



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

For

Product Name: Mobile Phone

Brand Name: plum

Model No.: Caliber

Series Model: A100 , A101

Test Report Number:

KS120718A04-RP1

Issued for

CLC Hong Kong Limited

**2209, Concordia Plaza, North Tower, No.1 Science Museum Road, Tsim Sha Tsui East, Kowloon,
Hong Kong**

Issued by

Compliance Certification Services Inc.

Kun shan Laboratory

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

TEL: 86-512-57355888

FAX: 86-512-57370818



TESTING CERT #2541.01

Note: This report shall not be reproduced except in full, without the written approval of Compliance Certification Services Inc. This document may be altered or revised by Compliance Certification Services Inc. personnel only, and shall be noted in the revision section of the document. The client should not use it to claim product endorsement by A2LA or any government agencies. The test results in the report only apply to the tested sample.



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

REVISION HISTORY

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	July 23, 2012	Initial Issue	ALL	Hadiif Hoo



TABLE OF CONTENTS

1	TEST RESULT CERTIFICATION	4
2	EUT DESCRIPTION	5
3	TEST METHODOLOGY	6
3.1.	EUT CONFIGURATION	6
3.2.	EUT EXERCISE.....	6
3.3.	GENERAL TEST PROCEDURES.....	6
3.4.	DESCRIPTION OF TEST MODES.....	6
4	INSTRUMENT CALIBRATION.....	7
4.1.	MEASURING INSTRUMENT CALIBRATION	7
4.2.	MEASUREMENT EQUIPMENT USED	7
4.3.	MEASUREMENT UNCERTAINTY.....	8
5	FACILITIES AND ACCREDITATIONS.....	9
5.1.	FACILITIES	9
5.2.	EQUIPMENT.....	9
5.3.	ACCREDITATIONS	9
6	SETUP OF EQUIPMENT UNDER TEST	10
6.1.	SETUP CONFIGURATION OF EUT	10
6.2.	SUPPORT EQUIPMENT	10
7	FCC PART 22 & 24 REQUIREMENTS.....	11
7.1.	PEAK POWER.....	11
7.2.	AVERAGE POWER.....	13
7.3.	ERP & EIRP MEASUREMENT.....	15
7.4.	OCCUPIED BANDWIDTH MEASUREMENT	20
7.5.	OUT OF BAND EMISSION AT ANTENNA TERMINALS	37
7.6.	FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT	66
7.7.	FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT	98
7.8.	REQUENCY STABILITY V.S. VOLTAGE MEASUREMENT	103
7.9.	POWERLINE CONDUCTED EMISSIONS	106



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

1 TEST RESULT CERTIFICATION

Product Name:	Mobile Phone
Trade Name:	plum
Model Name.:	Caliber
Series Model:	A100 , A101
Applicant Discrepancy:	Initial
Devices supporting GPRS:	Class B
Description Test Modes(worst case):	The all Models EUT were pretested, the SIM1 was found to transmit the highest SAR value
Device Category:	PORTABLE DEVICES
Exposure Category:	GENERAL POPULATION/UNCONTROLLED EXPOSURE
Date of Test:	July 23, 2012
Applicant:	CLC Hong Kong Limited 2209, Concordia Plaza, North Tower, No.1 Science Museum Road, Tsim Sha Tsui East, Kowloon, Hong Kong
Manufacturer:	CLC Technology Co. Ltd Room 303, Block 31, Longtang Industrial Zone, Longtang Community Minzhi Street, Bao'an District , Shenzhen,China
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:

Hadiif Hoo
RF Manager
Compliance Certification Service Inc.

Tested by:

Sean Yu
Test Engineer
Compliance Certification Service Inc.



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

2 EUT DESCRIPTION

Product Name:	Mobile Phone
Brand Name:	plum
Model Name:	Caliber
Series Model:	A100 , A101
Model Discrepancy:	The motherboards are the same, except followings: A100 two SIM card,A101 one SIM card ,and model name different.
Power Supply:	Power supply and ADP (rating): Input:100-240V/AC 50-60/Hz/0.15A Output:5.0v-500mAh Battery (rating): 1050mAh Restrictive Voltage:4.2V Charging Voltage:3.7V
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 BT:2402 ~ 2480 MHz
Transmit Power (ERP & EIRP Power):	GSM 850: 31.05 dBm GSM 1900: 31.49 dBm GPRS 850: 29.39 dBm GPRS 1900: 31.35 dBm WCDMA BAND V:21.88 dBm HSDPA BAND V:21.10 dBm WCDMA BAND II:23.78 dBm HSDPA BAND II:23.58 dBm
Modulation Technique:	GSM/GPRS: GMSK WCDMA/HSDPA: QPSK
Antenna Gain:	GSM/GPRS : -1.5 dBi
Antenna Type:	GSM/WCDMA: PIFA Antenna BT:Chip 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: Y7WPLUMCALIBER 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	CT1OO	95637	N.C.R
Test Software	EZ-EMC			



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

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.*



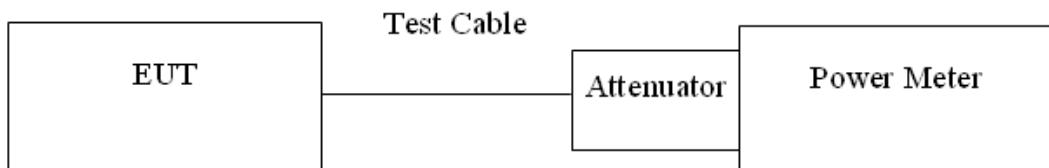
7 FCC PART 22 & 24 REQUIREMENTS

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	30.75
	190	836.40	30.71
	251	848.80	30.72
EDGE 850 (Class 12)	128	824.20	30.70
	190	836.40	30.71
	251	848.80	30.75
GSM 850	128	824.20	31.59
	190	836.40	31.80
	251	848.80	31.75

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)
GPRS 1900 (Class 12)	512	1850.20	26.75
	661	1880.00	26.79
	810	1909.80	26.66
EDGE 1900 (Class 12)	512	1850.20	25.59
	661	1880.00	25.56
	810	1909.80	25.84



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

GSM 1900	512	1850.20	27.82
	661	1880.00	27.80
	810	1909.80	27.81

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)
HSDPA (BAND V)	4132	826.40	22.62
	4182	836.40	22.58
	4233	846.60	22.60
WCDMA (BAND V)	4132	826.40	23.79
	4182	836.40	23.75
	4233	846.60	23.72

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)
HSDPA (BAND II)	9262	1852.40	22.62
	9400	1880.00	23.68
	9538	1907.60	22.85
WCDMA (BAND II)	9262	1852.40	22.70
	9400	1880.00	23.58
	9538	1907.60	22.58

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

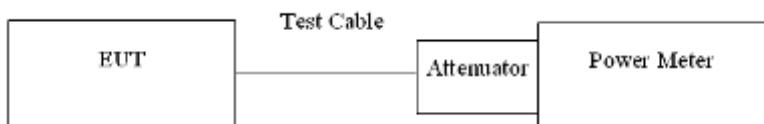


7.2. AVERAGE POWER

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	30.98
	190	836.40	30.55
	251	848.80	30.52
EDGE 850 (Class 12)	128	824.20	30.65
	190	836.40	30.73
	251	848.80	30.84
GSM 850	128	824.20	31.19
	190	836.40	31.26
	251	848.80	31.23

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)
GPRS 1900 (Class 12)	512	1850.20	26.81
	661	1880.00	26.05
	810	1909.80	26.07
EDGE 1900 (Class 12)	512	1850.20	26.28
	661	1880.00	26.04
	810	1909.80	25.85
GSM 1900	512	1850.20	27.34



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

	661	1880.00	27.44
	810	1909.80	26.34

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)
HSDPA (BAND V)	4132	826.40	22.22
	4182	836.40	22.62
	4233	846.60	22.26
WCDMA (BAND V)	4132	826.40	23.44
	4182	836.40	23.79
	4233	846.60	23.55

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)
HSDPA (BAND II)	9262	1852.40	22.56
	9400	1880.00	23.53
	9538	1907.60	22.66
WCDMA (BAND II)	9262	1852.40	22.52
	9400	1880.00	23.53
	9538	1907.60	22.34

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



7.3. ERP & EIRP MEASUREMENT

LIMIT

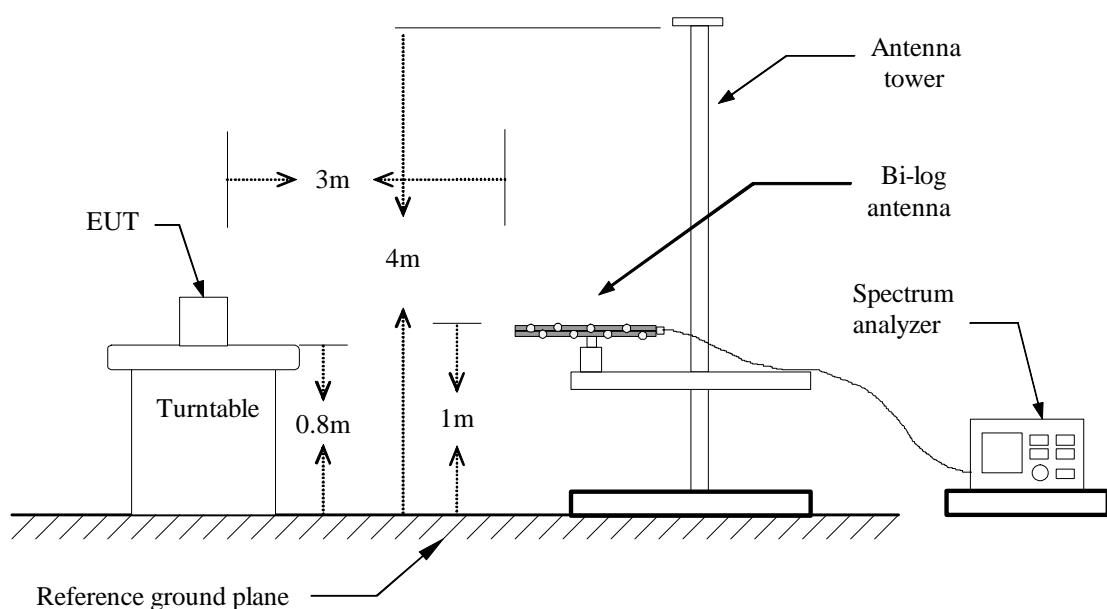
According to FCC §2.1046

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

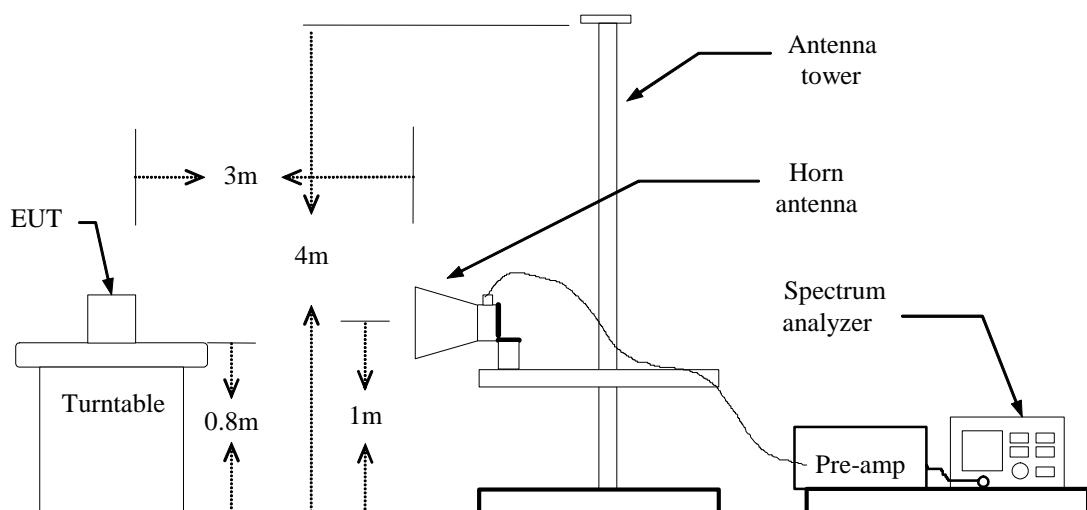
FCC 24.232(b): The equivalent Isotropic Radiated Power (EIRP) must not exceed 2 Watts.

TEST CONFIGURATION

Below 1 GHz

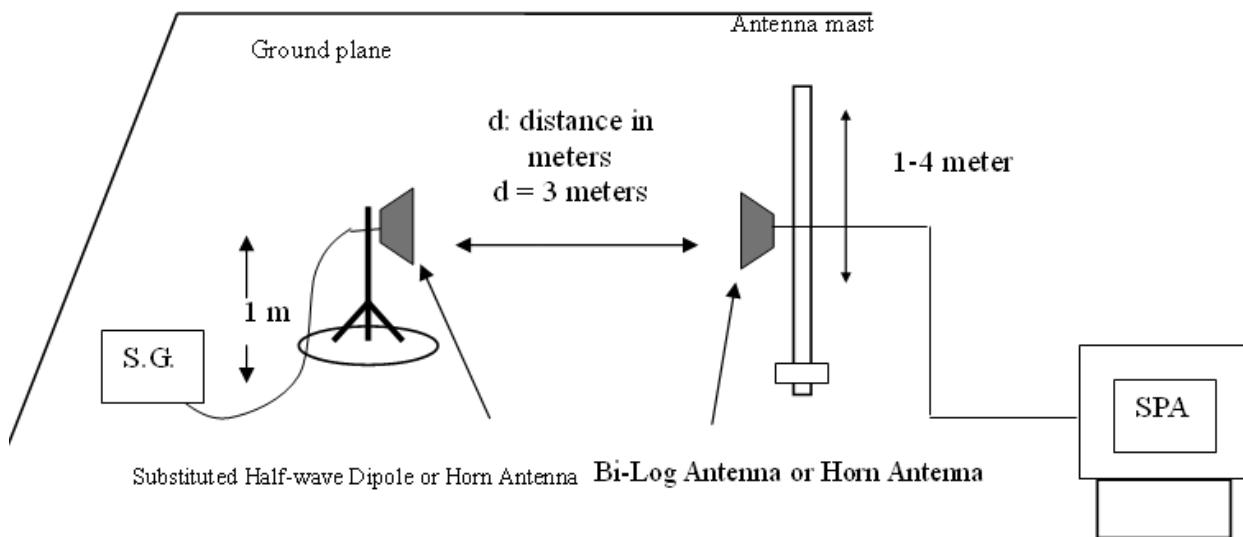


Above 1 GHz





FOR SUBSTITUTED METHOD TEST SET-UP



TEST PROCEDURE

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

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

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

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

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

TEST RESULTS

No non-compliance noted.



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

GSM 850 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.18	V	-14.54	34.61	20.07	38.5	-18.43
	824.30	H	-3.21	34.26	31.05	38.5	-7.45
190	836.66	V	-17.41	34.45	17.04	38.5	-21.46
	836.78	H	-4.34	34.26	29.92	38.5	-8.58
251	848.84	V	-16.97	34.64	17.67	38.5	-20.83
	848.84	H	-5.56	34.44	28.88	38.5	-9.62

GSM 1900 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.10	V	-9.68	41.17	31.49	33	-1.51
	1850.00	H	-16.26	40.79	24.53	33	-8.47
661	1880.00	V	-9.94	41.23	31.29	33	-1.71
	1879.80	H	-17.86	41.14	23.28	33	-9.72
810	1909.90	V	-10.91	41.3	30.39	33	-2.61
	1909.90	H	-17.21	41.38	24.17	33	-8.83

GPRS 850 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.18	V	-12.75	34.62	21.87	38.5	-16.63
	824.18	H	-5.26	34.65	29.39	38.5	-9.11
190	836.54	V	-15.67	34.53	18.86	38.5	-19.64
	836.54	H	-5.84	34.63	28.79	38.5	-9.71
251	848.78	V	-19.36	34.64	15.28	38.5	-23.22
	849.08	H	-6.98	34.75	27.77	38.5	-10.73

GPRS 1900 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.20	V	-11.93	41.17	29.24	33	-3.76
	1850.20	H	-16.08	40.79	24.71	33	-8.29
661	1879.80	V	-10.5	41.23	30.73	33	-2.27
	1879.80	H	-17.38	41.14	23.76	33	-9.24
810	1909.70	V	-9.95	41.3	31.35	33	-1.65
	1909.70	H	-16.72	41.38	24.66	33	-8.34

EDGE 850 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.18	V	-12.81	34.62	21.81	38.50	-16.69



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

	824.18	H	-5.30	34.65	*29.35	38.50	-9.15
190	836.54	V	-15.69	34.53	18.84	38.50	-19.66
	836.54	H	-5.84	34.63	28.79	38.50	-9.71
251	848.78	V	-19.58	34.64	15.06	38.50	-23.44
	849.08	H	-6.92	34.75	27.83	38.50	-10.67

EDGE 1900 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dB)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.10	V	-9.86	41.17	*31.31	33.00	-1.69
	1850.00	H	-16.26	40.79	24.53	33.00	-8.47
661	1880.00	V	-10.02	41.23	31.21	33.00	-1.79
	1879.80	H	-17.57	41.14	23.57	33.00	-9.43
810	1909.90	V	-10.92	41.30	30.39	33.00	-2.61
	1909.90	H	-17.31	41.38	24.07	33.00	-8.93

WCDMA BAND V Test Data

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	826.40	V	-19.68	34.59	14.91	38.45	-23.54
	826.40	H	-15.78	37.66	21.88	38.45	-16.57
4182	836.40	V	-17.36	34.54	17.18	38.45	-21.27
	836.40	H	-13.96	34.63	20.67	38.45	-17.78
4233	846.60	V	-17.08	34.58	17.5	38.45	-20.95
	846.60	H	-13.8	34.7	20.9	38.45	-17.55

HSDPA BAND V Test Data

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	826.40	V	-19.36	34.33	14.97	38.45	-23.48
	826.40	H	-15.45	36.55	21.10	38.45	-17.35
4182	836.40	V	-16.78	34.99	18.21	38.45	-20.24
	836.40	H	-13.72	34.12	20.4	38.45	-18.05
4233	846.60	V	-16.75	34.26	17.51	38.45	-20.94
	846.60	H	-13.65	34.42	20.77	38.45	-17.68

WCDMA BAND II Test Data

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
9262	1852.40	V	-15.62	34.68	19.06	38.45	-19.39
	1852.40	H	-8.23	37.58	29.35	38.45	-9.10
9400	1880.00	V	-12.69	34.19	21.5	38.45	-16.95
	1880.00	H	-10.36	34.26	23.9	38.45	-14.55
9538	1907.60	V	-9.25	34.16	24.91	38.45	-13.54
	1907.60	H	-5.36	33.16	27.8	38.45	-10.65



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

HSUPA BAND II Test Data

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
9262	1852.40	V	-19.01	34.68	15.67	38.45	-22.78
	1852.40	H	-11.16	37.58	26.42	38.45	-12.03
9400	1880.00	V	-16.52	34.19	17.67	38.45	-20.78
	1880.00	H	-13.19	34.26	21.07	38.45	-17.38
9538	1907.60	V	-16.49	34.16	17.67	38.45	-20.78
	1907.60	H	-13.27	33.16	19.89	38.45	-18.56

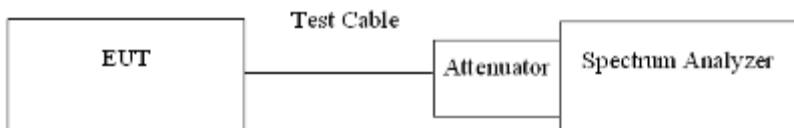


7.4. OCCUPIED BANDWIDTH MEASUREMENT

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	247.7111	319.749
	190	836.40	249.4675	319.837
	251	848.80	247.3267	320.981
EDGE 850	128	824.20	237.2237	315.305
	190	836.40	247.7024	305.680
	251	848.80	246.5225	313.657
GSM 850	128	824.20	244.5972	319.020
	190	836.40	248.3829	315.420
	251	848.80	249.3973	311.862



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Test Mode	CH	Frequency (MHz)	99% Bandwidth (kHz)	26dB Bandwidth (kHz)
GPRS 1900	512	1850.20	250.2430	319.477
	661	1880.00	249.6118	316.594
	810	1909.80	246.4672	319.478
EDGE 1900	512	1850.20	244.1619	315.626
	661	1880.00	246.3146	318.011
	810	1909.80	246.4034	322.803
GSM 1900	512	1850.20	247.6957	316.023
	661	1880.00	248.8254	317.055
	810	1909.80	246.3274	314.653

Test Mode	CH	Frequency (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)
WCDMA (Band V)	4132	826.40	4.1647	4.669
	4182	836.40	4.1745	4.669
	4233	846.60	4.1772	4.671
HSDPA (BAND V)	4132	826.40	4.1911	4.669
	4182	836.40	4.2002	4.666
	4233	846.60	4.1968	4.683

Test Mode	CH	Frequency (MHz)	99% Bandwidth (MHz)	26dB Bandwidth (MHz)
HSDPA (BAND II)	9262	1852.40	4.1601	4.725
	9400	1880.00	4.6269	4.444
	9538	1907.60	4.3837	4.768
WCDMA (BAND II)	9262	1852.40	4.1591	4.711
	9400	1880.00	4.5142	4.072
	9538	1907.60	4.3472	4.369



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

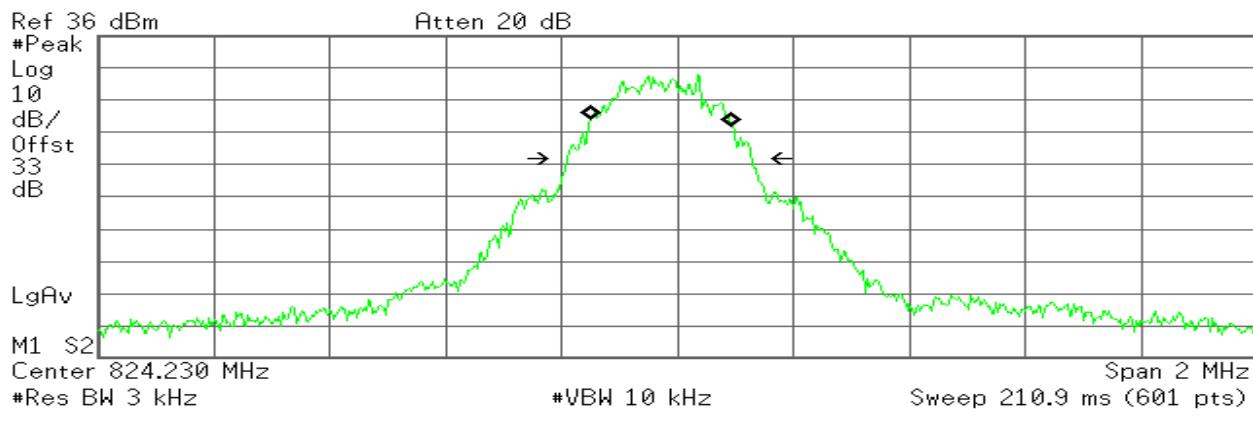
Date of Issue :July 24, 2012

Test Plot

GSM 850 (CH Low)

* Agilent

R T

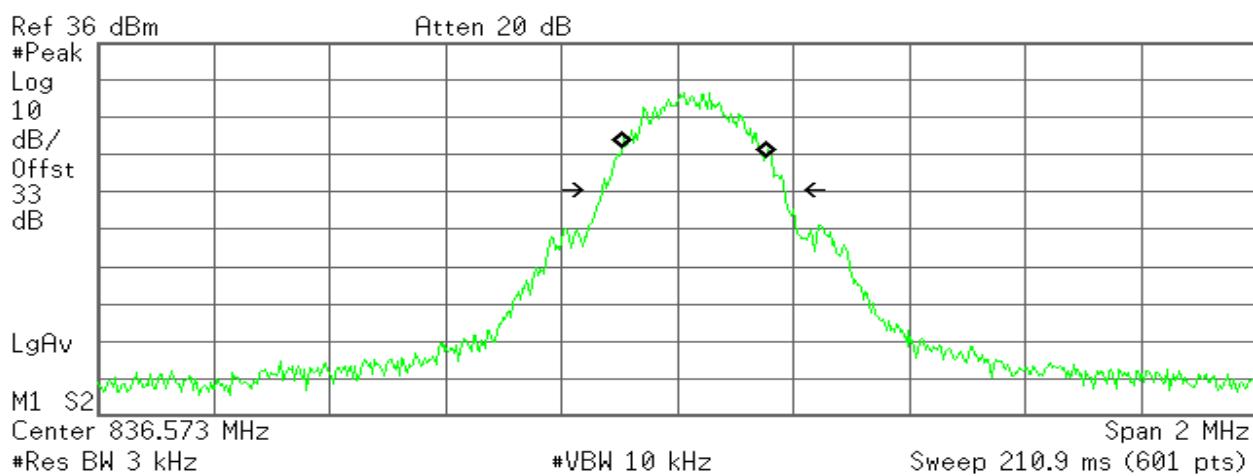


Transmit Freq Error -28.725 kHz
x dB Bandwidth 319.020 kHz

GSM 850 (CH Mid)

* Agilent

R T



Transmit Freq Error 28.302 kHz
x dB Bandwidth 315.420 kHz



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

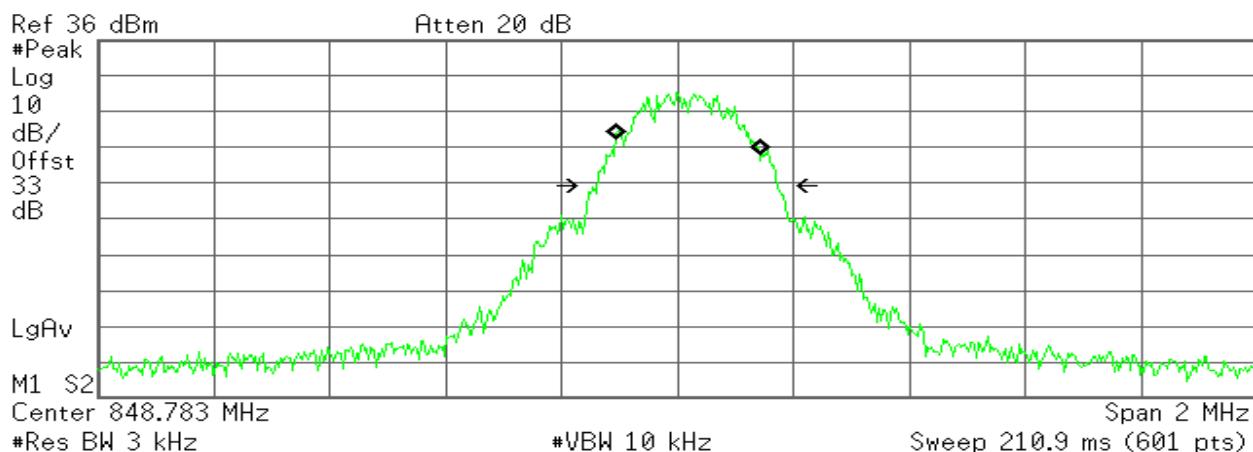
FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

GSM 850(CH High)

* Agilent

R T



Occupied Bandwidth

249.3973 kHz

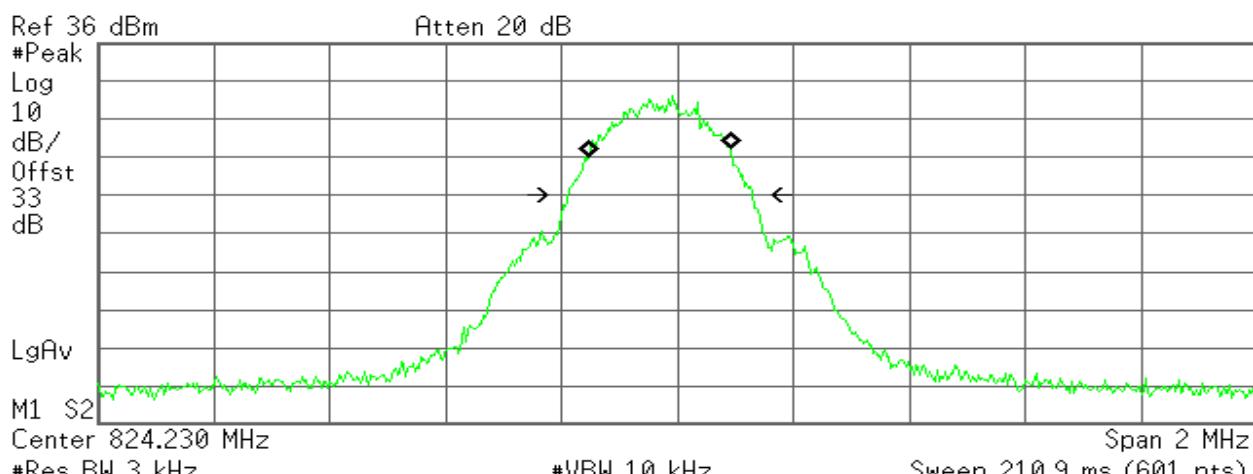
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 17.011 kHz
x dB Bandwidth 311.862 kHz

GPRS 850 (CH Low)

* Agilent

R T



Occupied Bandwidth

247.7111 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -30.030 kHz
x dB Bandwidth 319.749 kHz



Compliance Certification Services Inc.

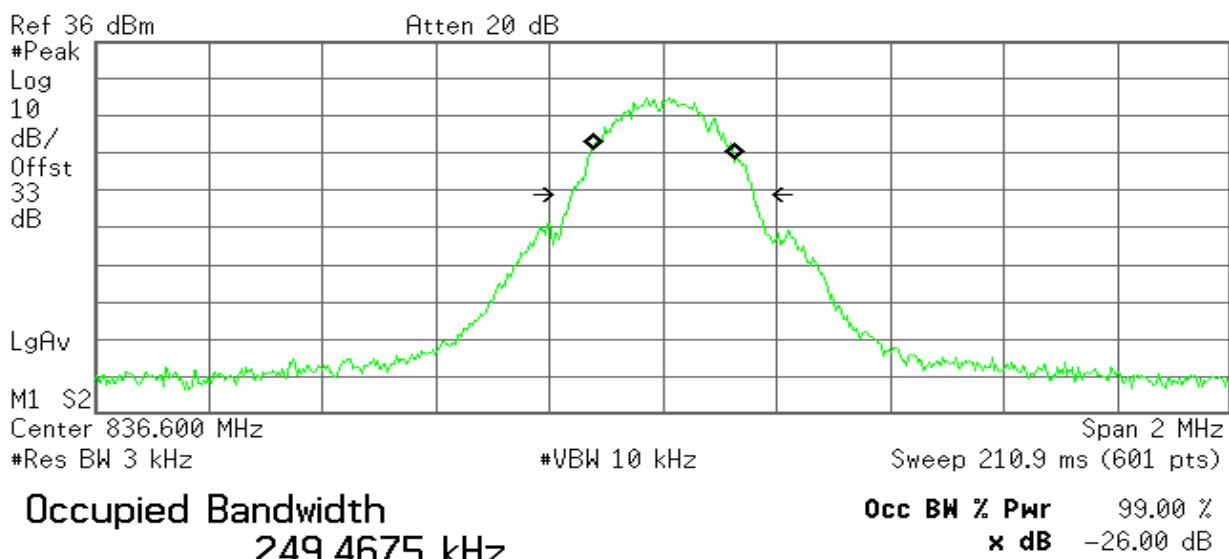
Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

GPRS 850 (CH Mid)

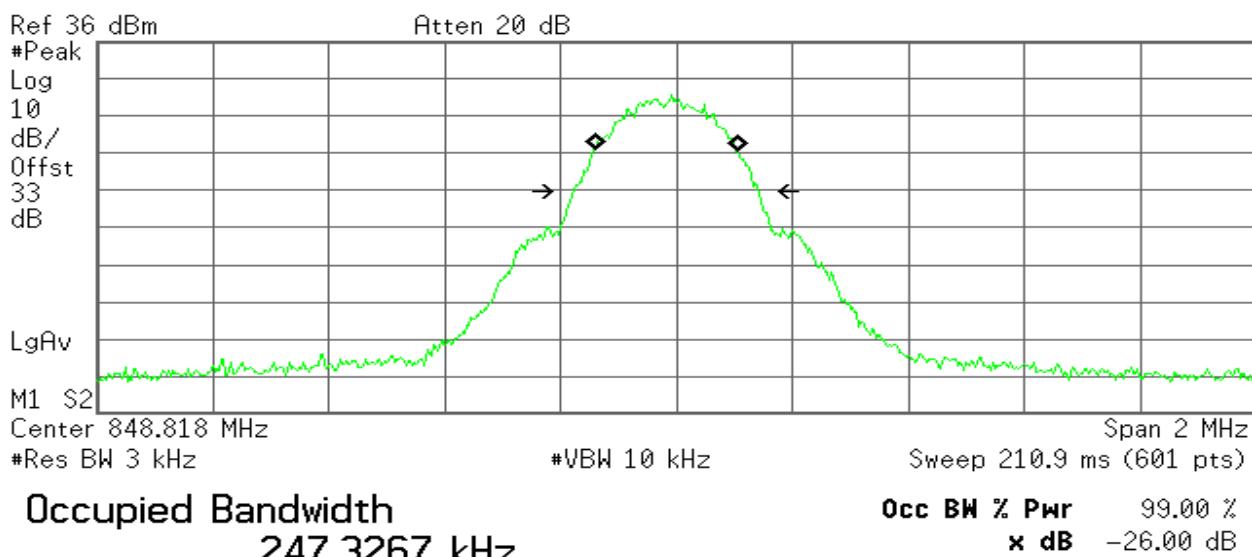
Agilent



Transmit Freq Error 327.212 Hz
x dB Bandwidth 319.837 kHz

GPRS 850(CH High)

Agilent



Transmit Freq Error -17.416 kHz
x dB Bandwidth 320.981 kHz



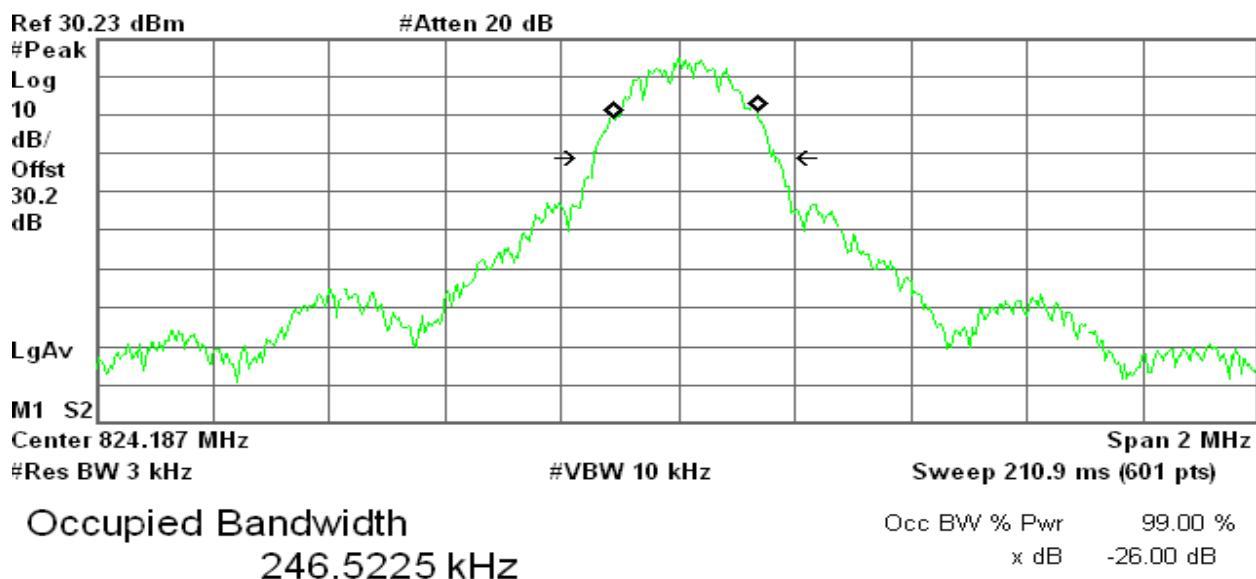
Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

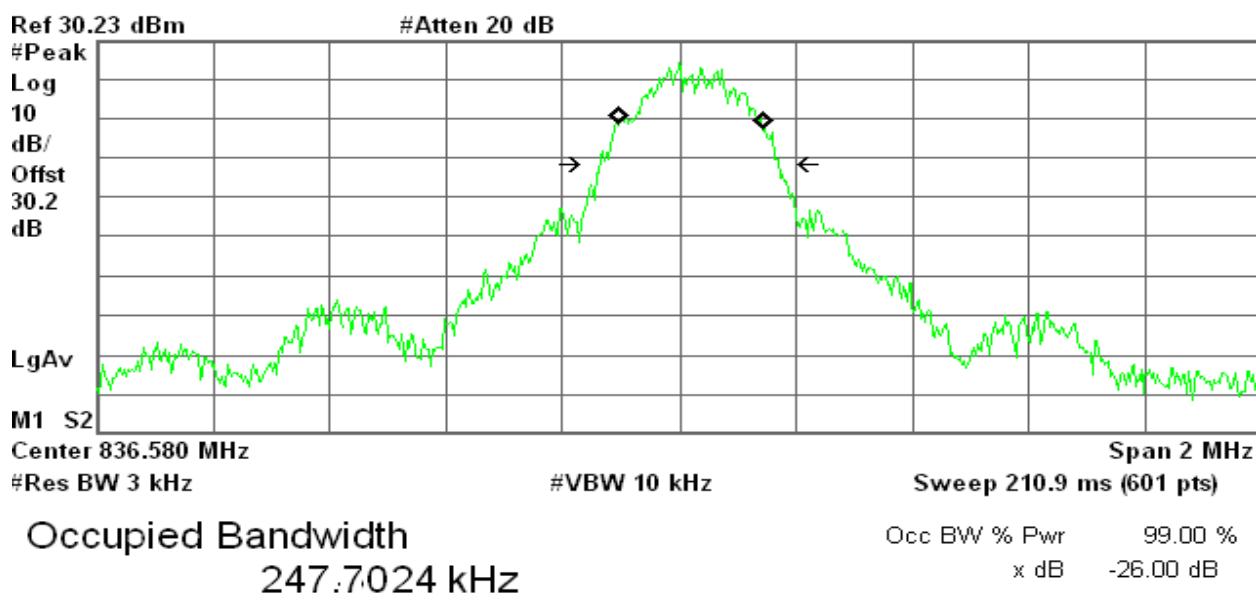
Date of Issue :July 24, 2012

EGPRS 850(CH Low)



Transmit Freq Error 12.448 kHz
x dB Bandwidth 315.305 kHz

EGPRS 850(CH Mid)



Transmit Freq Error 19.430 kHz
x dB Bandwidth 305.680 kHz



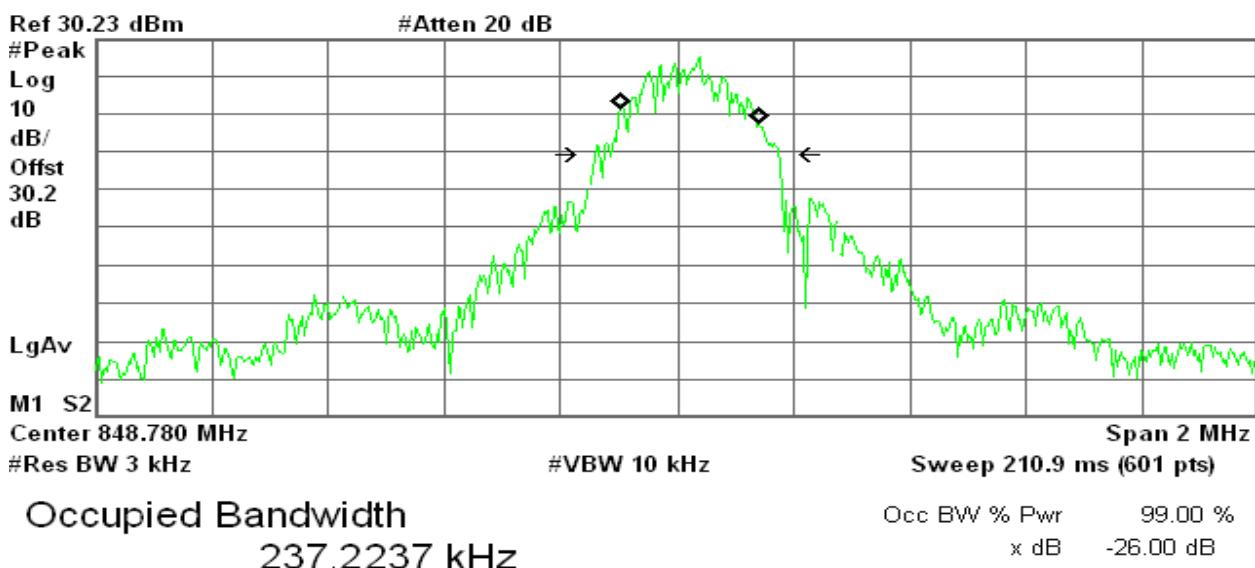
Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

EGPRS 850(CH High)

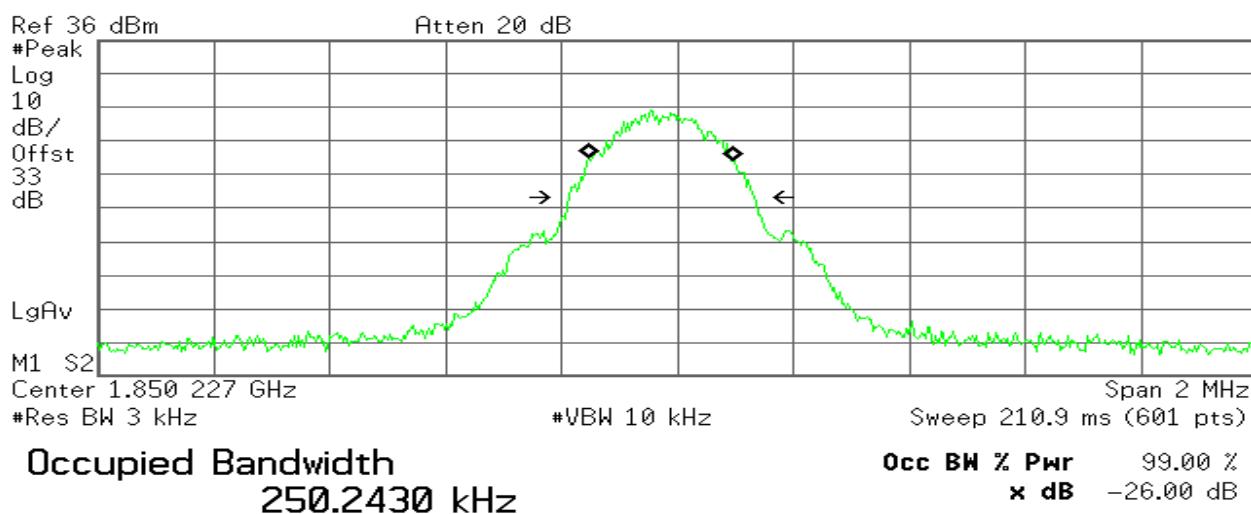


Transmit Freq Error 20.937 kHz
x dB Bandwidth 313.657 kHz

GPRS 1900 (CH Low)

* Agilent

R T



Transmit Freq Error -26.808 kHz
x dB Bandwidth 319.477 kHz



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

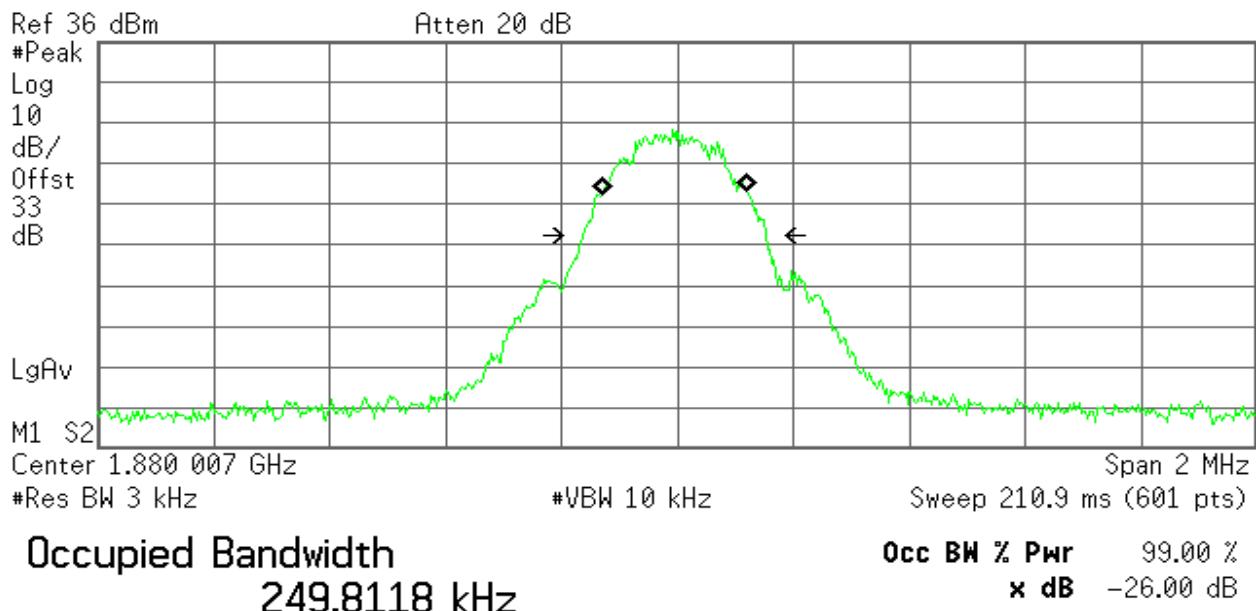
FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

GPRS 1900 (CH Mid)

* Agilent

R T

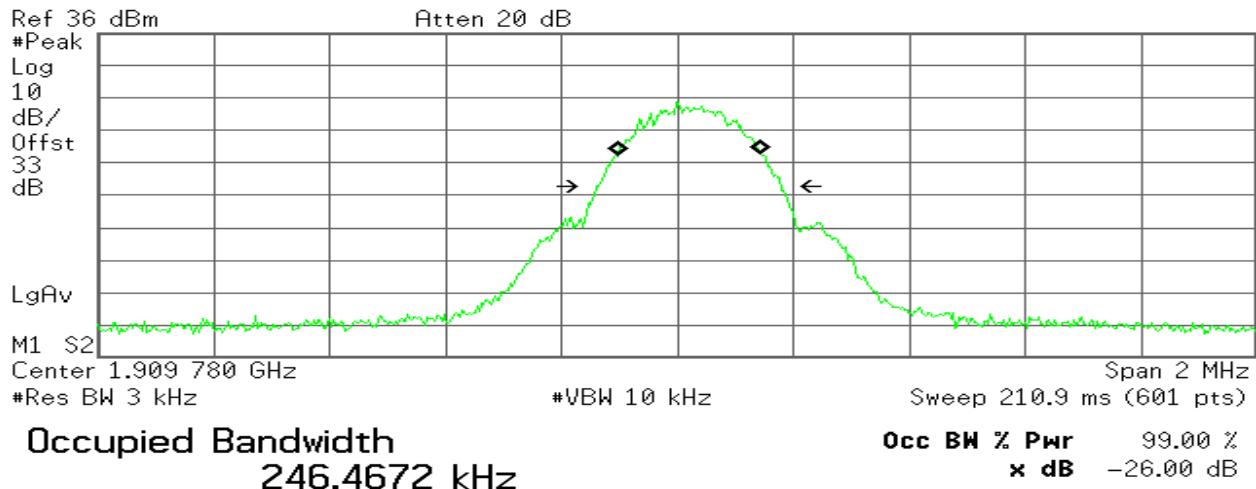


Transmit Freq Error -5.545 kHz
x dB Bandwidth 316.594 kHz

GPRS 1900 (CH High)

* Agilent

R T



Transmit Freq Error 20.387 kHz
x dB Bandwidth 319.478 kHz



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

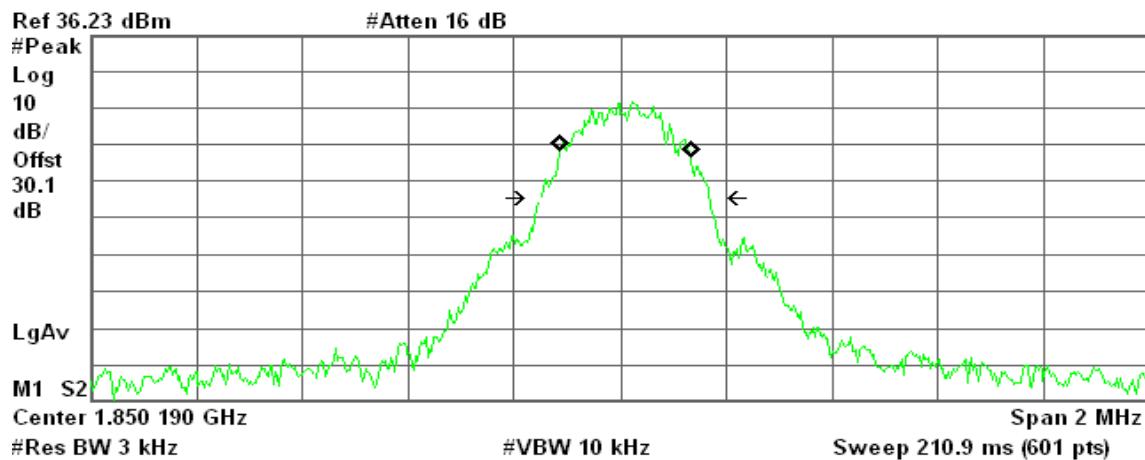
FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

EDGE 1900 (CH Low)

* Agilent

R T

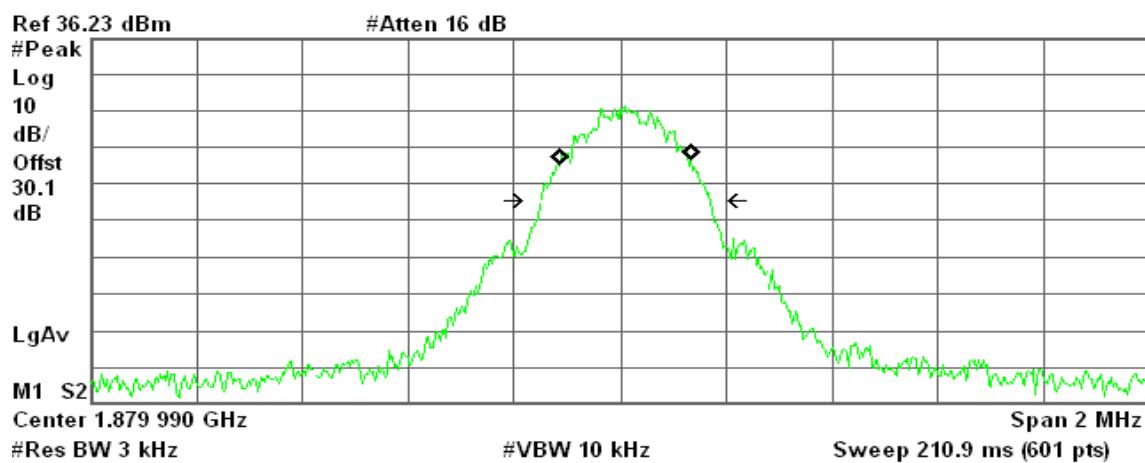


Transmit Freq Error 10.341 kHz
x dB Bandwidth 315.626 kHz

EDGE 1900 (CH Mid)

* Agilent

R T



Transmit Freq Error 9.943 kHz
x dB Bandwidth 318.011 kHz



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

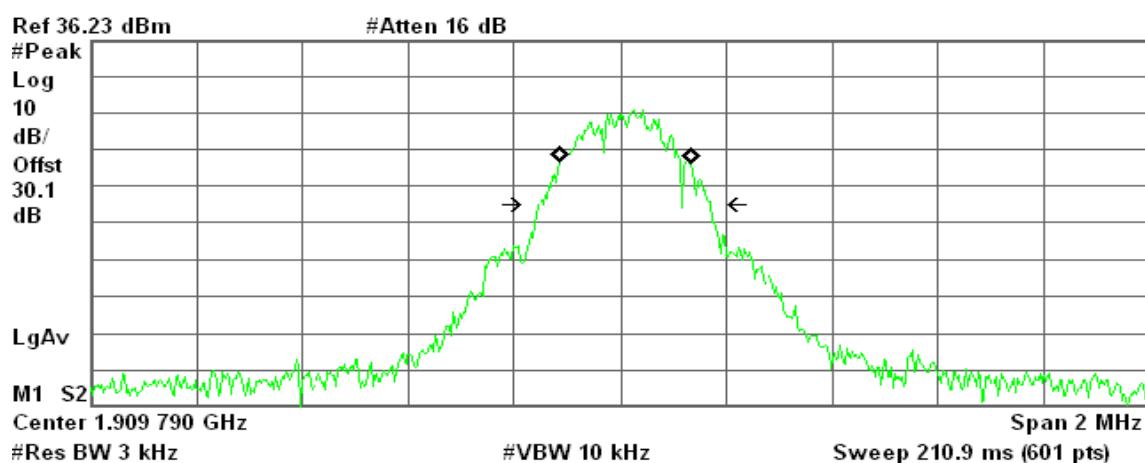
FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

EDGE 1900 (CH High)

Agilent

R T

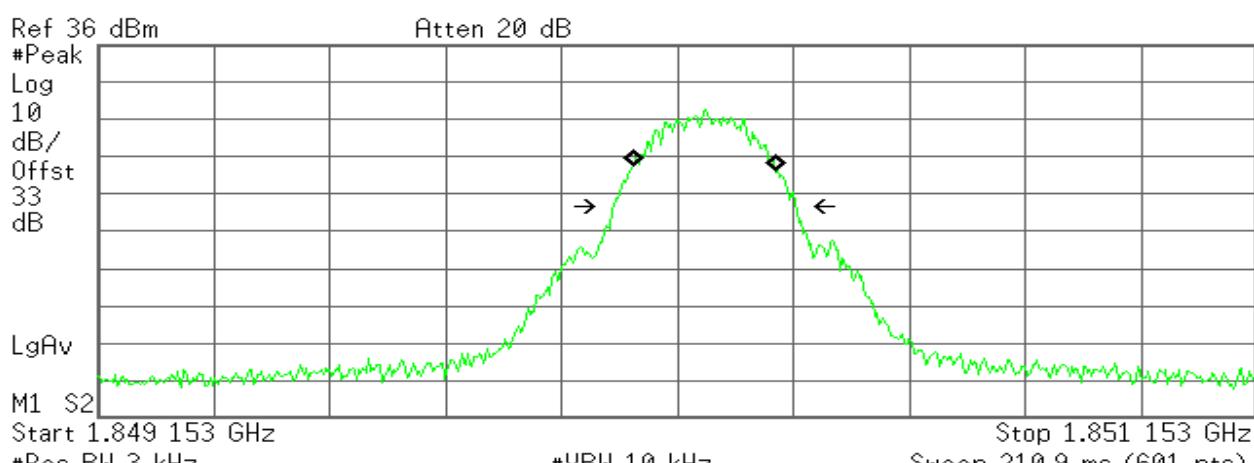


Transmit Freq Error 9.472 kHz
x dB Bandwidth 322.803 kHz

GSM 1900 (CH Low)

Agilent

R T



Transmit Freq Error 45.539 kHz
x dB Bandwidth 316.023 kHz



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

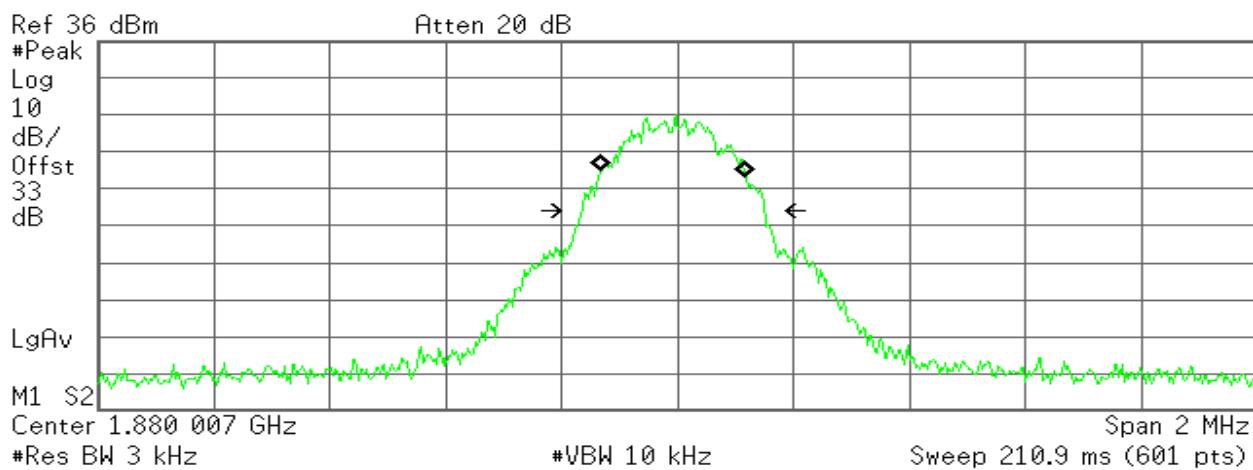
FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

GSM 1900 (CH Mid)

* Agilent

R T

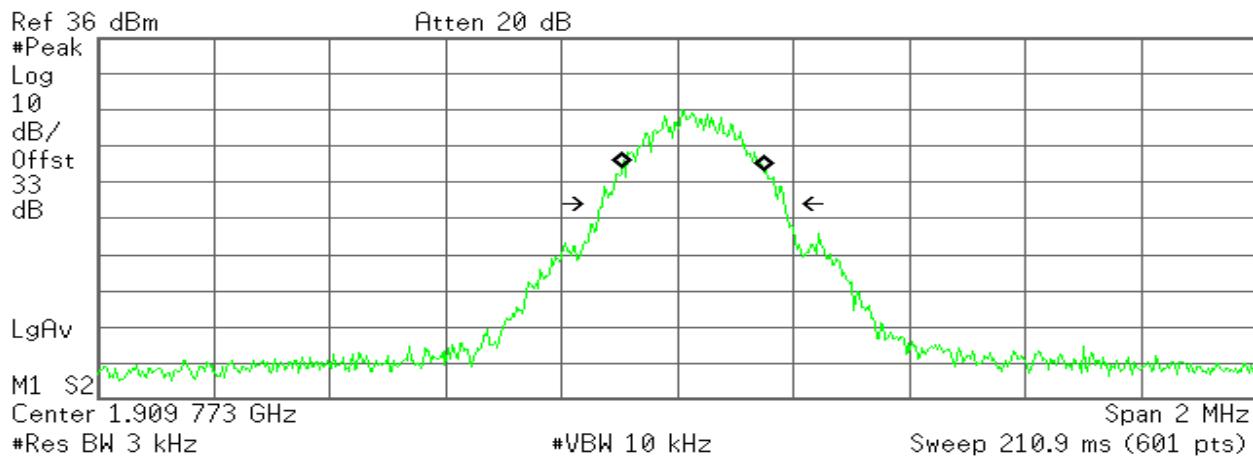


Transmit Freq Error -7.384 kHz
x dB Bandwidth 317.055 kHz

GSM 1900 (CH High)

* Agilent

R T



Transmit Freq Error 27.790 kHz
x dB Bandwidth 314.653 kHz



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

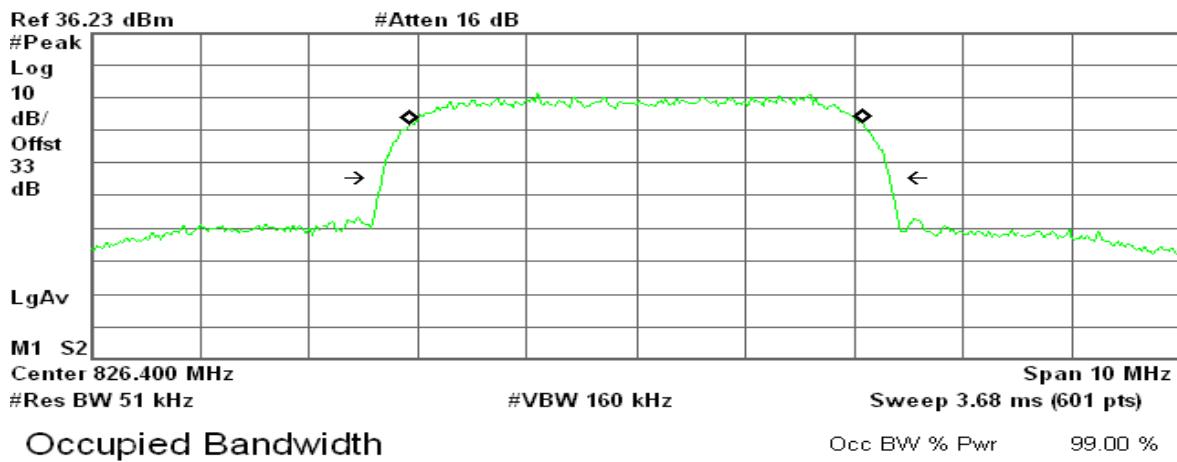
FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

WCDMA Band V (CH Low)

* Agilent

R T



Occupied Bandwidth
4.1647 MHz

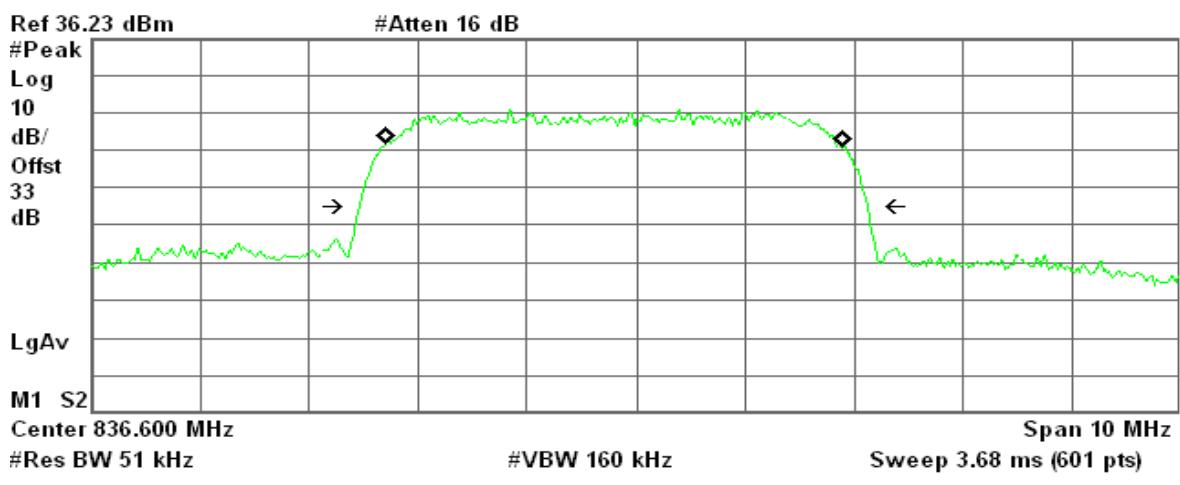
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 985.475 Hz
x dB Bandwidth 4.669 MHz

WCDMA Band V (CH Mid)

* Agilent

R T



Occupied Bandwidth
4.1745 MHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error -208.798 kHz
x dB Bandwidth 4.669 MHz



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

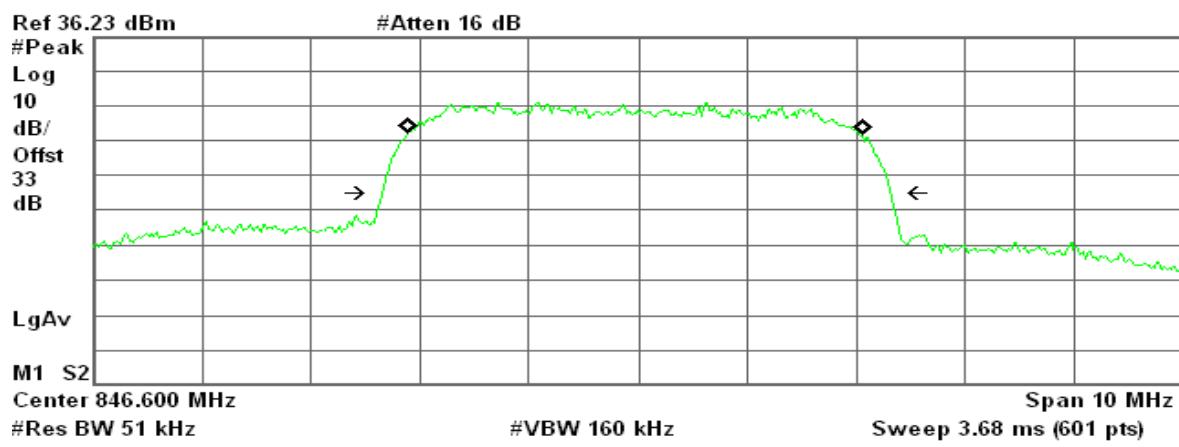
FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

WCDMA Band V (CH High)

* Agilent

R T

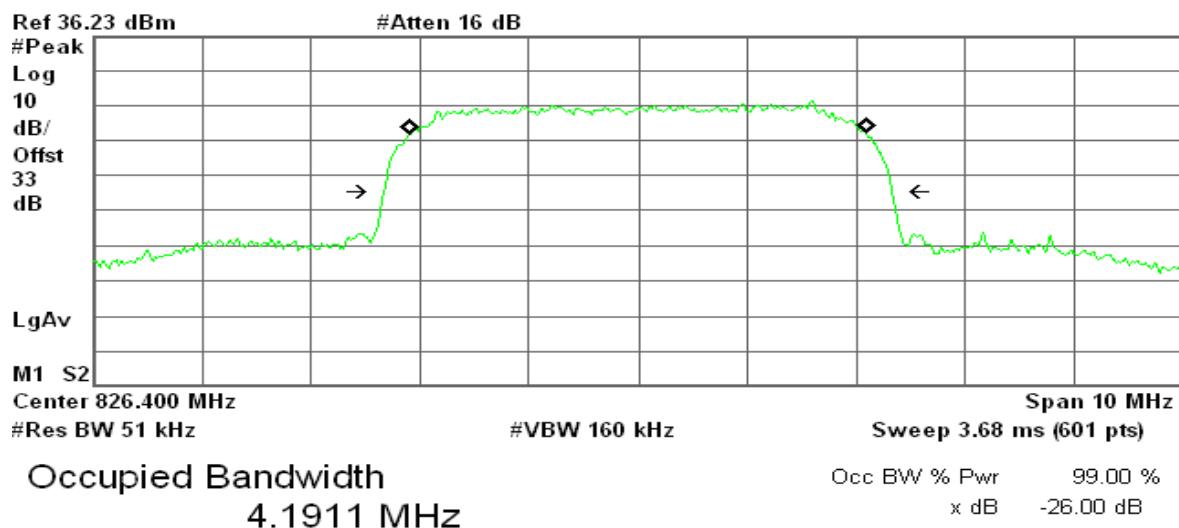


Transmit Freq Error -24.444 kHz
x dB Bandwidth 4.671 MHz

HSDPA Band V (CH Low)

* Agilent

R T



Transmit Freq Error 2.178 kHz
x dB Bandwidth 4.669 MHz



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

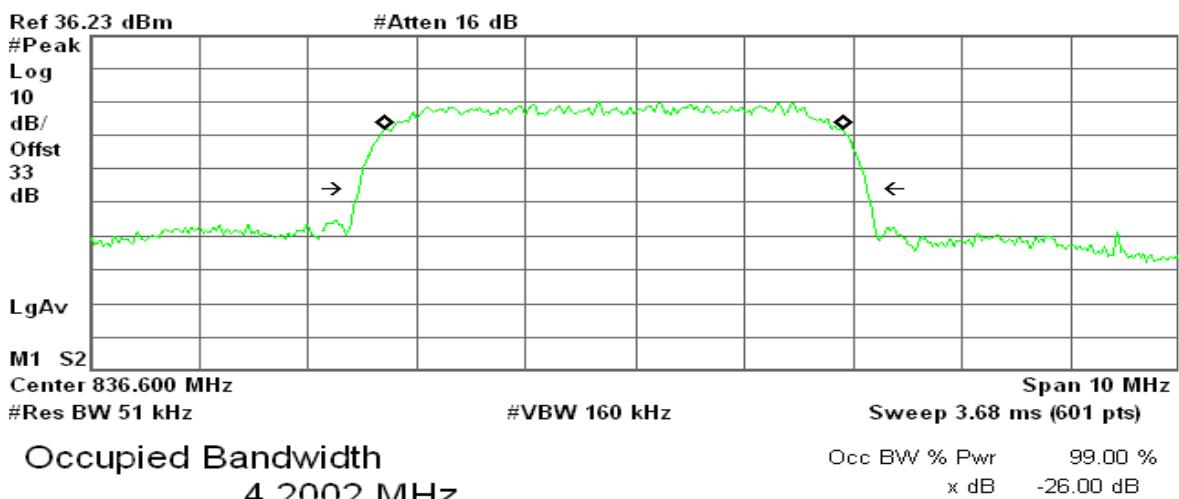
FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

HSDPA Band V (CH Mid)

Agilent

R T

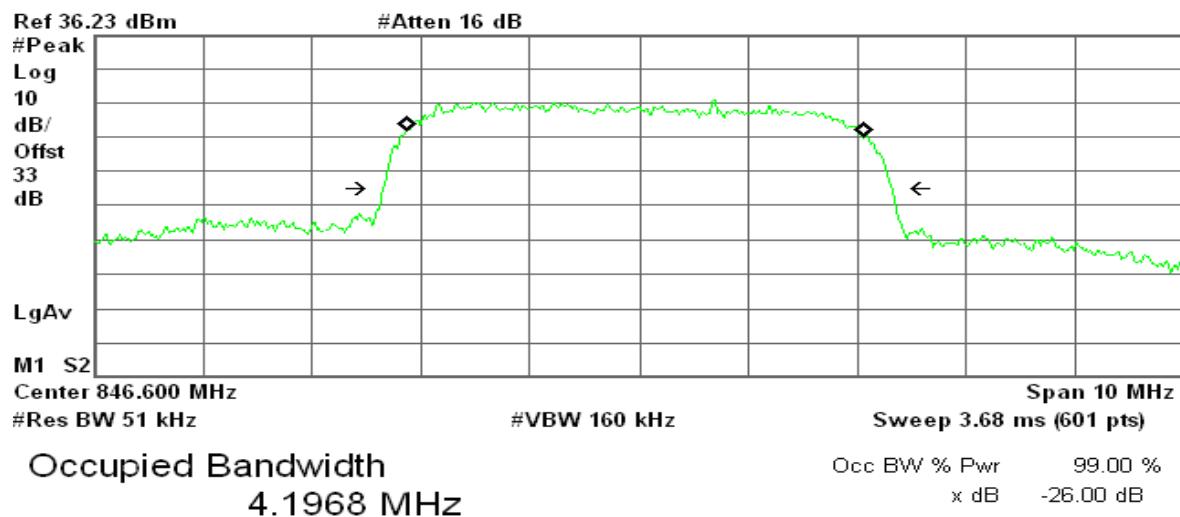


Transmit Freq Error -202.181 kHz
x dB Bandwidth 4.666 MHz

HSDPA Band V (CH High)

Agilent

R T



Transmit Freq Error -36.135 kHz
x dB Bandwidth 4.683 MHz



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

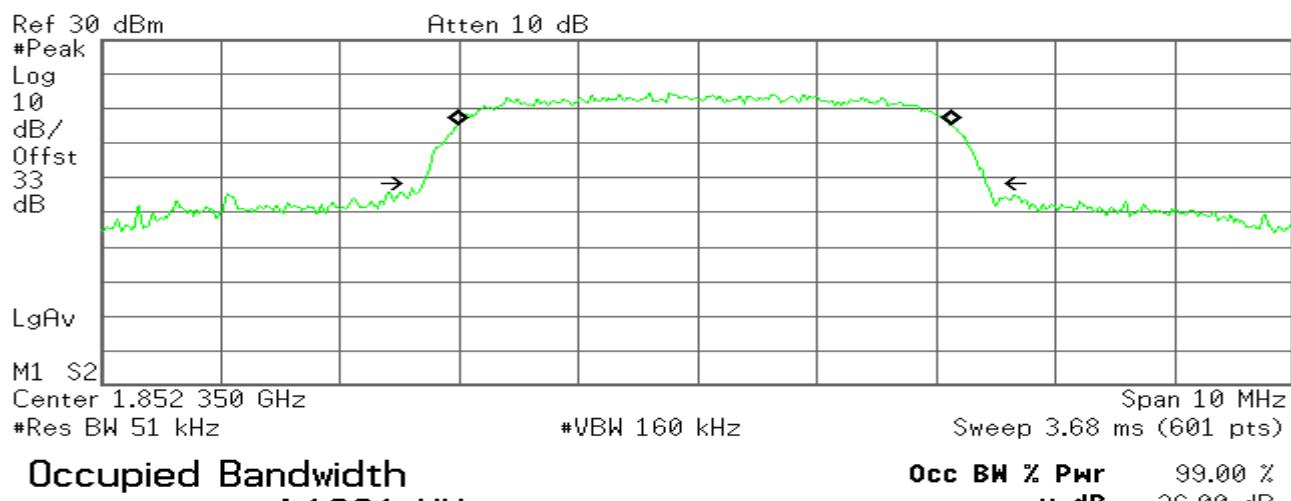
FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

WCDMA Band II (CH Low)

Agilent

R T

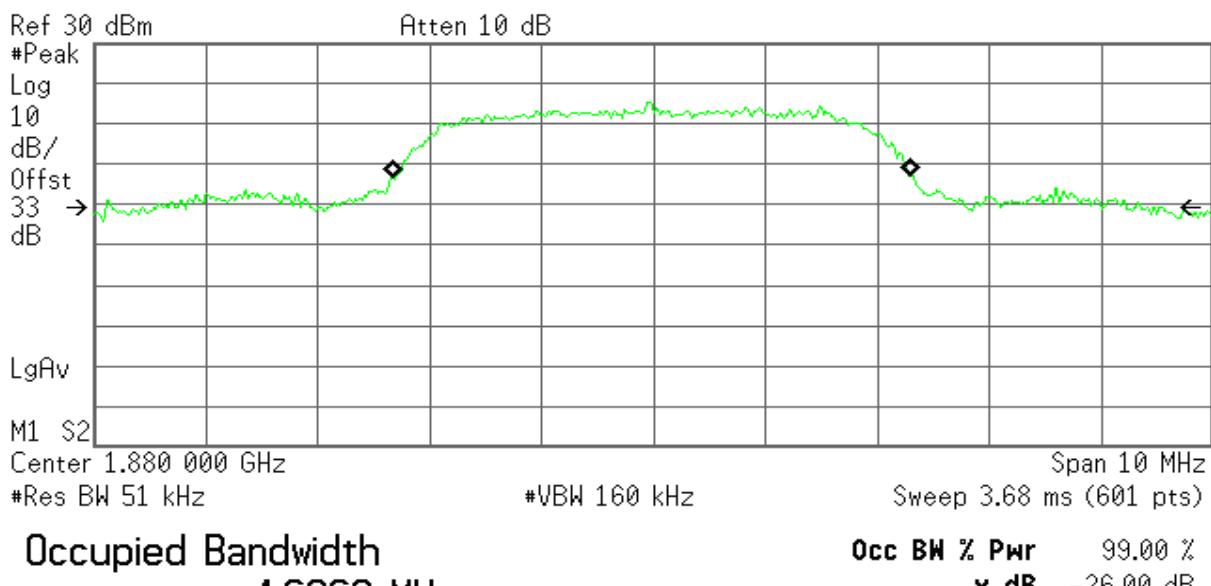


Transmit Freq Error 59.067 kHz
x dB Bandwidth 4.725 MHz

WCDMA Band II (CH Mid)

Agilent

R T



Transmit Freq Error -21.721 kHz
x dB Bandwidth 4.444 MHz



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

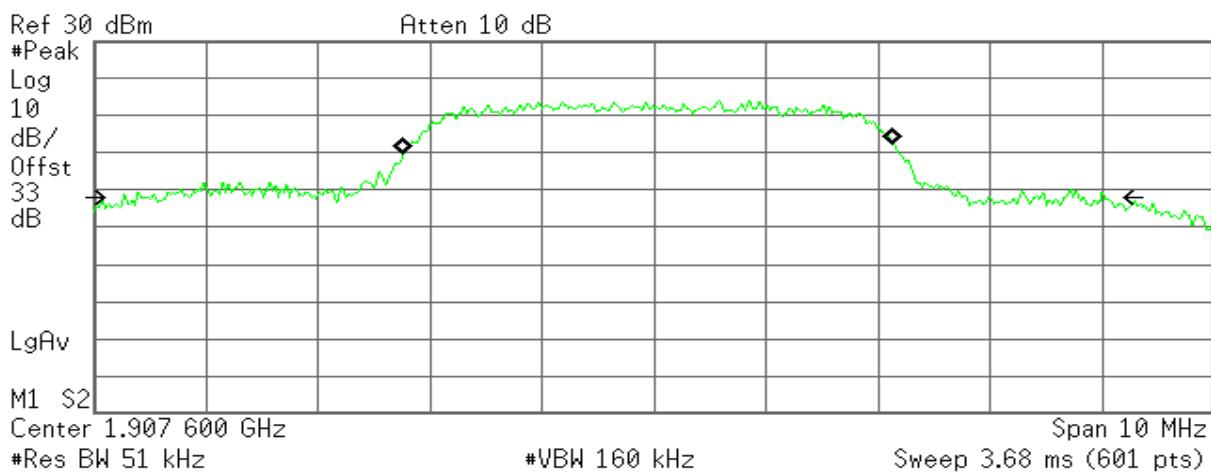
FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

WCDMA Band II (CH High)

Agilent

R T

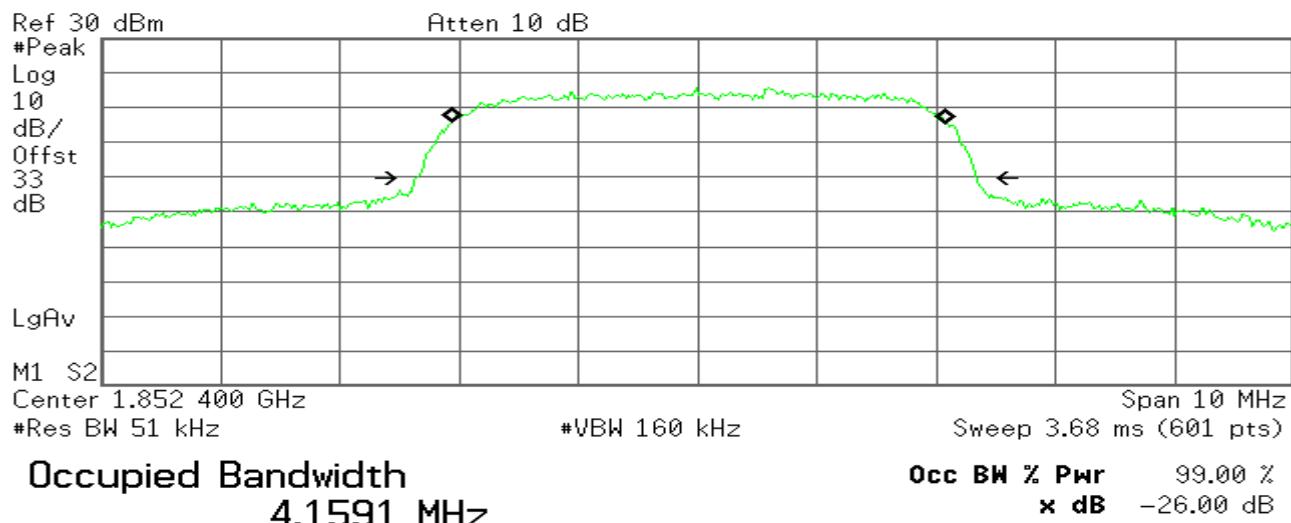


Transmit Freq Error -51.589 kHz
x dB Bandwidth 4.768 MHz

HSDPA Band II (CH Low)

Agilent

R T



Transmit Freq Error 10.133 kHz
x dB Bandwidth 4.711 MHz



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

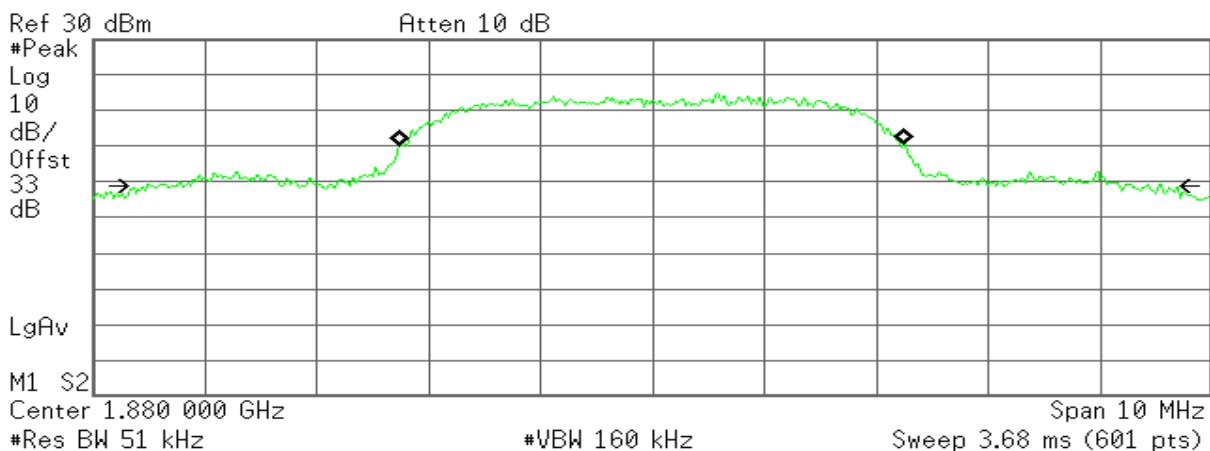
FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

HSDPA Band II(CH Mid)

Agilent

R T

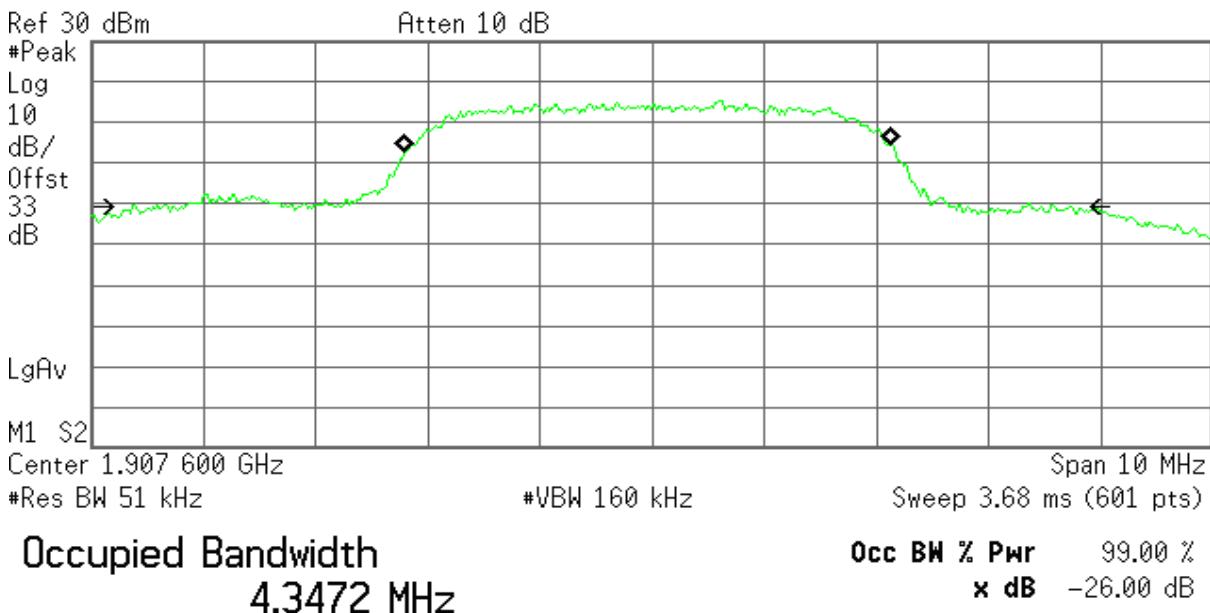


Transmit Freq Error -2.256 kHz
x dB Bandwidth 4.072 MHz

HSDPA Band II (CH High)

Agilent

R T



Transmit Freq Error -36.416 kHz
x dB Bandwidth 4.369 MHz



7.5. OUT OF BAND EMISSION AT ANTENNA TERMINALS

LIMIT

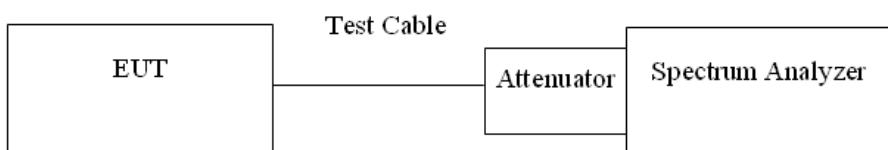
According to FCC §2.1051, FCC §22.917, FCC §24.238(a).

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.



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

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



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

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



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Mode	CH	Location	Description
EDGE 850	128	Figure 14-1	Band Edge emissions
	251	Figure 14-2	Band Edge emissions
EDGE 1900	512	Figure 14-3	Band Edge emissions
	810	Figure 14-4	Band Edge emissions

Mode	CH	Location	Description
WCDMA (Band II)	9262	Figure 16-1	Conducted spurious emissions, 30MHz - 20GHz
	9400	Figure 16-2	Conducted spurious emissions, 30MHz - 20GHz
	9538	Figure 16-3	Conducted spurious emissions, 30MHz - 20GHz
WCDMA (Band II)	9262	Figure 16-4	Band Edge emissions
	9538	Figure 16-5	Band Edge emissions

Mode	CH	Location	Description
HSDPA (Band II)	9262	Figure 17-1	Conducted spurious emissions, 30MHz - 20GHz
	9400	Figure 17-2	Conducted spurious emissions, 30MHz - 20GHz
	9538	Figure 17-3	Conducted spurious emissions, 30MHz - 20GHz
HSDPA (Band II)	9262	Figure 17-4	Band Edge emissions
	9538	Figure 17-5	Band Edge emissions



Test Plot

GSM 850

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

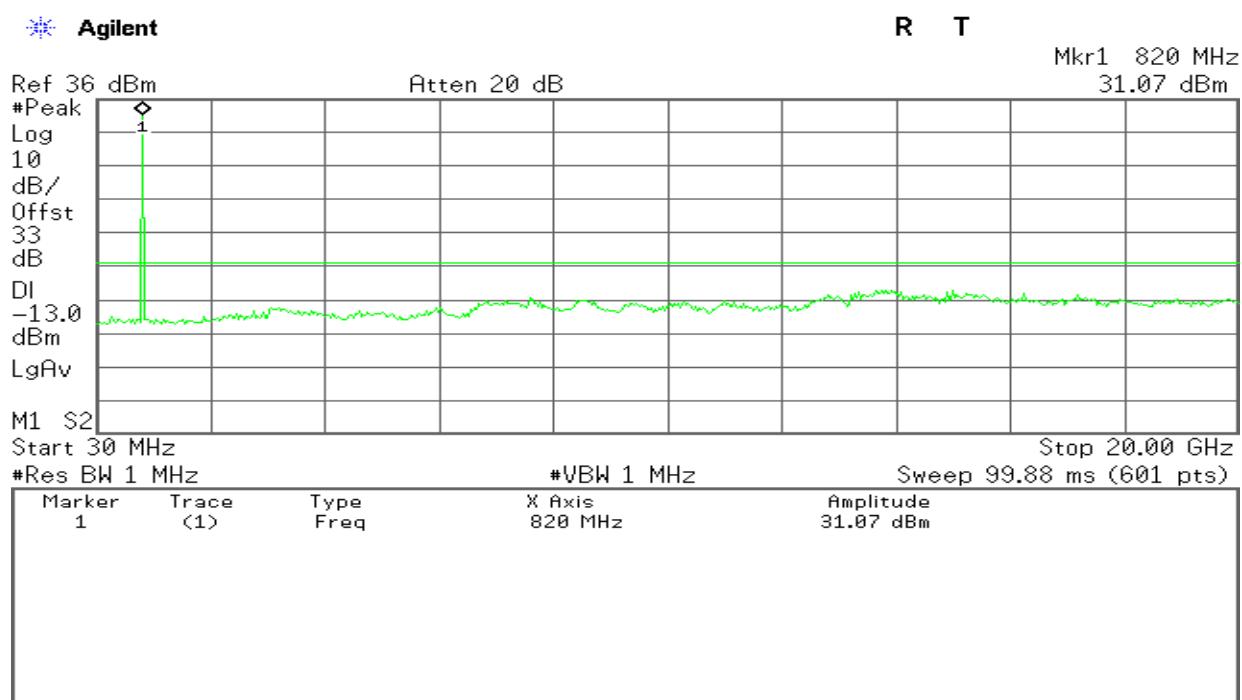
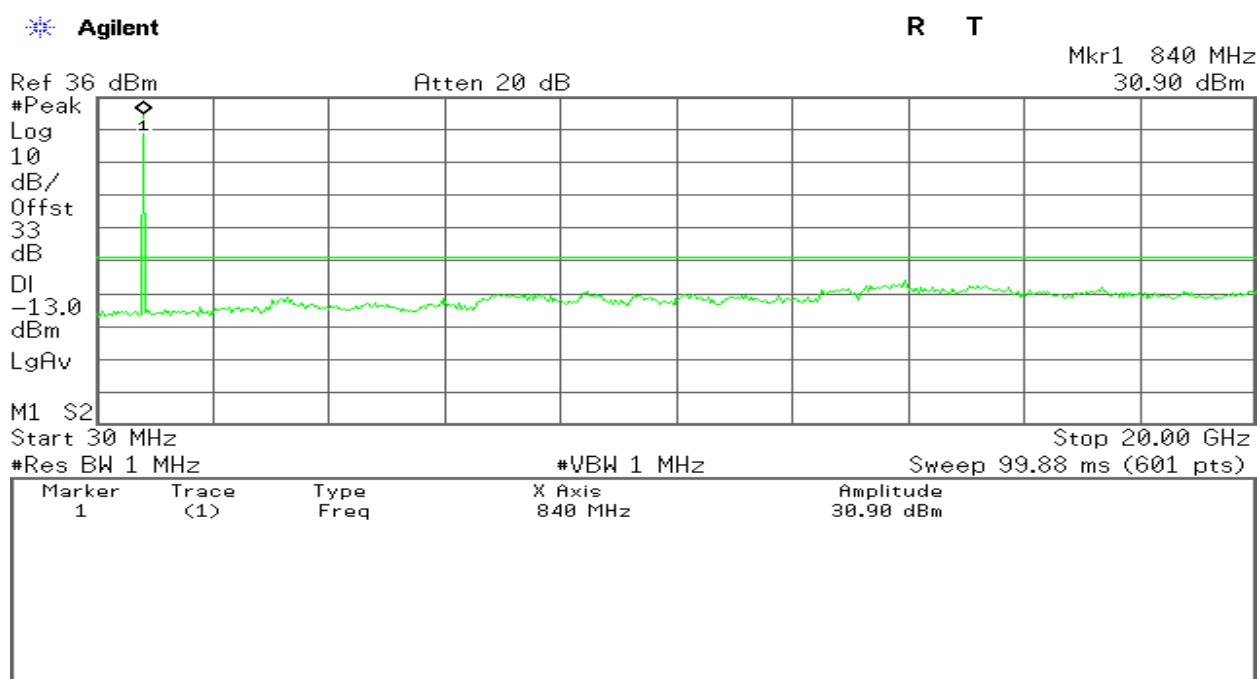


Figure 5-2: Out of Band emission at antenna terminals – GSM CH Mid





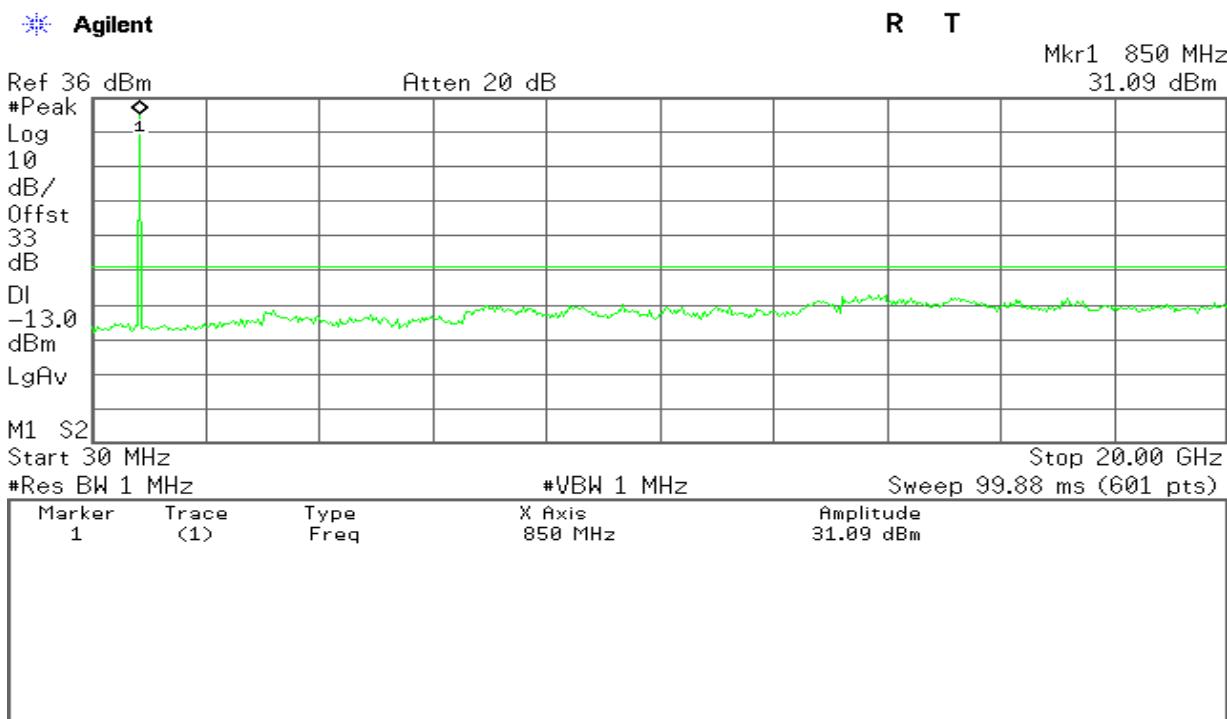
Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

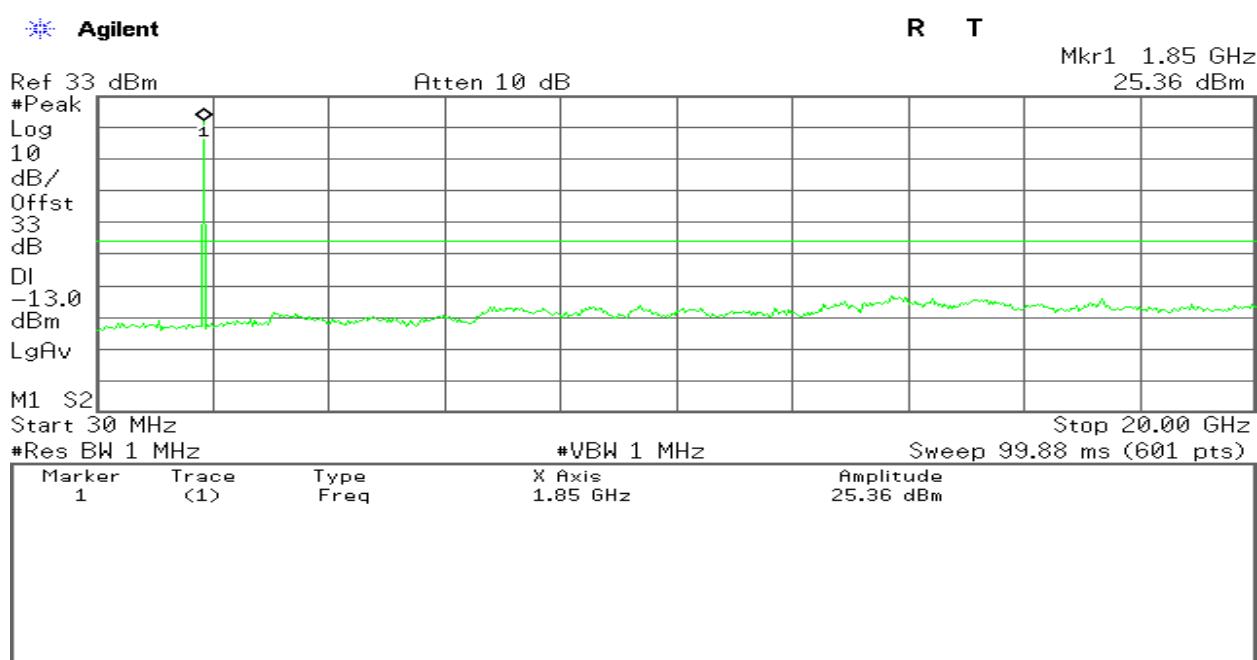
Date of Issue :July 24, 2012

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





Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

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

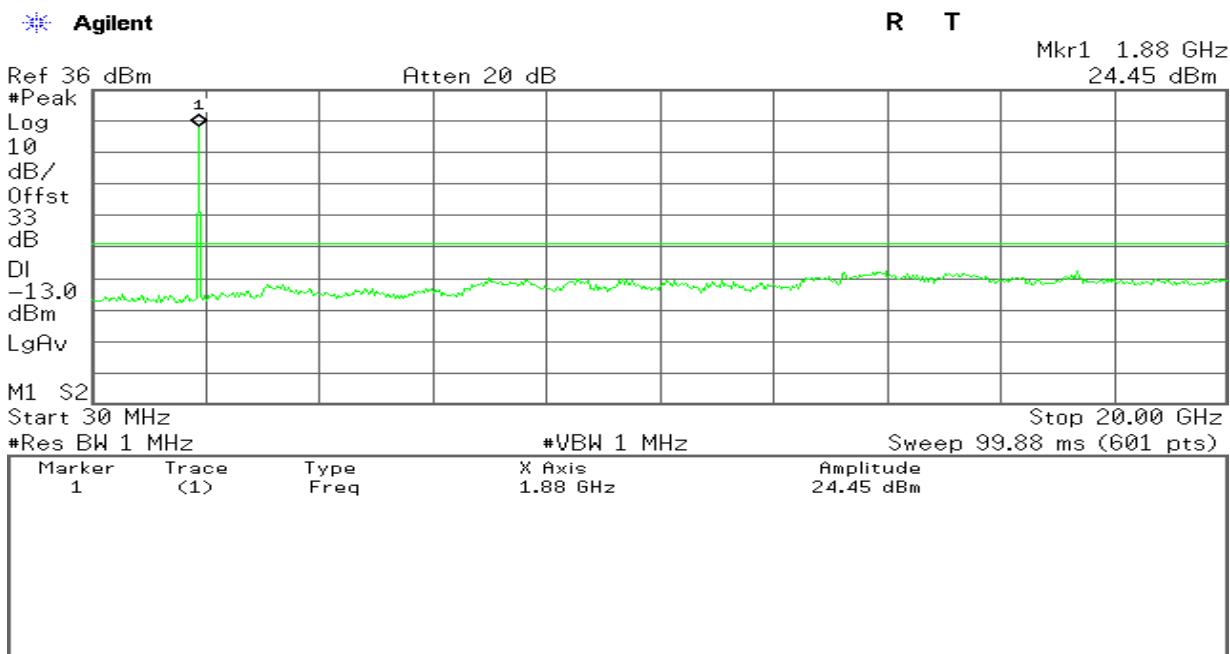
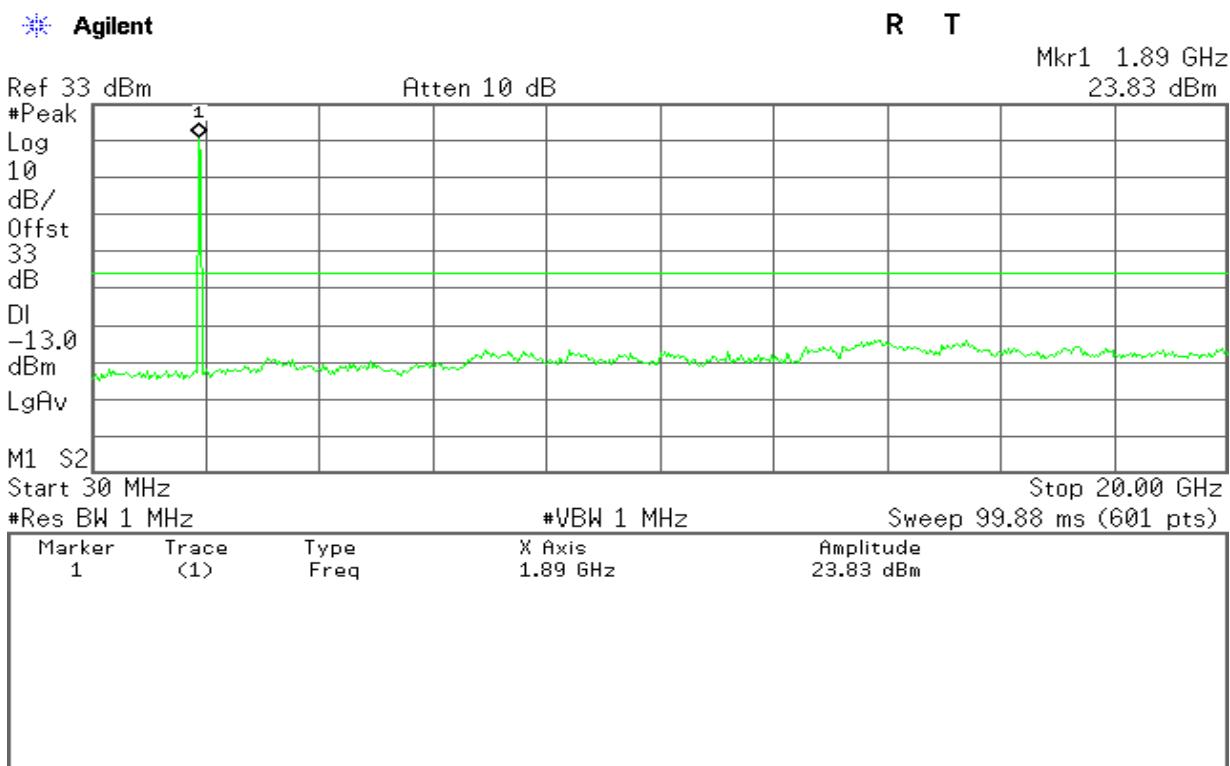


Figure 6-3: Out of Band emission at antenna terminals – GSM CH High





GSM 850

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

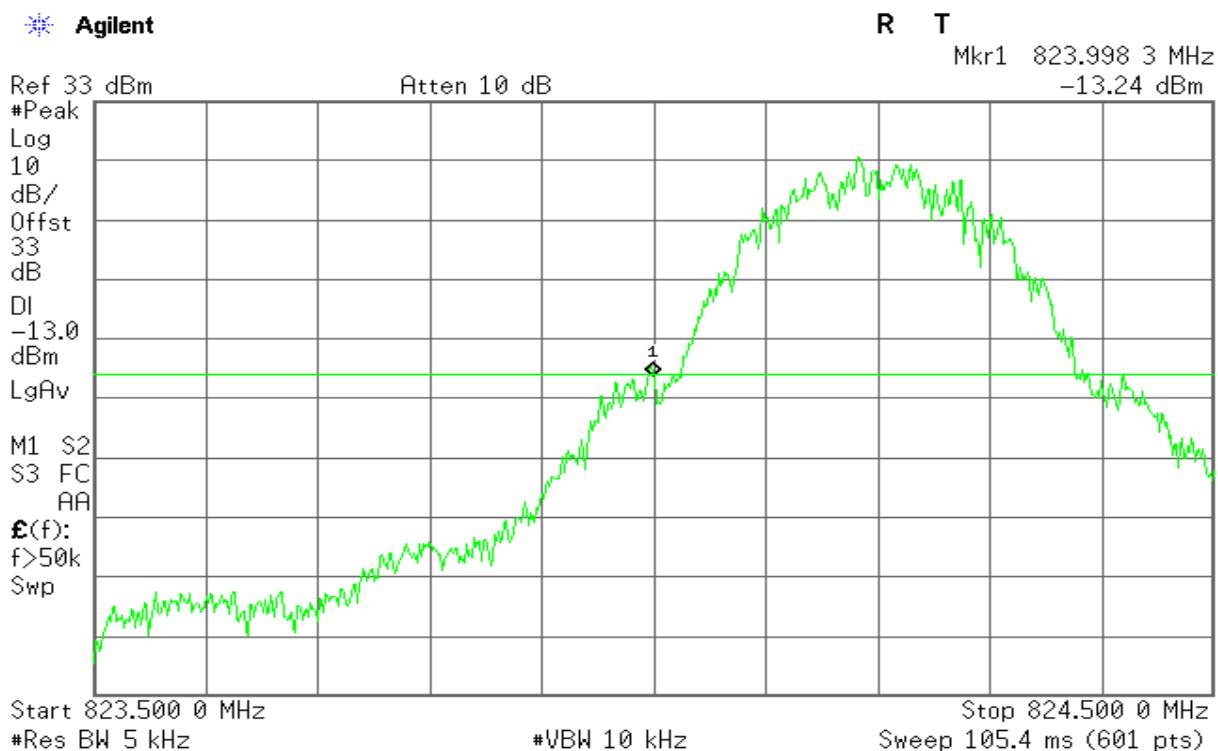
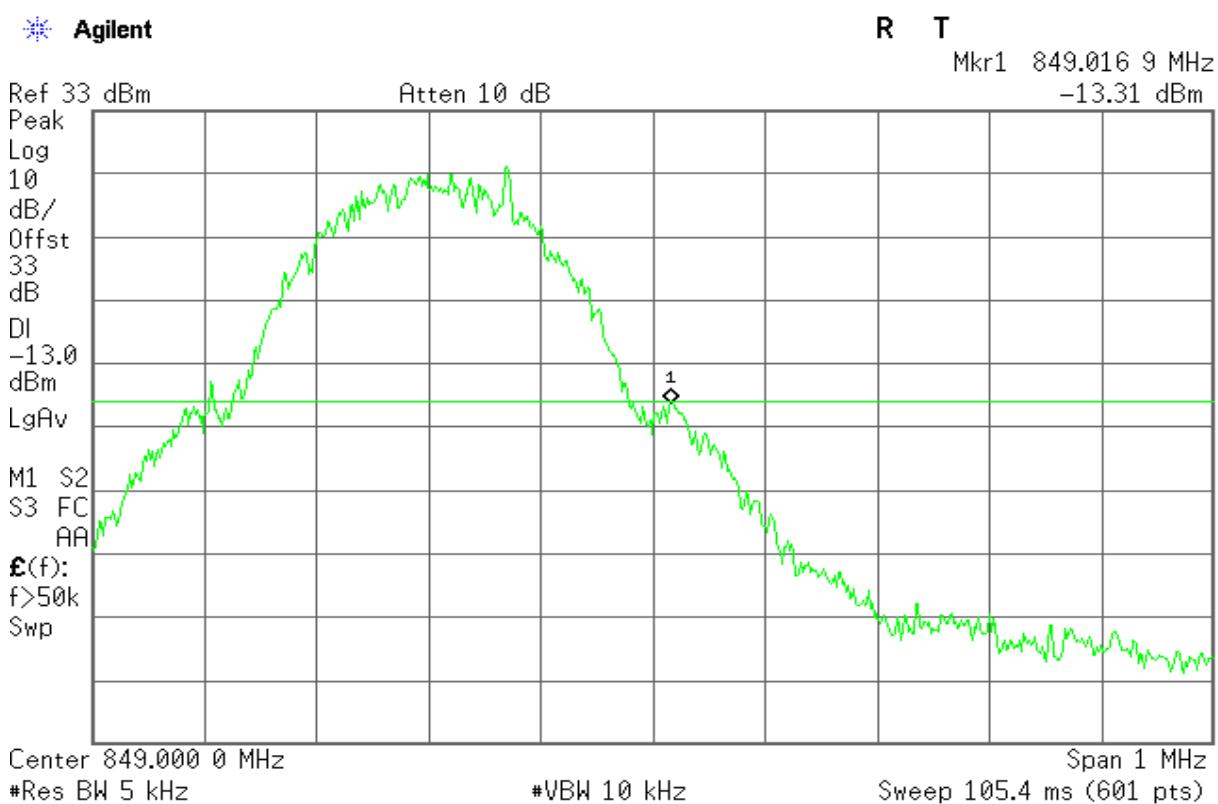


Figure 3-2: Band Edge emissions –GSM CH High





GSM 1900

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

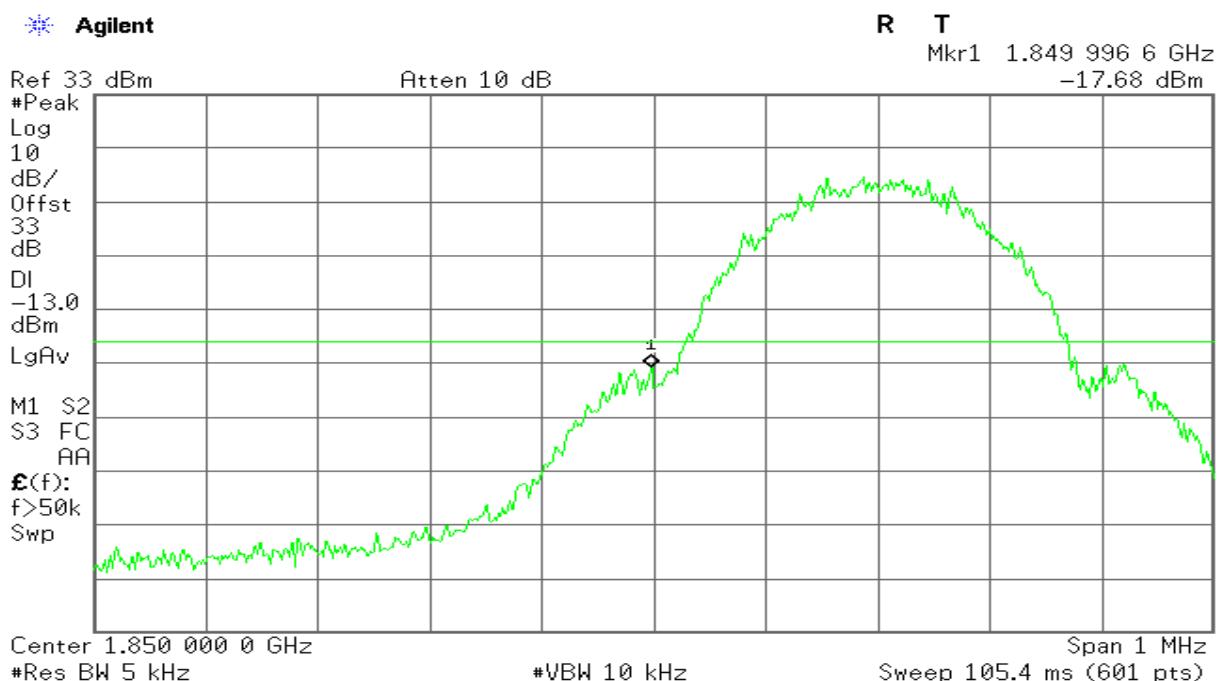
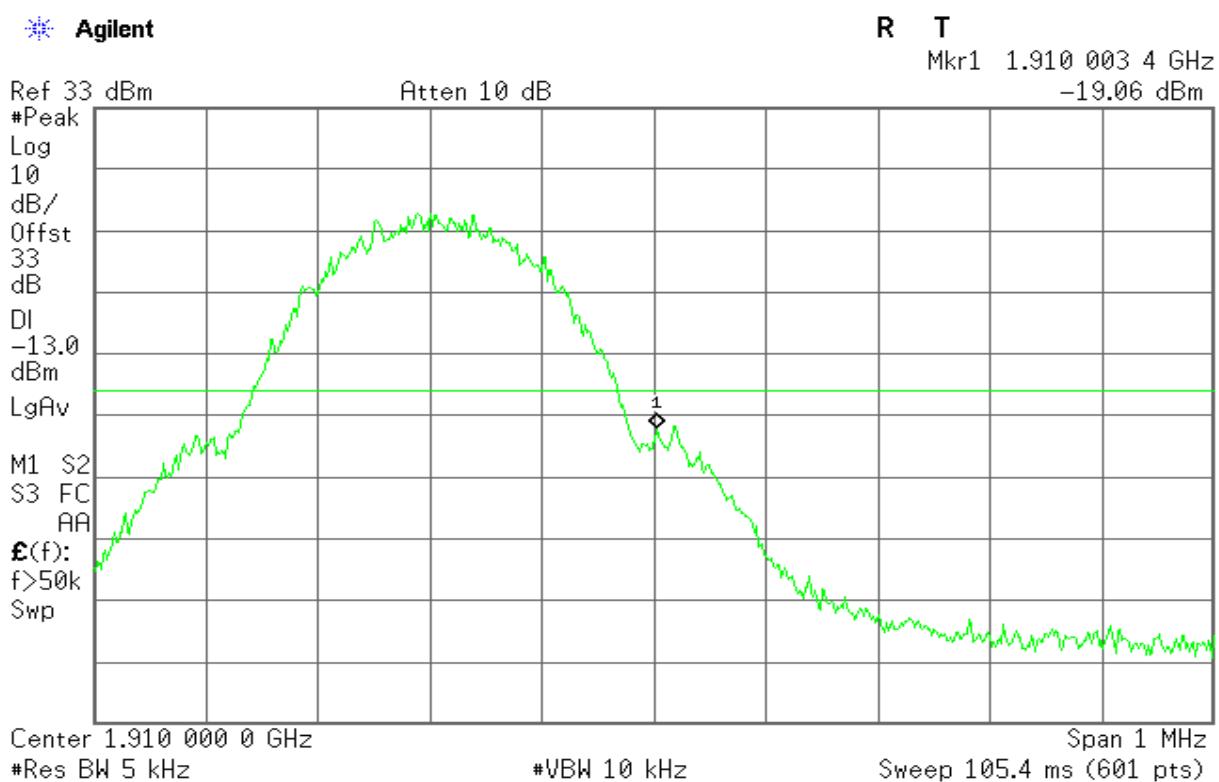


Figure 4-2: Band Edge emissions – GSM CH High





Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

GPRS 850

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

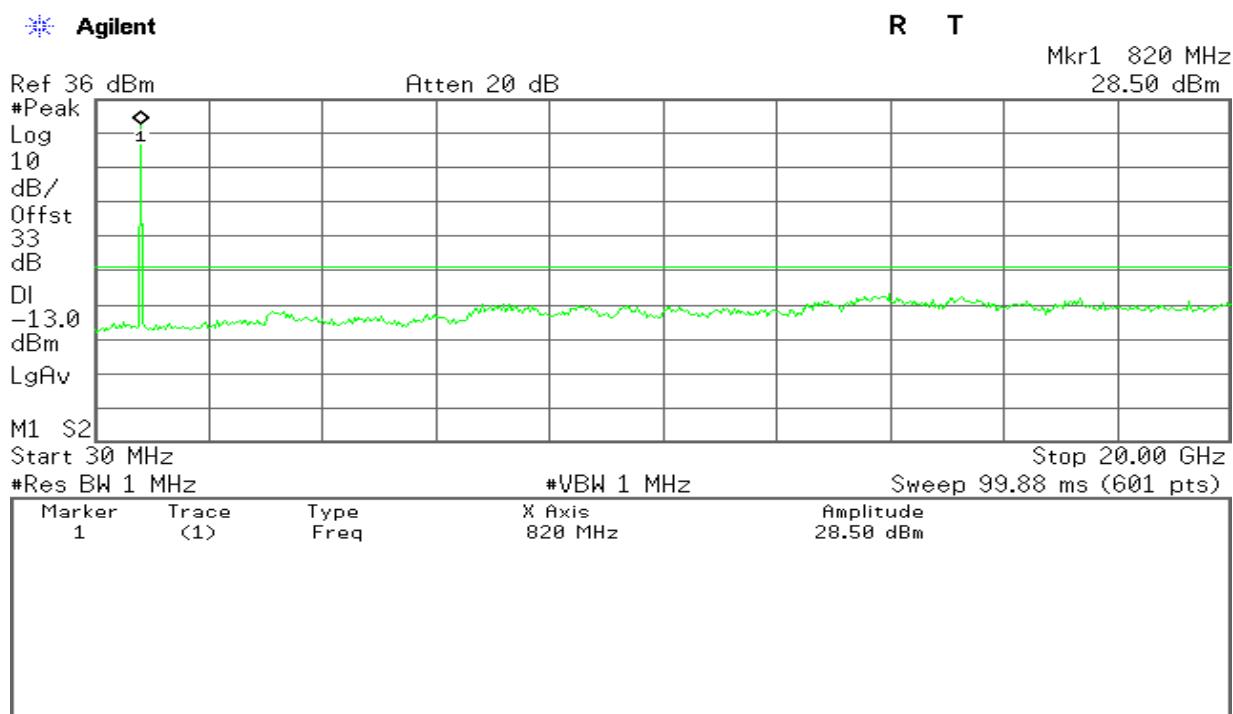
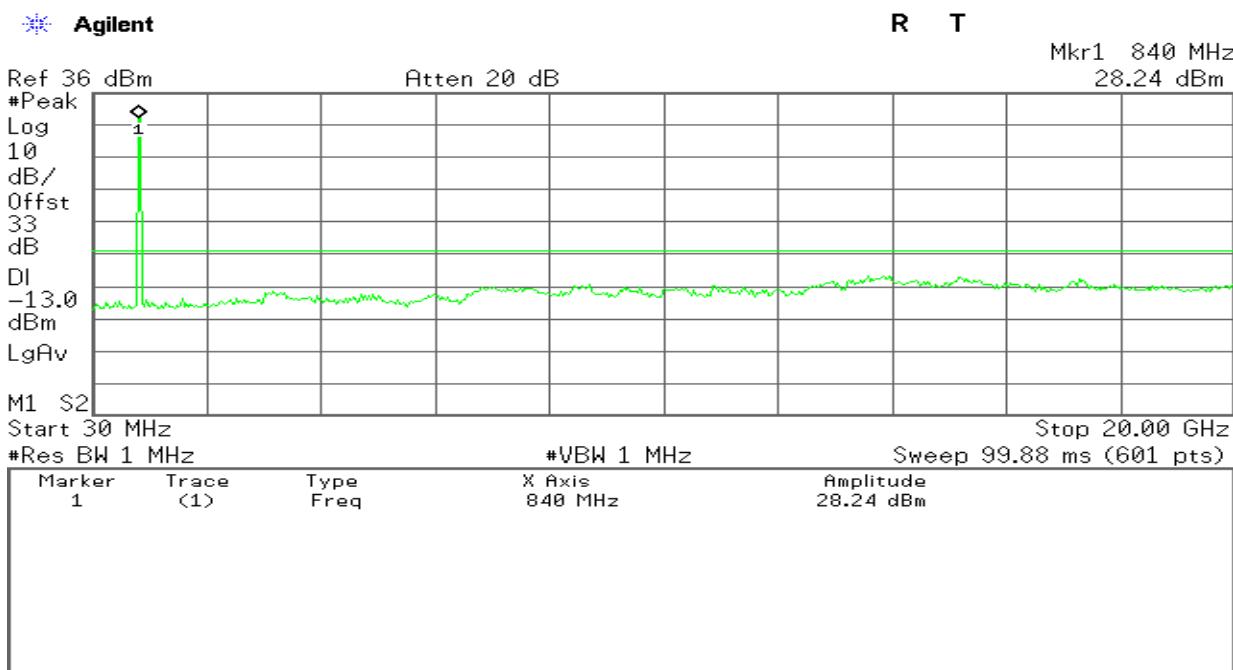


Figure 7-2: Out of Band emission at antenna terminals – GPRS CH Mid





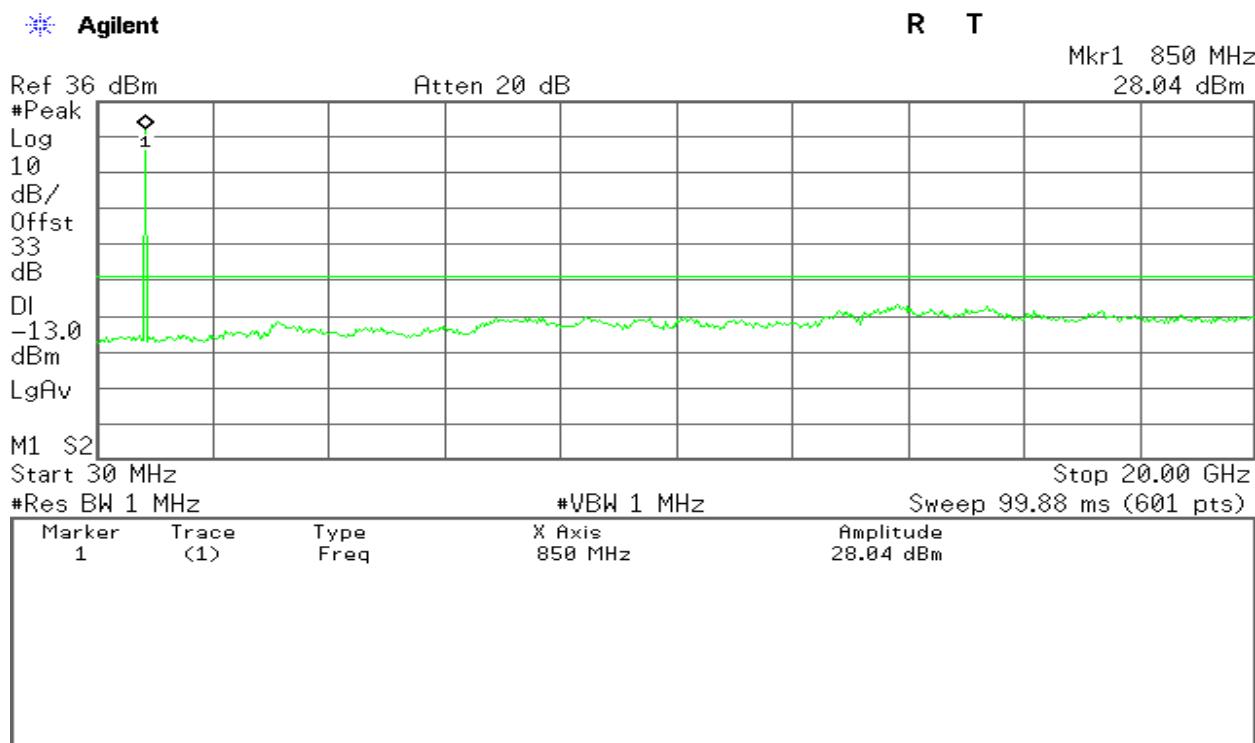
Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

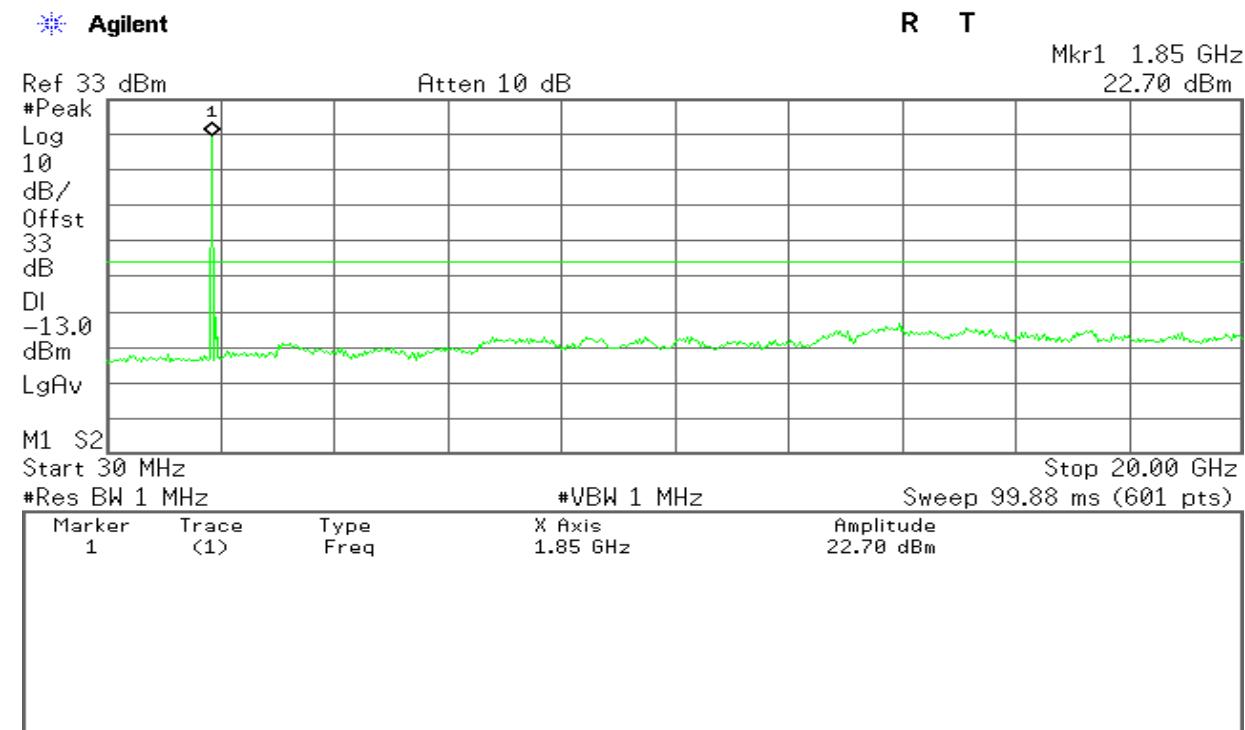
Date of Issue :July 24, 2012

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





Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

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

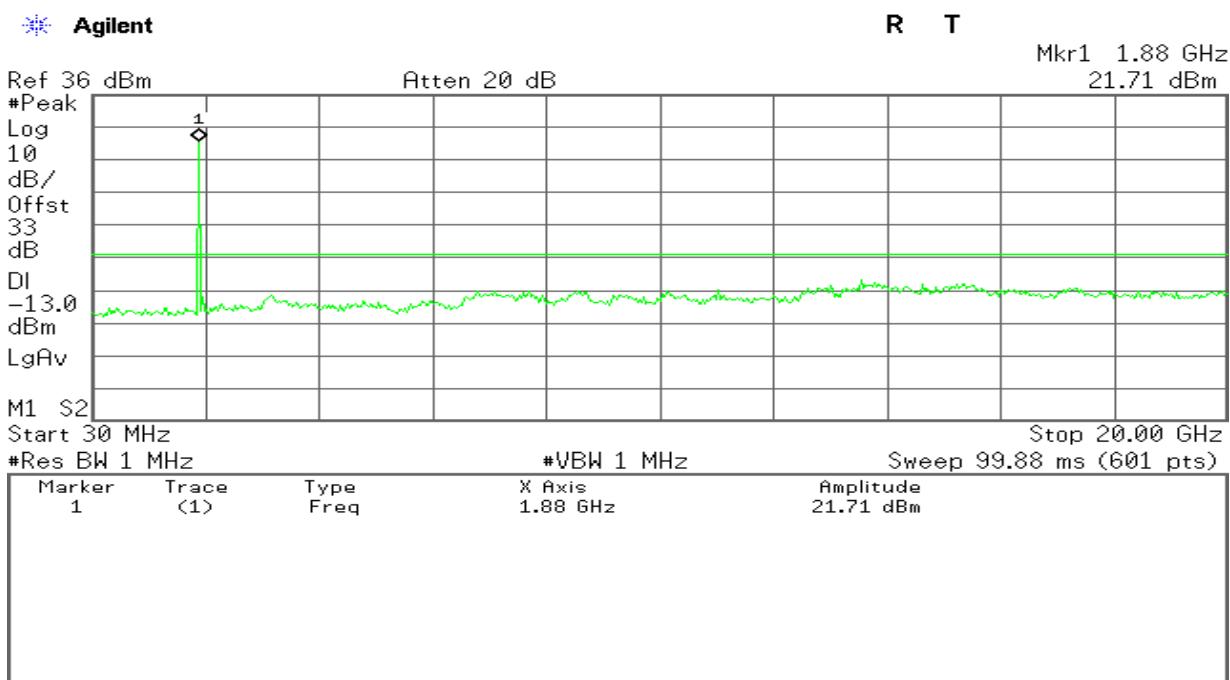
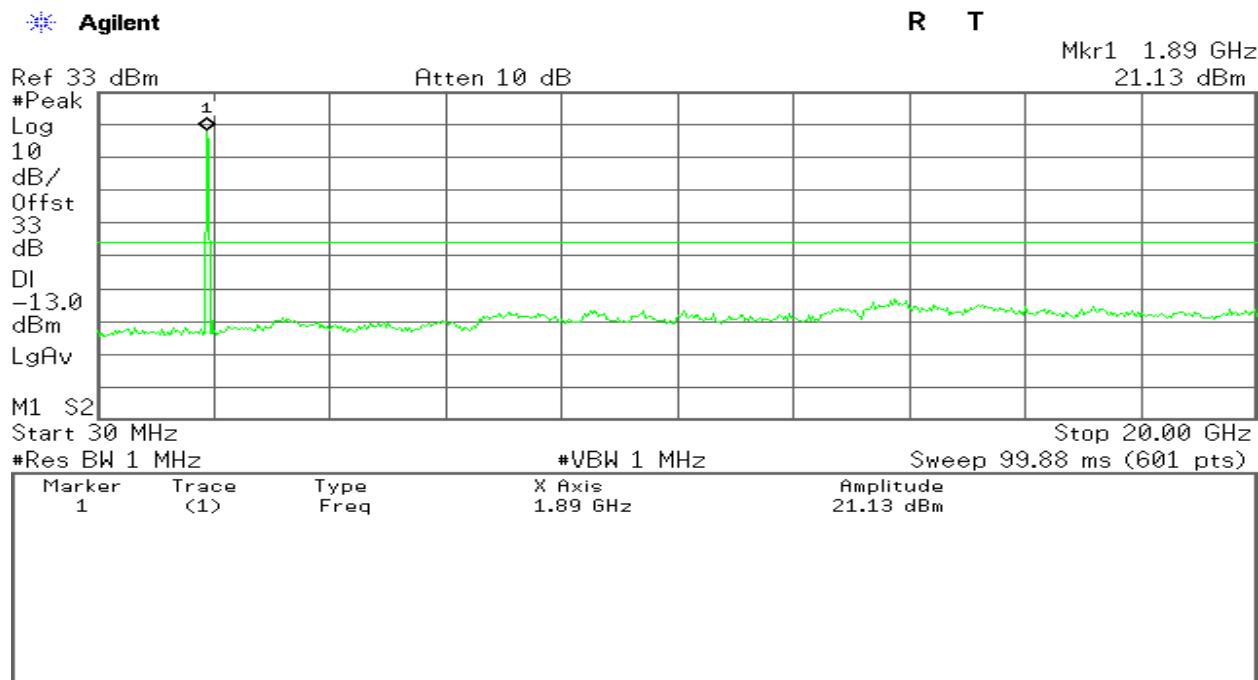


Figure 8-3: Out of Band emission at antenna terminals – GPRS CH High





GPRS 850

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

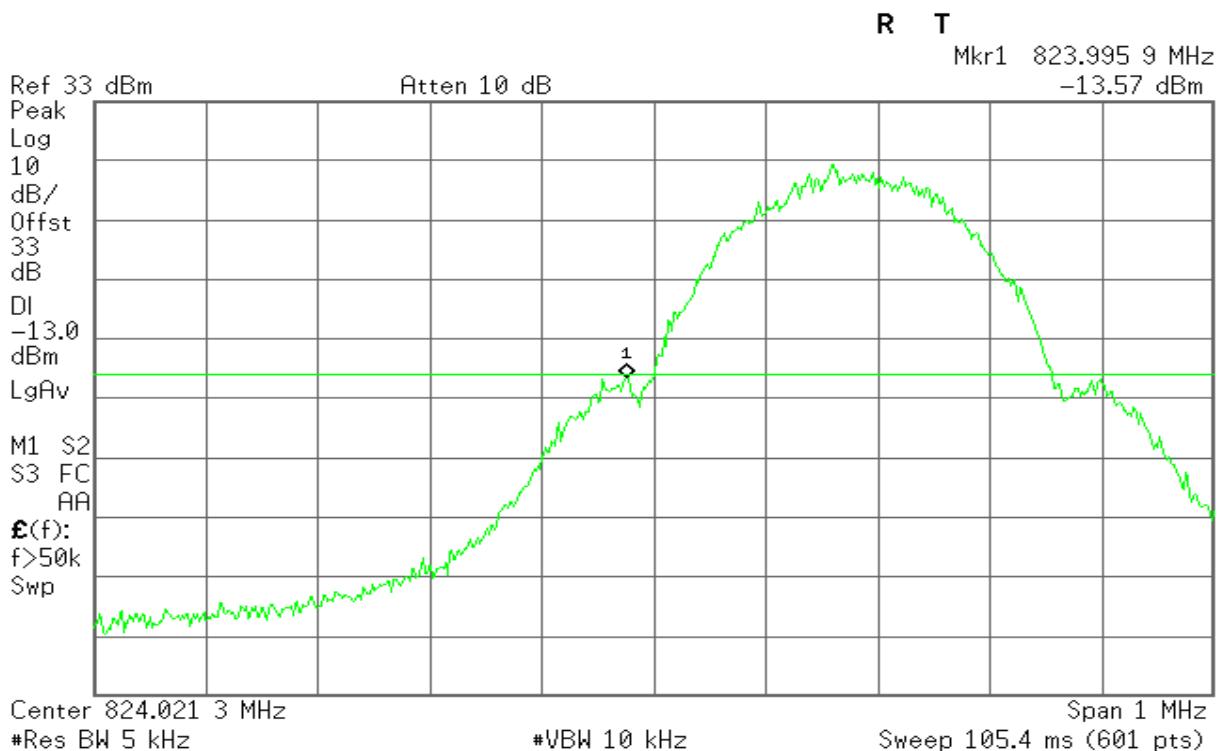
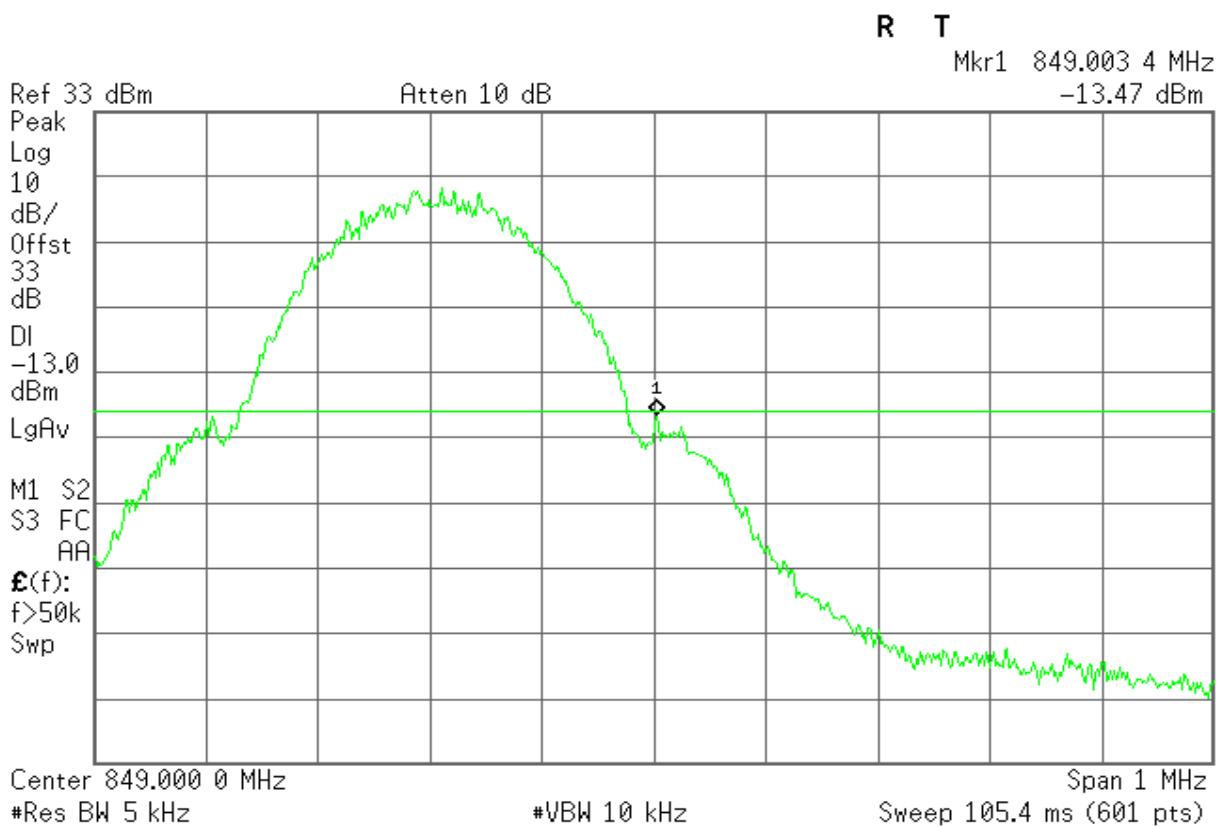


Figure 9-2: Band Edge emissions –GPRS CH High





GPRS 1900

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

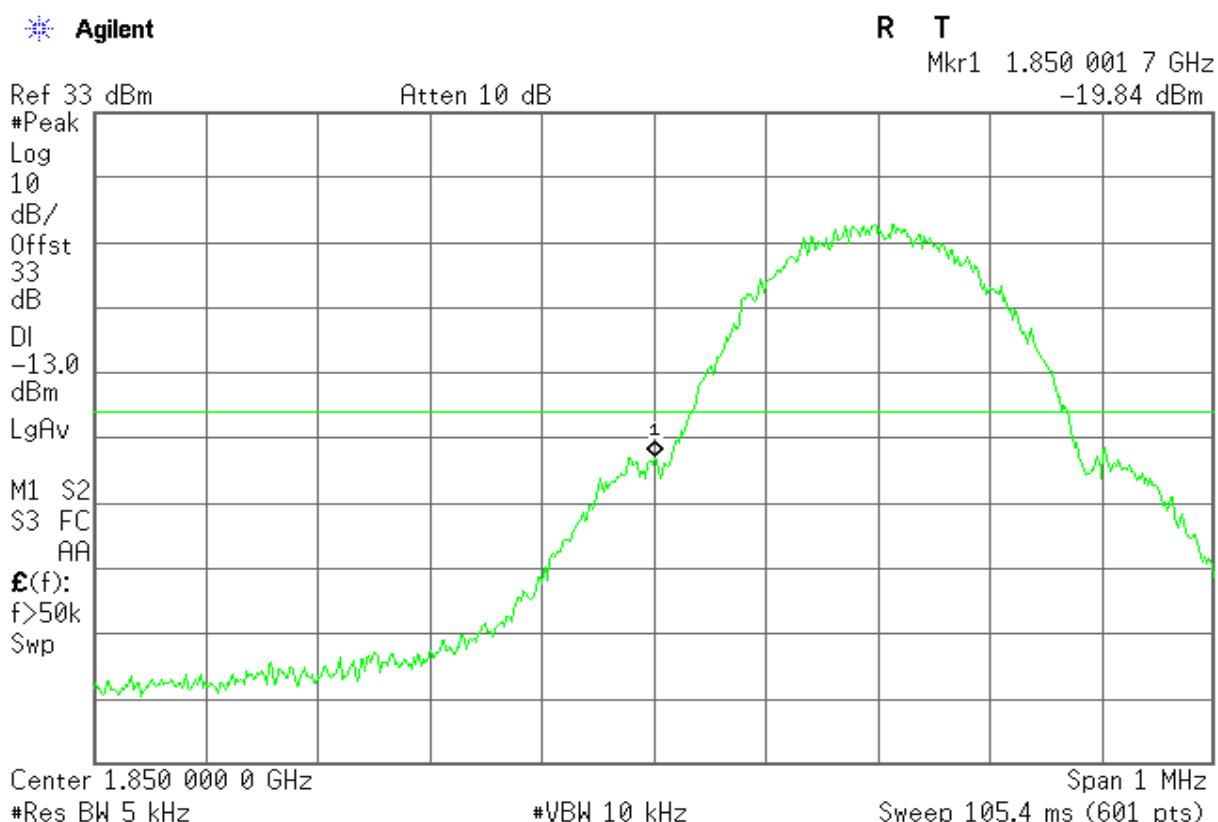
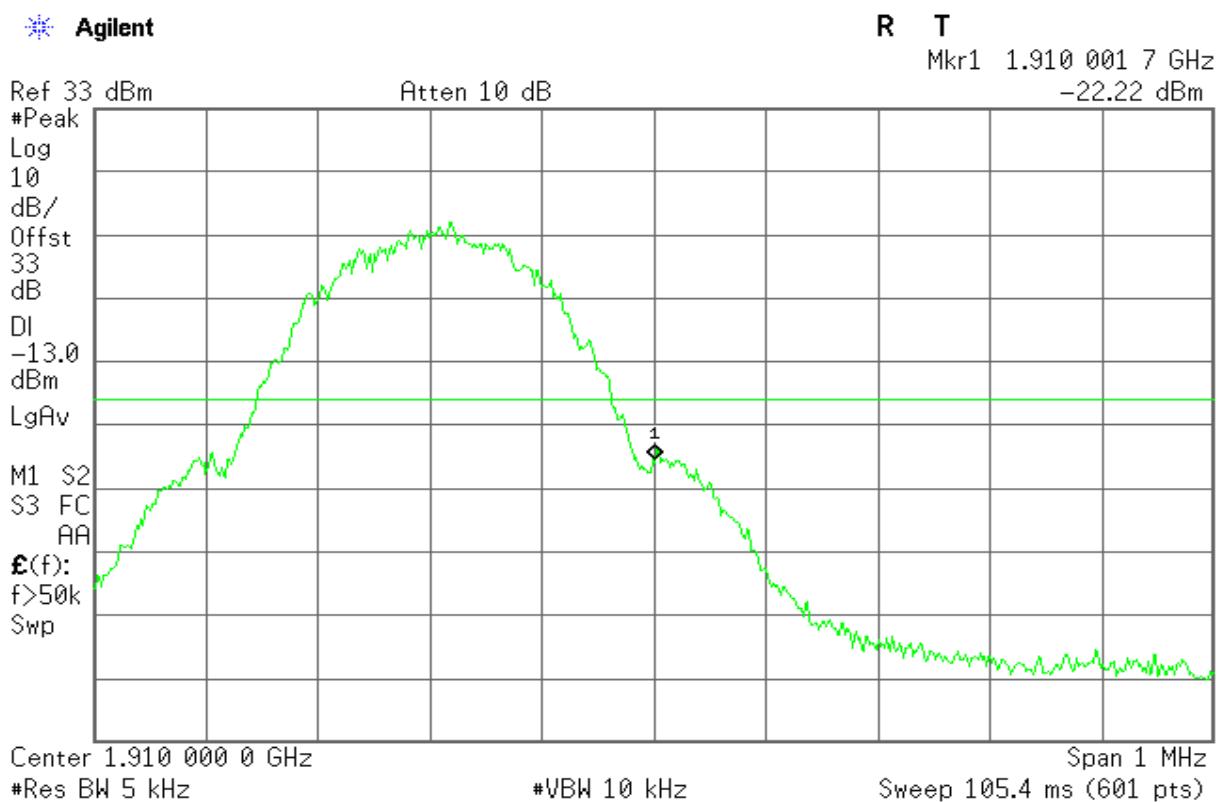


Figure 10-2: Band Edge emissions – GPRS CH High





WCDMA Band V

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

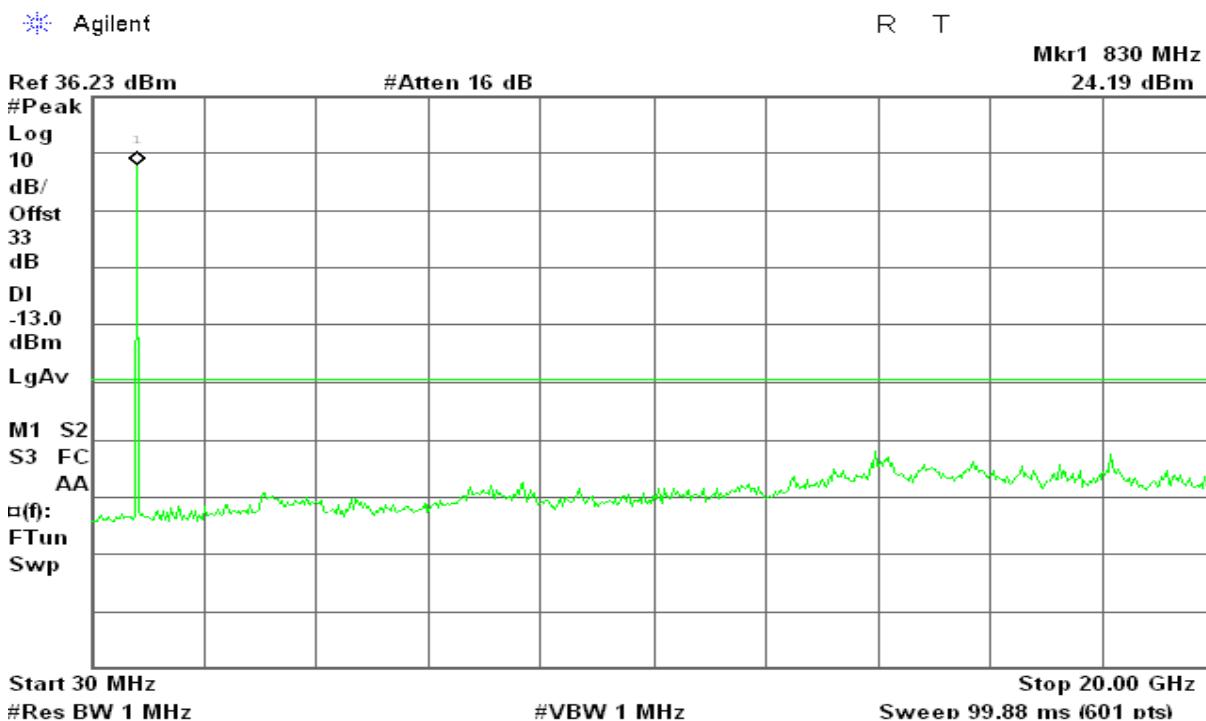


Figure 11-2: Out of Band emission at antenna terminals – WCDMA CH Mid

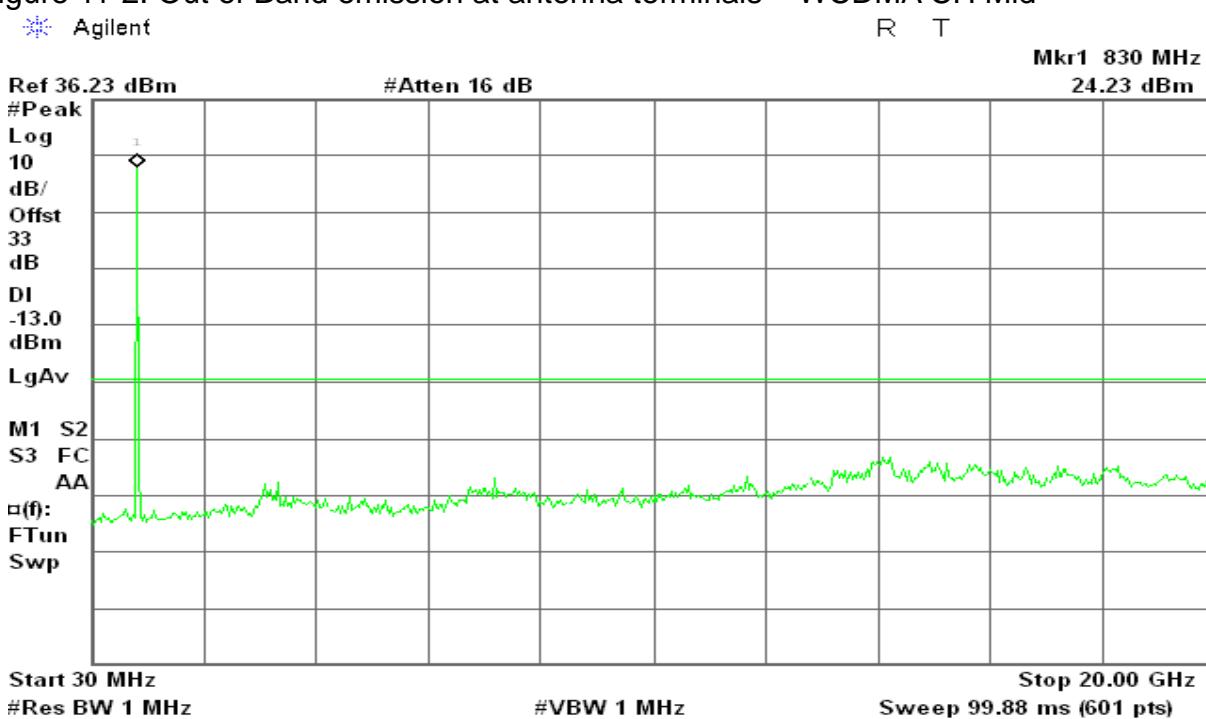
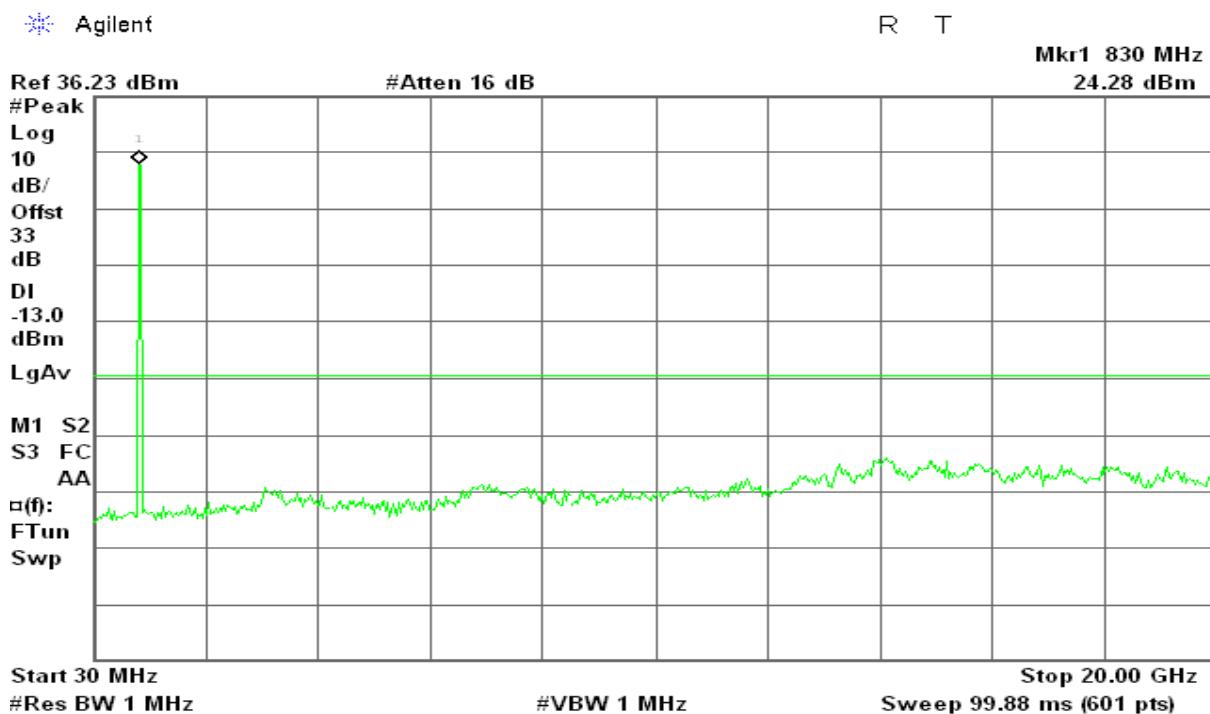


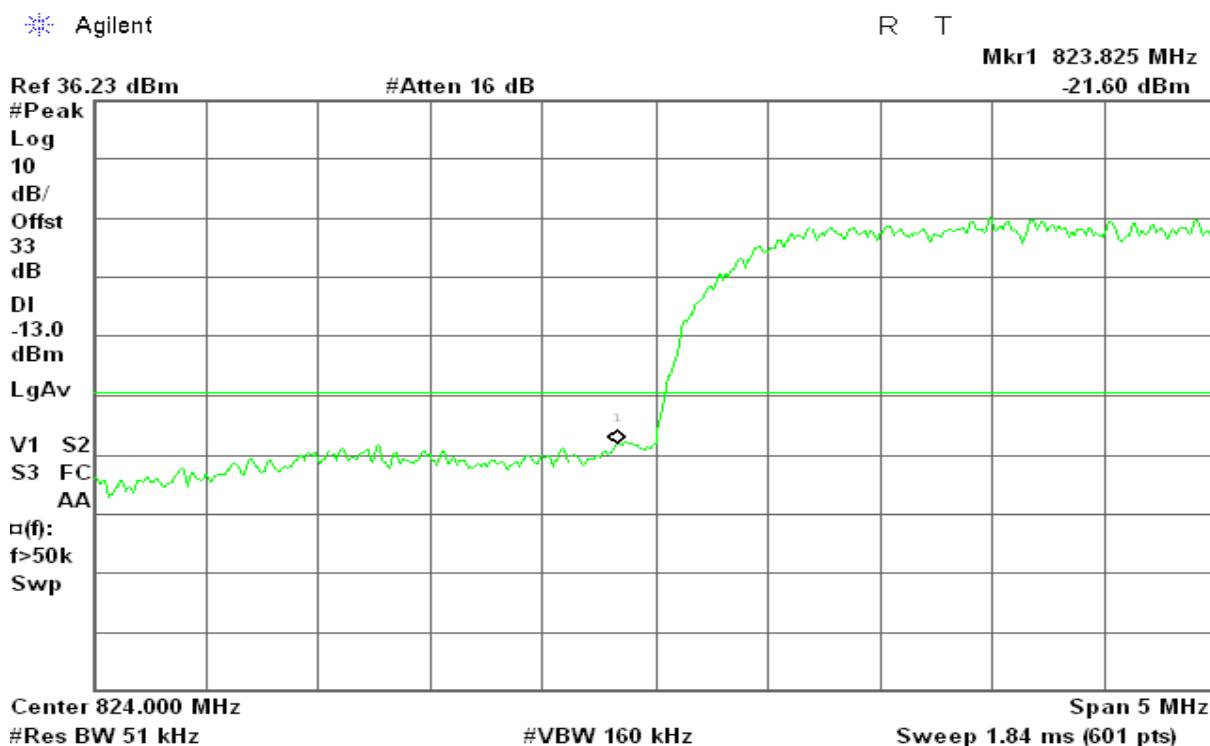


Figure 11-3: Out of Band emission at antenna terminals – WCDMA CH High



WCDMA Band V

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





Compliance Certification Services Inc.

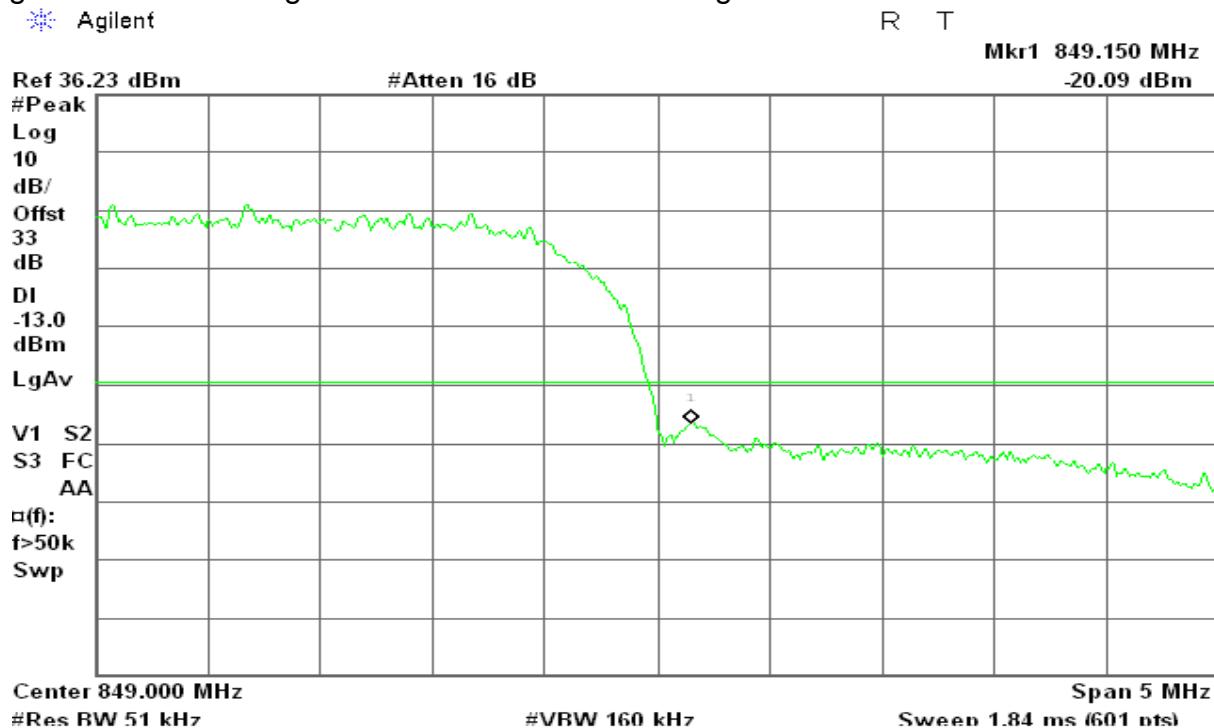
Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Figure 11-5: Band Edge emissions –WCDMA CH High

Agilent



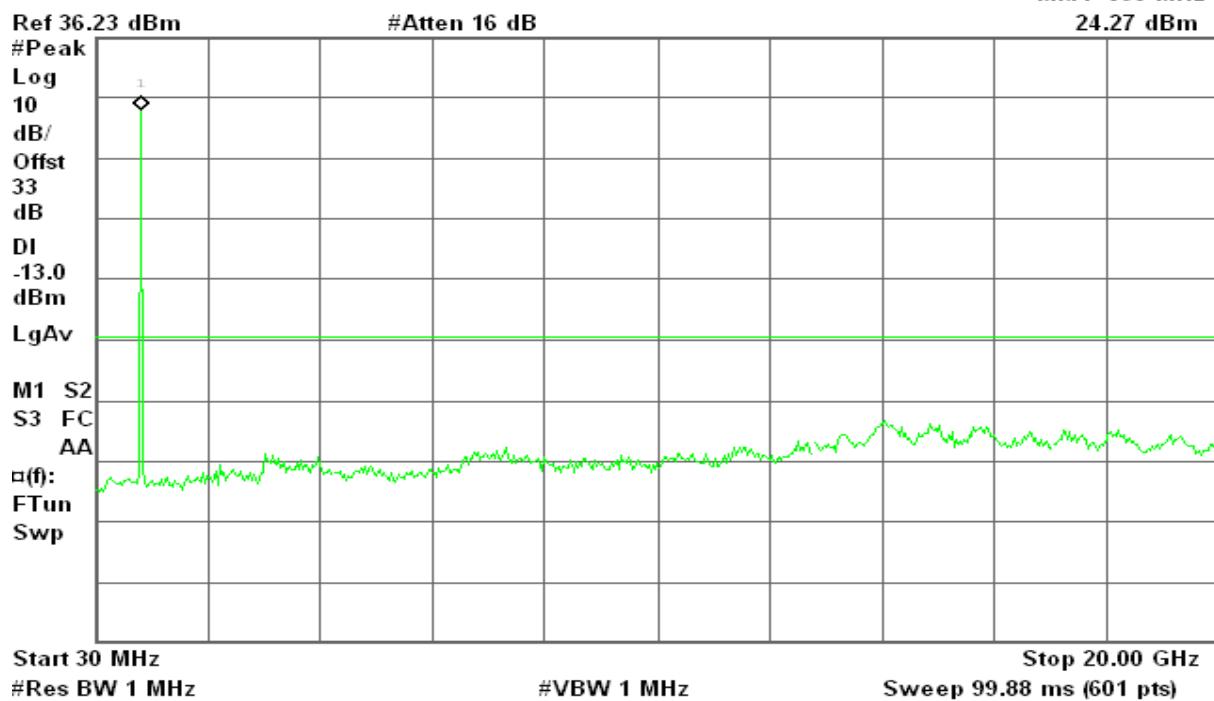
HSDPA Band V

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

Agilent

R T

Mkr1 830 MHz
24.27 dBm





Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

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

Agilent

R T

Mkr1 830 MHz
24.27 dBm

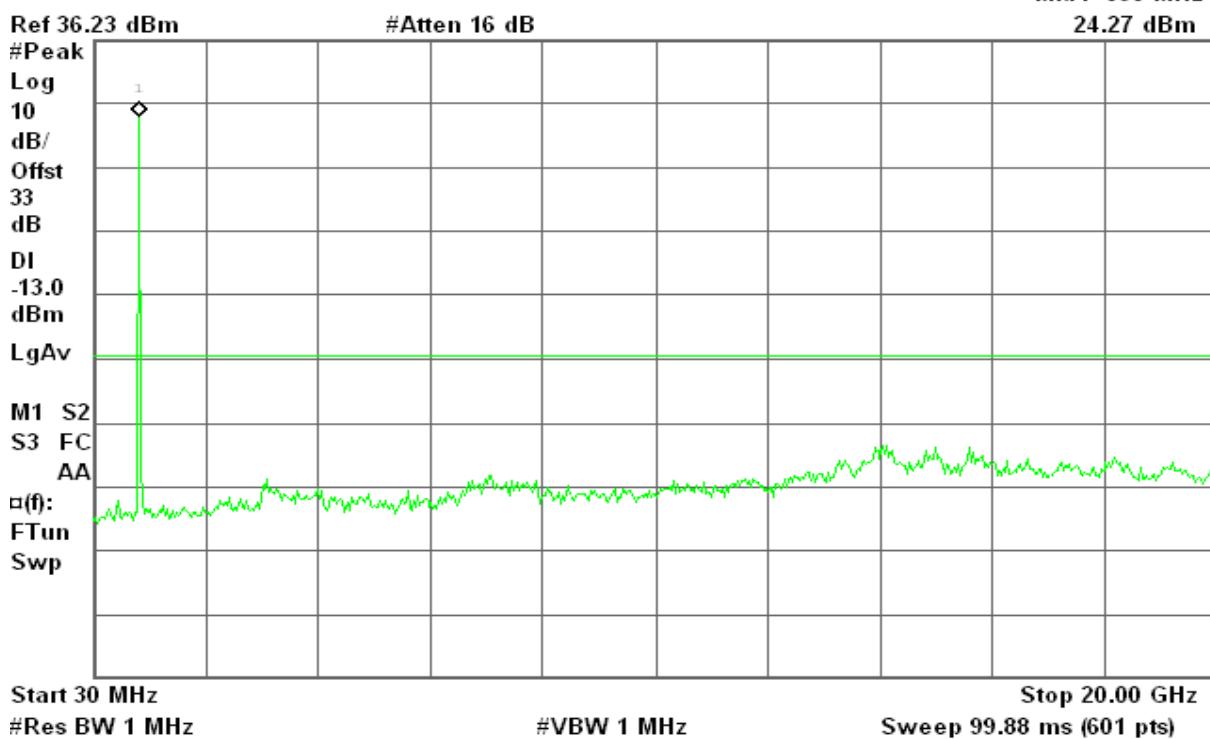
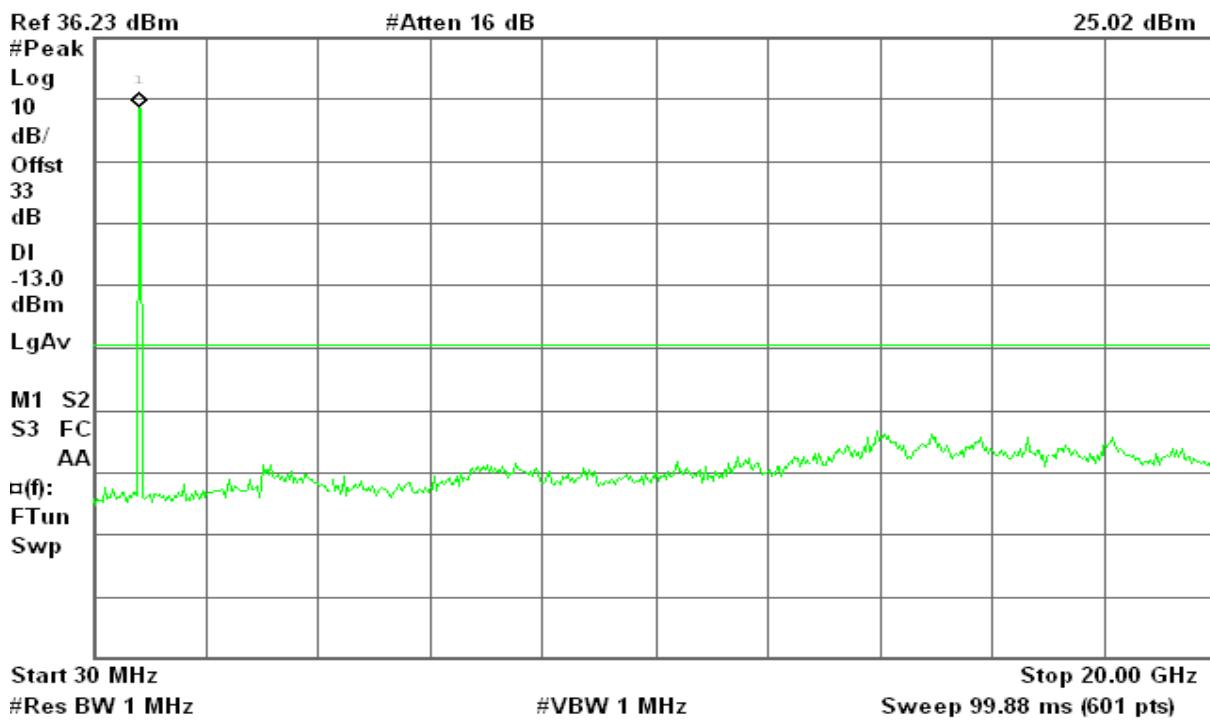


Figure 12-3: Out of Band emission at antenna terminals – HSDPA CH High

Agilent

R T

Mkr1 830 MHz
25.02 dBm





WCDMA / HSDPA Band V

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

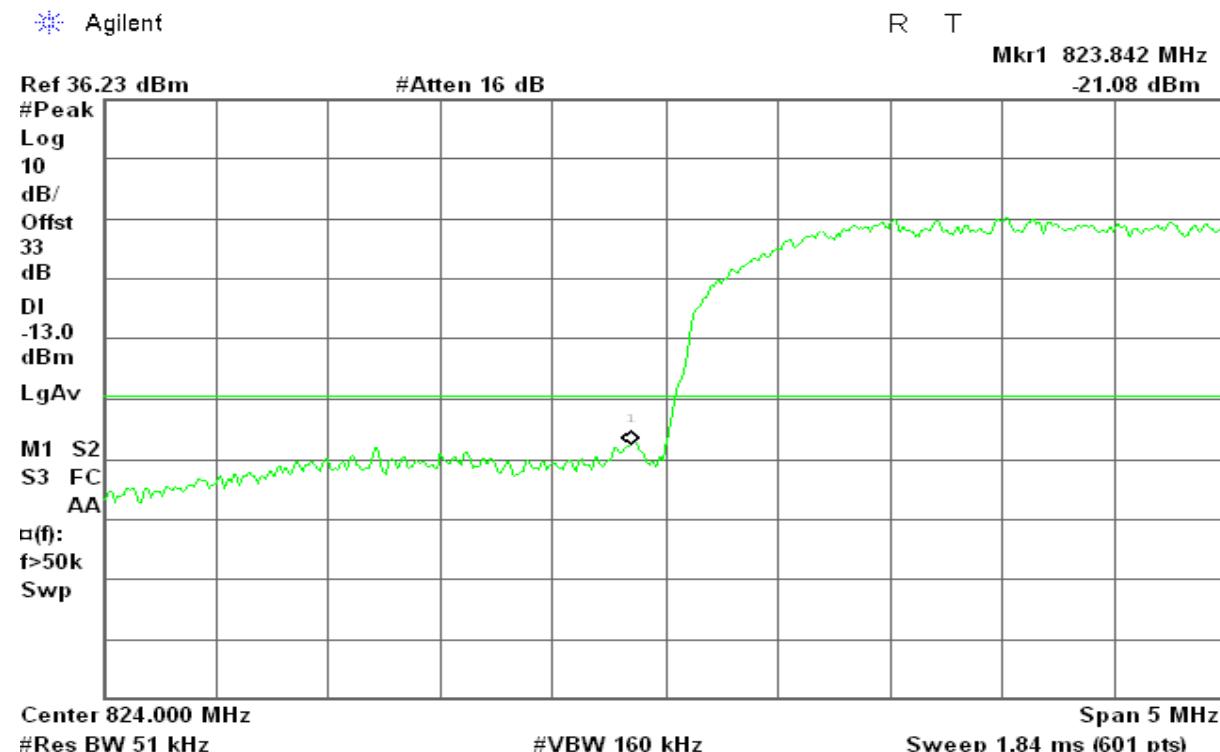
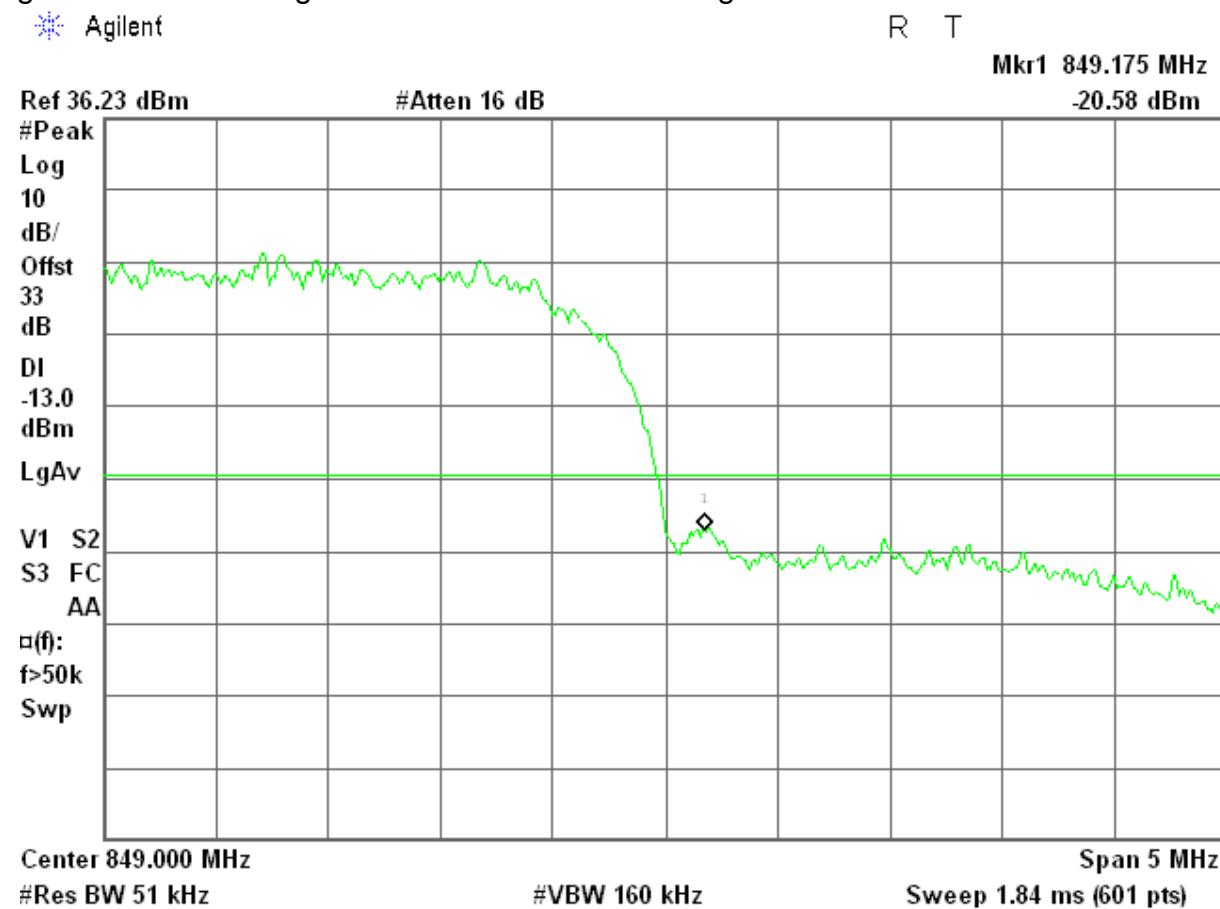


Figure 12-5: Band Edge emissions – HSDPA CH High





EDGE 850

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

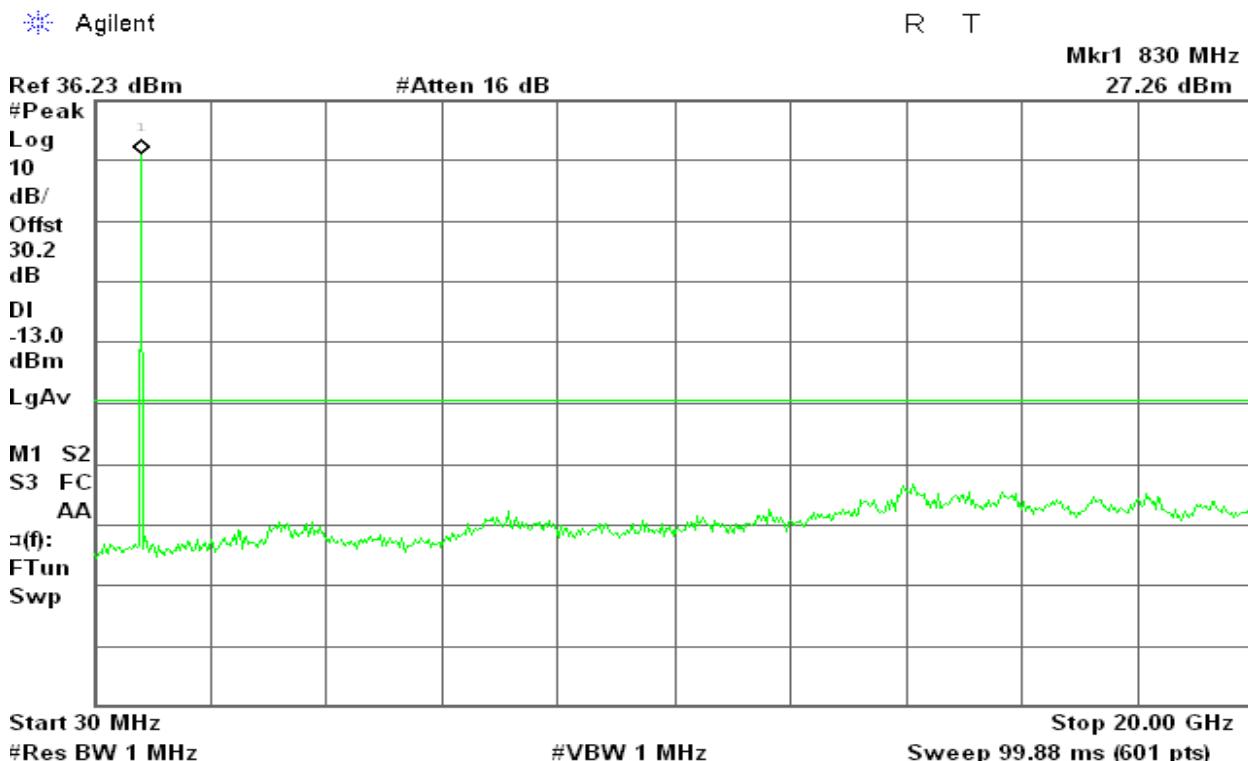


Figure 13-2: Out of Band emission at antenna terminals –EDGE CH Mid

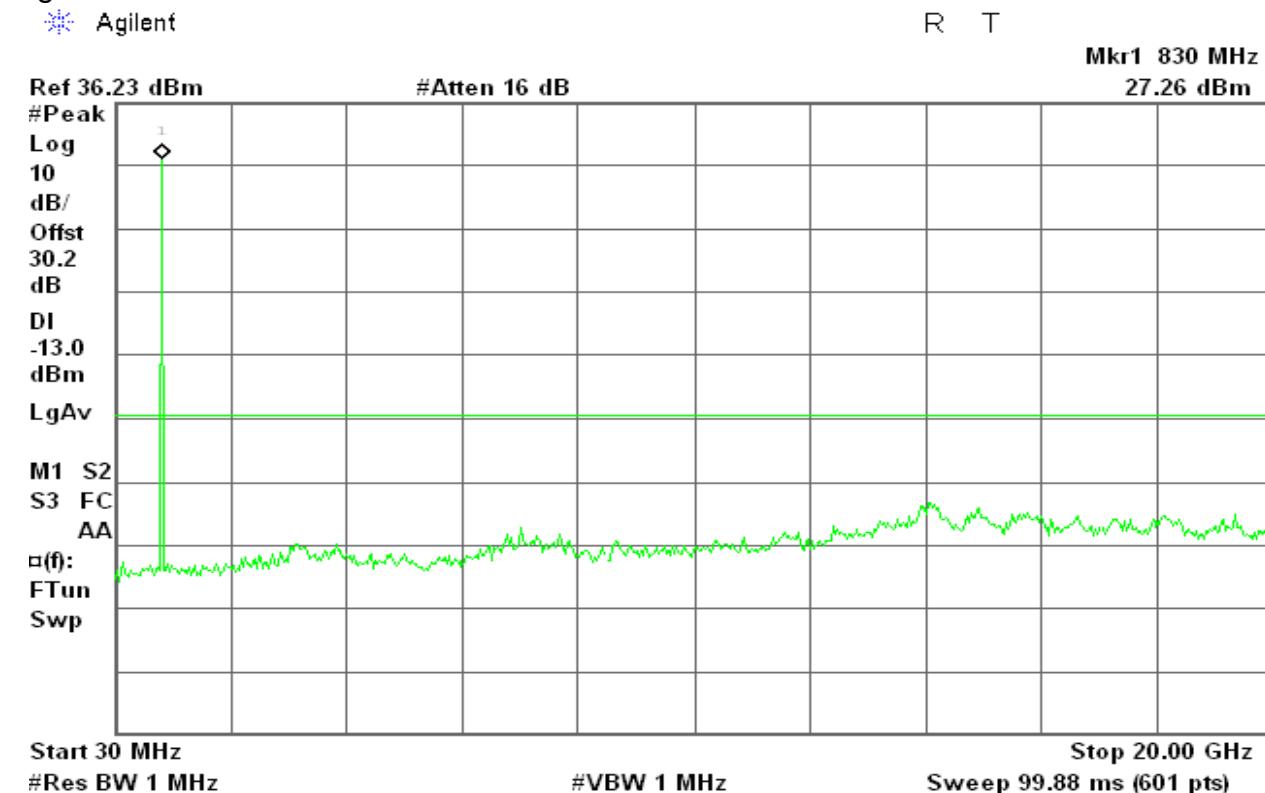
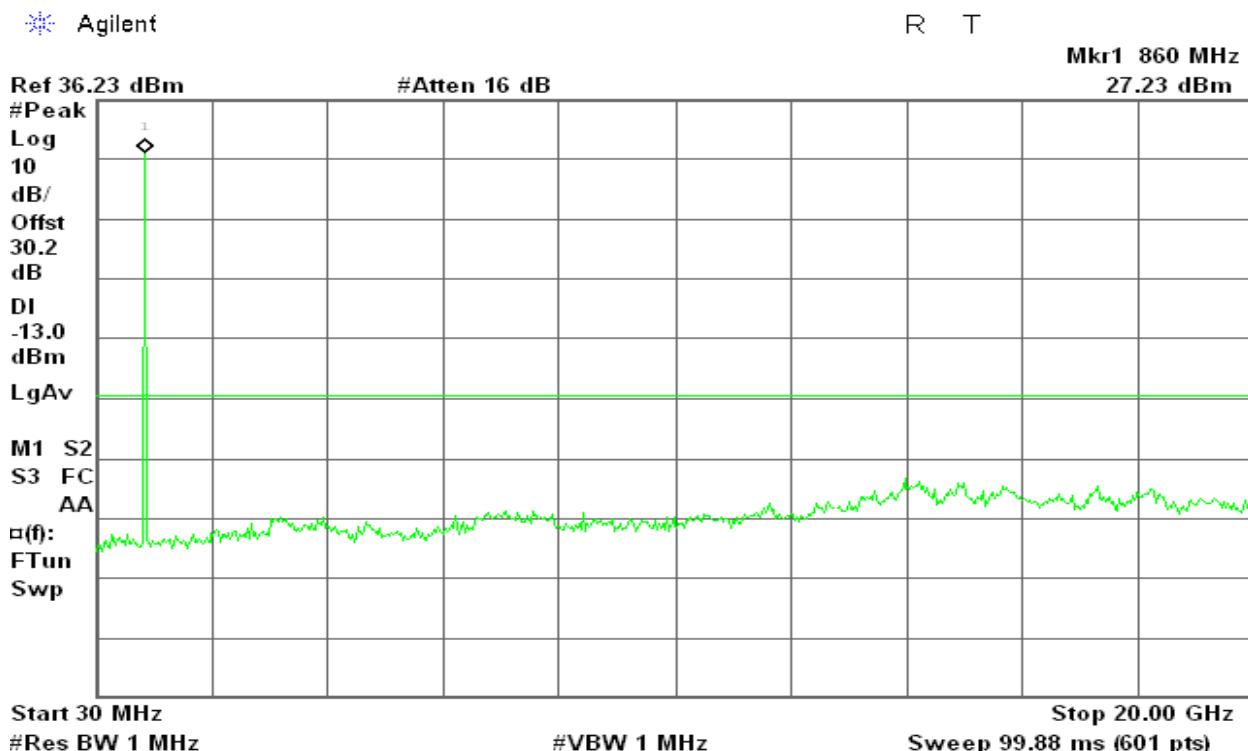


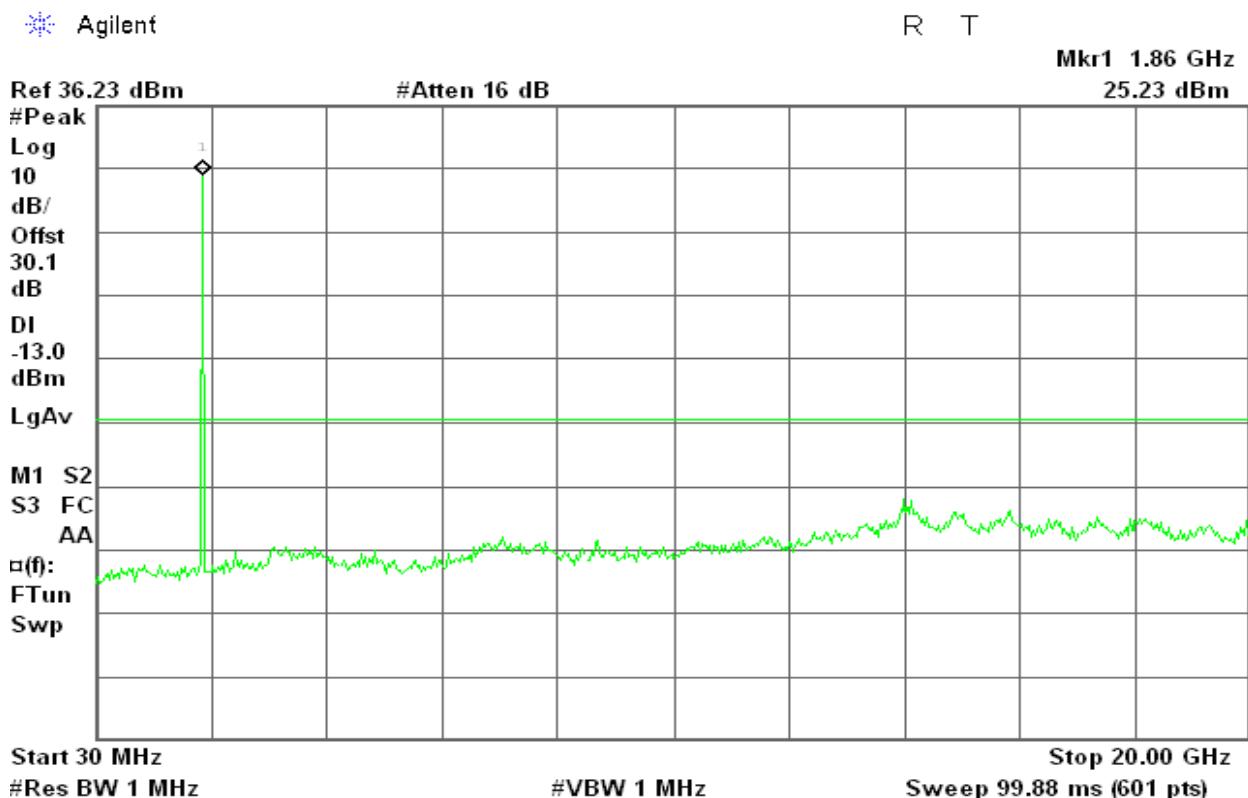


Figure 13-3: Out of Band emission at antenna terminals –EDGE CH High



EDGE 1900

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





Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

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

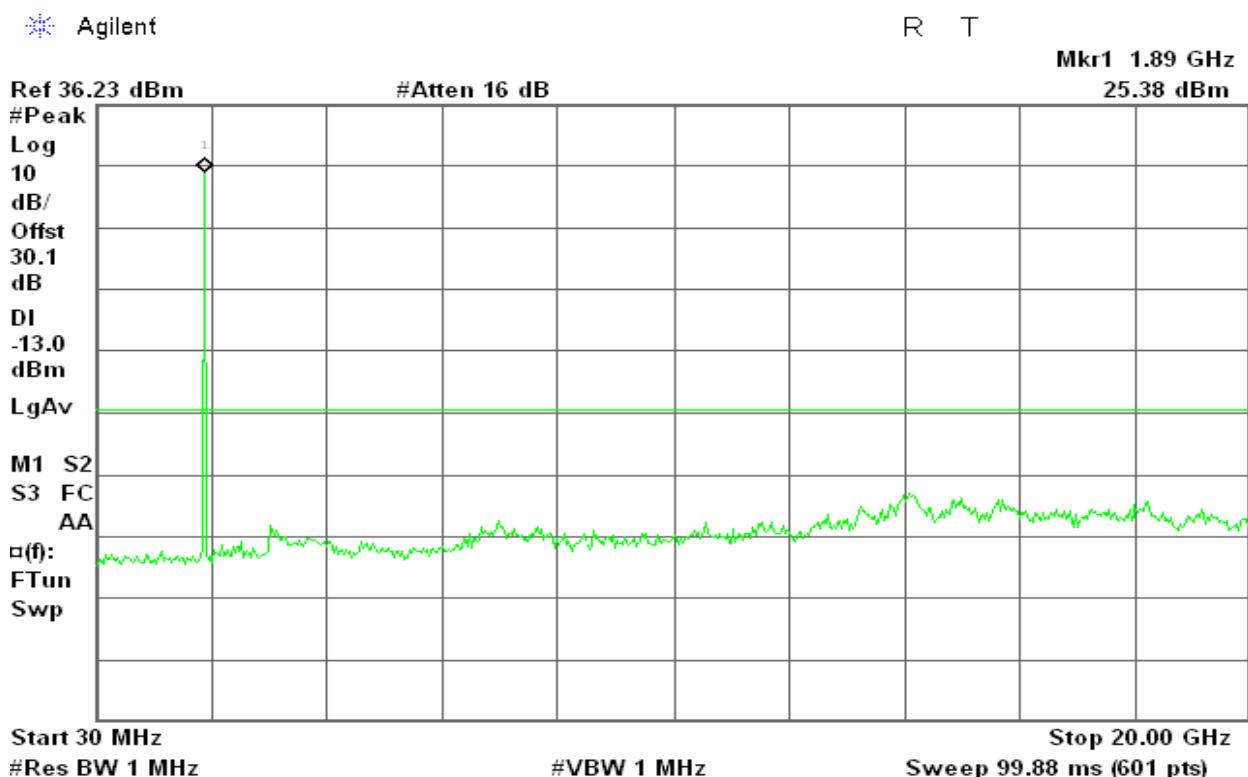
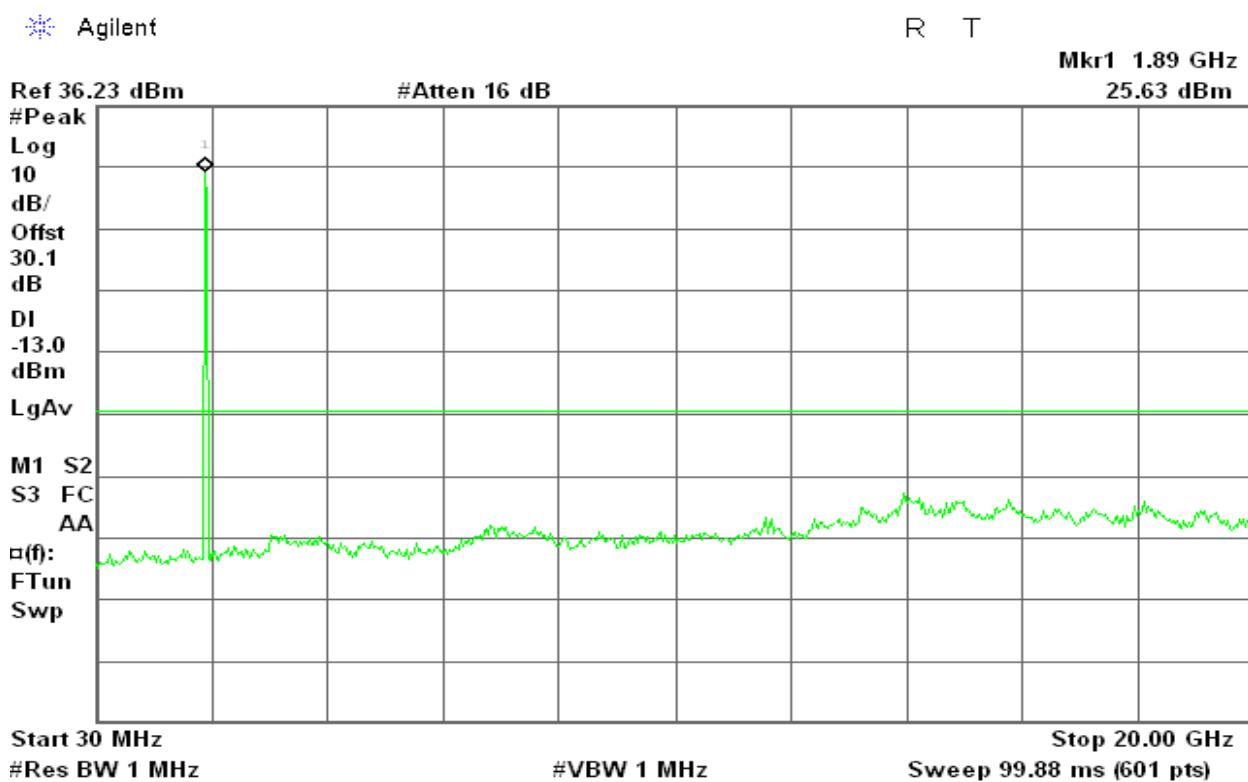


Figure 13-6: Out of Band emission at antenna terminals –EDGE CH High





EDGE 850

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

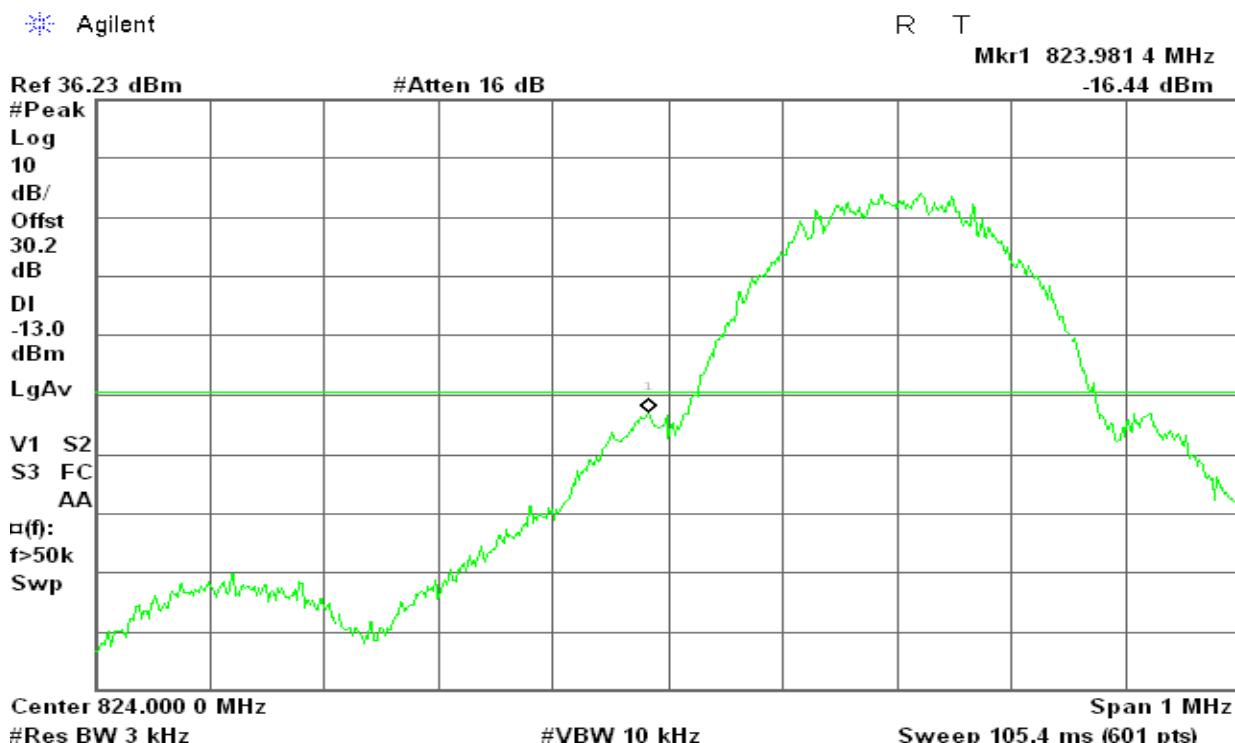
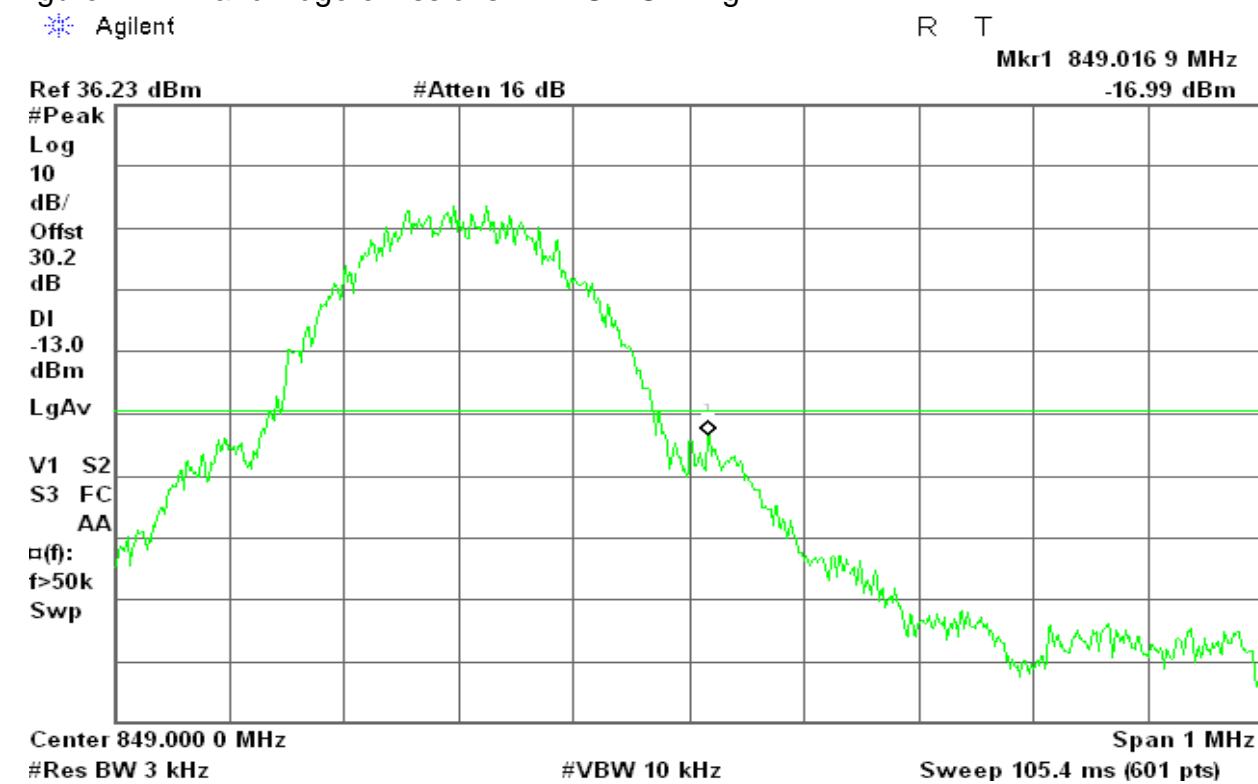


Figure 14-2: Band Edge emissions – EDGE CH High





EDGE 1900

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

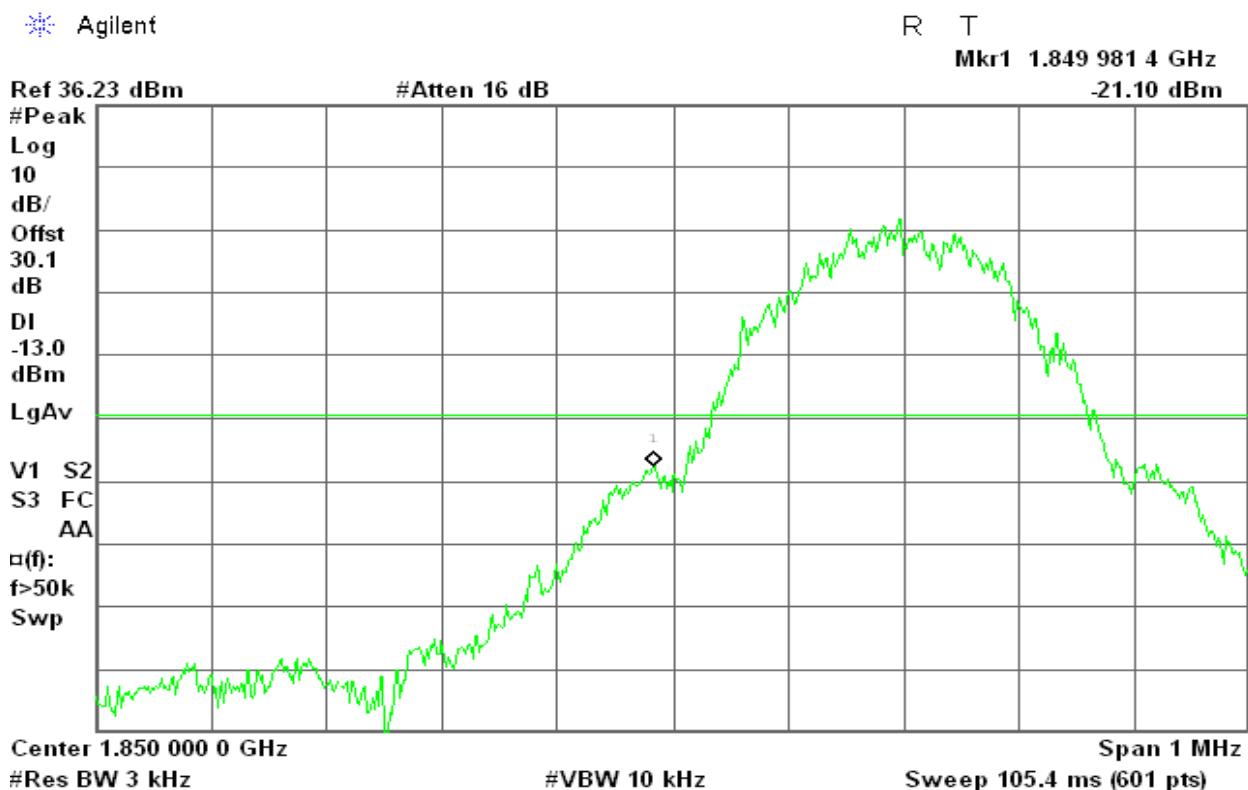
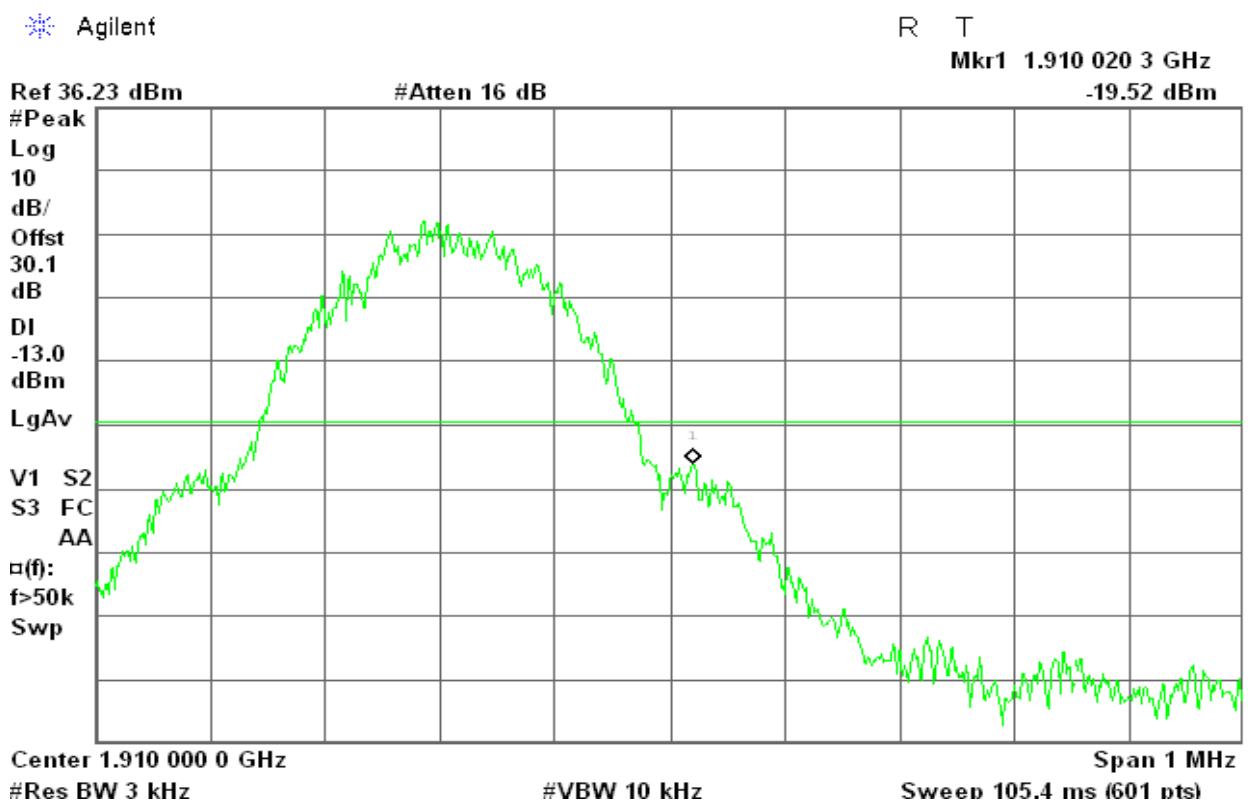


Figure 14-4: Band Edge emissions – EDGE CH High





WCDMA Band II

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

Agilent

R T

Mkr2 7.09 GHz
-32.19 dBm

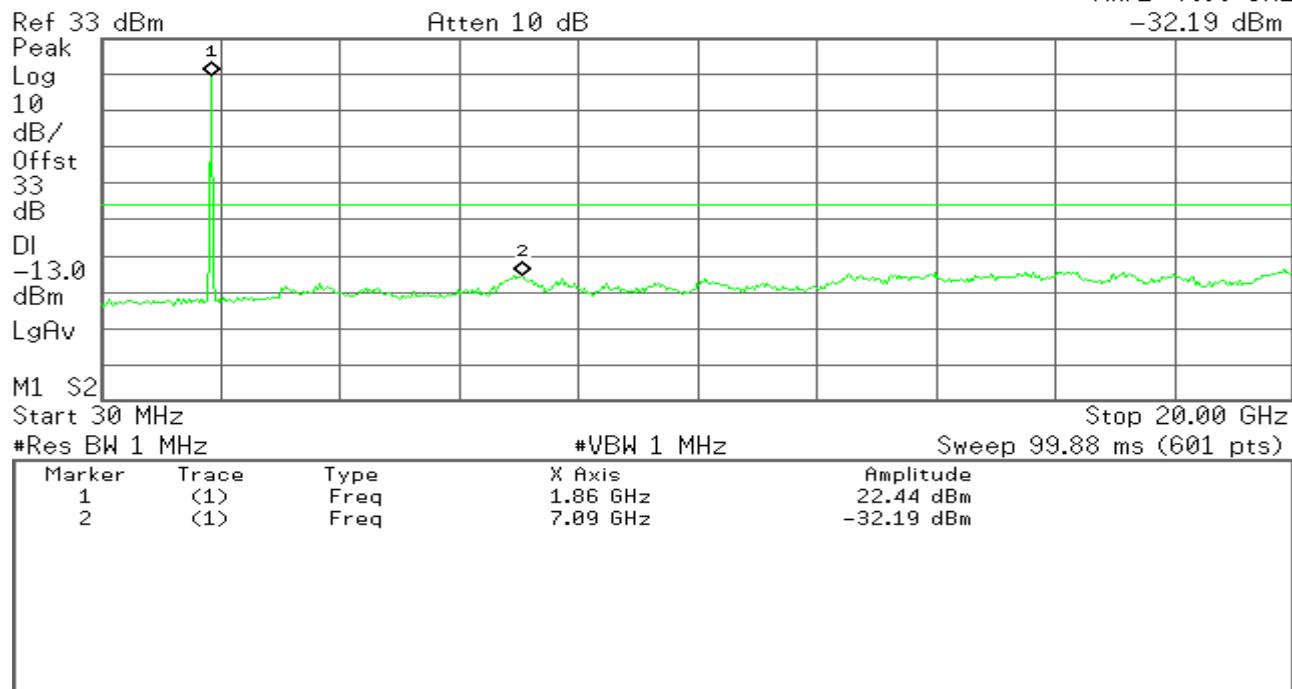
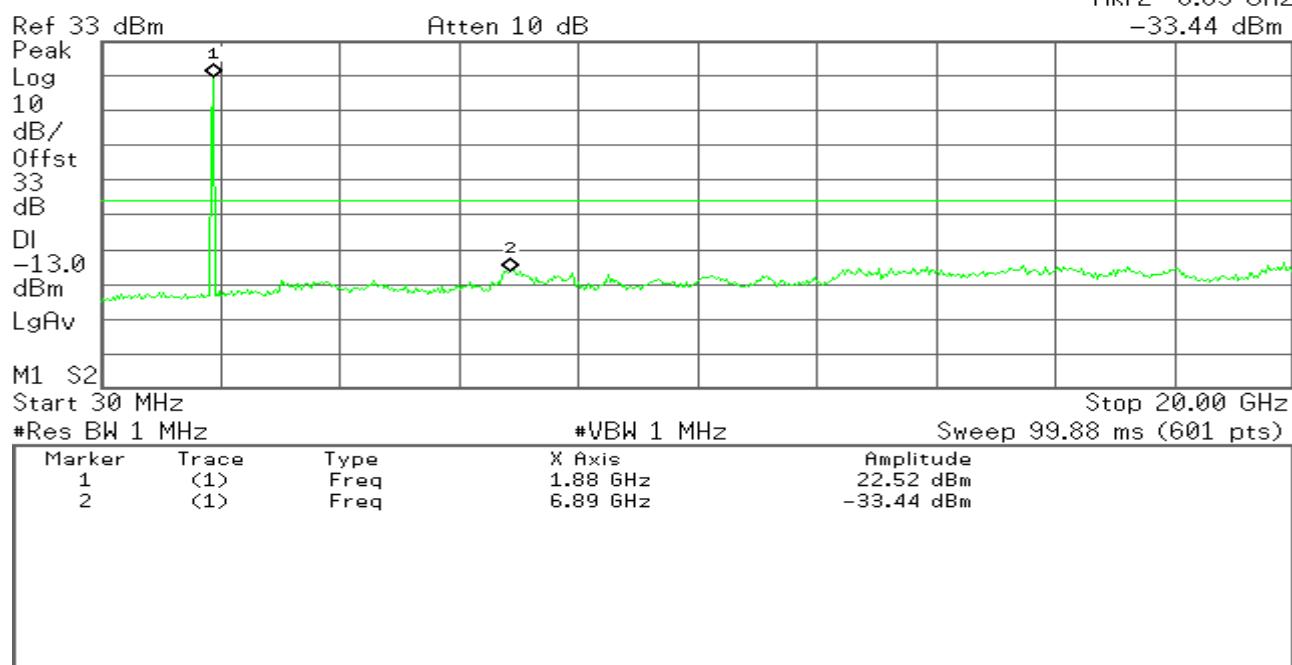


Figure 16-2: Out of Band emission at antenna terminals – WCDMA CH Mid

Agilent

R T

Mkr2 6.89 GHz
-33.44 dBm





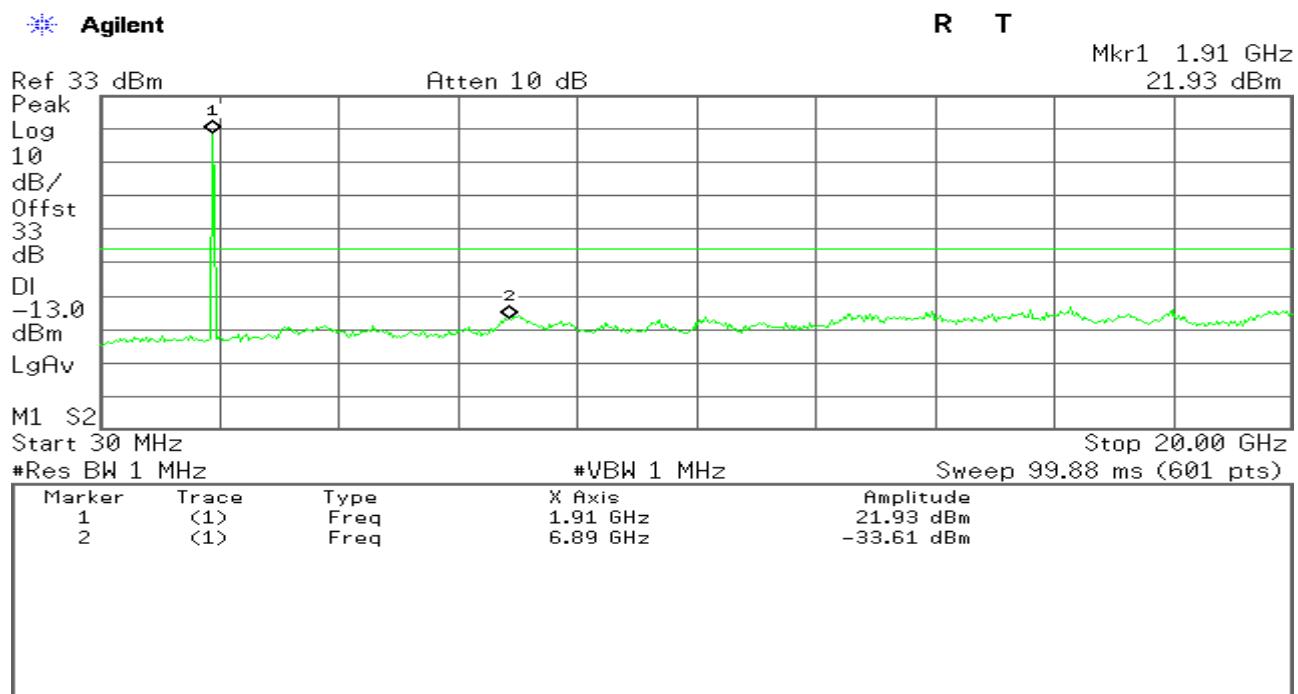
Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

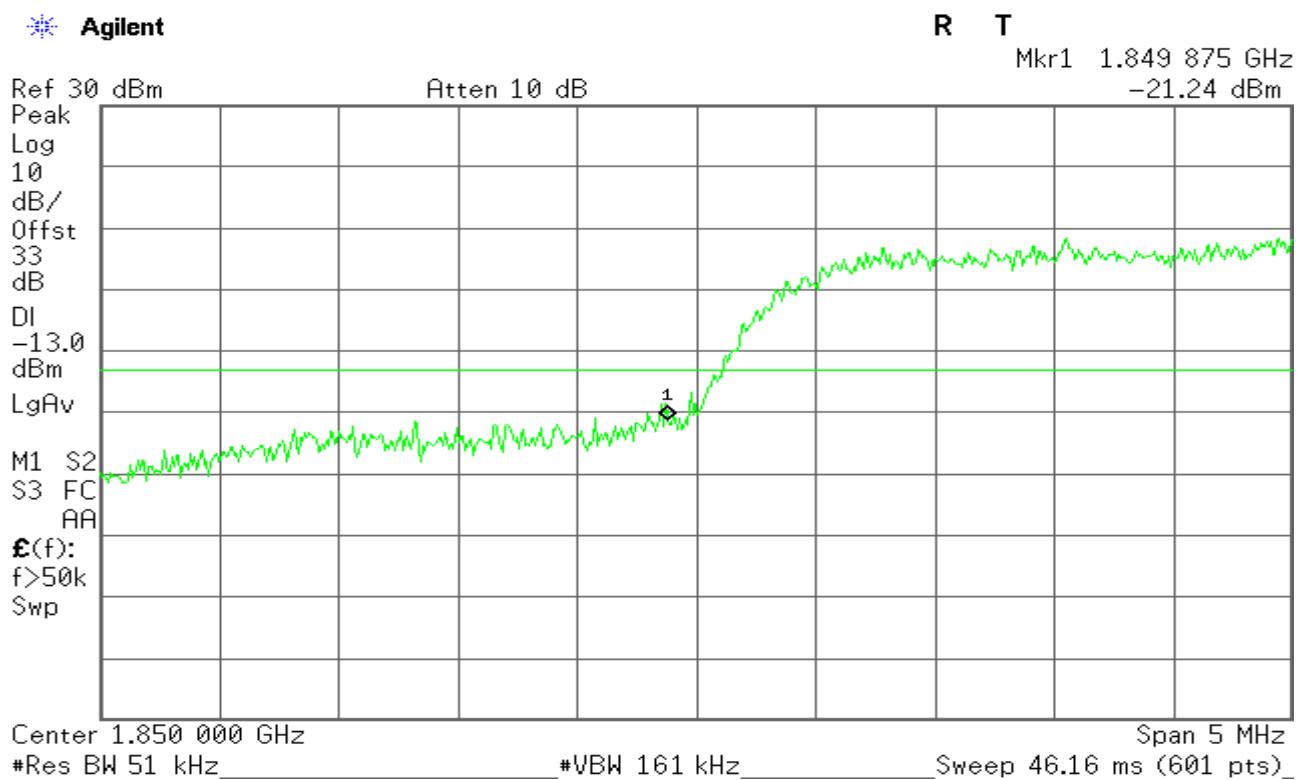
Date of Issue :July 24, 2012

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



WCDMA Band II

Figure 16-4: Band Edge emissions –WCDMA CH Low





Compliance Certification Services Inc.

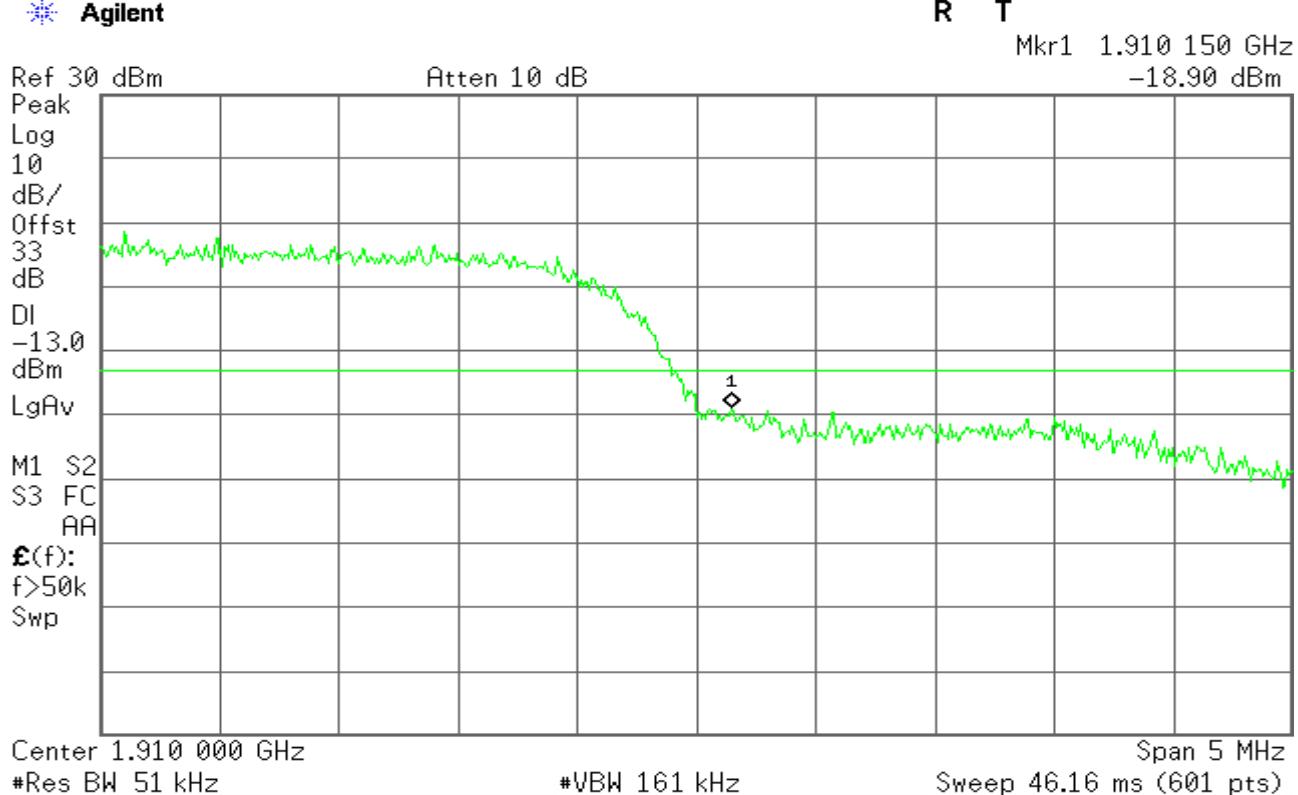
Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Figure 16-5: Band Edge emissions –WCDMA CH High

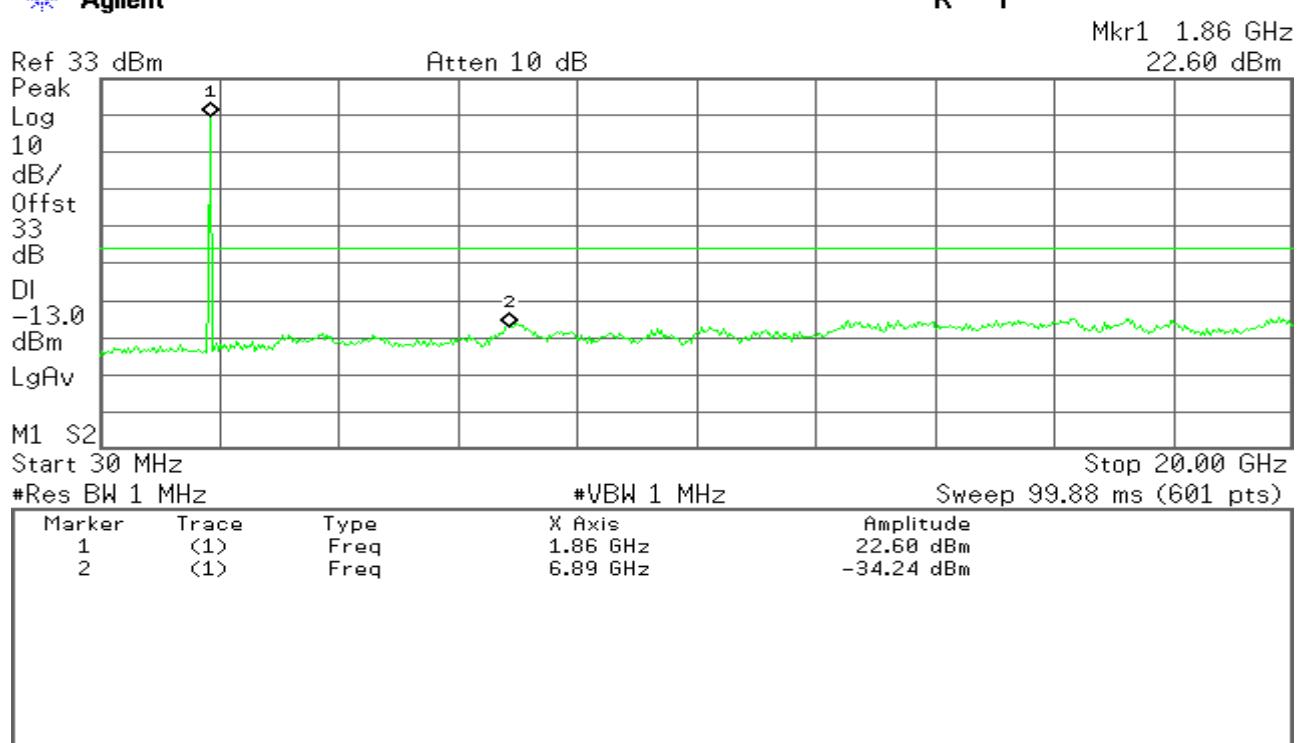
Agilent



HSDPA Band II

Figure 17-1: Out of Band emission at antenna terminals – HSDPA CH Low

Agilent





Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Figure 17-2: Out of Band emission at antenna terminals – HSDPA CH Mid

Agilent

R T

Mkr1 1.88 GHz

21.90 dBm

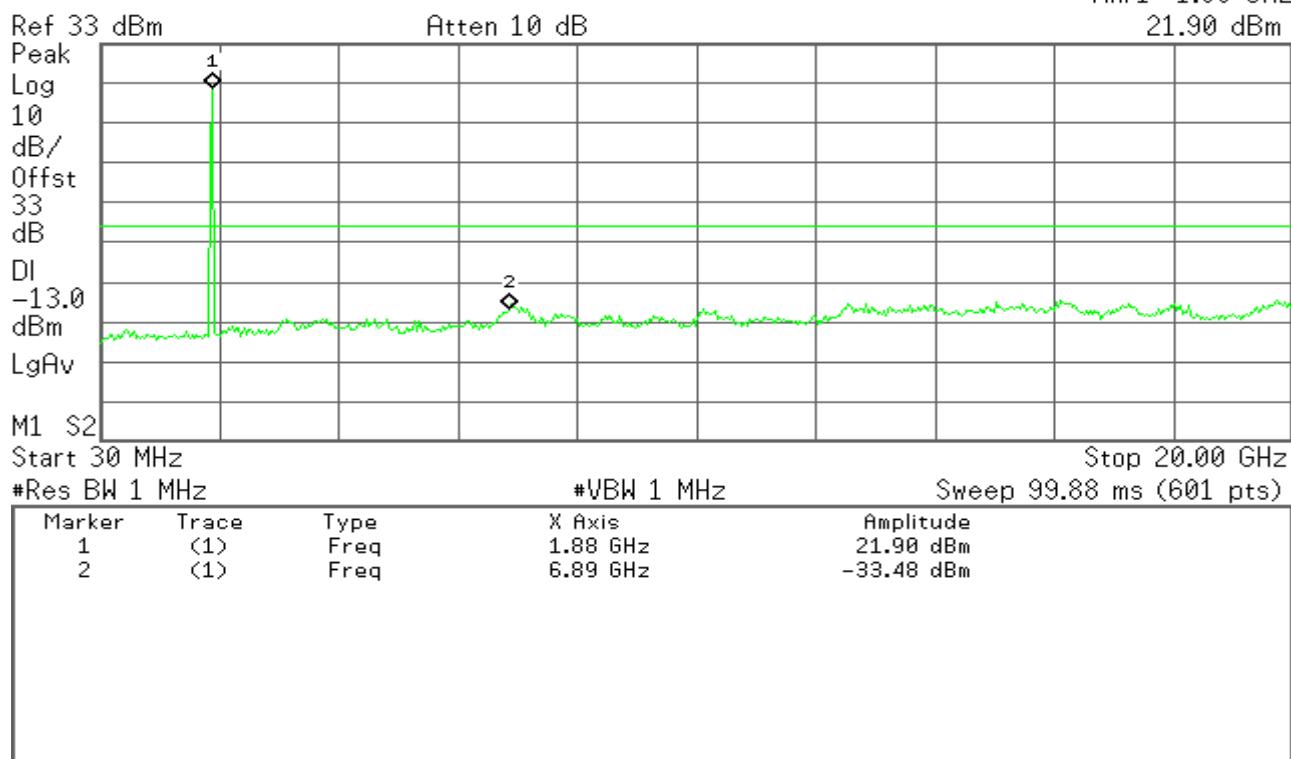


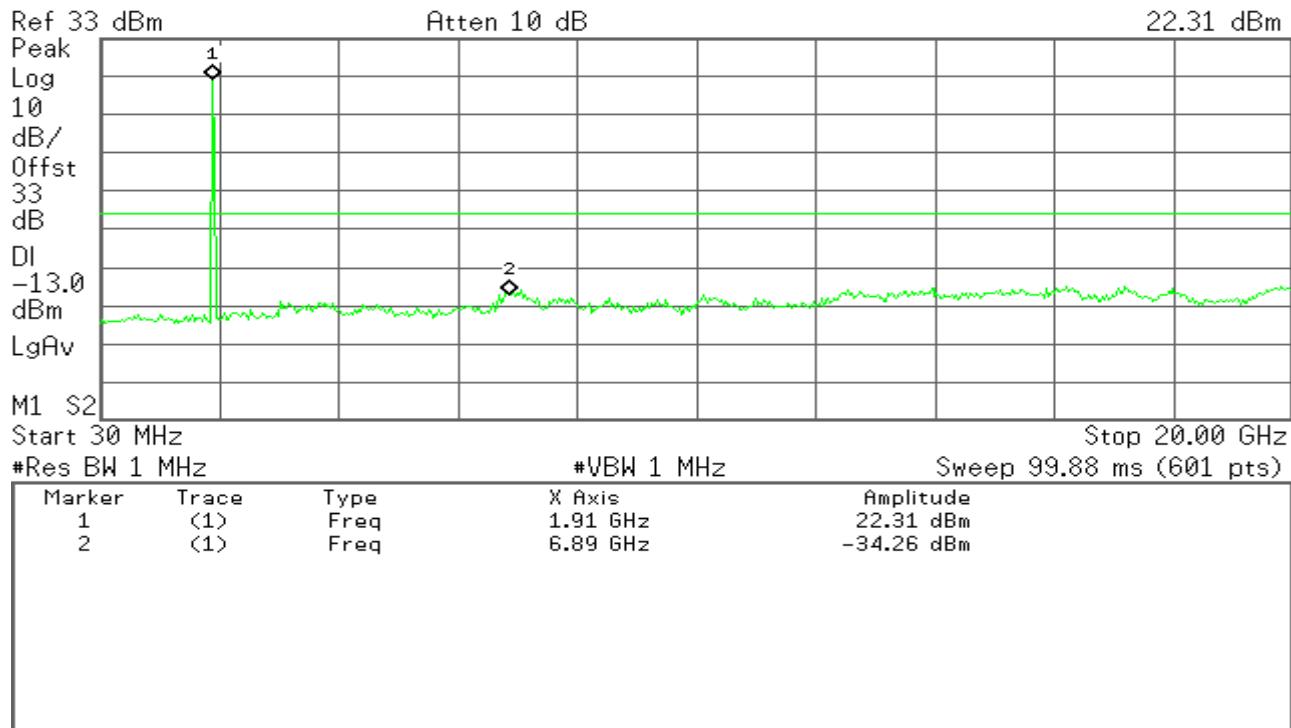
Figure 17-3: Out of Band emission at antenna terminals – HSDPA CH High

Agilent

R T

Mkr1 1.91 GHz

22.31 dBm





WCDMA / HSDPA Band II

Figure 17-4: Band Edge emissions – HSDPA CH Low

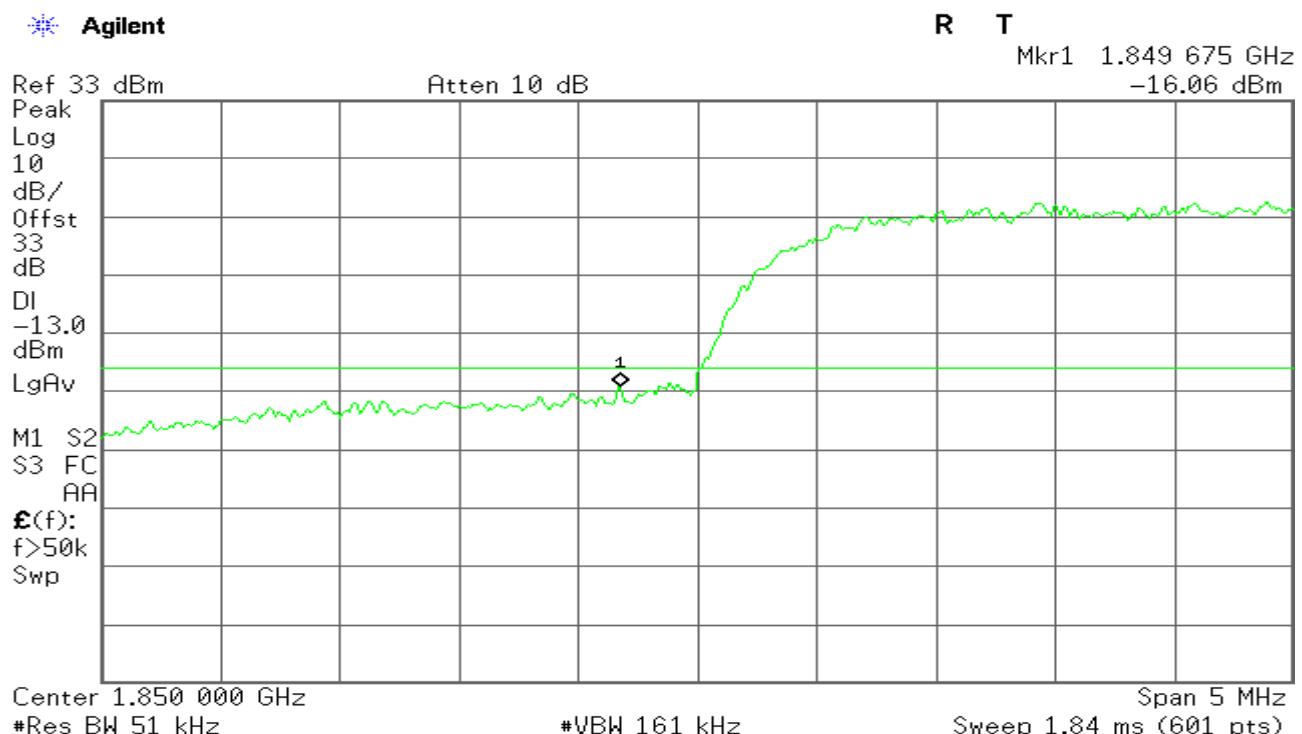
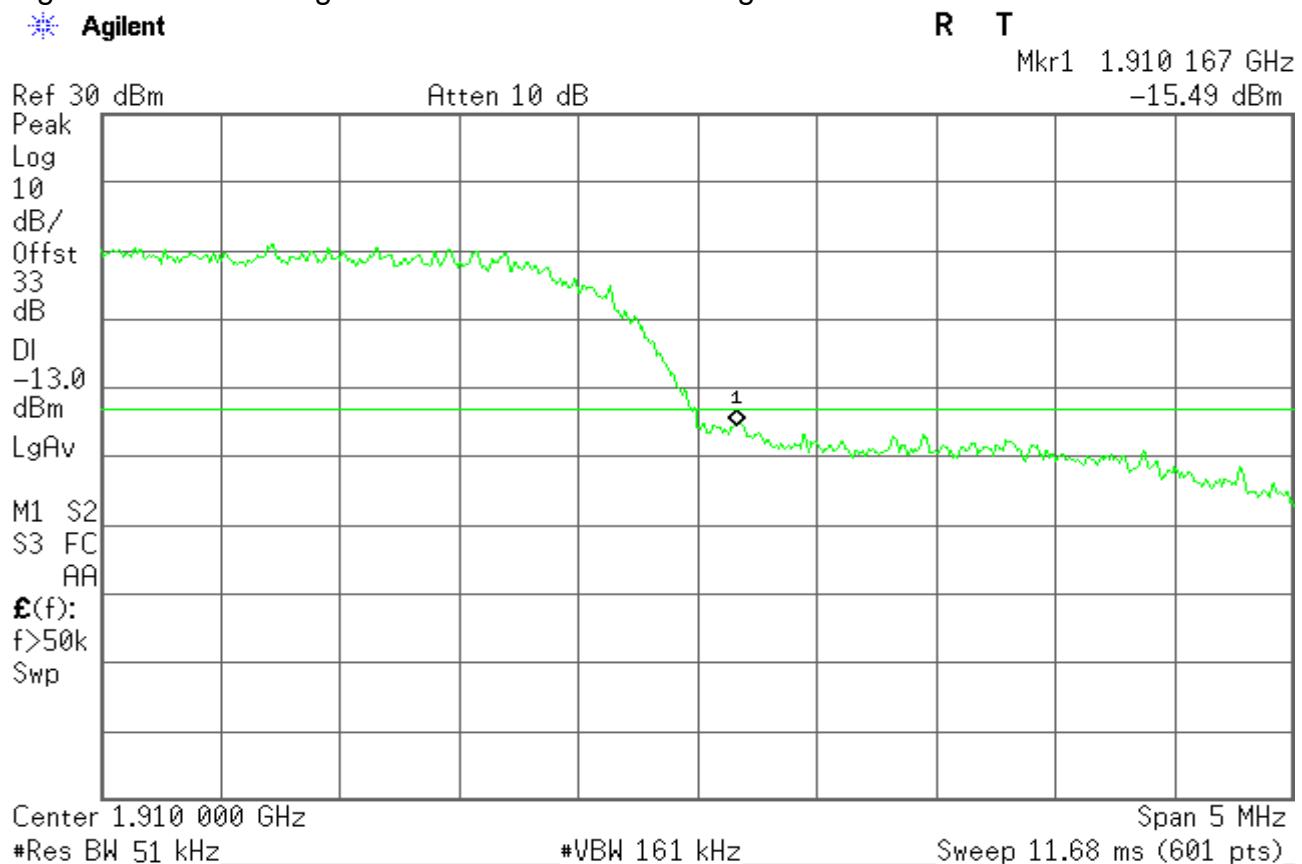


Figure 17-5: Band Edge emissions – HSDPA CH High



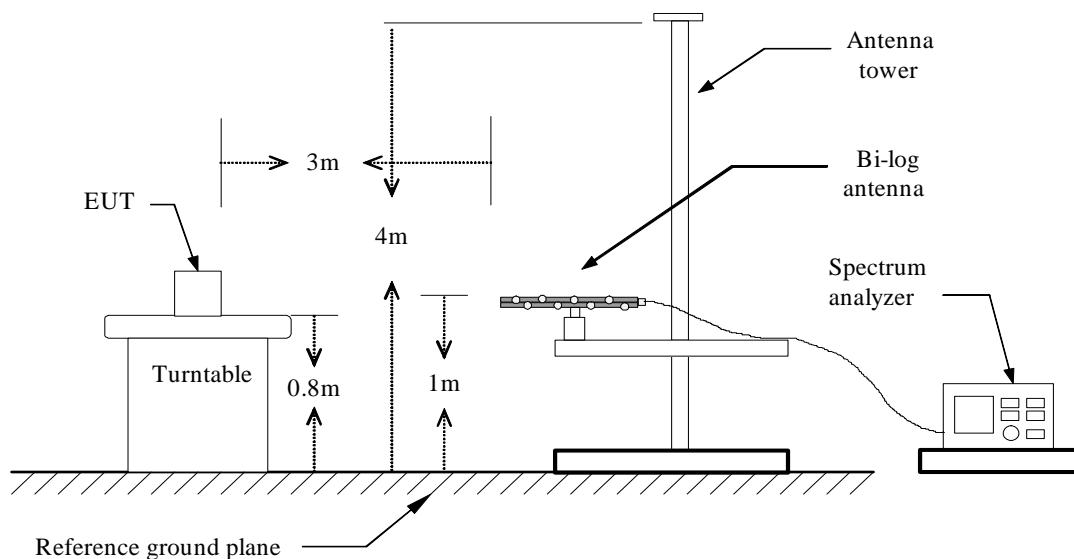
7.6. FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

LIMIT

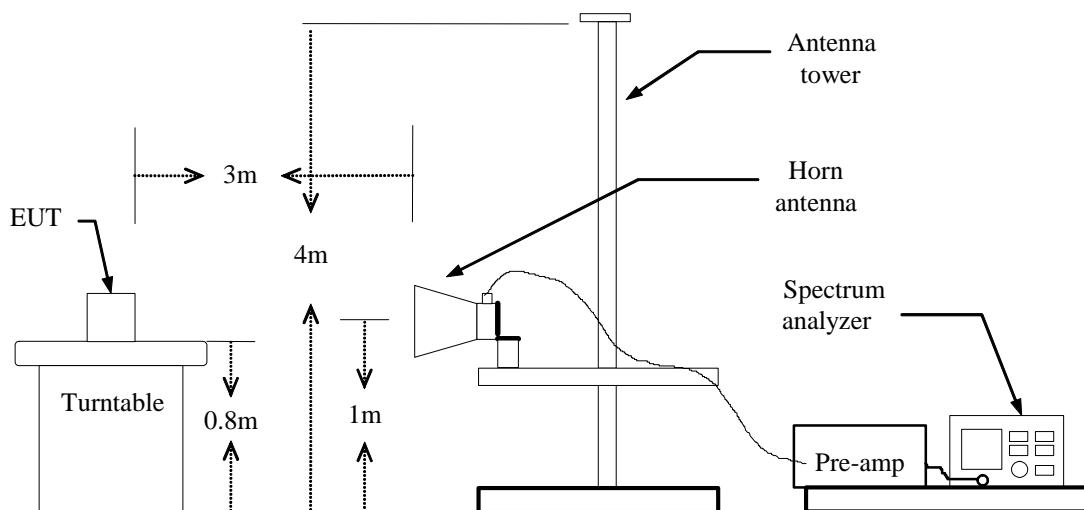
According to FCC §2.1053

TEST CONFIGURATION

Below 1 GHz

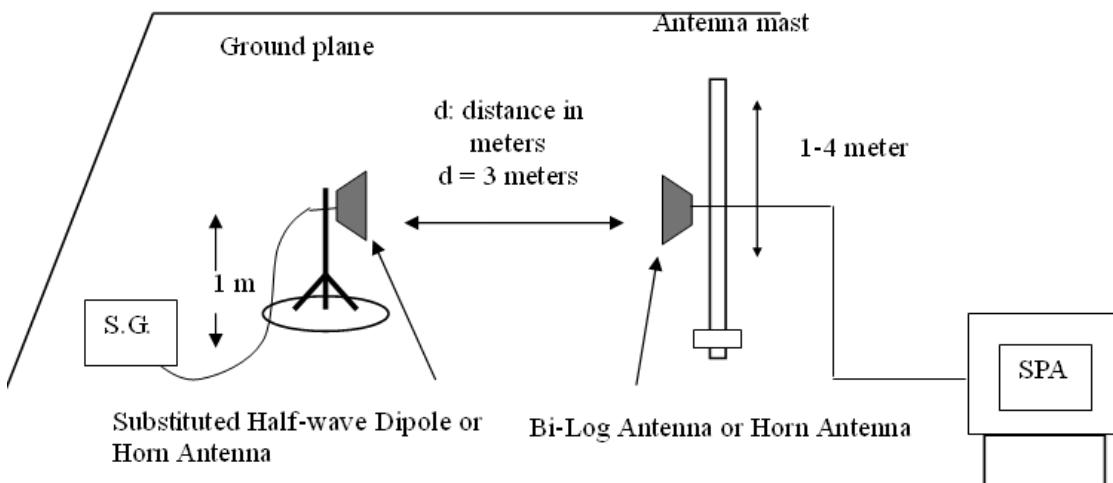


Above 1 GHz





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.

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

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



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

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:	July 23,2012
Temperature:	23°C	Tested by:	Sean
Humidity:	51 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
65.89	V	-36.25	-10.70	-46.95	-13.00	-33.95
112.45	V	-41.02	-5.90	-46.92	-13.00	-33.92
184.23	V	-38.58	-8.85	-47.43	-13.00	-34.43
270.56	V	-37.33	-9.18	-46.51	-13.00	-33.51
294.81	V	-34.69	-9.44	-44.13	-13.00	-31.13
363.68	V	-37.68	-6.68	-44.36	-13.00	-31.36
30.97	H	-30.41	-16.87	-47.28	-13.00	-34.28
39.70	H	-37.39	-8.79	-46.18	-13.00	-33.18
129.91	H	-36.25	-8.95	-45.20	-13.00	-32.20
164.83	H	-37.54	-10.97	-48.51	-13.00	-35.51
294.81	H	-36.25	-9.01	-45.26	-13.00	-32.26
418.00	H	-44.25	-4.31	-48.56	-13.00	-35.56



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

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

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
61.44	V	-35.25	-10.70	-45.95	-13.00	-32.95
123.25	V	-42.14	-5.90	-48.04	-13.00	-35.04
185.41	V	-39.12	-8.85	-47.97	-13.00	-34.97
269.12	V	-36.20	-9.18	-45.38	-13.00	-32.38
291.36	V	-35.74	-9.44	-45.18	-13.00	-32.18
362.47	V	-36.25	-6.68	-42.93	-13.00	-29.93
31.54	H	-31.20	-16.87	-48.07	-13.00	-35.07
39.25	H	-36.41	-8.79	-45.20	-13.00	-32.20
130.25	H	-35.75	-8.95	-44.70	-13.00	-31.70
163.98	H	-36.24	-10.97	-47.21	-13.00	-34.21
295.47	H	-35.12	-9.01	-44.13	-13.00	-31.13
417.36	H	-43.36	-4.31	-47.67	-13.00	-34.67

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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

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

Frequency (MHz)	Antenna Polarization	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
164.44	V	-51.46	-13.84	-65.30	-13.00	-52.30
262.66	V	-47.34	-13.71	-61.05	-13.00	-48.05
399.64	V	-47.72	-11.17	-58.89	-13.00	-45.89
498.59	V	-54.85	-8.40	-63.25	-13.00	-50.25
694.56	V	-58.71	-6.25	-64.96	-13.00	-51.96
799.12	V	-60.54	-4.98	-65.52	-13.00	-52.52
115.68	H	-55.41	-13.90	-69.31	-13.00	-56.31
161.86	H	-48.75	-14.15	-62.90	-13.00	-49.90
263.56	H	-52.62	-14.06	-66.68	-13.00	-53.68
400.36	H	-51.42	-10.96	-62.38	-13.00	-49.38
498.59	H	-59.52	-8.28	-67.80	-13.00	-54.80
695.56	H	-57.11	-6.18	-63.29	-13.00	-50.29

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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode: EDGE 850 / TX / CH 128

Test Date: July 23,2012

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)
100.36	V	-46.58	-17.68	-64.26	-13.00	-51.26
240.58	V	-49.76	-14.01	-63.77	-13.00	-50.77
264.52	V	-47.89	-13.71	-61.60	-13.00	-48.60
399.75	V	-46.95	-11.17	-58.12	-13.00	-45.12
499.21	V	-54.28	-8.38	-62.66	-13.00	-49.66
695.76	V	-58.43	-6.25	-64.68	-13.00	-51.68
100.46	H	-45.98	-17.49	-63.47	-13.00	-50.47
264.59	H	-52.04	-14.06	-66.10	-13.00	-53.10
400.28	H	-52.64	-10.96	-63.60	-13.00	-50.60
511.49	H	-58.73	-8.20	-66.93	-13.00	-53.93
695.73	H	-57.75	-6.18	-63.93	-13.00	-50.93
742.35	H	-62.33	-5.57	-67.90	-13.00	-54.90

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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode: EDGE 850 / TX / CH 190

Test Date: July 23,2012

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)
131.26	V	-45.88	-12.34	-58.22	-13.00	-45.22
262.58	V	-48.75	-13.71	-62.46	-13.00	-49.46
400.29	V	-46.35	-11.22	-57.57	-13.00	-44.57
498.34	V	-54.39	-8.40	-62.79	-13.00	-49.79
698.76	V	-58.79	-6.25	-65.04	-13.00	-52.04
966.53	V	-60.33	-3.05	-63.38	-13.00	-50.38
131.55	H	-45.83	-13.66	-59.49	-13.00	-46.49
264.91	H	-52.14	-14.06	-66.20	-13.00	-53.20
400.31	H	-51.65	-10.96	-62.61	-13.00	-49.61
451.89	H	-55.73	-9.64	-65.37	-13.00	-52.37
695.67	H	-57.49	-6.18	-63.67	-13.00	-50.67
966.38	H	-61.25	-3.10	-64.35	-13.00	-51.35

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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode: EDGE 850 / TX / CH 251

Test Date: July 23,2012

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)
262.59	V	-48.37	-13.71	-62.08	-13.00	-49.08
400.36	V	-48.91	-11.22	-60.13	-13.00	-47.13
497.81	V	-54.34	-8.40	-62.74	-13.00	-49.74
533.29	V	-57.46	-8.01	-65.47	-13.00	-52.47
695.74	V	-58.88	-6.25	-65.13	-13.00	-52.13
797.83	V	-60.34	-4.98	-65.32	-13.00	-52.32
115.67	H	-55.43	-14.27	-69.70	-13.00	-56.70
161.34	H	-48.21	-14.15	-62.36	-13.00	-49.36
262.91	H	-51.62	-14.06	-65.68	-13.00	-52.68
400.33	H	-51.37	-10.91	-62.28	-13.00	-49.28
497.82	H	-59.86	-8.28	-68.14	-13.00	-55.14
695.67	H	-58.70	-6.18	-64.88	-13.00	-51.88

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no 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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	GPRS 1900 / TX / CH 512	Test Date:	July 23,2012
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)
134.11	V	-43.55	-12.75	-56.30	-13.00	-43.30
226.89	V	-40.11	-14.56	-54.67	-13.00	-41.67
400.00	V	-41.25	-11.22	-52.47	-13.00	-39.47
500.74	V	-49.42	-8.38	-57.80	-13.00	-44.80
697.54	V	-54.14	-6.25	-60.39	-13.00	-47.39
801.65	V	-52.24	-4.97	-57.21	-13.00	-44.21
102.11	H	-35.21	-16.71	-51.92	-13.00	-38.92
194.24	H	-42.23	-13.34	-55.57	-13.00	-42.57
400.52	H	-46.44	-10.96	-57.40	-13.00	-44.40
460.32	H	-51.44	-9.30	-60.74	-13.00	-47.74
724.21	H	-54.21	-6.03	-60.24	-13.00	-47.24
801.26	H	-55.23	-4.87	-60.10	-13.00	-47.10

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no 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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	GPRS 1900 / TX / CH 661	Test Date:	July 23,2012
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)
42.22	V	-47.22	-12.36	-59.58	-13.00	-46.58
135.12	V	-43.11	-12.84	-55.95	-13.00	-42.95
228.20	V	-39.41	-14.56	-53.97	-13.00	-40.97
400.10	V	-41.24	-11.22	-52.46	-13.00	-39.46
500.74	V	-49.12	-8.38	-57.50	-13.00	-44.50
799.21	V	-51.44	-4.97	-56.41	-13.00	-43.41
117.12	H	-37.25	-13.90	-51.15	-13.00	-38.15
191.20	H	-42.14	-13.48	-55.62	-13.00	-42.62
400.01	H	-46.25	-10.87	-57.12	-13.00	-44.12
501.41	H	-53.15	-8.27	-61.42	-13.00	-48.42
721.02	H	-54.25	-6.14	-60.39	-13.00	-47.39
800.12	H	-55.25	-4.88	-60.13	-13.00	-47.13

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no 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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	GPRS 1900 / TX / CH 810	Test Date:	July 23,2012
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)
135.55	V	-41.25	-12.84	-54.09	-13.00	-41.09
205.21	V	-41.24	-14.98	-56.22	-13.00	-43.22
401.41	V	-41.12	-11.17	-52.29	-13.00	-39.29
500.25	V	-49.75	-8.38	-58.13	-13.00	-45.13
695.15	V	-55.21	-6.25	-61.46	-13.00	-48.46
801.42	V	52.26	-4.92	47.34	-13.00	60.34
116.26	H	-38.24	-14.09	-52.33	-13.00	-39.33
194.24	H	-42.24	-13.34	-55.58	-13.00	-42.58
400.12	H	-46.45	-10.96	-57.41	-13.00	-44.41
500.24	H	-53.75	-8.27	-62.02	-13.00	-49.02
698.52	H	-52.54	-6.18	-58.72	-13.00	-45.72
799.42	H	-54.62	-4.89	-59.51	-13.00	-46.51

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no 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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode: EDGE 1900 / TX / CH 512

Test Date: July 23,2012

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)
86.59	V	-36.64	-19.92	-56.56	-13.00	-43.56
133.25	V	-43.28	-12.67	-55.95	-13.00	-42.95
215.43	V	-39.75	-15.47	-55.22	-13.00	-42.22
400.58	V	-42.51	-11.22	-53.73	-13.00	-40.73
500.82	V	-49.70	-8.38	-58.08	-13.00	-45.08
800.13	V	-50.82	-4.97	-55.79	-13.00	-42.79
32.64	H	-37.15	-15.23	-52.38	-13.00	-39.38
115.48	H	-38.54	-14.27	-52.81	-13.00	-39.81
400.56	H	-47.90	-10.96	-58.86	-13.00	-45.86
500.23	H	-53.22	-8.27	-61.49	-13.00	-48.49
697.45	H	-54.82	-6.18	-61.00	-13.00	-48.00
800.33	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.

Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no 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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode: EDGE 1900 / TX / CH 661

Test Date: July 23,2012

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)
140.35	V	-41.82	-13.09	-54.91	-13.00	-41.91
241.52	V	-41.33	-14.02	-55.35	-13.00	-42.35
400.82	V	-42.01	-11.22	-53.23	-13.00	-40.23
499.85	V	-49.67	-8.38	-58.05	-13.00	-45.05
695.34	V	-55.34	-6.25	-61.59	-13.00	-48.59
797.34	V	-51.89	-4.98	-56.87	-13.00	-43.87
117.64	H	-36.67	-13.90	-50.57	-13.00	-37.57
191.64	H	-42.56	-13.48	-56.04	-13.00	-43.04
400.35	H	-46.57	-10.87	-57.44	-13.00	-44.44
499.61	H	-53.89	-8.27	-62.16	-13.00	-49.16
695.82	H	-54.61	-6.18	-60.79	-13.00	-47.79
799.31	H	-54.34	-4.90	-59.24	-13.00	-46.24

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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode: EDGE 1900 / TX / CH 810

Test Date: July 23,2012

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)
137.68	V	-43.25	-13.00	-56.25	-13.00	-43.25
231.56	V	-41.27	-14.43	-55.70	-13.00	-42.70
400.33	V	-42.65	-11.17	-53.82	-13.00	-40.82
452.19	V	-48.97	-9.76	-58.73	-13.00	-45.73
500.49	V	-50.31	-8.38	-58.69	-13.00	-45.69
797.86	V	-50.42	-4.98	-55.40	-13.00	-42.40
117.46	H	-39.88	-13.90	-53.78	-13.00	-40.78
193.26	H	-44.67	-13.20	-57.87	-13.00	-44.87
287.46	H	-42.57	-12.87	-55.44	-13.00	-42.44
400.58	H	-47.61	-10.96	-58.57	-13.00	-45.57
697.85	H	-52.37	-6.18	-58.55	-13.00	-45.55
800.16	H	-55.82	-4.88	-60.70	-13.00	-47.70

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with " N/A " remark, if no 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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	WCDMA / TX / CH 4132	Test Date:	July 23,2012
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)
101.21	V	-46.24	-17.68	-63.92	-13.00	-50.92
240.20	V	-49.12	-14.01	-63.13	-13.00	-50.13
264.41	V	-47.24	-13.71	-60.95	-13.00	-47.95
399.25	V	-46.25	-11.17	-57.42	-13.00	-44.42
499.20	V	-54.74	-8.38	-63.12	-13.00	-50.12
695.20	V	-58.26	-6.25	-64.51	-13.00	-51.51
100.35	H	-45.25	-17.49	-62.74	-13.00	-49.74
264.26	H	-52.50	-14.06	-66.56	-13.00	-53.56
400.24	H	-52.20	-10.96	-63.16	-13.00	-50.16
511.21	H	-58.30	-8.20	-66.50	-13.00	-53.50
695.35	H	-55.25	-6.18	-61.43	-13.00	-48.43
742.26	H	-62.80	-5.57	-68.37	-13.00	-55.37

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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	WCDMA Band V / TX / CH 4182	Test Date:	July 23,2012
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)
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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	WCDMA Band V / TX / CH 4233	Test Date:	July 23,2012
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)
261.26	V	-48.71	-13.71	-62.42	-13.00	-49.42
400.25	V	-48.20	-11.22	-59.42	-13.00	-46.42
497.16	V	-53.55	-8.40	-61.95	-13.00	-48.95
533.24	V	-56.84	-8.01	-64.85	-13.00	-51.85
695.26	V	-51.25	-6.25	-57.50	-13.00	-44.50
797.25	V	-60.11	-4.98	-65.09	-13.00	-52.09
114.42	H	-50.23	-14.27	-64.50	-13.00	-51.50
161.21	H	-49.33	-14.15	-63.48	-13.00	-50.48
262.23	H	-50.23	-14.06	-64.29	-13.00	-51.29
400.24	H	-51.47	-10.91	-62.38	-13.00	-49.38
497.26	H	-49.25	-8.28	-57.53	-13.00	-44.53
695.37	H	-58.70	-6.18	-64.88	-13.00	-51.88

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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	WCDMA Band II / TX / CH 9262	Test Date:	July 23,2012
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)
101.44	V	-46.16	-17.68	-63.84	-13.00	-50.84
245.24	V	-49.23	-14.01	-63.24	-13.00	-50.24
265.24	V	-47.21	-13.71	-60.92	-13.00	-47.92
397.12	V	-46.24	-11.17	-57.41	-13.00	-44.41
498.27	V	-54.62	-8.38	-63.00	-13.00	-50.00
697.12	V	-58.13	-6.25	-64.38	-13.00	-51.38
100.21	H	-45.22	-17.49	-62.71	-13.00	-49.71
264.13	H	-52.13	-14.06	-66.19	-13.00	-53.19
400.24	H	-52.26	-10.96	-63.22	-13.00	-50.22
511.12	H	-58.46	-8.20	-66.66	-13.00	-53.66
695.21	H	-55.16	-6.18	-61.34	-13.00	-48.34
742.74	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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	WCDMA Band II / TX / CH 9400	Test Date:	July 23,2012
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)
102.12	V	-46.16	-17.68	-63.84	-13.00	-50.84
245.21	V	-49.25	-14.01	-63.26	-13.00	-50.26
265.41	V	-47.16	-13.71	-60.87	-13.00	-47.87
397.21	V	-46.24	-11.17	-57.41	-13.00	-44.41
498.42	V	-54.25	-8.38	-62.63	-13.00	-49.63
697.24	V	-58.19	-6.25	-64.44	-13.00	-51.44
100.12	H	-45.32	-17.49	-62.81	-13.00	-49.81
264.12	H	-52.16	-14.06	-66.22	-13.00	-53.22
400.74	H	-52.26	-10.96	-63.22	-13.00	-50.22
511.21	H	-58.46	-8.20	-66.66	-13.00	-53.66
695.14	H	-55.33	-6.18	-61.51	-13.00	-48.51
742.23	H	-61.34	-5.57	-66.91	-13.00	-53.91

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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	WCDMA Band II / TX / CH 9538	Test Date:	July 23,2012
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)
261.12	V	-48.71	-13.71	-62.42	-13.00	-49.42
400.23	V	-48.20	-11.22	-59.42	-13.00	-46.42
494.42	V	-53.55	-8.40	-61.95	-13.00	-48.95
533.21	V	-56.84	-8.01	-64.85	-13.00	-51.85
695.23	V	-51.25	-6.25	-57.50	-13.00	-44.50
797.45	V	-60.11	-4.98	-65.09	-13.00	-52.09
114.36	H	-50.33	-14.27	-64.60	-13.00	-51.60
161.75	H	-49.21	-14.15	-63.36	-13.00	-50.36
262.24	H	-50.20	-14.06	-64.26	-13.00	-51.26
400.12	H	-51.41	-10.91	-62.32	-13.00	-49.32
497.42	H	-49.10	-8.28	-57.38	-13.00	-44.38
695.36	H	-58.62	-6.18	-64.80	-13.00	-51.80

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.



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Above 1GHz

Operation Mode:	GPRS 850 / TX / CH 128	Test Date:	July 23,2012
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)
1678.50	V	-52.11	0.73	-51.38	-13.00	-38.38
6955.30	V	-53.10	13.76	-39.34	-13.00	-26.34
1678.40	H	-54.25	0.84	-53.41	-13.00	-40.41
6673.45	H	-59.21	12.80	-46.41	-13.00	-33.41

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no 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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	GPRS 850 / TX / CH 190	Test Date:	July 23,2012
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)
1678.75	V	-50.44	0.73	-49.71	-13.00	-36.71
6950.25	V	-55.24	13.76	-41.48	-13.00	-28.48
1675.20	H	-55.12	0.84	-54.28	-13.00	-41.28
6675.24	H	-61.32	12.80	-48.52	-13.00	-35.52

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no 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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	GPRS 850 / TX / CH 251	Test Date:	July 23,2012
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)
1398.12	V	-58.75	0.05	-58.70	-13.00	-45.70
5688.24	V	-60.12	9.95	-50.17	-13.00	-37.17
1395.68	H	-52.30	0.90	-51.40	-13.00	-38.40
5241.30	H	-60.45	10.22	-50.23	-13.00	-37.23

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no 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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	GPRS 1900 / TX / CH 512	Test Date:	July 23,2012
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)
5395.50	V	-55.20	9.86	-45.34	-13.00	-32.34
7133.35	V	-55.25	14.34	-40.91	-13.00	-27.91
5437.35	H	-51.30	10.24	-41.06	-13.00	-28.06
7621.25	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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	GPRS 1900 / TX / CH 661	Test Date:	July 23,2012
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)
5640.50	V	-58.75	9.94	-48.81	-13.00	-35.81
7348.25	V	-61.36	14.97	-46.39	-13.00	-33.39
5640.20	H	-52.35	10.28	-42.07	-13.00	-29.07
6807.10	H	-61.00	13.34	-47.66	-13.00	-34.66

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no 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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	GPRS 1900 / TX / CH 810	Test Date:	July 23,2012
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)
4761.20	V	-61.55	8.99	-52.56	-13.00	-39.56
7075.10	V	-61.12	14.17	-46.95	-13.00	-33.95
5192.10	H	-55.21	10.22	-44.99	-13.00	-31.99
7033.10	H	-55.23	14.23	-41.00	-13.00	-28.00

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no 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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	HSDPA Band V / TX / CH 4132	Test Date:	July 23,2012
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)
2499.20	V	-59.35	3.61	-55.74	-13.00	-42.74
7796.30	V	-61.20	16.19	-45.01	-13.00	-32.01
2498.30	H	-61.38	3.91	-57.47	-13.00	-44.47
7399.12	H	-61.36	15.48	-45.88	-13.00	-32.88

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no 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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	WCDMA / HSDPA Band V / TX / CH 4182	Test Date:	July 23,2012
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)
1671.26	V	-55.30	0.73	-54.57	-13.00	-41.57
7736.26	V	-56.20	3.66	-52.54	-13.00	-39.54
4954.50	H	-60.30	10.14	-50.16	-13.00	-37.16
7377.50	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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	WCDMA / HSDPA Band V / TX / CH 4233	Test Date:	July 23,2012
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)
1699.30	V	-54.60	0.79	-53.81	-13.00	-40.81
2546.50	V	-55.50	3.77	-51.73	-13.00	-38.73
1700.50	H	-56.42	0.90	-55.52	-13.00	-42.52
4597.35	H	-51.36	9.69	-41.67	-13.00	-28.67

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no 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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	WCDMA / HSUPA Band II / TX / CH 9262	Test Date:	July 23,2012
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)
5395.55	V	-55.16	9.86	-45.30	-13.00	-32.30
7133.46	V	-55.26	14.34	-40.92	-13.00	-27.92
5437.26	H	-51.29	10.24	-41.05	-13.00	-28.05
7621.19	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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	WCDMA / HSUPA Band II / TX / CH 9400	Test Date:	July 23,2012
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)
5640.19	V	-58.14	9.94	-48.20	-13.00	-35.20
7348.28	V	-61.28	14.97	-46.31	-13.00	-33.31
5640.19	H	-52.15	10.28	-41.87	-13.00	-28.87
6807.24	H	-61.27	13.34	-47.93	-13.00	-34.93

Remark:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser, with "N/A" remark, if no 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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Operation Mode:	WCDMA / HSUPA Band II / TX / CH 9538	Test Date:	July 23,2012
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)
4761.18	V	-61.18	8.99	-52.19	-13.00	-39.19
7075.24	V	-61.24	14.17	-47.07	-13.00	-34.07
5192.19	H	-55.26	10.22	-45.04	-13.00	-32.04
7033.24	H	-55.16	14.23	-40.93	-13.00	-27.93

Remark:

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



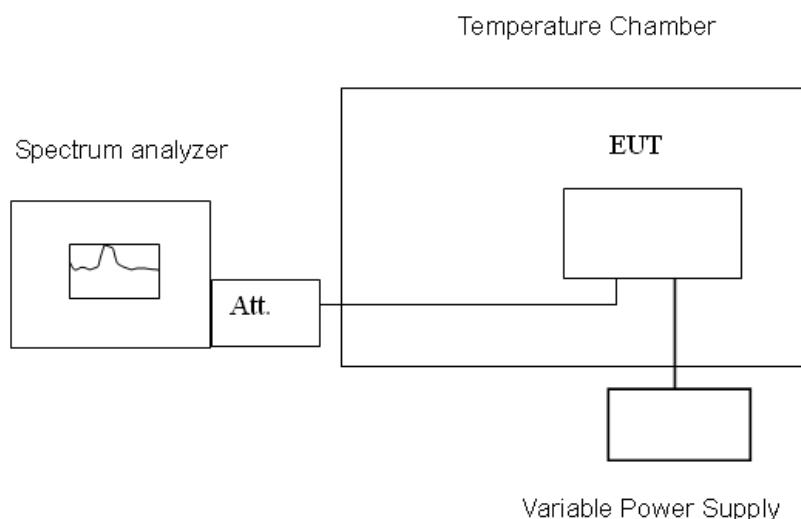
7.7. FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

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.



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

TEST RESULTS

No non-compliance noted.

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

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	0	
	10	836600026	26	
	0	836600027	27	
	-5	836600036	36	
	-10	836600038	38	

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

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	0	
	10	1879999991	-9	
	0	1879999977	-23	
	-5	1879999982	-18	
	-10	1879999986	-14	

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

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	33	2090
	40	83660020	35	
	30	83660024	39	
	20	83659985	0	
	10	83660014	29	
	0	83660017	32	
	-5	83660010	25	
	-10	83660023	38	



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 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	96	4700
	40	1880000047	93	
	30	1880000051	97	
	20	1879999954	0	
	10	1880000045	91	
	0	1880000052	98	
	-5	1880000047	93	
	-10	1880000051	97	

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	12	2090
	40	83660007	18	
	30	83659999	10	
	20	83659989	0	
	10	83660002	13	
	0	83660004	15	
	-5	83660006	17	
	-10	83660003	14	

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	64	4700
	40	1880000029	63	
	30	1880000032	66	
	20	1879999966	0	
	10	1880000027	61	
	0	1880000031	65	
	-5	1880000028	62	
	-10	1880000024	58	



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

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	12	2090
	40	83660007	18	
	30	83659999	10	
	20	83659989	0	
	10	83660002	13	
	0	83660004	15	
	-5	83660006	17	
	-10	83660003	14	

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	83639998	14	2090
	40	83640001	17	
	30	83640013	29	
	20	83639984	0	
	10	83640000	16	
	0	83639996	12	
	-5	83640018	34	
	-10	83640014	30	

Reference Frequency: WCDMA 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	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: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

Reference Frequency: HSUPA 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	

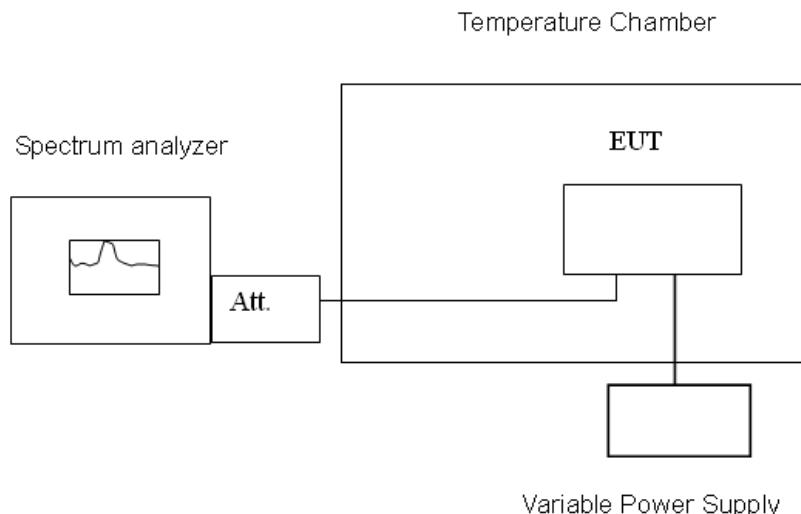


7.8. FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

LIMIT

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

TEST CONFIGURATION



Remark: Measurement setup for testing on Antenna connector.

TEST PROCEDURE

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

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



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

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	-4	4700
3.7		1879999954	0	
3.6 end		1879999951	-3	

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	10	2090
3.7		83599989	0	
3.6 end		83599993	4	

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	8	4700
3.7		1879999966	0	
3.6 end		1879999973	7	



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 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	1	2090
3.7		83599985	0	
3.6 end		83599999	14	

Reference Frequency: HSUPA 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)
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.



Compliance Certification Services Inc.

Report No: KS120718A04-RP1

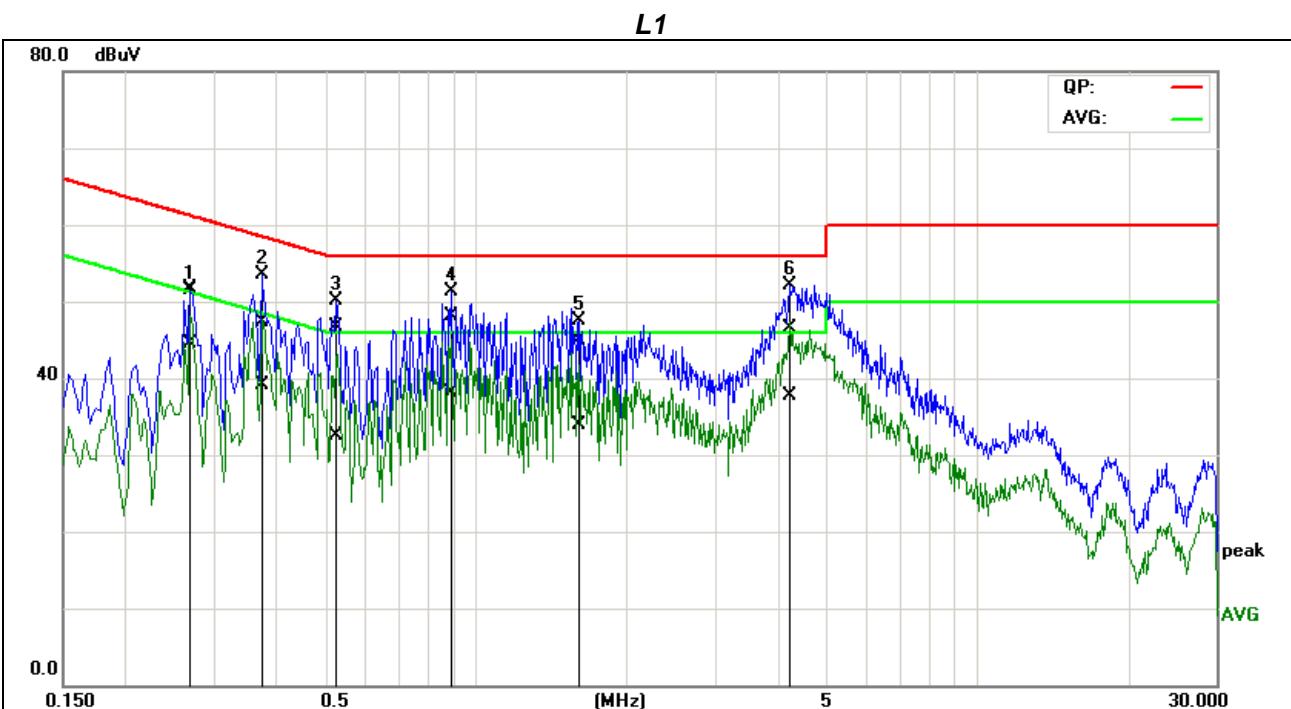
FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

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:	July 23,2012
Temperature:	23°C	Tested by:	Sean
Humidity:	50% RH		



No.	Frequ	QuasiPeak	Average	Correction	QuasiPeak	Average	QuasiPeak	Average	QuasiPeak	Average	Rem
	(MHz)	reading	reading	factor	result	result	limit	limit	margin	margin	ark
1*	0.2682	41.54	34.31	10.22	51.76	44.53	61.17	51.17	-9.41	-6.64	Pass
2	0.3738	37.01	28.69	10.37	47.38	39.06	58.42	48.42	-11.04	-9.36	Pass
3	0.5282	35.92	21.64	10.84	46.76	32.48	56.00	46.00	-9.24	-13.52	Pass
4	0.8923	37.14	27.11	11.00	48.14	38.11	56.00	46.00	-7.86	-7.89	Pass
5	1.5936	33.80	22.84	11.06	44.86	33.90	56.00	46.00	-11.14	-12.10	Pass
6	4.2619	35.28	26.56	11.16	46.44	37.72	56.00	46.00	-9.56	-8.28	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



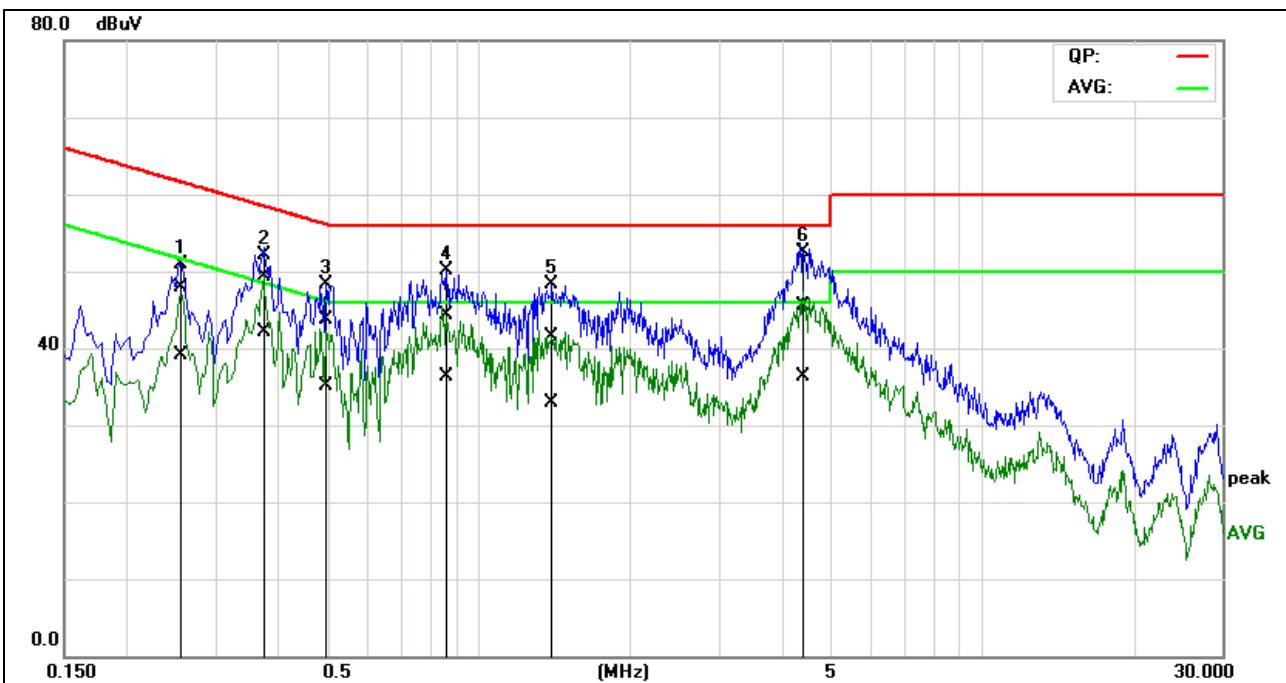
Compliance Certification Services Inc.

Report No: KS120718A04-RP1

FCC ID: Y7WPLUMCALIBER

Date of Issue :July 24, 2012

L2



No.	Frequency	QuasiPeak reading	Average reading	Correction factor	QuasiPeak result	Average result	QuasiPeak limit	Average limit	QuasiPeak margin	Average margin	Remark
	(MHz)	(dBuV)	(dBuV)	(dB)	(dBuV)	(dBuV)	(dBuV)	(dBuV)	(dB)	(dB)	
1	0.2564	37.72	28.88	10.20	47.92	39.08	61.55	51.55	-13.63	-12.47	Pass
2*	0.3775	38.96	31.64	10.38	49.34	42.02	58.33	48.33	-8.99	-6.31	Pass
3	0.4965	32.85	24.36	10.81	43.66	35.17	56.06	46.06	-12.40	-10.89	Pass
4	0.8609	33.27	25.21	11.00	44.27	36.21	56.00	46.00	-11.73	-9.79	Pass
5	1.3868	30.42	21.88	11.05	41.47	32.93	56.00	46.00	-14.53	-13.07	Pass
6	4.3854	34.41	25.23	11.17	45.58	36.40	56.00	46.00	-10.42	-9.60	Pass

Remark:

5. Measuring frequencies from 0.15 MHz to 30MHz.
6. The emissions measured in frequency range from 0.15 MHz to 30MHz were made with an instrument using Quasi-peak detector and average detector.
7. 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;
8. 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