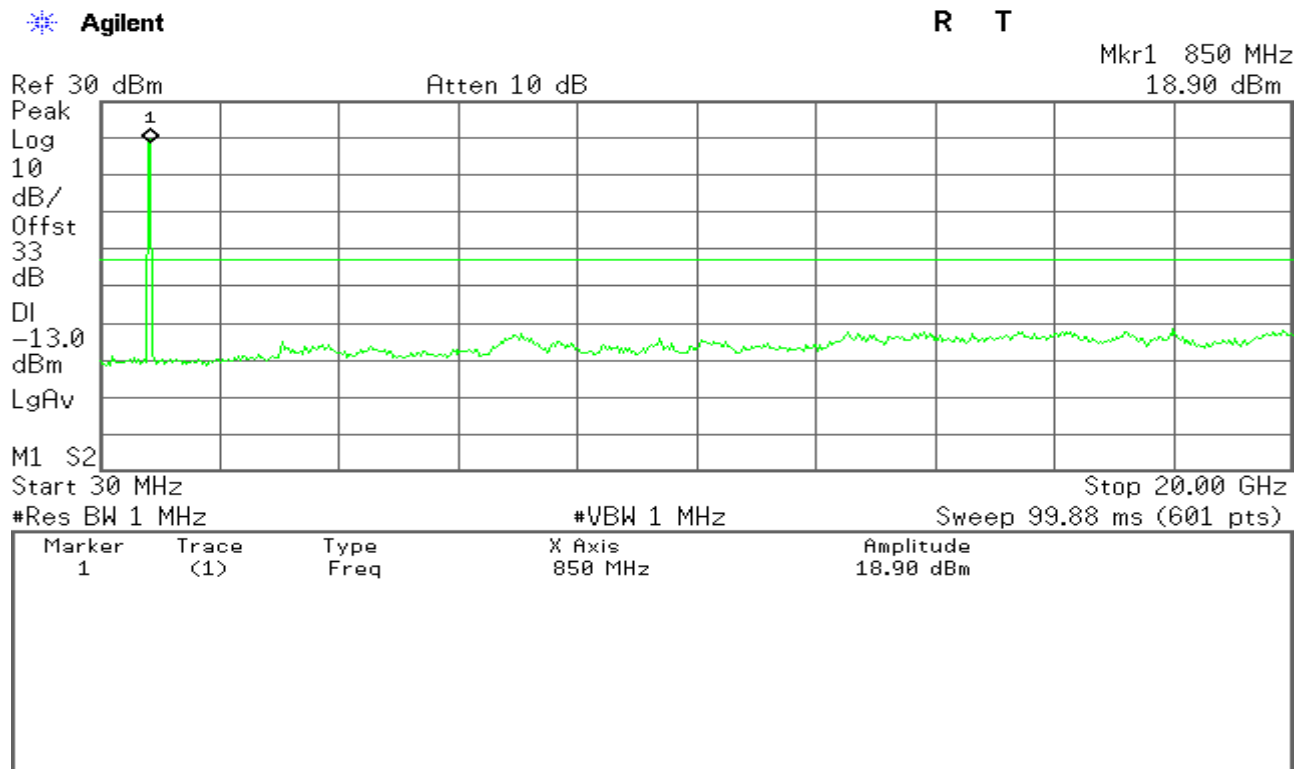




Figure 11-3: Out of Band emission at antenna terminals – WCDMA CH High



WCDMA Band V

Figure 11-4: Band Edge emissions –WCDMA CH Low

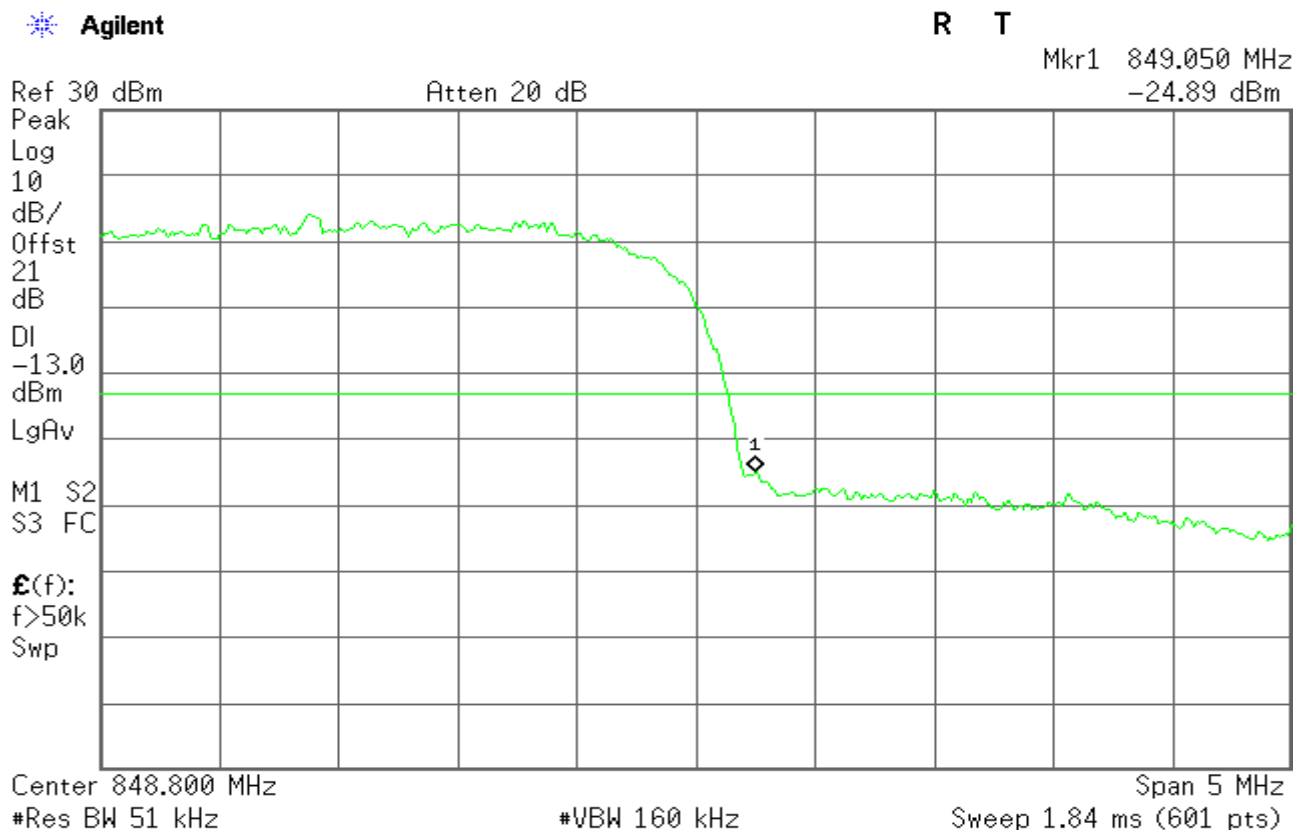
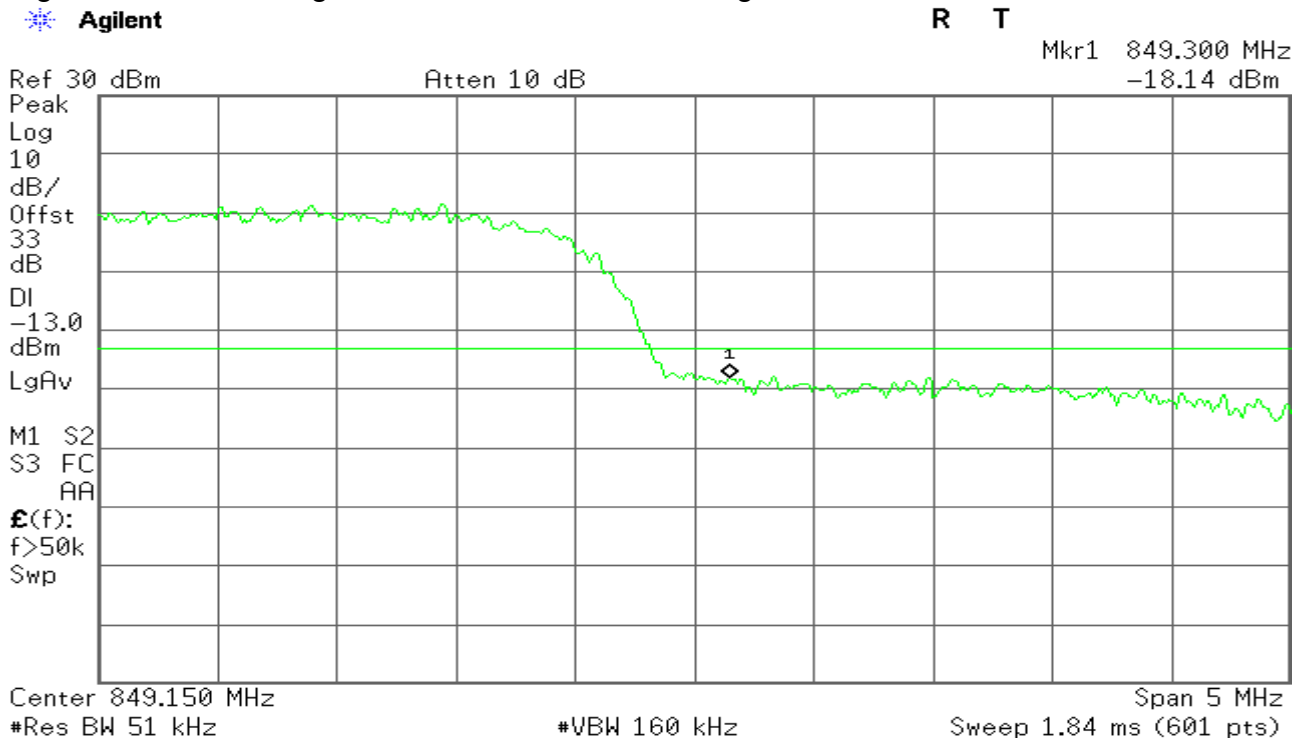




Figure 11-4: Band Edge emissions –WCDMA CH high



HSDPA Band V

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

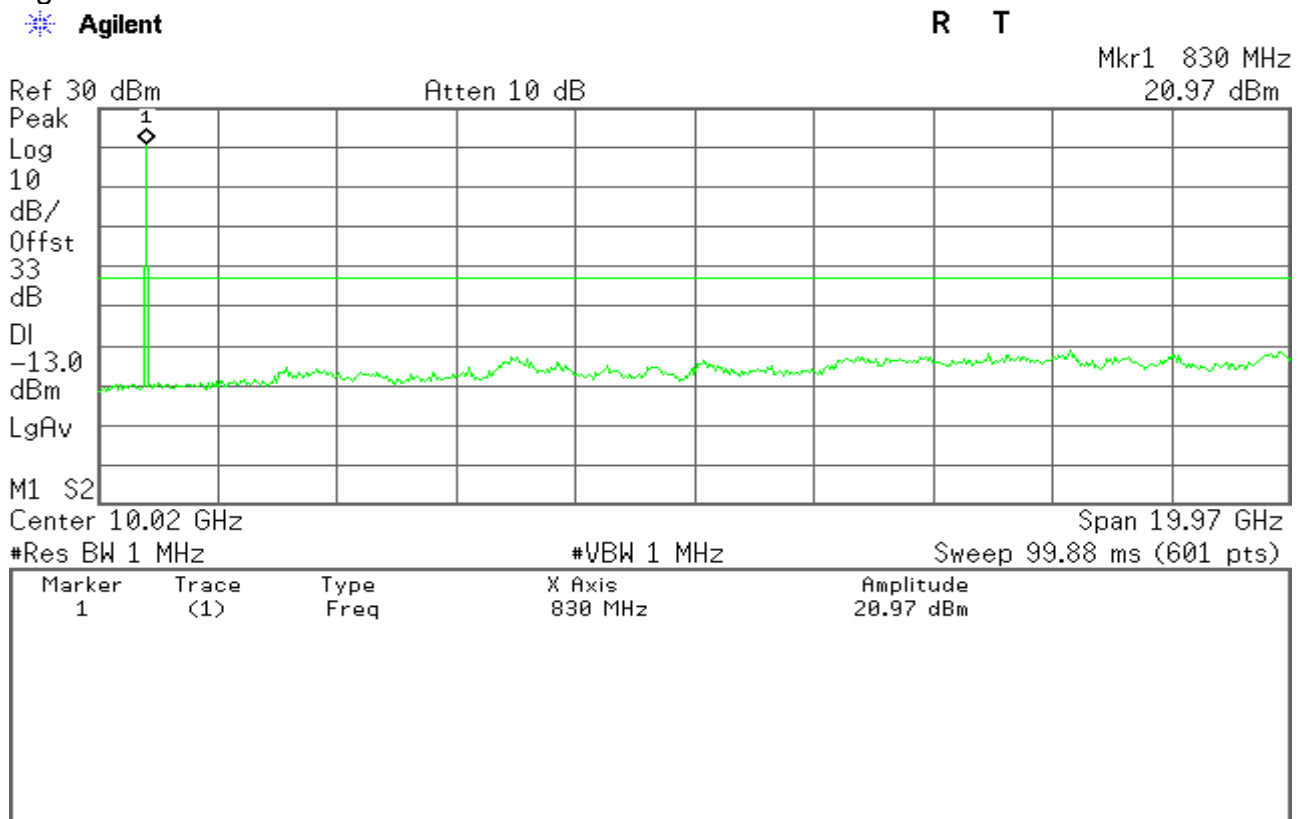




Figure 12-2: Out of Band emission at antenna terminals – HSDPA CH Mid

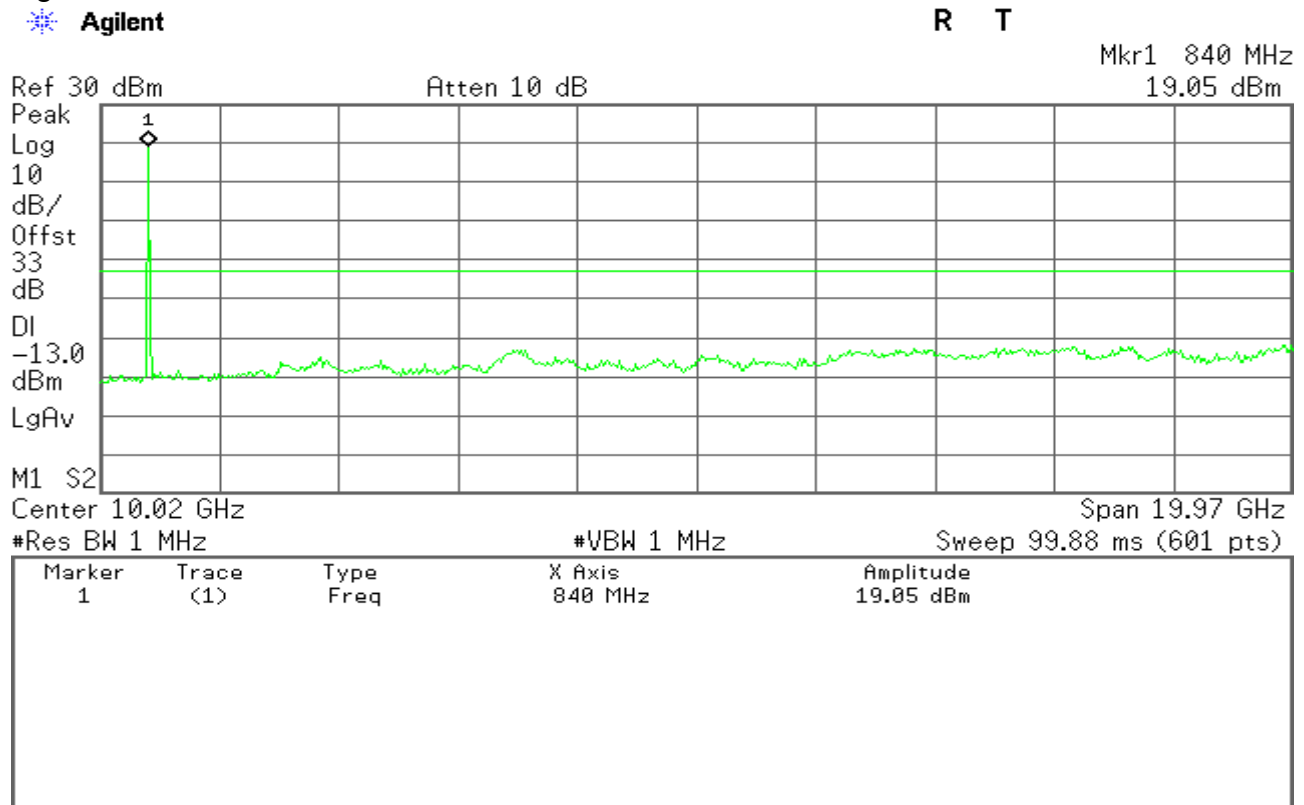
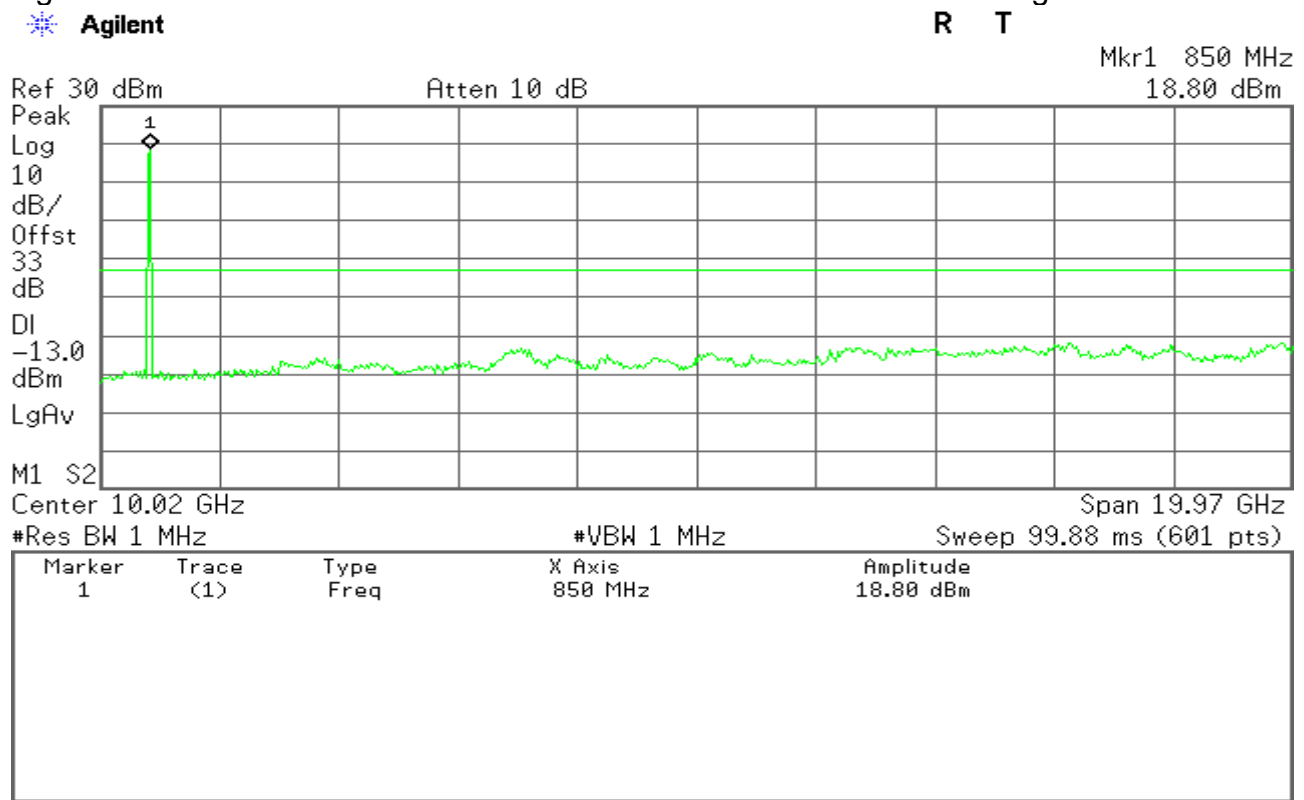


Figure 12-3: Out of Band emission at antenna terminals – HSDPA CH High





WCDMA / HSDPA Band V

Figure 12-4: Band Edge emissions – HSDPA CH Low

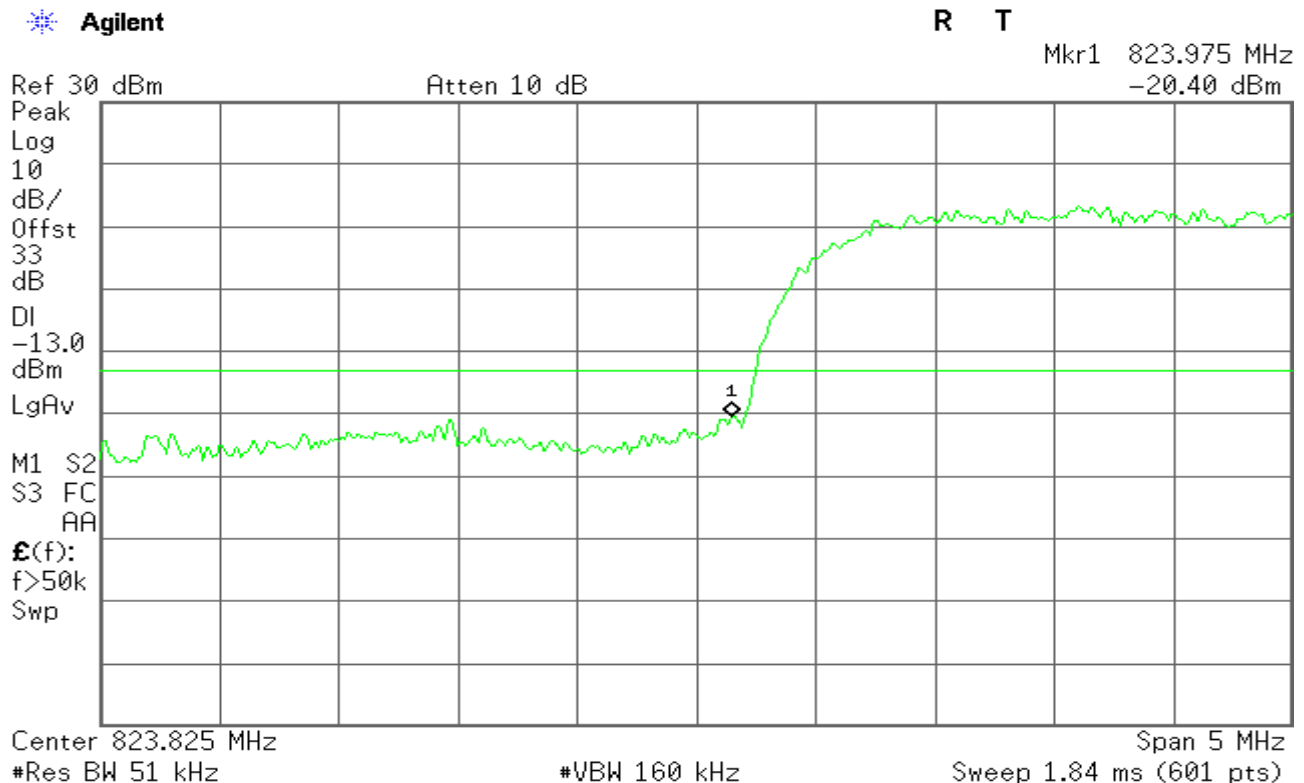
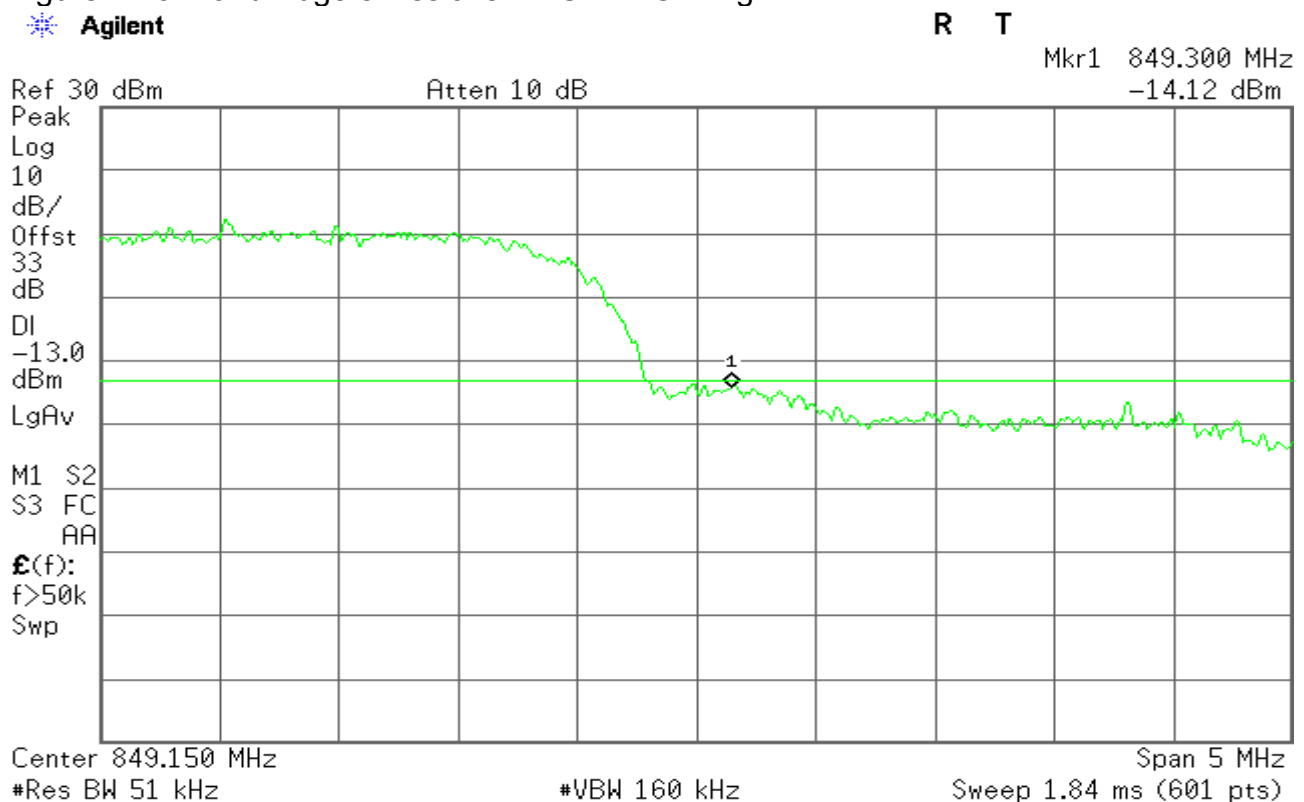


Figure 12-5: Band Edge emissions – HSDPA CH High





EDGE 850

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

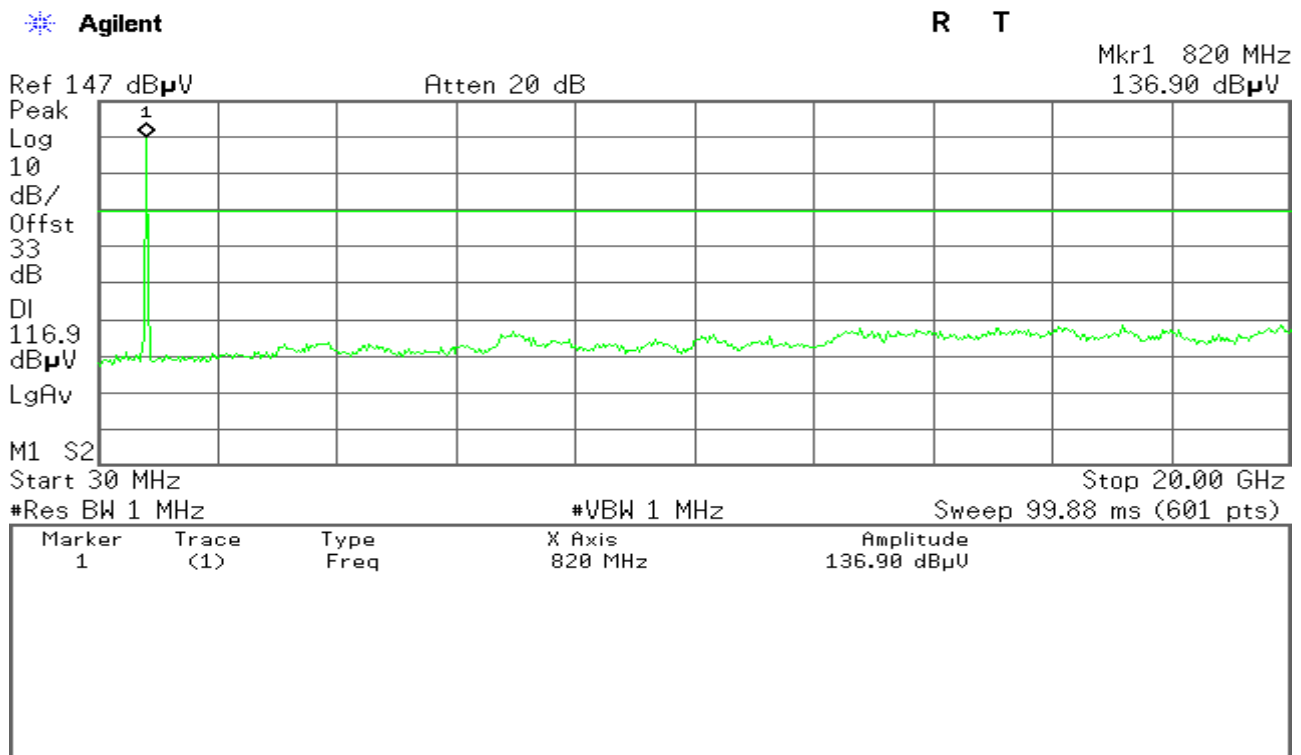


Figure 13-2: Out of Band emission at antenna terminals –EDGE CH Mid

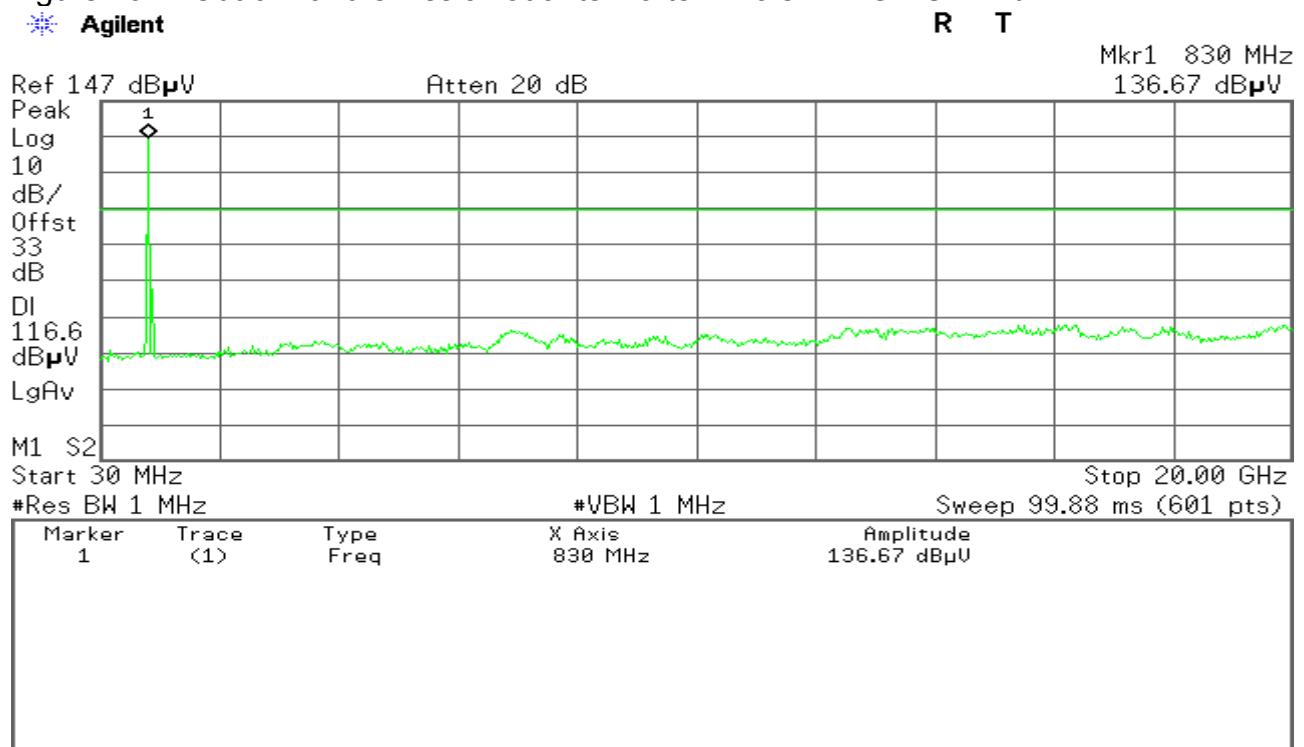
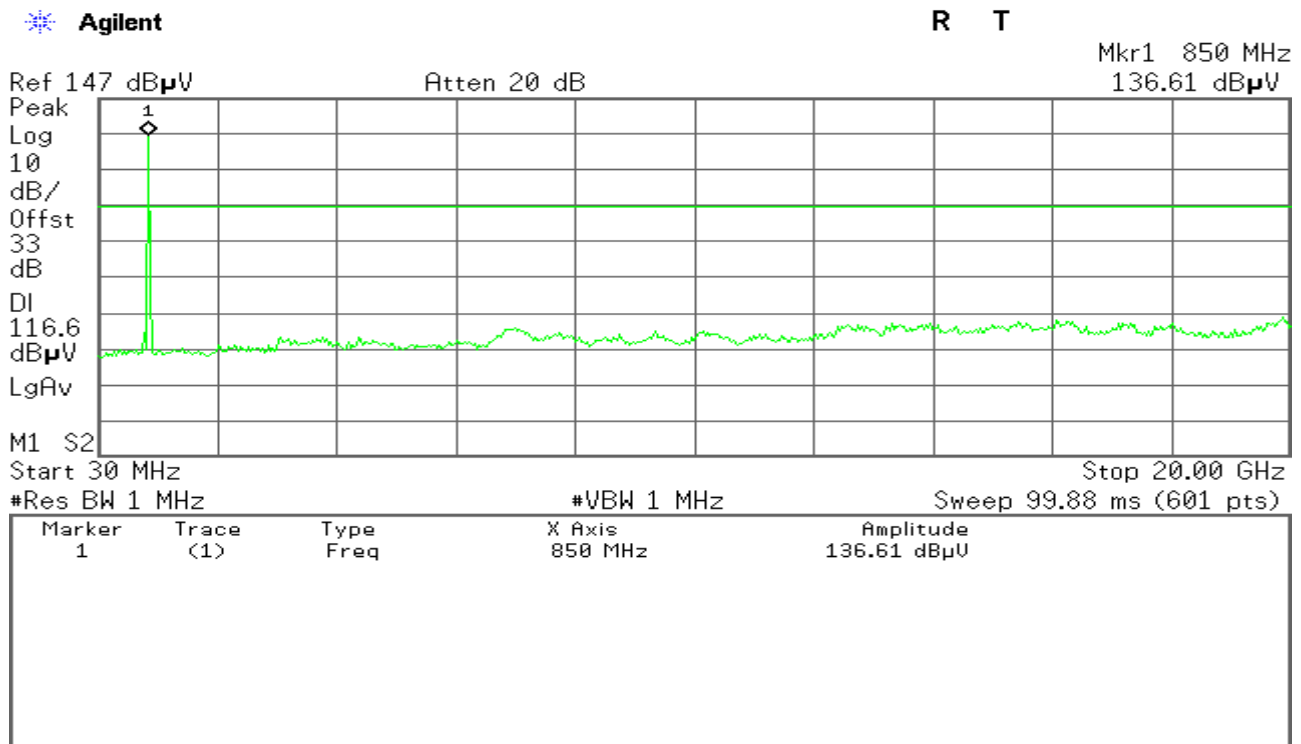




Figure 13-3: Out of Band emission at antenna terminals –EDGE CH High



EDGE 1900

Figure 13-4: Out of Band emission at antenna terminals –EDGE CH Low

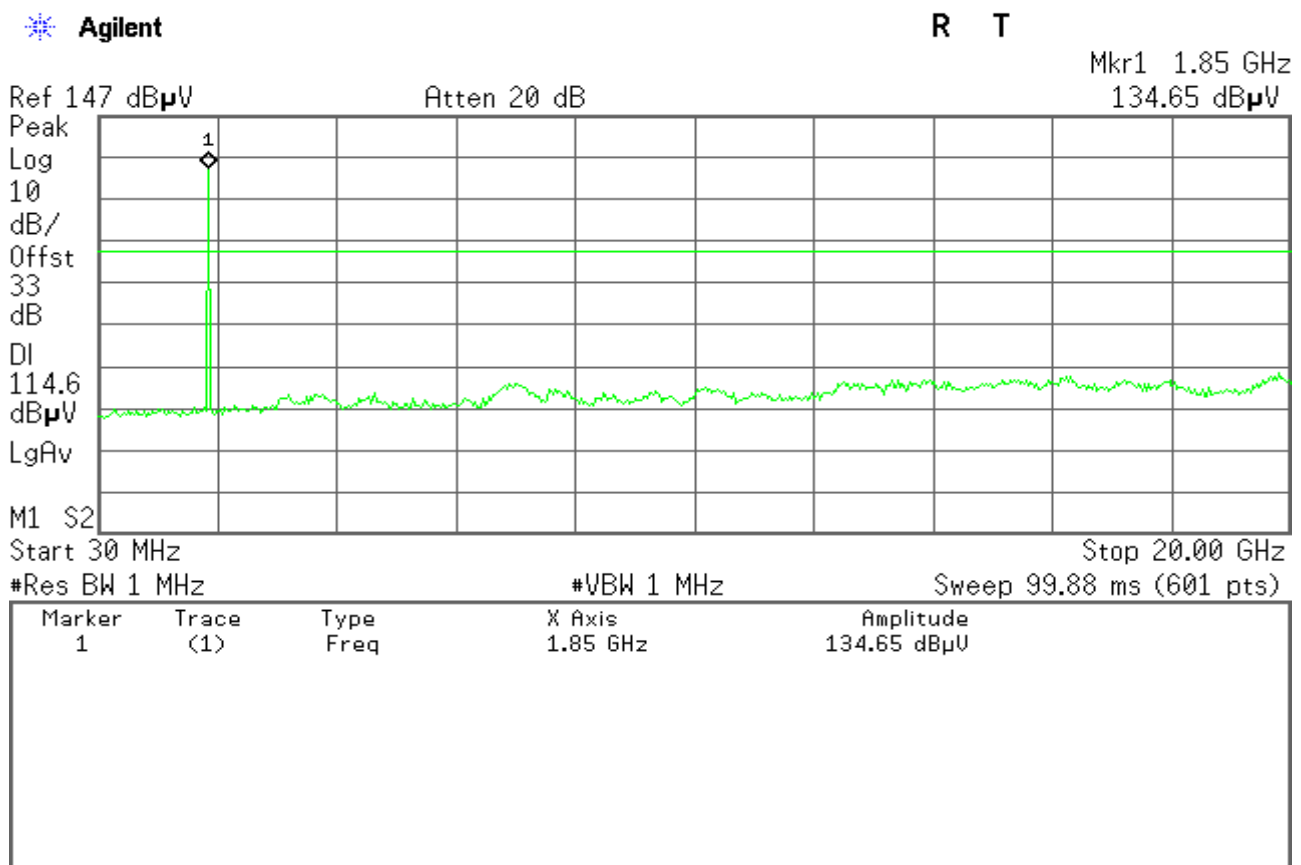




Figure 13-5: Out of Band emission at antenna terminals –EDGE CH Mid

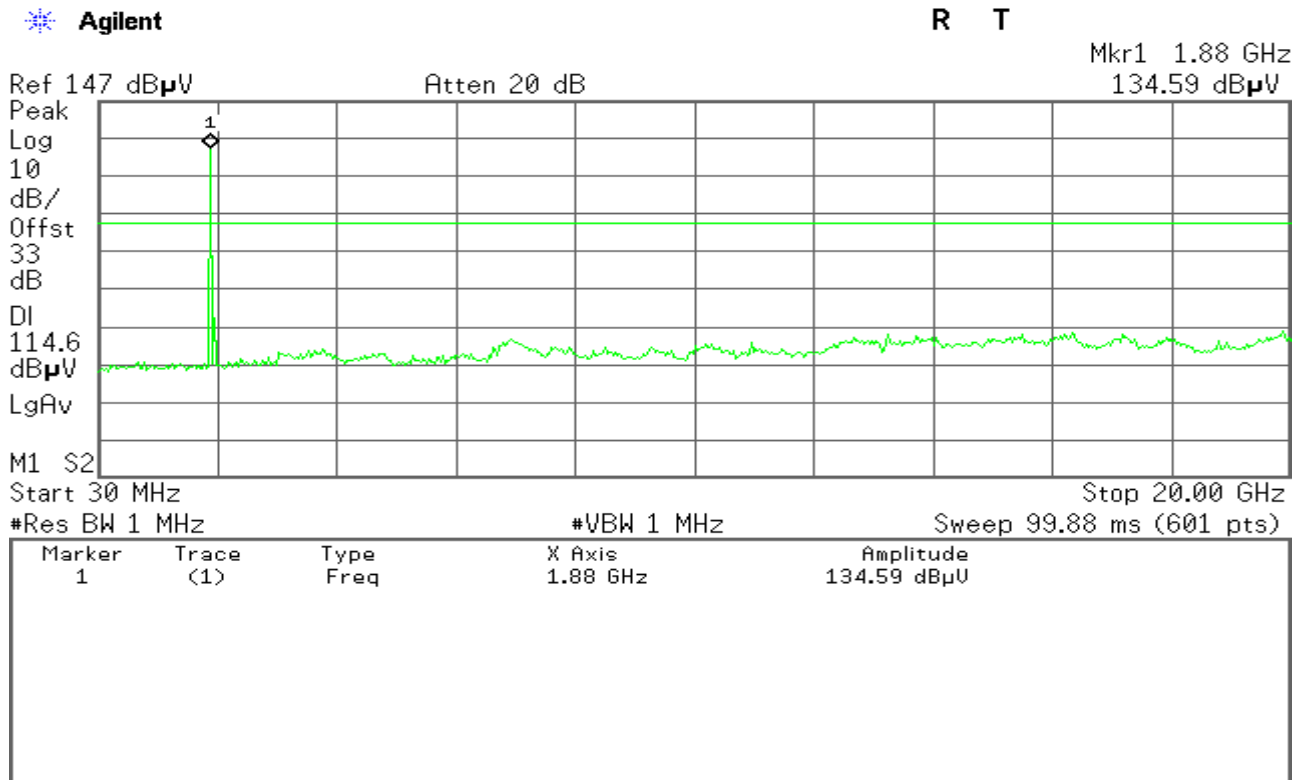
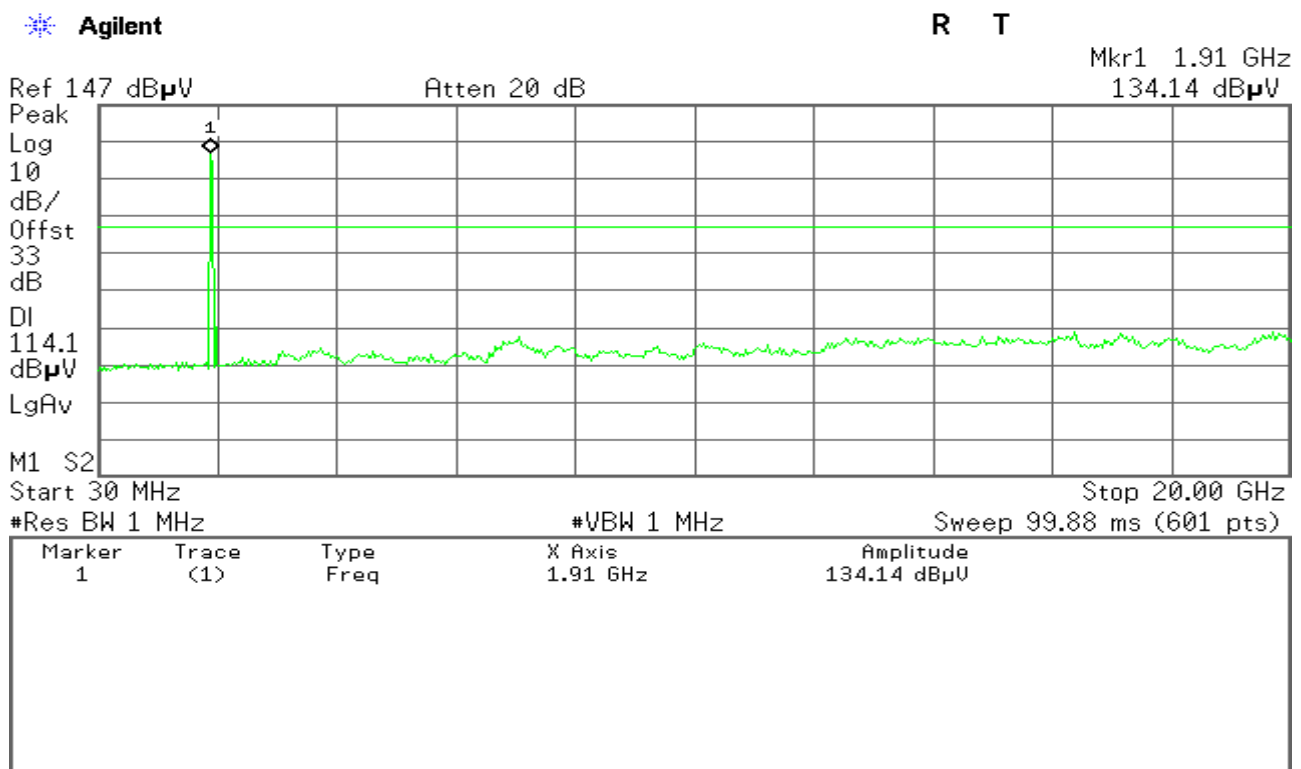


Figure 13-6: Out of Band emission at antenna terminals –EDGE CH High





EDGE 850

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

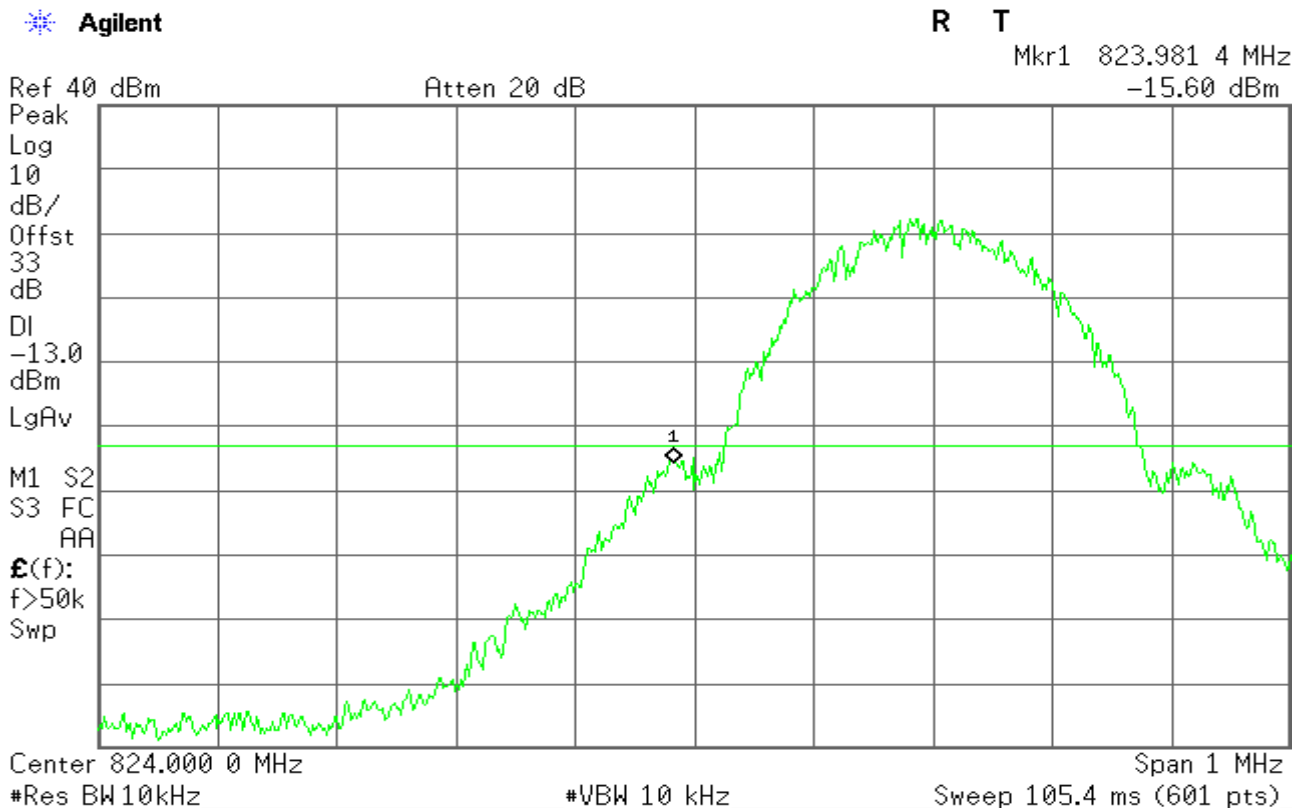
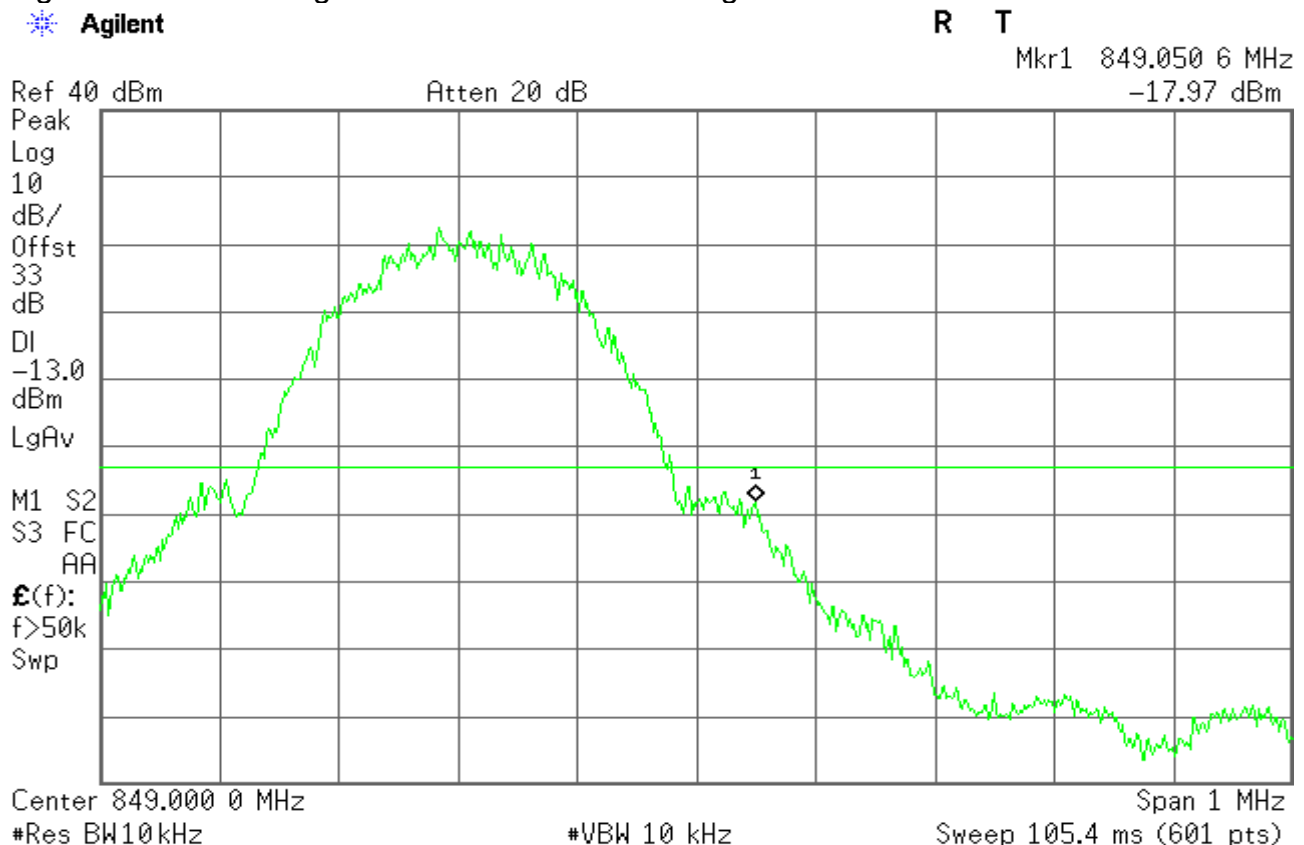


Figure 14-2: Band Edge emissions – EDGE CH High





EDGE 1900

Figure 14-3: Band Edge emissions – EDGE CH Low

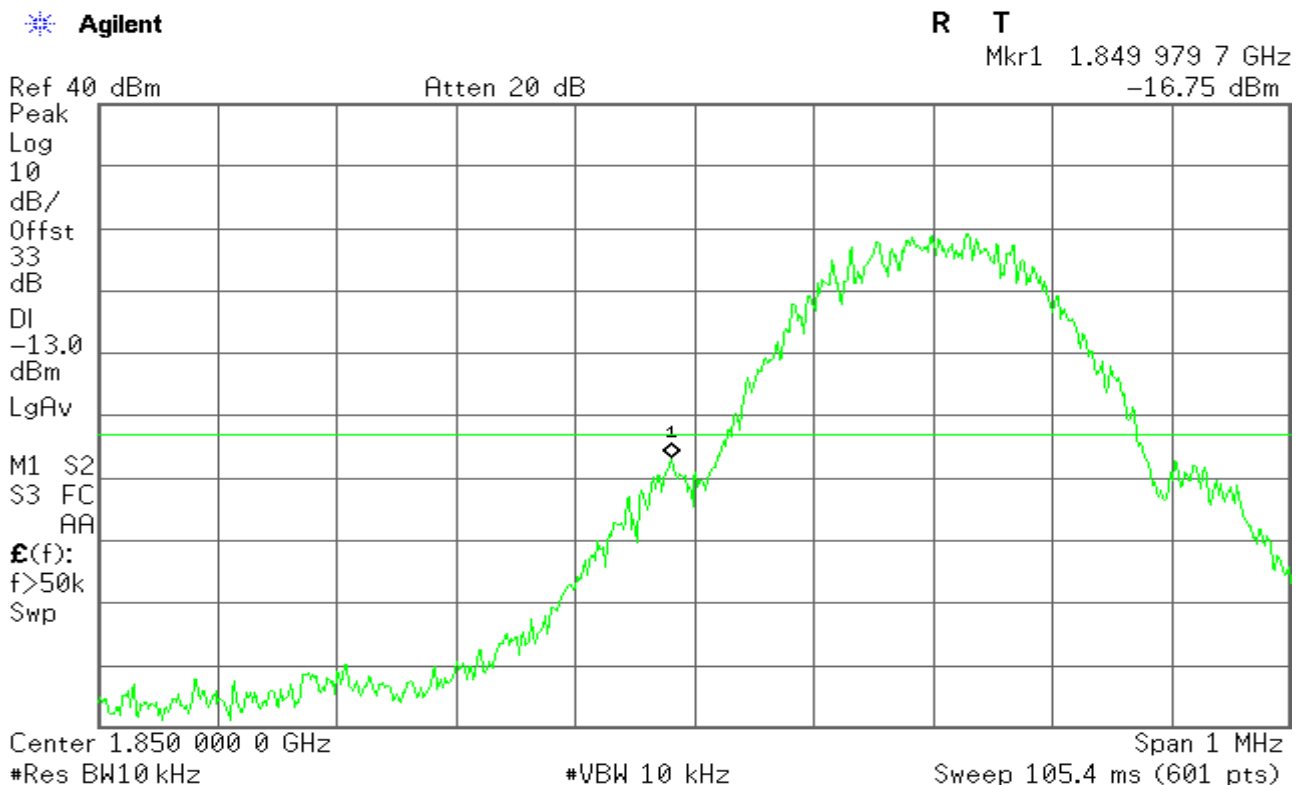
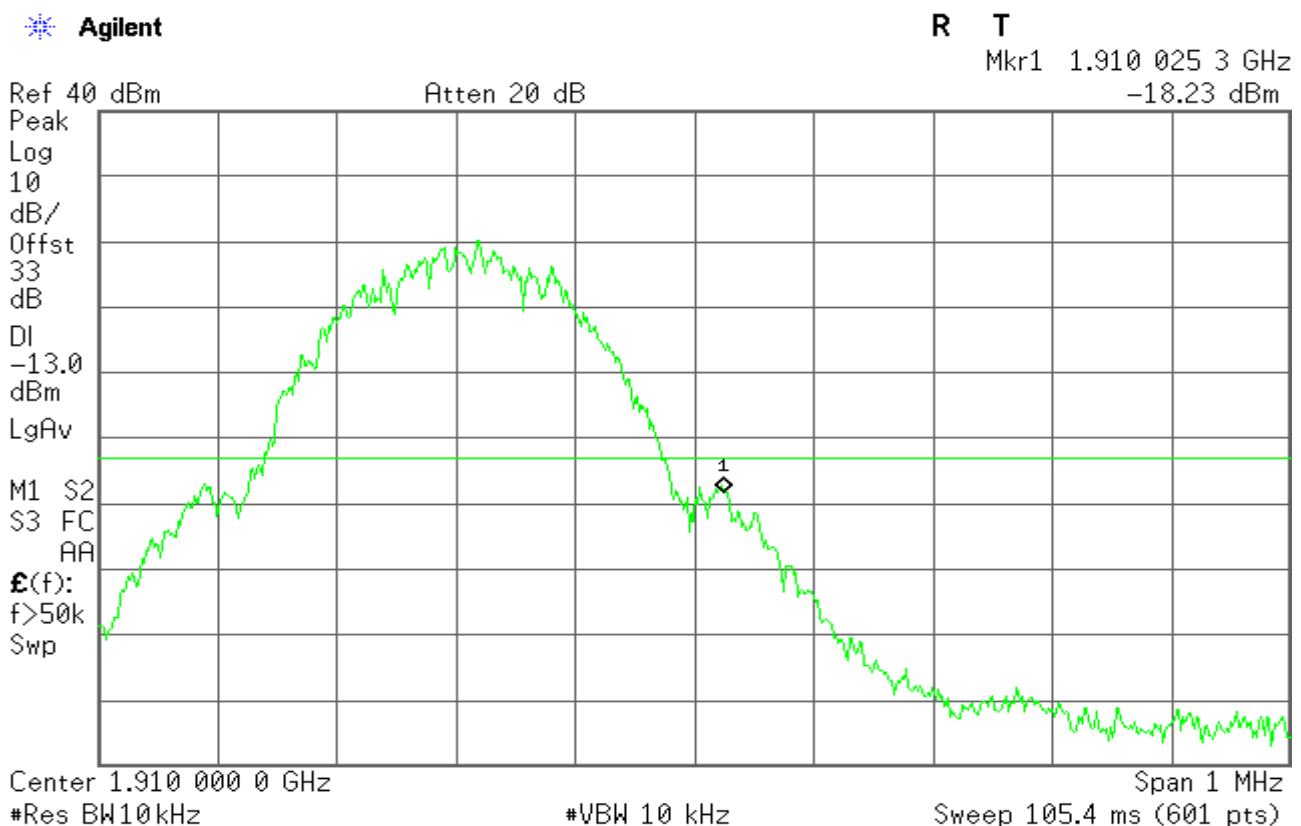


Figure 14-4: Band Edge emissions – EDGE CH High





WCDMA Band II

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

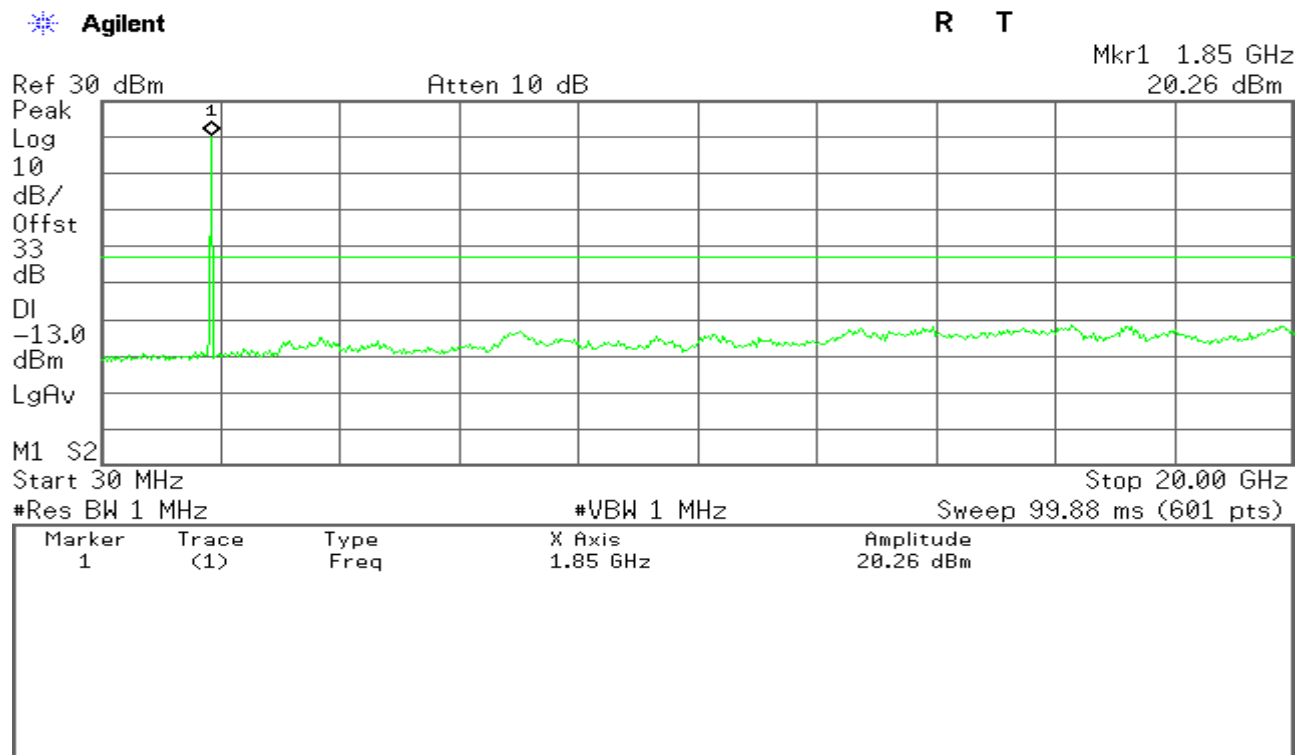


Figure 15-2: Out of Band emission at antenna terminals – WCDMA CH Mid

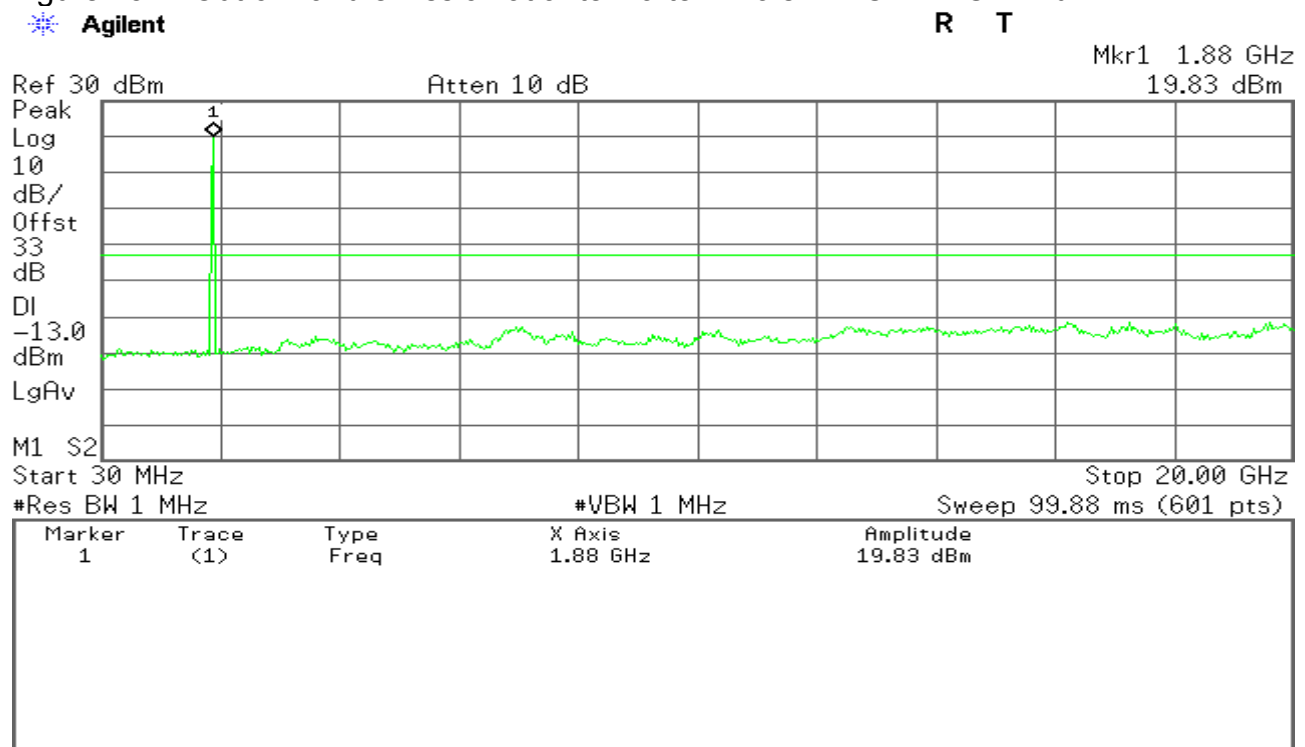
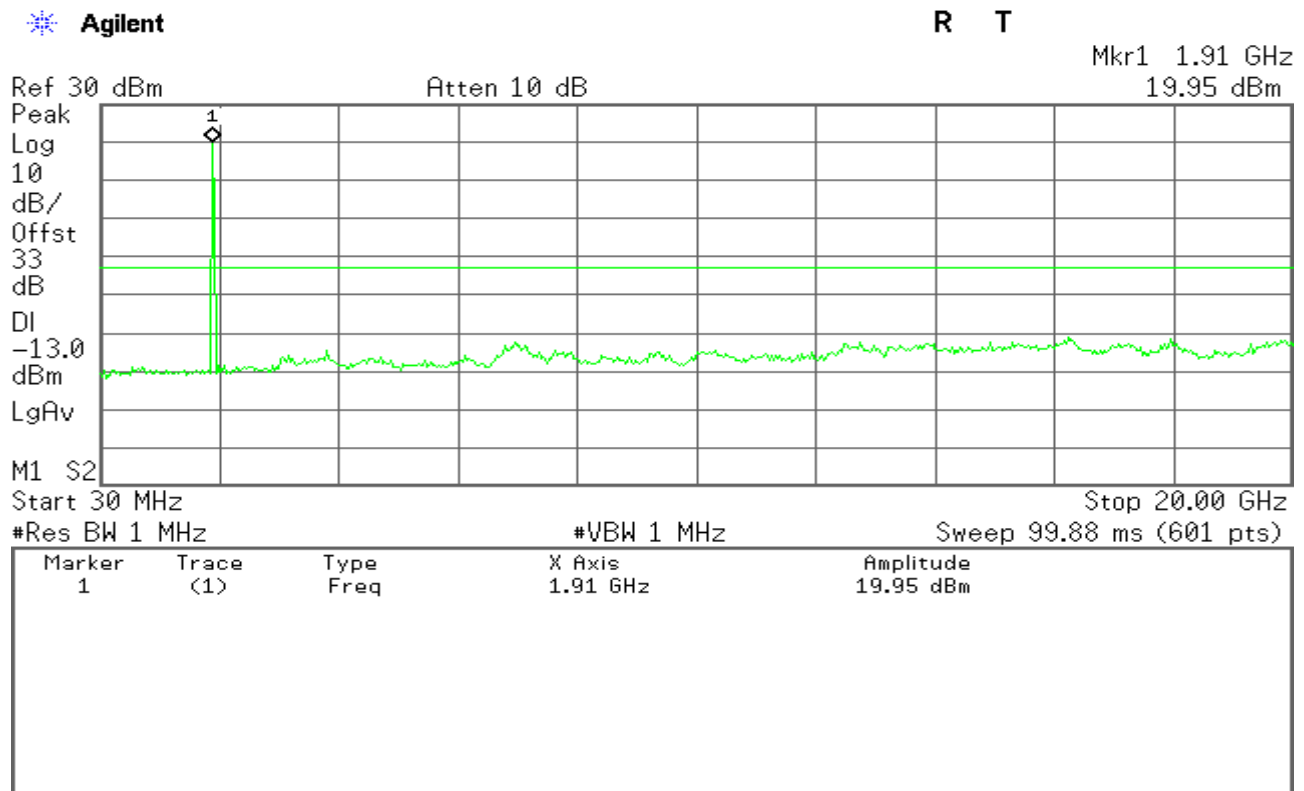




Figure 15-3: Out of Band emission at antenna terminals – WCDMA CH High



WCDMA Band II

Figure 15-4: Band Edge emissions –WCDMA CH Low

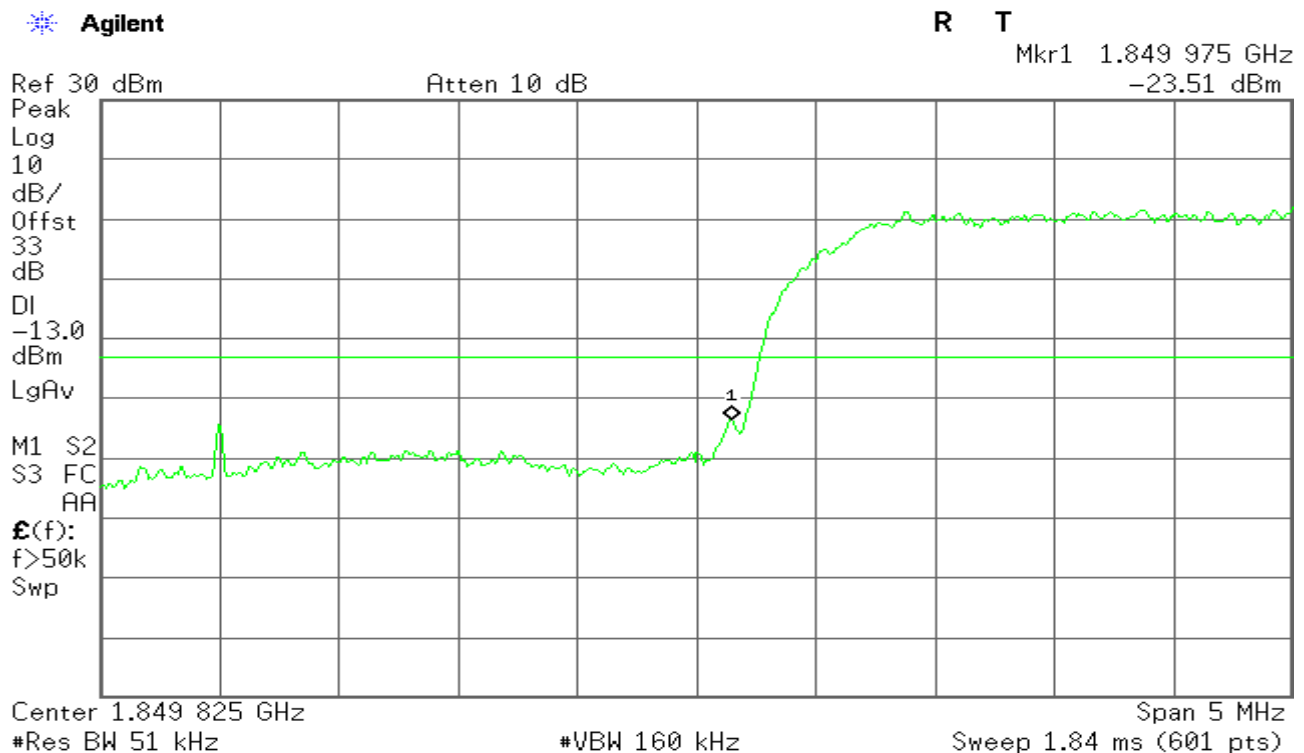
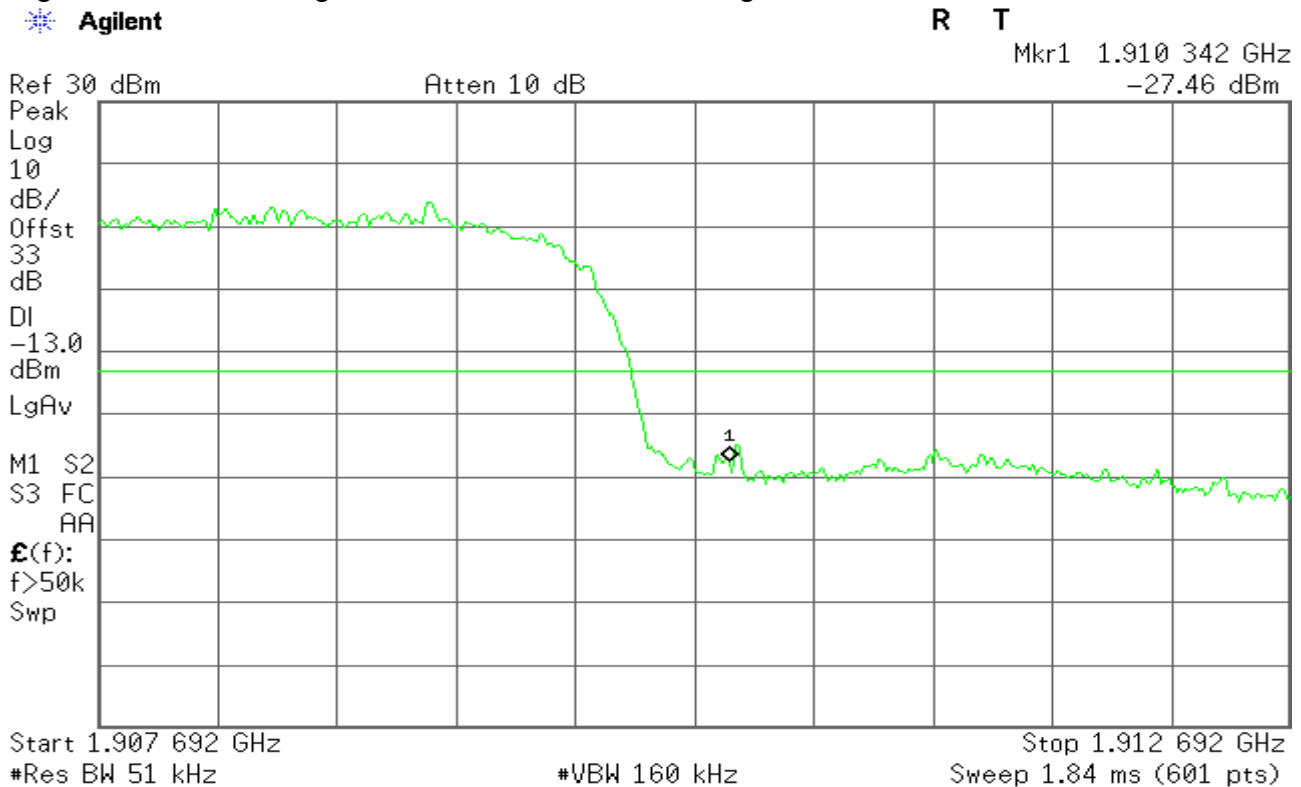




Figure 15-5: Band Edge emissions –WCDMA CH high



HSDPA Band II

Figure 15-6: Out of Band emission at antenna terminals – HSDPA CH Low

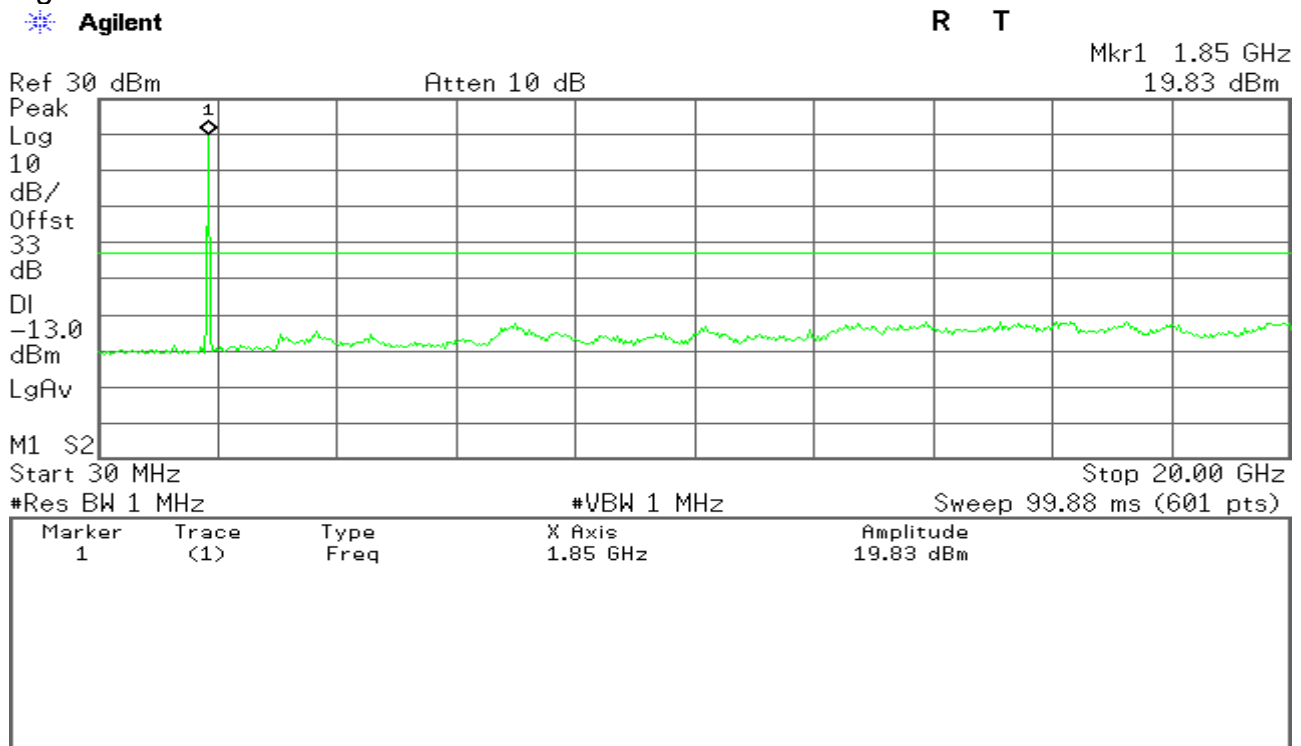




Figure 15-7: Out of Band emission at antenna terminals – HSDPA CH Mid

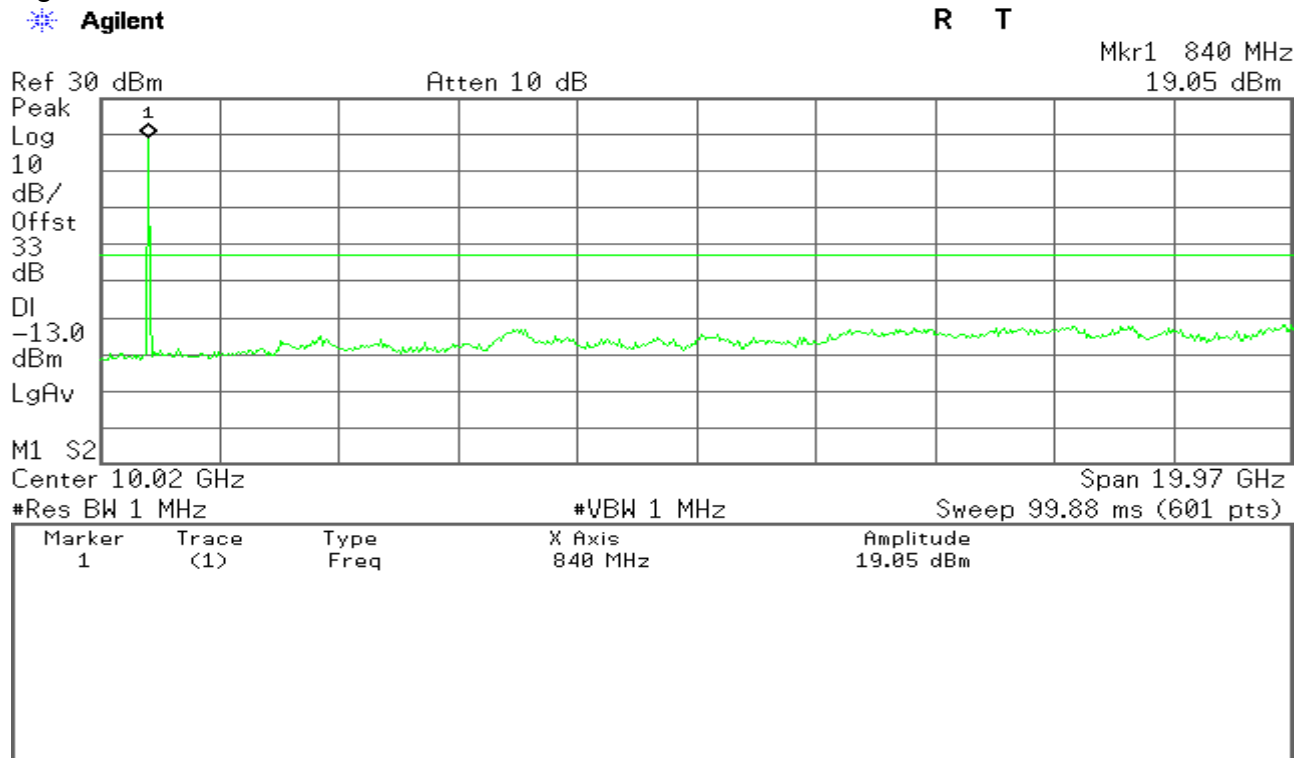
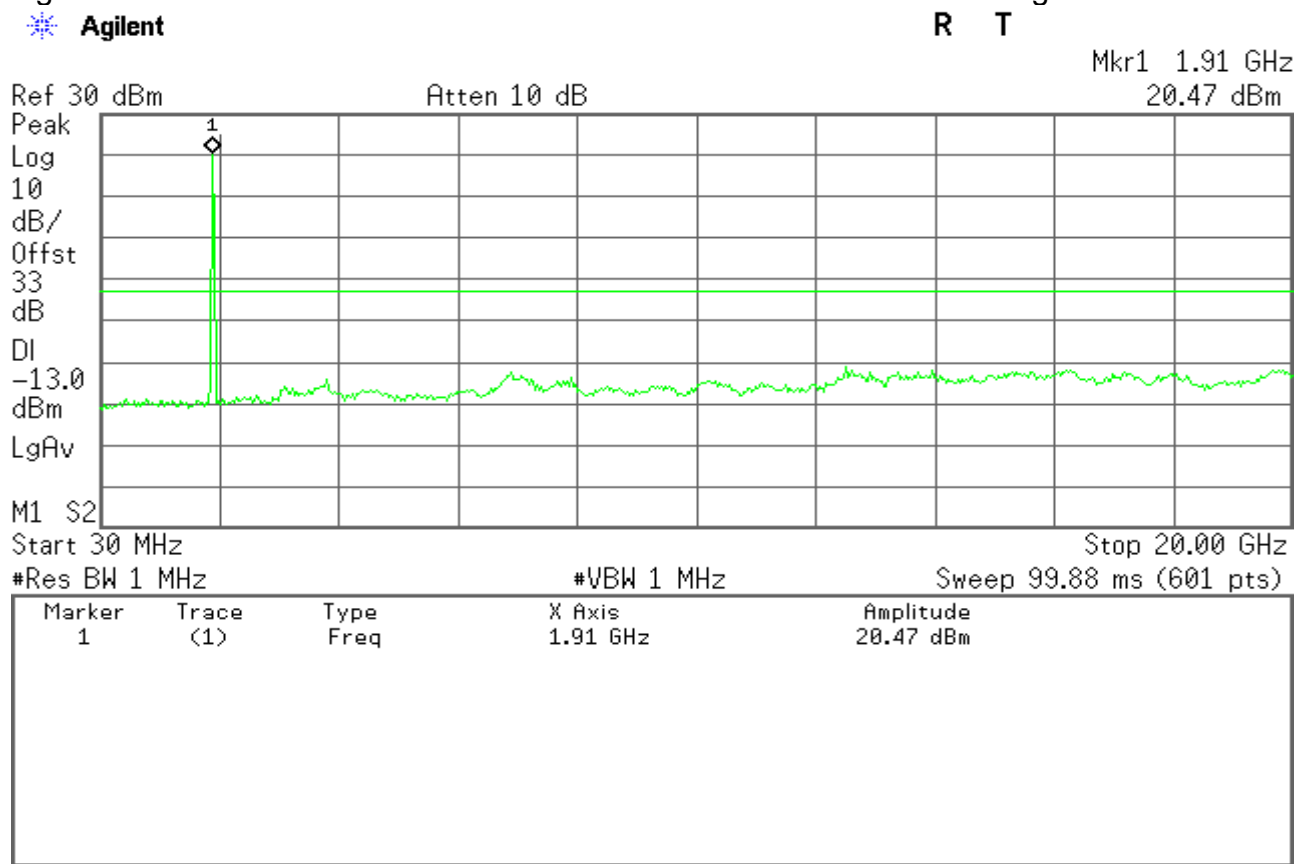


Figure 15-8: Out of Band emission at antenna terminals – HSDPA CH High





WCDMA / HSDPA Band II

Figure 15-9: Band Edge emissions – HSDPA CH Low

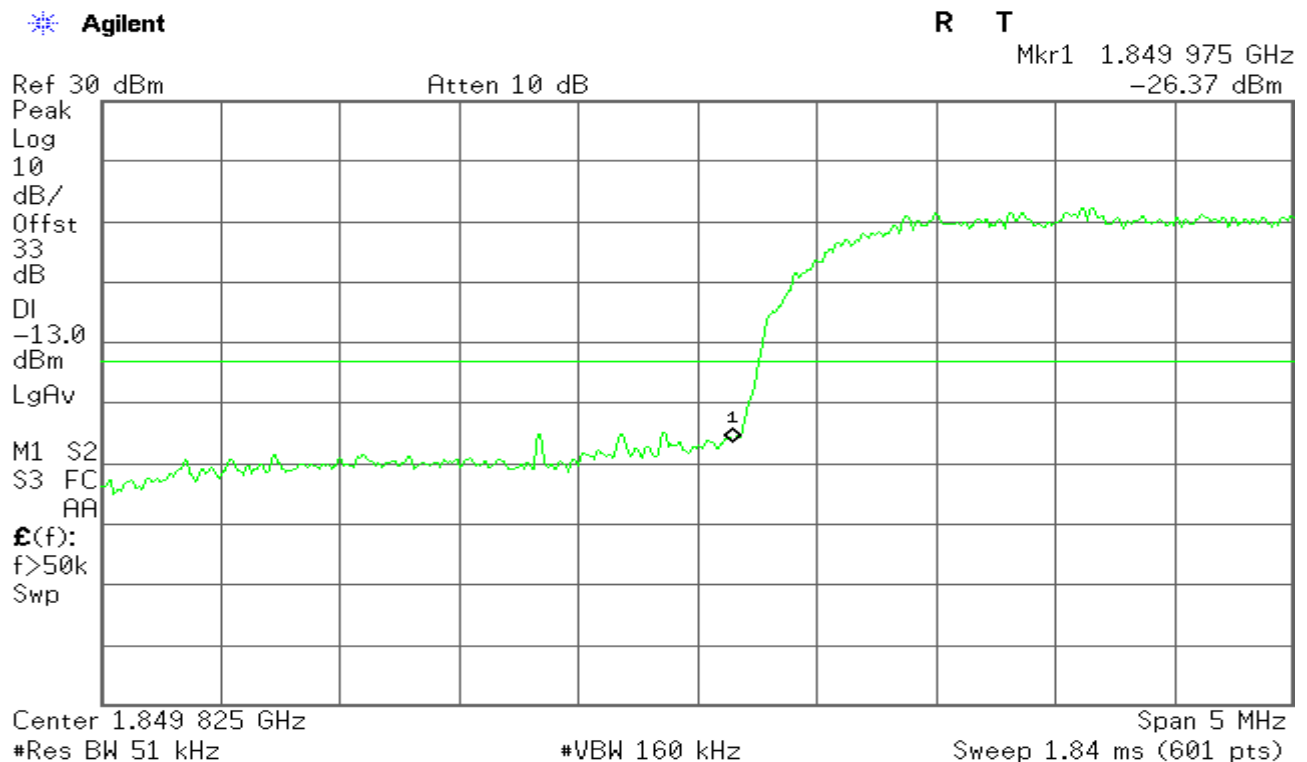
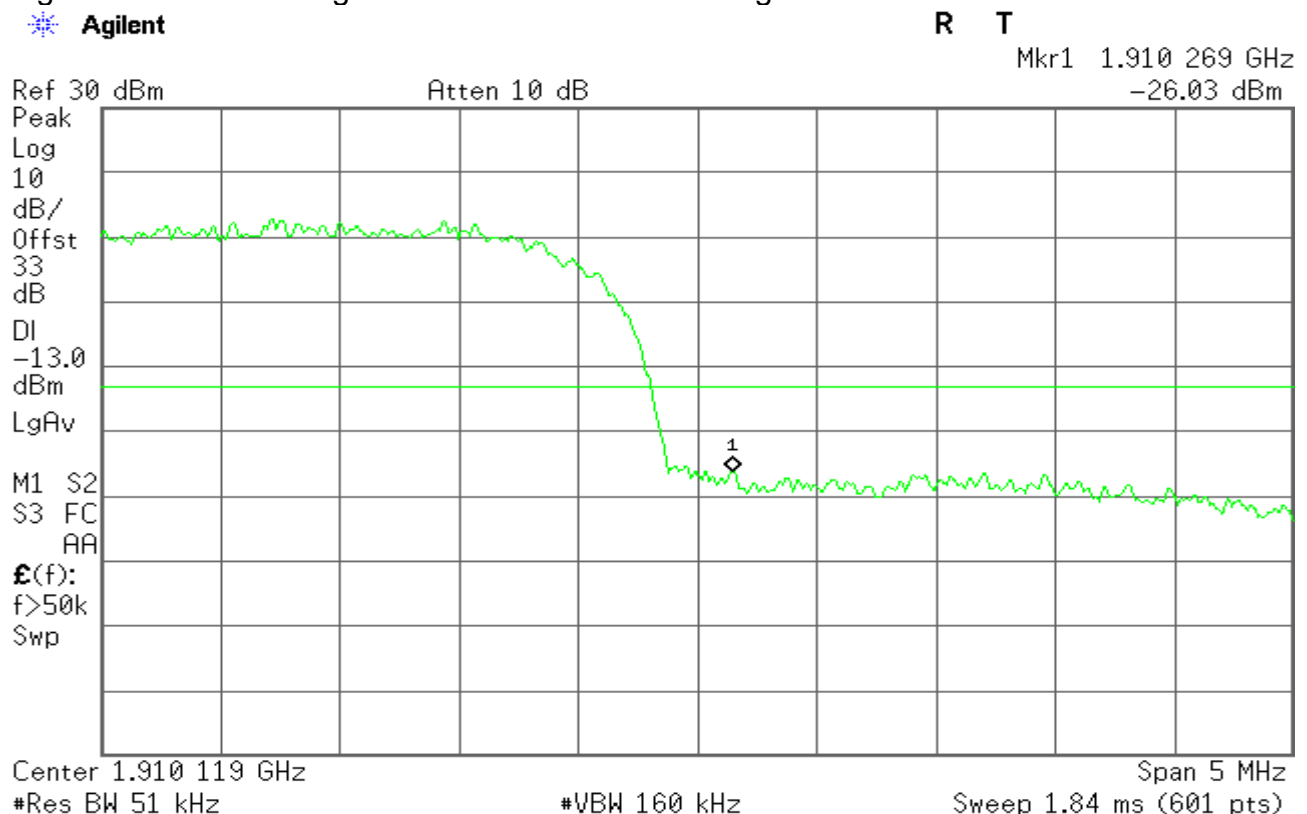


Figure 15-10: Band Edge emissions – HSDPA CH High





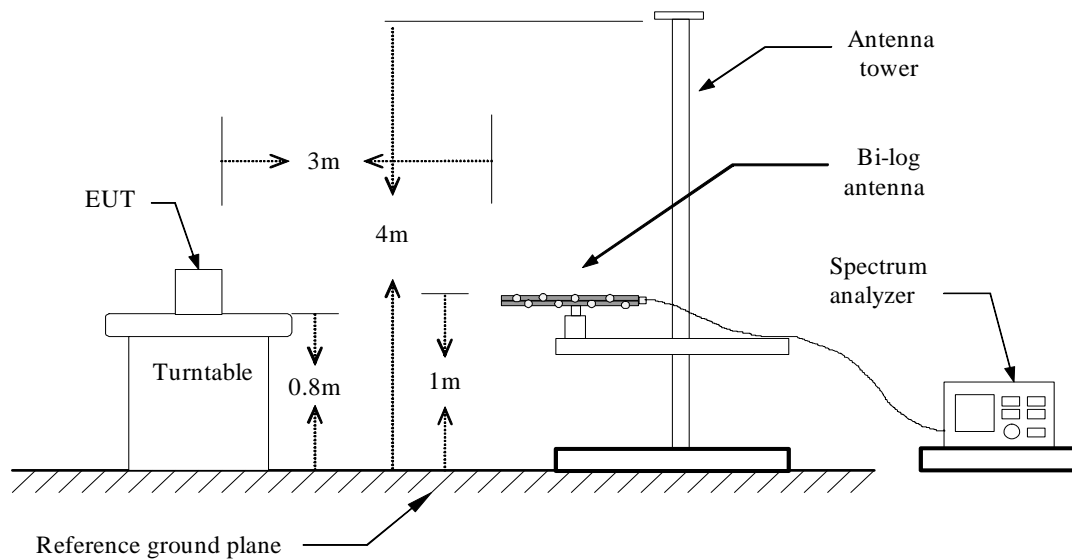
7.6. FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

LIMIT

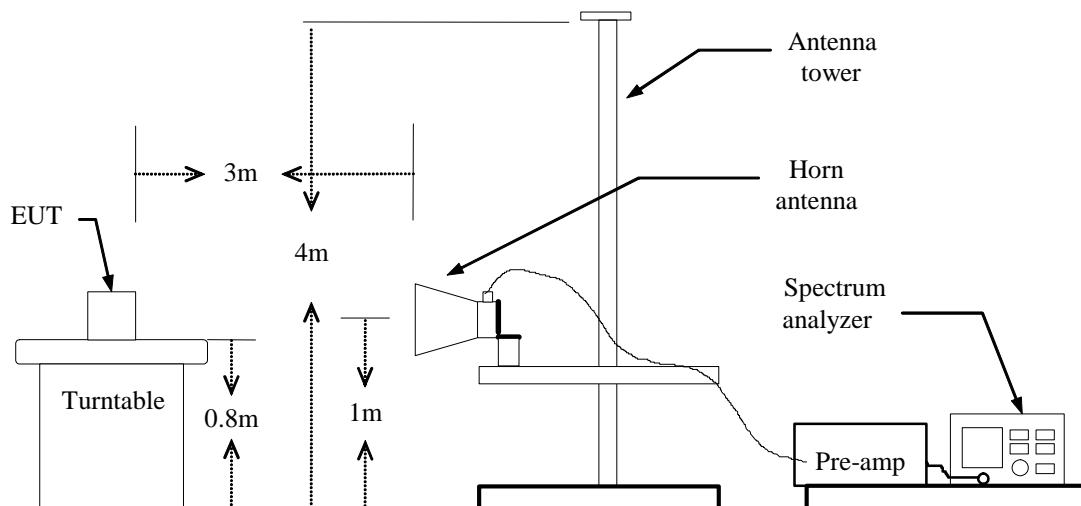
According to FCC §2.1053

TEST CONFIGURATION

Below 1 GHz

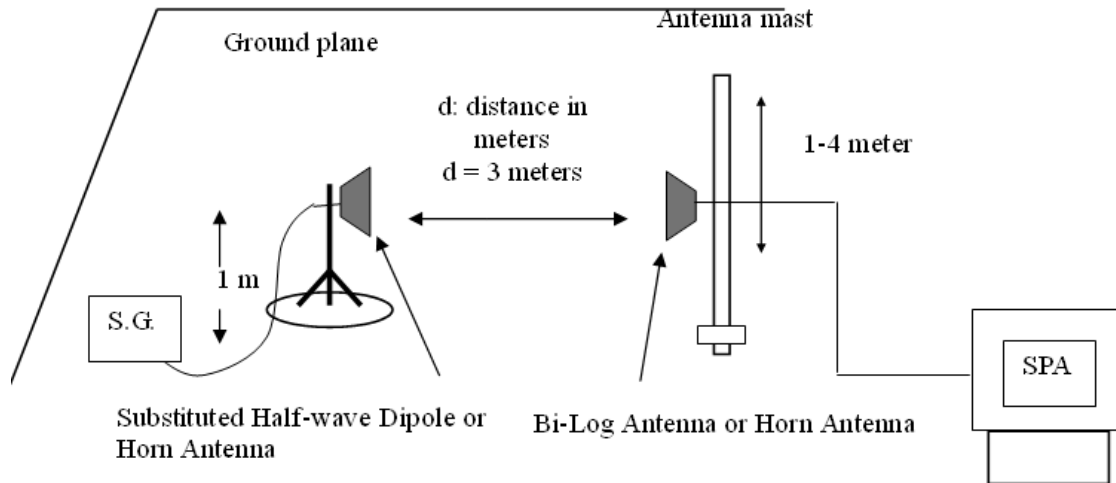


Above 1 GHz





Substituted Method Test Set-up



TEST PROCEDURE

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

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

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

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

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



TEST RESULTS

Refer to the attached tabular data sheets.

Radiated Spurious Emission Measurement Result / Below 1GHz

Operation Mode:	GPRS 850 / TX / CH 128	Test Date:	October 31,2012
Temperature:	23°C	Tested by:	Sean.Yu
Humidity:	51 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
65.55	V	-36.58	-10.70	-47.28	-13.00	-34.28
112.46	V	-41.14	-5.90	-47.04	-13.00	-34.04
184.29	V	-38.47	-8.85	-47.32	-13.00	-34.32
270.29	V	-37.21	-9.18	-46.39	-13.00	-33.39
294.16	V	-34.74	-9.44	-44.18	-13.00	-31.18
363.26	V	-37.14	-6.68	-43.82	-13.00	-30.82
30.59	H	-30.74	-16.87	-47.61	-13.00	-34.61
39.46	H	-37.12	-8.79	-45.91	-13.00	-32.91
129.59	H	-36.24	-8.95	-45.19	-13.00	-32.19
164.26	H	-37.25	-10.97	-48.22	-13.00	-35.22
294.29	H	-36.41	-9.01	-45.42	-13.00	-32.42
418.59	H	-44.42	-4.31	-48.73	-13.00	-35.73



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	GPRS 850 / TX / CH 190	Test Date:	October 31,2012
Temperature:	23°C	Tested by:	Sean.Yu
Humidity:	51 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
61.46	V	-35.22	-10.70	-45.92	-13.00	-32.92
123.59	V	-42.74	-5.90	-48.64	-13.00	-35.64
185.68	V	-39.24	-8.85	-48.09	-13.00	-35.09
269.68	V	-36.25	-9.18	-45.43	-13.00	-32.43
291.95	V	-35.41	-9.44	-44.85	-13.00	-31.85
362.96	V	-36.47	-6.68	-43.15	-13.00	-30.15
31.96	H	-31.25	-16.87	-48.12	-13.00	-35.12
39.95	H	-36.12	-8.79	-44.91	-13.00	-31.91
130.65	H	-35.74	-8.95	-44.69	-13.00	-31.69
163.69	H	-36.24	-10.97	-47.21	-13.00	-34.21
295.55	H	-35.32	-9.01	-44.33	-13.00	-31.33
417.65	H	-43.51	-4.31	-47.82	-13.00	-34.82

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.



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	GPRS 850 / TX / CH 251	Test Date:	October 31,2012
Temperature:	23°C	Tested by:	Sean.Yu
Humidity:	51 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
164.55	V	-51.16	-13.84	-65.00	-13.00	-52.00
262.16	V	-47.26	-13.71	-60.97	-13.00	-47.97
399.32	V	-47.19	-11.17	-58.36	-13.00	-45.36
498.59	V	-54.25	-8.40	-62.65	-13.00	-49.65
694.26	V	-58.46	-6.25	-64.71	-13.00	-51.71
799.19	V	-60.29	-4.98	-65.27	-13.00	-52.27
115.29	H	-55.19	-13.90	-69.09	-13.00	-56.09
161.42	H	-48.24	-14.15	-62.39	-13.00	-49.39
263.29	H	-52.27	-14.06	-66.33	-13.00	-53.33
400.27	H	-51.16	-10.96	-62.12	-13.00	-49.12
498.16	H	-49.26	-8.28	-57.54	-13.00	-44.54
695.29	H	-57.46	-6.18	-63.64	-13.00	-50.64

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.



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode: EDGE 850 / TX / CH 128

Test Date: October 31,2012

Temperature: 21°C

Tested by: Sean.Yu

Humidity: 53 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
100.69	V	-46.26	-17.68	-63.94	-13.00	-50.94
240.46	V	-49.46	-14.01	-63.47	-13.00	-50.47
264.59	V	-47.75	-13.71	-61.46	-13.00	-48.46
399.26	V	-46.16	-11.17	-57.33	-13.00	-44.33
499.46	V	-54.26	-8.38	-62.64	-13.00	-49.64
695.75	V	-58.46	-6.25	-64.71	-13.00	-51.71
100.25	H	-45.85	-17.49	-63.34	-13.00	-50.34
264.65	H	-52.63	-14.06	-66.69	-13.00	-53.69
400.46	H	-50.32	-10.96	-61.28	-13.00	-48.28
511.96	H	-58.43	-8.20	-66.63	-13.00	-53.63
695.52	H	-57.36	-6.18	-63.54	-13.00	-50.54
742.36	H	-62.93	-5.57	-68.50	-13.00	-55.50

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode: EDGE 850 / TX / CH 190

Test Date: October 31,2012

Temperature: 21°C

Tested by: Sean.Yu

Humidity: 53 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
131.16	V	-45.46	-12.34	-57.80	-13.00	-44.80
262.29	V	-48.26	-13.71	-61.97	-13.00	-48.97
400.46	V	-46.26	-11.22	-57.48	-13.00	-44.48
498.75	V	-54.36	-8.40	-62.76	-13.00	-49.76
698.29	V	-58.49	-6.25	-64.74	-13.00	-51.74
966.29	V	-60.52	-3.05	-63.57	-13.00	-50.57
131.16	H	-45.29	-13.66	-58.95	-13.00	-45.95
264.46	H	-52.63	-14.06	-66.69	-13.00	-53.69
400.29	H	-51.62	-10.96	-62.58	-13.00	-49.58
451.46	H	-55.42	-9.64	-65.06	-13.00	-52.06
555.36	H	-57.35	-6.18	-63.53	-13.00	-50.53
966.49	H	-61.62	-3.10	-64.72	-13.00	-51.72

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode: EDGE 850 / TX / CH 251

Test Date: October 31,2012

Temperature: 21°C

Tested by: Sean.Yu

Humidity: 53 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
355.65	V	-48.65	-13.71	-62.36	-13.00	-49.36
400.16	V	-48.62	-11.22	-59.84	-13.00	-46.84
497.62	V	-54.36	-8.40	-62.76	-13.00	-49.76
533.36	V	-57.26	-8.01	-65.27	-13.00	-52.27
695.36	V	-58.16	-6.25	-64.41	-13.00	-51.41
797.23	V	-60.26	-4.98	-65.24	-13.00	-52.24
115.85	H	-55.75	-14.27	-70.02	-13.00	-57.02
161.46	H	-48.46	-14.15	-62.61	-13.00	-49.61
356.29	H	-51.16	-14.06	-65.22	-13.00	-52.22
400.46	H	-51.95	-10.91	-62.86	-13.00	-49.86
497.69	H	-50.32	-8.28	-58.60	-13.00	-45.60
695.86	H	-58.65	-6.18	-64.83	-13.00	-51.83

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	GPRS 1900 / TX / CH 512	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
134.13	V	-43.49	-12.75	-56.24	-13.00	-43.24
226.89	V	-40.29	-14.56	-54.85	-13.00	-41.85
400.00	V	-41.16	-11.22	-52.38	-13.00	-39.38
500.74	V	-49.49	-8.38	-57.87	-13.00	-44.87
697.54	V	-54.26	-6.25	-60.51	-13.00	-47.51
801.65	V	-52.75	-4.97	-57.72	-13.00	-44.72
102.36	H	-35.29	-16.71	-52.00	-13.00	-39.00
194.35	H	-42.24	-13.34	-55.58	-13.00	-42.58
400.58	H	-46.75	-10.96	-57.71	-13.00	-44.71
460.15	H	-51.65	-9.30	-60.95	-13.00	-47.95
724.75	H	-49.68	-6.03	-55.71	-13.00	-42.71
801.29	H	-55.43	-4.87	-60.30	-13.00	-47.30

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	GPRS 1900 / TX / CH 661	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
42.36	V	-47.13	-12.36	-59.49	-13.00	-46.49
135.16	V	-43.85	-12.84	-56.69	-13.00	-43.69
228.26	V	-39.16	-14.56	-53.72	-13.00	-40.72
400.14	V	-41.75	-11.22	-52.97	-13.00	-39.97
500.44	V	-49.12	-8.38	-57.50	-13.00	-44.50
799.48	V	-51.42	-4.97	-56.39	-13.00	-43.39
117.59	H	-37.16	-13.90	-51.06	-13.00	-38.06
191.49	H	-42.12	-13.48	-55.60	-13.00	-42.60
400.75	H	-46.16	-10.87	-57.03	-13.00	-44.03
501.95	H	-53.85	-8.27	-62.12	-13.00	-49.12
721.62	H	-54.29	-6.14	-60.43	-13.00	-47.43
800.85	H	-55.26	-4.88	-60.14	-13.00	-47.14

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	GPRS 1900 / TX / CH 810	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
135.69	V	-41.25	-12.84	-54.09	-13.00	-41.09
205.16	V	-41.24	-14.98	-56.22	-13.00	-43.22
401.29	V	-41.46	-11.17	-52.63	-13.00	-39.63
500.46	V	-49.26	-8.38	-57.64	-13.00	-44.64
695.29	V	-55.63	-6.25	-61.88	-13.00	-48.88
801.46	V	52.55	-4.92	47.63	-13.00	60.63
116.29	H	-38.36	-14.09	-52.45	-13.00	-39.45
194.29	H	-42.25	-13.34	-55.59	-13.00	-42.59
400.46	H	-46.42	-10.96	-57.38	-13.00	-44.38
500.26	H	-53.16	-8.27	-61.43	-13.00	-48.43
698.59	H	-52.52	-6.18	-58.70	-13.00	-45.70
799.59	H	-54.16	-4.89	-59.05	-13.00	-46.05

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode: EDGE 1900 / TX / CH 512

Test Date: October 31,2012

Temperature: 21°C

Tested by: Sean.Yu

Humidity: 53 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
86.63	V	-36.64	-19.16	-55.80	-13.00	-42.80
129.36	V	-43.28	-12.26	-55.54	-13.00	-42.54
215.24	V	-39.75	-15.16	-54.91	-13.00	-41.91
400.46	V	-42.51	-11.26	-53.77	-13.00	-40.77
500.29	V	-49.70	-8.16	-57.86	-13.00	-44.86
800.16	V	-50.52	-4.97	-55.49	-13.00	-42.49
32.26	H	-37.16	-15.23	-52.39	-13.00	-39.39
115.16	H	-38.24	-14.27	-52.51	-13.00	-39.51
400.42	H	-47.25	-10.96	-58.21	-13.00	-45.21
500.26	H	-53.16	-8.27	-61.43	-13.00	-48.43
697.49	H	-54.24	-6.18	-60.42	-13.00	-47.42
800.29	H	-53.64	-4.90	-58.54	-13.00	-45.54

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode: EDGE 1900 / TX / CH 661

Test Date: October 31,2012

Temperature: 21°C

Tested by: Sean.Yu

Humidity: 53 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
140.75	V	-41.62	-13.09	-54.71	-13.00	-41.71
160.25	V	-41.32	-14.02	-55.34	-13.00	-42.34
400.25	V	-42.62	-11.22	-53.84	-13.00	-40.84
499.16	V	-49.42	-8.38	-57.80	-13.00	-44.80
695.95	V	-55.52	-6.25	-61.77	-13.00	-48.77
797.16	V	-51.16	-4.98	-56.14	-13.00	-43.14
117.35	H	-36.25	-13.90	-50.15	-13.00	-37.15
191.28	H	-42.29	-13.48	-55.77	-13.00	-42.77
400.18	H	-46.16	-10.87	-57.03	-13.00	-44.03
499.85	H	-53.62	-8.27	-61.89	-13.00	-48.89
695.16	H	-54.95	-6.18	-61.13	-13.00	-48.13
799.46	H	-54.22	-4.90	-59.12	-13.00	-46.12

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode: EDGE 1900 / TX / CH 810

Test Date: October 31,2012

Temperature: 21°C

Tested by: Sean.Yu

Humidity: 53 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
137.49	V	-43.45	-13.00	-56.45	-13.00	-43.45
231.59	V	-41.52	-14.43	-55.95	-13.00	-42.95
400.35	V	-42.41	-11.17	-53.58	-13.00	-40.58
452.62	V	-48.26	-9.76	-58.02	-13.00	-45.02
500.95	V	-50.15	-8.38	-58.53	-13.00	-45.53
797.19	V	-45.68	-4.98	-50.66	-13.00	-37.66
117.46	H	-39.57	-13.90	-53.47	-13.00	-40.47
193.26	H	-43.46	-13.20	-56.66	-13.00	-43.66
287.18	H	-42.24	-12.87	-55.11	-13.00	-42.11
400.29	H	-47.35	-10.96	-58.31	-13.00	-45.31
697.52	H	-52.56	-6.18	-58.74	-13.00	-45.74
800.36	H	-55.65	-4.88	-60.53	-13.00	-47.53

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	WCDMA Band V / TX / CH 4132	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
100.25	V	-46.22	-17.68	-63.90	-13.00	-50.90
245.45	V	-49.45	-14.01	-63.46	-13.00	-50.46
265.23	V	-47.35	-13.71	-61.06	-13.00	-48.06
398.45	V	-46.12	-11.17	-57.29	-13.00	-44.29
499.26	V	-54.62	-8.38	-63.00	-13.00	-50.00
696.41	V	-58.41	-6.25	-64.66	-13.00	-51.66
100.24	H	-45.25	-17.49	-62.74	-13.00	-49.74
264.26	H	-52.15	-14.06	-66.21	-13.00	-53.21
400.74	H	-52.25	-10.96	-63.21	-13.00	-50.21
511.26	H	-58.41	-8.20	-66.61	-13.00	-53.61
695.23	H	-55.25	-6.18	-61.43	-13.00	-48.43
742.52	H	-61.45	-5.57	-67.02	-13.00	-54.02

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	WCDMA Band V / TX / CH 4182	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
131.53	V	-45.46	-12.34	-57.80	-13.00	-44.80
261.53	V	-48.47	-13.71	-62.18	-13.00	-49.18
401.24	V	-46.41	-11.22	-57.63	-13.00	-44.63
498.78	V	-54.24	-8.40	-62.64	-13.00	-49.64
698.25	V	-58.53	-6.25	-64.78	-13.00	-51.78
966.41	V	-60.24	-3.05	-63.29	-13.00	-50.29
131.25	H	-45.74	-13.66	-59.40	-13.00	-46.40
264.43	H	-52.15	-14.06	-66.21	-13.00	-53.21
400.47	H	-51.42	-10.96	-62.38	-13.00	-49.38
451.52	H	-55.74	-9.64	-65.38	-13.00	-52.38
695.85	H	-57.15	-6.18	-63.33	-13.00	-50.33
966.16	H	-61.43	-3.10	-64.53	-13.00	-51.53

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	WCDMA Band V / TX / CH 4233	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
261.25	V	-44.20	-13.71	-57.91	-13.00	-44.91
400.14	V	-48.35	-11.22	-59.57	-13.00	-46.57
497.25	V	-53.45	-8.40	-61.85	-13.00	-48.85
523.65	V	-56.68	-8.01	-64.69	-13.00	-51.69
695.12	V	-51.25	-6.25	-57.50	-13.00	-44.50
797.26	V	-60.22	-4.98	-65.20	-13.00	-52.20
114.14	H	-50.15	-14.27	-64.42	-13.00	-51.42
161.45	H	-49.24	-14.15	-63.39	-13.00	-50.39
265.26	H	-50.36	-14.06	-64.42	-13.00	-51.42
401.36	H	-51.47	-10.91	-62.38	-13.00	-49.38
497.46	H	-49.58	-8.28	-57.86	-13.00	-44.86
695.36	H	-58.46	-6.18	-64.64	-13.00	-51.64

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	WCDMA Band II / TX / CH 9262	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
101.52	V	-46.16	-17.68	-63.84	-13.00	-50.84
245.41	V	-49.23	-14.01	-63.24	-13.00	-50.24
265.26	V	-47.21	-13.71	-60.92	-13.00	-47.92
397.74	V	-46.24	-11.17	-57.41	-13.00	-44.41
498.58	V	-54.62	-8.38	-63.00	-13.00	-50.00
697.35	V	-58.13	-6.25	-64.38	-13.00	-51.38
100.42	H	-45.22	-17.49	-62.71	-13.00	-49.71
264.25	H	-52.13	-14.06	-66.19	-13.00	-53.19
400.41	H	-52.26	-10.96	-63.22	-13.00	-50.22
511.25	H	-58.46	-8.20	-66.66	-13.00	-53.66
695.53	H	-55.16	-6.18	-61.34	-13.00	-48.34
701.25	H	-61.24	-5.57	-66.81	-13.00	-53.81

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	WCDMA Band II / TX / CH 9400	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
102.36	V	-46.16	-17.68	-63.84	-13.00	-50.84
245.35	V	-49.25	-14.01	-63.26	-13.00	-50.26
265.33	V	-47.16	-13.71	-60.87	-13.00	-47.87
397.77	V	-46.24	-11.17	-57.41	-13.00	-44.41
498.46	V	-54.25	-8.38	-62.63	-13.00	-49.63
697.59	V	-58.19	-6.25	-64.44	-13.00	-51.44
100.26	H	-45.32	-17.49	-62.81	-13.00	-49.81
264.36	H	-52.16	-14.06	-66.22	-13.00	-53.22
400.48	H	-52.26	-10.96	-63.22	-13.00	-50.22
511.42	H	-58.46	-8.20	-66.66	-13.00	-53.66
695.26	H	-55.33	-6.18	-61.51	-13.00	-48.51
742.25	H	-61.34	-5.57	-66.91	-13.00	-53.91

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	WCDMA Band II / TX / CH 9538	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
261.16	V	-48.85	-13.71	-62.56	-13.00	-49.56
400.18	V	-48.32	-11.22	-59.54	-13.00	-46.54
494.82	V	-53.74	-8.40	-62.14	-13.00	-49.14
533.43	V	-56.22	-8.01	-64.23	-13.00	-51.23
695.58	V	-51.41	-6.25	-57.66	-13.00	-44.66
797.45	V	-60.75	-4.98	-65.73	-13.00	-52.73
114.35	H	-50.26	-14.27	-64.53	-13.00	-51.53
161.55	H	-49.45	-14.15	-63.60	-13.00	-50.60
262.24	H	-50.35	-14.06	-64.41	-13.00	-51.41
400.35	H	-51.25	-10.91	-62.16	-13.00	-49.16
497.25	H	-49.54	-8.28	-57.82	-13.00	-44.82
695.55	H	-58.25	-6.18	-64.43	-13.00	-51.43

Remark:

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



Radiated Spurious Emission Measurement Result / Above 1GHz

Operation Mode:	GPRS 850 / TX / CH 128	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1678.80	V	-52.46	0.73	-51.73	-13.00	-38.73
6955.65	V	-53.35	13.76	-39.59	-13.00	-26.59
1678.46	H	-54.16	0.84	-53.32	-13.00	-40.32
6673.59	H	-59.26	12.80	-46.46	-13.00	-33.46

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	GPRS 850 / TX / CH 190	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1678.56	V	-50.16	0.73	-49.43	-13.00	-36.43
6950.62	V	-55.26	13.76	-41.50	-13.00	-28.50
1675.13	H	-55.16	0.84	-54.32	-13.00	-41.32
6675.29	H	-61.26	12.80	-48.46	-13.00	-35.46

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	GPRS 850 / TX / CH 251	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1398.33	V	-58.62	0.05	-58.57	-13.00	-45.57
5688.36	V	-60.16	9.95	-50.21	-13.00	-37.21
1395.16	H	-52.26	0.90	-51.36	-13.00	-38.36
5241.25	H	-60.46	10.22	-50.24	-13.00	-37.24

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	GPRS 1900 / TX / CH 512	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
5395.46	V	-55.16	9.86	-45.30	-13.00	-32.30
7133.26	V	-55.24	14.34	-40.90	-13.00	-27.90
5437.49	H	-51.42	10.24	-41.18	-13.00	-28.18
7621.64	H	-52.29	16.14	-36.15	-13.00	-23.15

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	GPRS 1900 / TX / CH 661	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
5640.49	V	-58.46	9.94	-48.52	-13.00	-35.52
7348.25	V	-61.26	14.97	-46.29	-13.00	-33.29
5640.46	H	-52.16	10.28	-41.88	-13.00	-28.88
8012.36	H	-61.23	13.34	-47.89	-13.00	-34.89

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	GPRS 1900 / TX / CH 810	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4761.46	V	-61.49	8.99	-52.50	-13.00	-39.50
7075.20	V	-61.35	14.17	-47.18	-13.00	-34.18
5192.19	H	-55.49	10.22	-45.27	-13.00	-32.27
7033.46	H	-55.25	14.23	-41.02	-13.00	-28.02

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	HSDPA Band V / TX / CH 4132	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
2499.46	V	-59.48	3.61	-55.87	-13.00	-42.87
7796.26	V	-61.29	16.19	-45.10	-13.00	-32.10
2498.26	H	-61.46	3.91	-57.55	-13.00	-44.55
7399.26	H	-61.85	15.48	-46.37	-13.00	-33.37

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	WCDMA / HSDPA Band V / TX / CH 4182	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1671.49	V	-55.49	0.73	-54.76	-13.00	-41.76
7736.28	V	-56.25	3.66	-52.59	-13.00	-39.59
4954.19	H	-60.48	10.14	-50.34	-13.00	-37.34
7377.29	H	-61.25	15.41	-45.84	-13.00	-32.84

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	WCDMA / HSDPA Band V / TX / CH 4233	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean.Yu
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1699.49	V	-54.49	0.79	-53.70	-13.00	-40.70
2546.25	V	-55.25	3.77	-51.48	-13.00	-38.48
1700.75	H	-56.48	0.90	-55.58	-13.00	-42.58
2545.45	H	-51.25	9.69	-41.56	-13.00	-28.56

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	WCDMA / HSUPA Band II / TX / CH 9262	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
5395.49	V	-55.48	9.86	-45.62	-13.00	-32.62
7133.58	V	-55.25	14.34	-40.91	-13.00	-27.91
5437.49	H	-51.46	10.24	-41.22	-13.00	-28.22
7621.34	H	-52.30	16.14	-36.16	-13.00	-23.16

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	WCDMA / HSUPA Band II / TX / CH 9400	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
5640.49	V	-58.46	9.94	-48.52	-13.00	-35.52
7348.26	V	-61.26	14.97	-46.29	-13.00	-33.29
5640.36	H	-52.85	10.28	-42.57	-13.00	-29.57
6807.19	H	-61.36	13.34	-48.02	-13.00	-35.02

Remark:

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



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Operation Mode:	WCDMA / HSUPA Band II / TX / CH 9538	Test Date:	October 31,2012
Temperature:	21°C	Tested by:	Sean
Humidity:	53 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4761.55	V	-61.36	8.99	-52.37	-13.00	-39.37
7075.62	V	-61.53	14.17	-47.36	-13.00	-34.36
5192.69	H	-55.26	10.22	-45.04	-13.00	-32.04
7033.16	H	-55.12	14.23	-40.89	-13.00	-27.89

Remark:

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



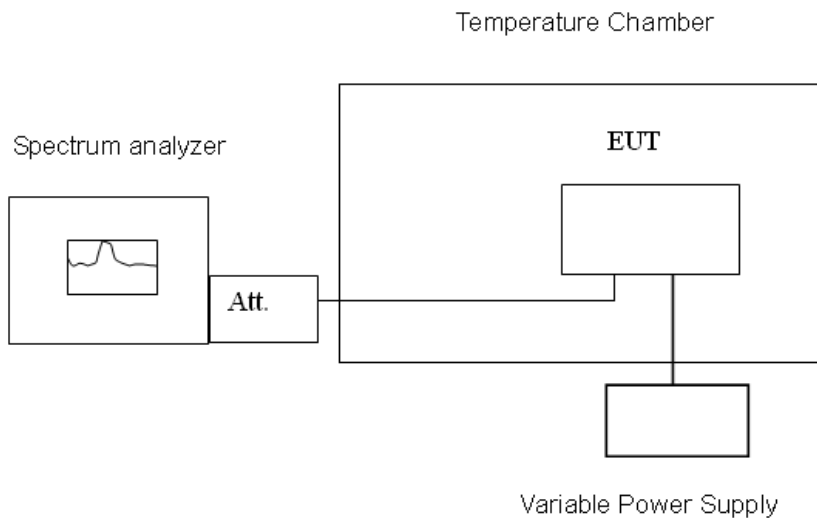
7.7. FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

LIMIT

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

Frequency Tolerance: 2.5 ppm

TEST CONFIGURATION



Remark: Measurement setup for testing on Antenna connector

TEST PROCEDURE

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



TEST RESULTS

No non-compliance noted.

Reference Frequency: GSM Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2091.5 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	45	836600027	27	2091.5
	40	836600031	31	
	30	836600023	23	
	20	836599985	15	
	10	836600026	26	
	0	836600027	27	
	-5	836600036	36	
	-10	836600038	38	

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)
3.7	45	1879999983	-17	4700
	40	1879999983	-17	
	30	1879999979	-21	
	20	1880000015	15	
	10	1879999991	-9	
	0	1879999977	-23	
	-5	1879999982	-18	
	-10	1879999986	-14	

Reference Frequency: GPRS Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090 Hz				
Power Supply Vac	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	45	83660018	18	2090
	40	83660020	20	
	30	83660024	20	
	20	83659985	15	
	10	83660014	14	
	0	83660017	17	
	-5	83660010	10	
	-10	83660023	23	



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C

Limit: ± 2.5 ppm = 4700 Hz

Power Supply Vac	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	45	1880000050	50	4700
	40	1880000047	47	
	30	1880000051	51	
	20	1879999954	46	
	10	1880000045	45	
	0	1880000052	52	
	-5	1880000047	47	
	-10	1880000051	51	

Reference Frequency: EDGE Mid Channel 836.6 MHz @ 20°C

Limit: ± 2.5 ppm = 2090 Hz

Power Supply Vac	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	45	83660001	1	2090
	40	83660007	7	
	30	83659999	-0.1	
	20	83659989	11	
	10	83660002	2	
	0	83660004	4	
	-5	83660006	6	
	-10	83660003	3	

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C

Limit: ± 2.5 ppm = 4700 Hz

Power Supply Vac	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	45	1880000030	30	4700
	40	1880000029	29	
	30	1880000032	32	
	20	1879999966	34	
	10	1880000027	27	
	0	1880000031	31	
	-5	1880000028	28	
	-10	1880000024	24	

**Reference Frequency: HSDPA Band V Mid Channel 836.6 MHz @ 20°C**

Limit: +/- 2.5 ppm = 2090 Hz

Power Supply Vac	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	45	83660001	1	2090
	40	83660007	7	
	30	83659999	-1	
	20	83659989	11	
	10	83660002	2	
	0	83660004	4	
	-5	83660006	6	
	-10	83660003	3	

Reference Frequency: WCDMA Band V Mid Channel 836.6 MHz @ 20°C

Limit: +/- 2.5 ppm = 2090 Hz

Power Supply Vac	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	45	83659998	-2	2090
	40	83659901	-99	
	30	83659999	-1	
	20	83659984	16	
	10	83660001	1	
	0	83659996	-4	
	-5	83659918	-82	
	-10	83660014	14	

Reference Frequency: WCDMA Band II Mid Channel 1880 MHz @ 20°CLimit: \pm 2.5 ppm = 4700 Hz

Power Supply Vac	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	45	1880000050	50	4700
	40	1880000033	33	
	30	1880000031	31	
	20	1879999966	34	
	10	1880000027	27	
	0	1880000031	31	
	-5	1880000028	28	
	-10	1880000024	24	



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Reference Frequency: HSDPA Band II Mid Channel 1880 MHz @ 20°C

Limit: ± 2.5 ppm = 4700 Hz

Power Supply Vac	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
3.7	45	1880000030	30	4700
	40	1880000029	29	
	30	1880000032	32	
	20	1879999966	34	
	10	1880000027	27	
	0	1880000031	31	
	-5	1880000028	28	
	-10	1880000024	24	

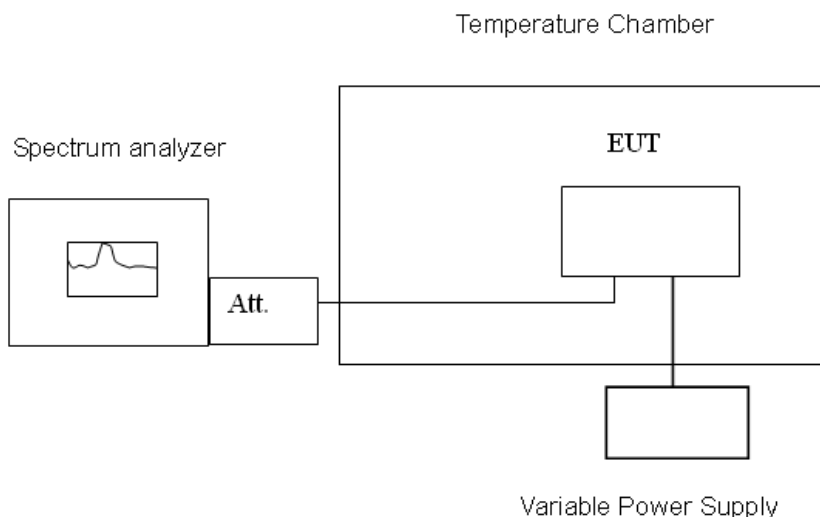


7.8. REQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

LIMIT

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

TEST CONFIGURATION



Remark: Measurement setup for testing on Antenna connector.

TEST PROCEDURE

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

Reduce the input voltage to specify extreme voltage variation ($\pm 10\%$) and endpoint, record the maximum frequency change.



TEST RESULTS

No non-compliance noted.

Reference Frequency: GPRS Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vac	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.2	20	83599987	2	2090
3.7		83599985	0	
3.6 end		83599982	-3	

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vac	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.2	20	1879999950	-50	4700
3.7		1879999954	46	
3.6 end		1879999951	-49	

Reference Frequency: EDGE Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vac	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.2	20	83599999	1	2090
3.7		83599989	11	
3.6 end		83599993	7	

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vac	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.2	20	1879999974	26	4700
3.7		1879999966	34	
3.6 end		1879999973	7	



Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

Reference Frequency: HSDPA Band V Mid Channel 836.6 MHz @ 20°C

Limit: ± 2.5 ppm = 2090Hz

Power Supply Vac	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.2	20	83599986	14	2090
3.7		83599985	15	
3.6 end		83599999	1	

Reference Frequency: HSDPA II Mid Channel 1880 MHz @ 20°C

Limit: ± 2.5 ppm = 4700 Hz

Power Supply Vac	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
4.2	20	1879999975	25	4700
3.7		1879999966	34	
3.6 end		1879999973	27	



7.9. POWERLINE CONDUCTED EMISSIONS

LIMIT

For an intentional radiator which is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed 250 microvolts (The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.50 MHz). The limits at specific frequency range is listed as follows:

Frequency Range (MHz)	Limits (dB μ V)	
	Quasi-peak	Average
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5	56	46
5 to 30	60	50

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

TEST CONFIGURATION

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

TEST PROCEDURE

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

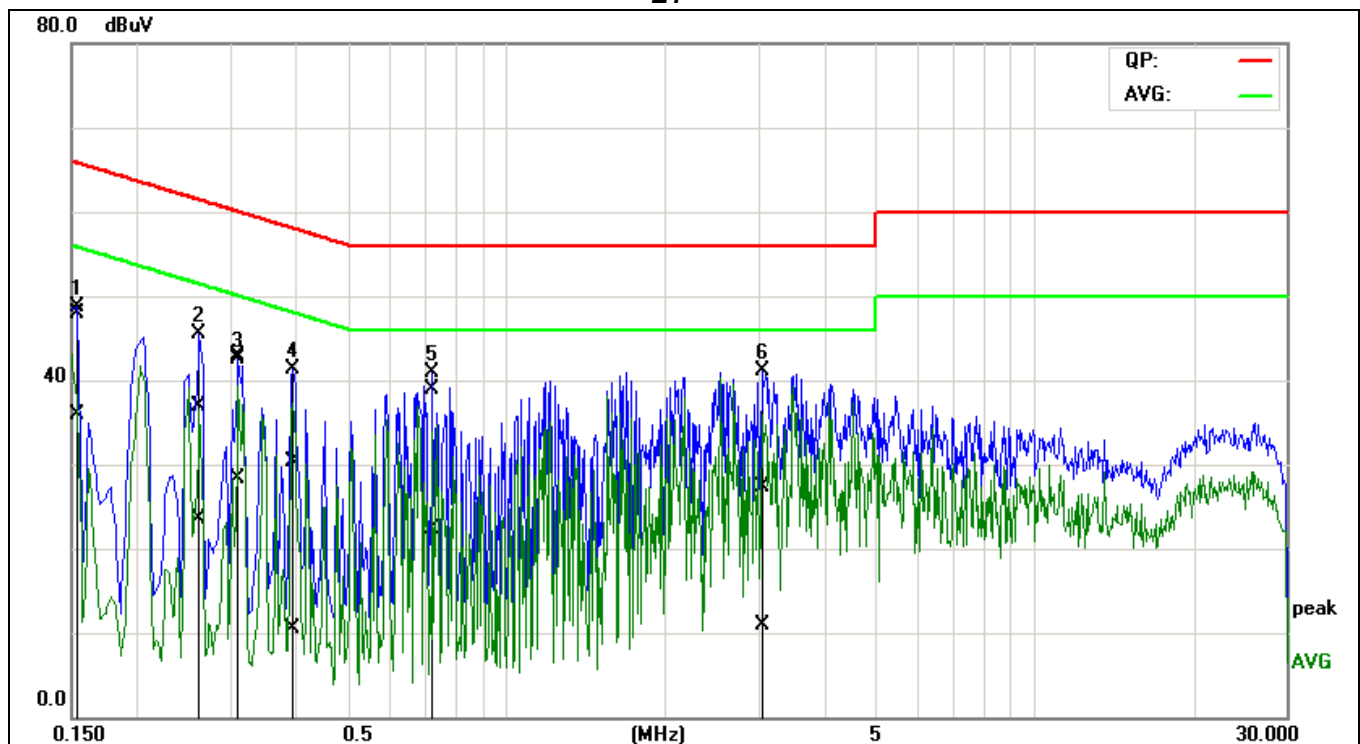


TEST RESULTS

The initial step in collecting conducted data is a spectrum analyzer peak scan of the measurement range. Significant peaks are then marked as shown on the following data page, and these signals are then quasi-peaked.

Operation Mode:	Normal Link	Test Date:	October 31,2012
Temperature:	23°C	Tested by:	Sean.Yu
Humidity:	50% RH		

L1



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1	0.1511	37.75	25.58	10.25	48.00	35.83	65.94	55.94	-17.94	-20.11	Pass
2	0.2640	26.58	13.18	10.24	36.82	23.42	61.30	51.30	-24.48	-27.88	Pass
3*	0.3122	32.56	18.03	10.29	42.85	28.32	59.91	49.91	-17.06	-21.59	Pass
4	0.3925	20.10	0.22	10.30	30.40	10.52	58.01	48.01	-27.61	-37.49	Pass
5	0.7247	28.61	12.01	10.29	38.90	22.30	56.00	46.00	-17.10	-23.70	Pass
6	3.0059	17.09	0.67	10.29	27.38	10.96	56.00	46.00	-28.62	-35.04	Pass

Remark:

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

"-" means Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary



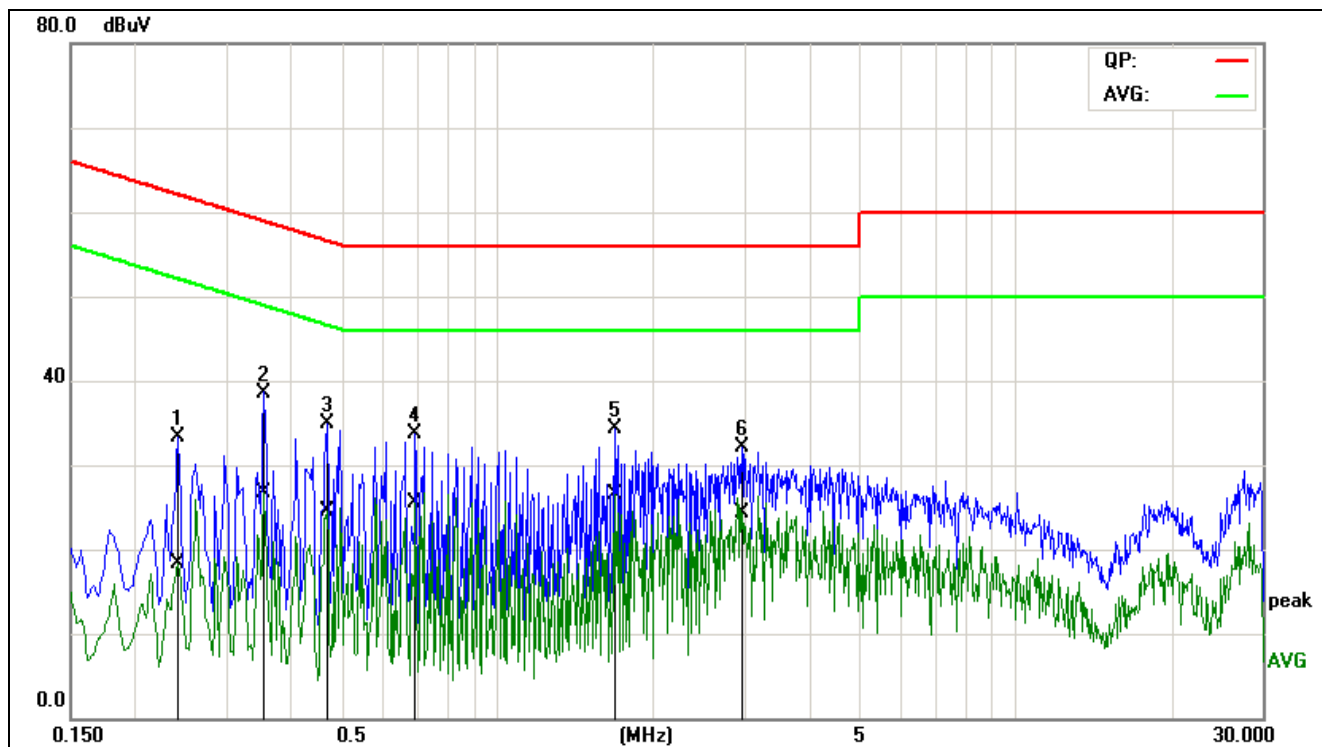
Compliance Certification Services Inc.

Report No: KS121018A05-RP1

FCC ID: COYA35

Date of Issue :November 6, 2012

L2



No.	Frequency (MHz)	QuasiPeak reading (dBuV)	Average reading (dBuV)	Correction factor (dB)	QuasiPeak result (dBuV)	Average result (dBuV)	QuasiPeak limit (dBuV)	Average limit (dBuV)	QuasiPeak margin (dB)	Average margin (dB)	Remark
1	0.2420	22.91	7.97	10.38	33.29	18.35	62.03	52.03	-28.74	-33.68	Pass
2	0.3540	28.04	16.05	10.56	38.60	26.61	58.87	48.87	-20.27	-22.26	Pass
3	0.4700	24.09	13.77	10.73	34.82	24.50	56.51	46.51	-21.69	-22.01	Pass
4	0.6940	22.95	14.64	10.81	33.76	25.45	56.00	46.00	-22.24	-20.55	Pass
5*	1.6860	23.43	15.50	10.91	34.34	26.41	56.00	46.00	-21.66	-19.59	Pass
6	2.9740	21.06	13.45	10.95	32.01	24.40	56.00	46.00	-23.99	-21.60	Pass

Remark:

- Measuring frequencies from 0.15 MHz to 30MHz.
- The emissions measured in frequency range from 0.15 MHz to 30MHz were made with an instrument using Quasi-peak detector and average detector.
- The IF bandwidth of SPA between 0.15MHz to 30MHz was 10kHz; the IF bandwidth of Test Receiver between 0.15MHz to 30MHz was 9kHz;
- L1 = Line One (Live Line) / L2 = Line Two (Neutral Line)

"-" means Quasi-peak reading value also meets average limit and measurement with the average detector is unnecessary

END OF REPORT