



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

TEST REPORT

For

Wireless Medical Alarm System

Model: CTC-1052RV

Trade Name: CLIMAX

Issued to

**Climax Technology Co Ltd
No.258, Sinhu 2nd Rd., Neihu District,
Taipei City 114, Taiwan (R.O.C.)**

Issued by

**Compliance Certification Services Inc.
No.11, Wu-Gong 6th Rd., Wugu Industrial Park,
New Taipei City 248, Taiwan (R.O.C.)
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Issued Date: September 14, 2011**



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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	September 14, 2011	Initial Issue	ALL	Jessica Ho



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1. TEST RESULT CERTIFICATION

Applicant: Climax Technology Co Ltd
 No.258, Sinhu 2nd Rd., Neihu District,
 Taipei City 114, Taiwan (R.O.C.)

Equipment Under Test: Wireless Medical Alarm System

Trade Name: CLIMAX

Model Number: CTC-1052RV

Date of Test: August 20 ~ September 16, 2011

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

We hereby certify that:

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

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

Approved by:

Reviewed by:

Jason Lin
 Section Manager
 Compliance Certification Services Inc.

Gina Lo
 Section Manager
 Compliance Certification Services Inc.



2. EUT DESCRIPTION

Product	Wireless Medical Alarm System
Trade Name	CLIMAX
Model Number	CTC-1052RV
Model Discrepancy	N/A
Received Date	July 6, 2011
Power Supply	1. Power Adapter Model Number: HK-AX-120A200-US I/P: 100-240V, 50-60Hz, 0.8A O/P: 12V, 2A 2. Internal Battery: 7.2V Ni-mH 1300mAH
Frequency Range	GSM / GPRS / EDGE: 850: 824.2 ~ 848.8 MHz GSM / GPRS / EDGE: 1900: 1850.2 ~ 1909.8 MHz
Transmit Power (ERP & EIRP Power)	GSM 850: 31.48 dBm GSM 1900: 30.69 dBm GPRS 850: 30.99 dBm GPRS 1900: 30.31 dBm EDGE 850: 25.92 dBm EDGE 1900: 26.95 dBm
Cellular Phone Protocol	GSM: GMSK GPRS: GMSK EDGE: 8PSK
Type of Emission	GSM 850 MHz: 253KGXW--- GSM 1900 MHz: 242KGXW--- GPRS 850 MHz: 244KGXW--- GPRS 1900 MHz: 247KGXW--- EDGE 850 MHz: 249KG7W--- EDGE 1900 MHz: 242KG7W---
Antenna Gain	GSM / GPRS / EDGE 850 MHz: 2.42 dBi GSM / GPRS / EDGE 1900 MHz: 2.42 dBi
Antenna Type	Dipole 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: GX9CTC1052RV 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: CTC-1052RV) had been tested under operating condition.

EUT staying in continuous transmitting mode was programmed.

GSM / GPRS / EDGE 850:

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

GSM / GPRS / EDGE 1900:

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

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.

The field strength of spurious emission was measured in the following position: EUT stand-up position (Z axis), lie-down position (X, Y axis). The worst emission was found in lie-down position (X axis) for GSM 850 / GPRS 850 / EDGE 850, stand-up position (Z axis) for GSM 1900 / GPRS 1900 / EDGE1900 and the worst case was recorded.



4. INSTRUMENT CALIBRATION

4.1 MEASURING INSTRUMENT CALIBRATION

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



4.2 MEASUREMENT EQUIPMENT USED

Equipment Used for Emissions Measurement

Remark: Each piece of equipment is scheduled for calibration once a year and Loop Antenna is scheduled for calibration once three years.

Conducted Emissions Test Site				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360131	03/17/2012
Power Meter	Anritsu	ML2495A	1012009	04/27/2012
Power Sensor	Anritsu	MA2411A	0917072	04/27/2012
Temp. / Humidity Chamber	Terchy	MHG-150LF	930619	10/20/2011

Wugu 966 Chamber A				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	US42510252	11/03/2011
EMI Test Receiver	R&S	ESCI	100064	02/17/2012
Pre-Amplifier	Mini-Circuits	ZFL-1000LN	SF350700823	01/13/2012
Pre-Amplifier	MITEQ	AFS44-00102650-42-10P-44	1415367	11/19/2011
Bilog Antenna	Sunol Sciences	JB3	A030105	10/06/2011
Bilog Antenna	Sunol Sciences	JB3	A030205	10/06/2011
Horn Antenna	EMCO	3117	00055165	01/12/2012
Horn Antenna	EMCO	3117	00055167	12/06/2011
Turn Table	CCS	CC-T-1F	N/A	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R
Site NSA	CCS	N/A	N/A	12/26/2011
Site NSA	CCS	N/A	N/A	12/26/2011
Test S/W	EZ-EMC (CCS-3A1RE)			

Conducted Emission room # B				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
EMI Test Receiver	R&S	ESCI	101073	07/28/2012
LISN	R&S	ENV216	101054	05/25/2012
LISN	EMCO	3825/2	9106-1809	05/25/2012
ISN	FCC	FCC-TLISN-T2-02-09	100105	02/20/2012
ISN	FCC	FCC-TLISN-T8-02-09	100106	02/15/2012
Coaxial Cable	Commate	CFD300-NL	NA	05/27/2012
Current Probe	TEGAM	95236-1	12567	03/22/2012
Capacitive Voltag Probe	FCC	F-CVP-1	100185	02/16/2012
Test S/W	CCS-3A1-CE			



4.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
Powerline Conducted Emission	+/- 1.2575
3M Semi Anechoic Chamber / 30M~200M	+/- 4.0138
3M Semi Anechoic Chamber / 200M~1000M	+/- 3.9483
3M Semi Anechoic Chamber / 1G~8G	+/- 2.5975
3M Semi Anechoic Chamber / 8G~18G	+/- 2.6112
3M Semi Anechoic Chamber / 18G~26G	+/- 2.7389
3M Semi Anechoic Chamber / 26G~40G	+/- 2.9683

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



5. FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

No.199, Chunghsen Road, Hsintien City, Taipei Hsien, Taiwan, R.O.C.

Tel: 886-2-2217-0894 / Fax: 886-2-2217-1029

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

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

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

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

5.2 EQUIPMENT

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




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

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

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



5.3 TABLE OF ACCREDITATIONS AND LISTINGS

Country	Agency	Scope of Accreditation	Logo
USA	FCC	3M Semi Anechoic Chamber (FCC MRA: TW1039) to perform FCC Part 15 measurements	 FCC MRA: TW1039
Taiwan	TAF	LP0002, RTTE01, FCC Method-47 CFR Part 15 Subpart C, D, E, RSS-210, RSS-310 IDA TS SRD, AS/NZS 4268, AS/NZS 4771, TS 12.1 & 12.2, ETSI EN 300 440-1, ETSI EN 300 440-2, ETSI EN 300 328, ETSI EN 300 220-1, ETSI EN 300 220-2, ETSI EN 301 893, ETSI EN 301 489-1/3/7/17 FCC OET Bulletin 65 + Supplement C, EN 50360, EN 50361, EN 50371, RSS 102, EN 50383, EN 50385, EN 50392, IEC 62209, CNS 14958-1, CNS 14959 FCC Method -47 CFR Part 15 Subpart B IEC / EN 61000-3-2, IEC / EN 61000-3-3, IEC / EN 61000-4-2/3/4/5/6/8/11	
Canada	Industry Canada	3M Semi Anechoic Chamber (IC 2324G-1 / IC 2324G-2) to perform	 IC 2324G-1 IC 2324G-2

* No part of this report may be used to claim or imply product endorsement by A2LA or any agency of the US Government.



6. SETUP OF EQUIPMENT UNDER TEST

6.1 SETUP CONFIGURATION OF EUT

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

6.2 SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	FCC ID	Series No.	Data Cable	Power Cord
1.	SIM Card	N/A	N/A	N/A	N/A	N/A	N/A
2.	Universal Radio Communication Tester (Remote)	R&S	CMU200	101245	N/A	N/A	Unshielded, 1.8m

Remark:

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



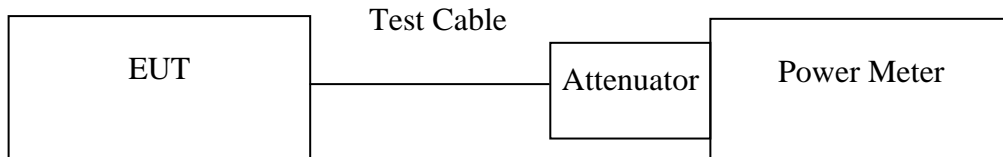
7. FCC PART 22 & 24 REQUIREMENTS

7.1 PEAK POWER

LIMIT

According to FCC §2.1046.

Test Configuration



Remark: Measurement setup for testing on Antenna connector

TEST PROCEDURE

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

TEST RESULTS

No non-compliance noted.



Test Data

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power (W)
GSM 850	128	824.20	*32.80	1.90546
	190	836.60	32.60	1.81970
	251	848.80	32.40	1.73780
GPRS 850	128	824.20	32.20	1.65959
	190	836.60	32.10	1.62181
	251	848.80	32.10	1.62181
EDGE 850	128	824.20	27.80	0.60256
	190	836.60	27.70	0.58884
	251	848.80	27.50	0.56234

Test Mode	CH	Frequency (MHz)	Peak Power (dBm)	Output Power (W)
GSM 1900	512	1850.20	*30.60	1.14815
	661	1880.00	30.60	1.14815
	810	1909.80	30.50	1.12202
GPRS 1900	512	1850.20	30.40	1.09648
	661	1880.00	30.30	1.07152
	810	1909.80	30.30	1.07152
EDGE 1900	512	1850.20	26.80	0.47863
	661	1880.00	26.80	0.47863
	810	1909.80	26.80	0.47863

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

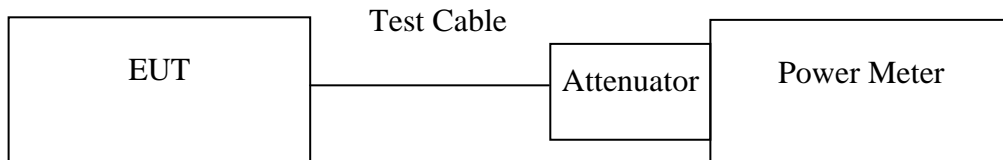


7.2 AVERAGE POWER

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 RESULTS

No non-compliance noted.

Test Data

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power (W)
GSM 850	128	824.20	*32.40	1.73780
	190	836.60	32.20	1.65959
	251	848.80	32.10	1.62181
GPRS 850	128	824.20	23.17	0.20745
	190	836.60	23.07	0.20273
	251	848.80	23.07	0.20273
EDGE 850	128	824.20	18.77	0.07532
	190	836.60	18.67	0.07361
	251	848.80	18.47	0.07029

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power (W)
GSM 1900	512	1850.20	*29.90	0.97724
	661	1880.00	29.80	0.95499
	810	1909.80	29.80	0.95499
GPRS 1900	512	1850.20	21.37	0.13706
	661	1880.00	21.27	0.13394
	810	1909.80	21.27	0.13394
EDGE 1900	512	1850.20	17.77	0.05983
	661	1880.00	17.77	0.05983
	810	1909.80	17.77	0.05983

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



7.3 ERP & EIRP MEASUREMENT

LIMIT

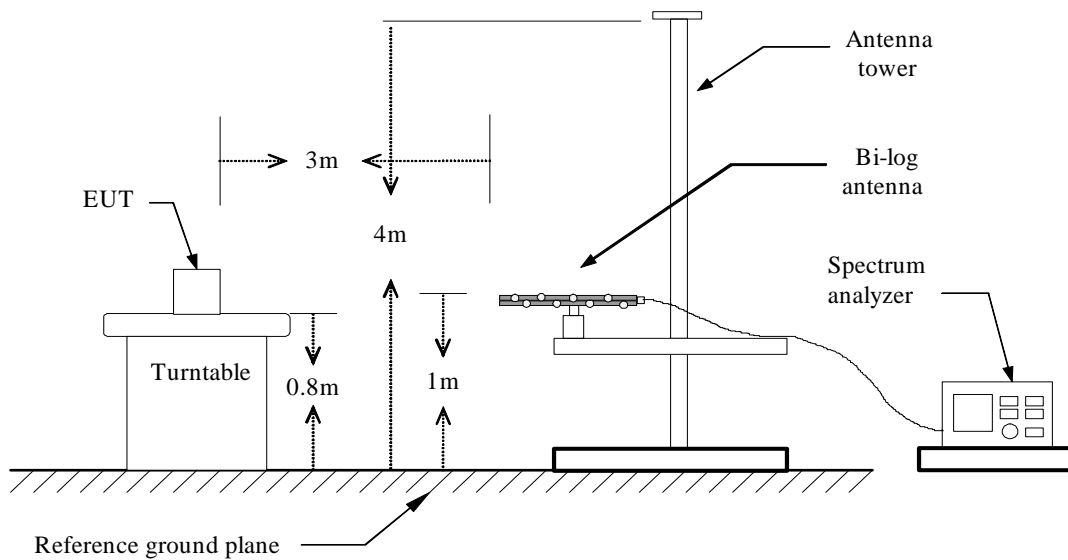
According to FCC §2.1046

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

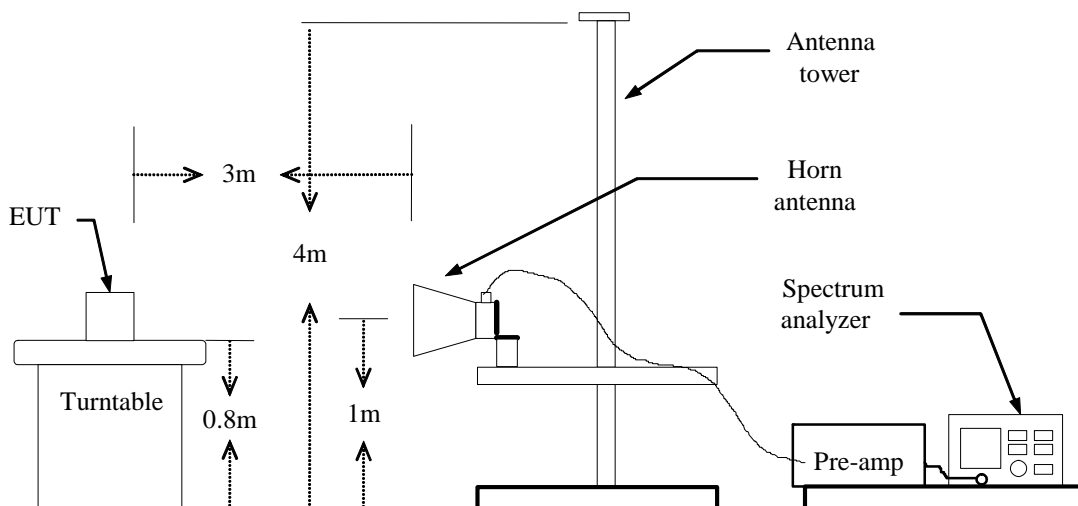
FCC 24.232(b): The equivalent Isotropic Radiated Power (EIRP) must not exceed 2 Watts.

Test Configuration

Below 1 GHz

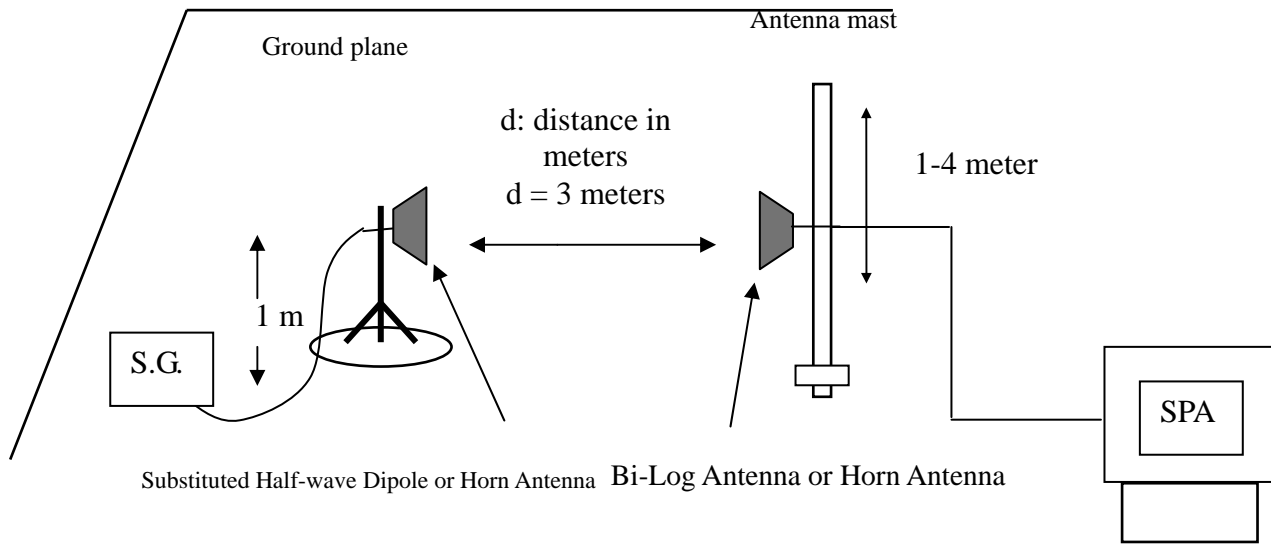


Above 1 GHz





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:

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

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

TEST RESULTS

No non-compliance noted.

**GSM 850 TEST DATA**

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.20	V	16.77	3.39	6.24	19.62	38.45	-18.83
	824.20	H	27.87	3.39	6.24	30.72	38.45	-7.73
190	836.60	V	14.62	3.4	6.37	17.59	38.45	-21.76
	836.60	H	27.01	3.4	6.37	29.98	38.45	-8.47
251	848.80	V	15.31	3.4	6.4	18.31	38.45	-21.04
	848.80	H	28.48	3.4	6.4	*31.48	38.45	-6.97

GPRS 850 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.20	V	19.92	3.39	6.24	22.77	38.45	-15.68
	824.20	H	28	3.39	6.24	30.85	38.45	-7.60
190	836.60	V	27.77	3.4	6.37	30.74	38.45	-7.71
	836.60	H	27.84	3.4	6.37	30.81	38.45	-7.64
251	848.80	V	17.33	3.4	6.4	20.33	38.45	-18.12
	848.80	H	27.99	3.4	6.4	*30.99	38.45	-7.46

EDGE 850 Test Data

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.20	V	14.04	3.39	6.24	16.89	38.45	-21.56
	824.20	H	22.16	3.39	6.24	25.01	38.45	-13.44
190	836.60	V	12.01	3.4	6.37	14.98	38.45	-23.47
	836.60	H	22.29	3.4	6.37	25.26	38.45	-13.19
251	848.80	V	10.69	3.4	6.4	13.69	38.45	-25.66
	848.80	H	22.92	3.4	6.4	*25.92	38.45	-12.53

**GSM 1900 TEST DATA**

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.20	V	22.75	5.37	5.67	23.05	33.00	-9.95
	1850.20	H	30.32	5.37	5.67	30.62	33.00	-2.38
661	1880.00	V	22.85	5.42	5.62	23.05	33.00	-9.95
	1880.00	H	30.49	5.42	5.62	*30.69	33.00	-2.31
810	1909.80	V	22.84	5.48	5.56	22.92	33.00	-10.08
	1909.80	H	30	5.48	5.56	30.08	33.00	-2.92

GPRS 1900 TEST DATA

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.20	V	23.87	5.37	5.67	24.17	33.00	-8.83
	1850.20	H	28.84	5.37	5.67	29.14	33.00	-3.86
661	1880.00	V	24.39	5.42	5.62	24.59	33.00	-8.41
	1880.00	H	30.03	5.42	5.62	30.23	33.00	-2.77
810	1909.80	V	23.59	5.48	5.56	23.67	33.00	-9.33
	1909.80	H	30.23	5.48	5.56	*30.31	33.00	-2.69

EDGE 1900 Test Data

Channel	Frequency (MHz)	Antenna Pol.	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.20	V	19.91	5.37	5.67	20.21	33.00	-12.79
	1850.20	H	25.22	5.37	5.67	25.52	33.00	-7.48
661	1880.00	V	20.61	5.42	5.62	20.81	33.00	-12.19
	1880.00	H	26.43	5.42	5.62	26.63	33.00	-6.37
810	1909.80	V	19.86	5.48	5.56	19.94	33.00	-13.06
	1909.80	H	26.87	5.48	5.56	*26.95	33.00	-6.05

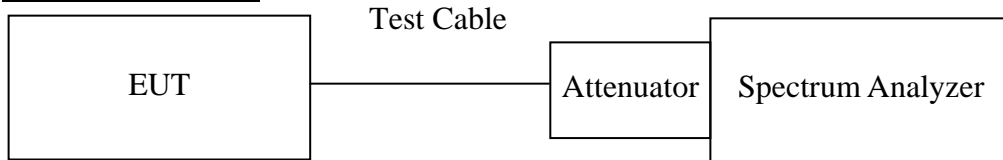


7.4 OCCUPIED BANDWIDTH MEASUREMENT

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)
GSM 850	128	824.20	244.2833
	190	836.60	244.3352
	251	848.80	253.5271
GPRS 850	128	824.20	244.8477
	190	836.60	241.1793
	251	848.80	242.8479
EDGE 850	128	824.20	241.7602
	190	836.60	249.2961
	251	848.80	244.2241

Test Mode	CH	Frequency (MHz)	99% Bandwidth (kHz)
GSM 1900	512	1850.20	242.0784
	661	1880.00	242.4145
	810	1909.80	241.8228
GPRS 1900	512	1850.20	245.2222
	661	1880.00	247.7830
	810	1909.80	244.0941
EDGE 1900	512	1850.20	244.6014
	661	1880.00	245.0883
	810	1909.80	242.1485

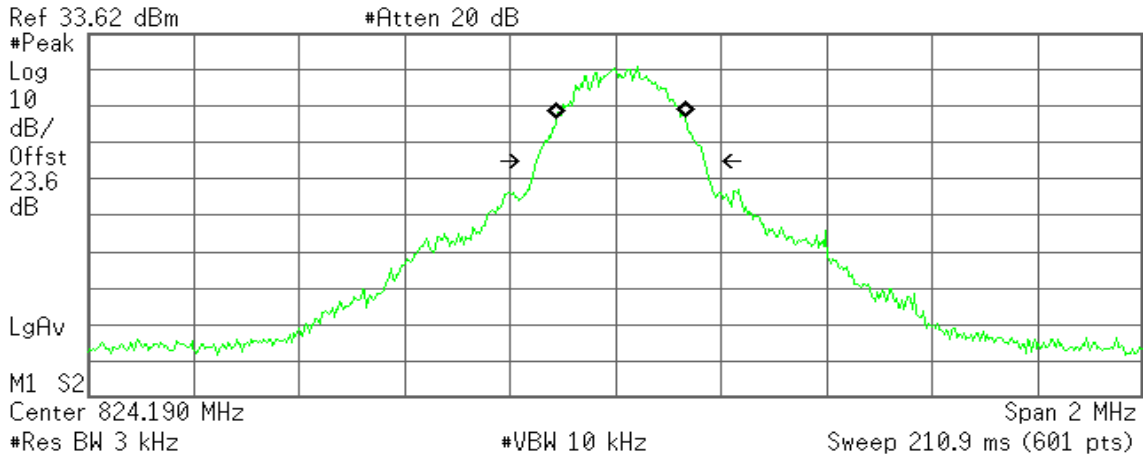


Test Plot

GSM 850 (CH Low)

Agilent 13:34:48 Aug 25, 2011

R T



Occupied Bandwidth
244.2833 kHz

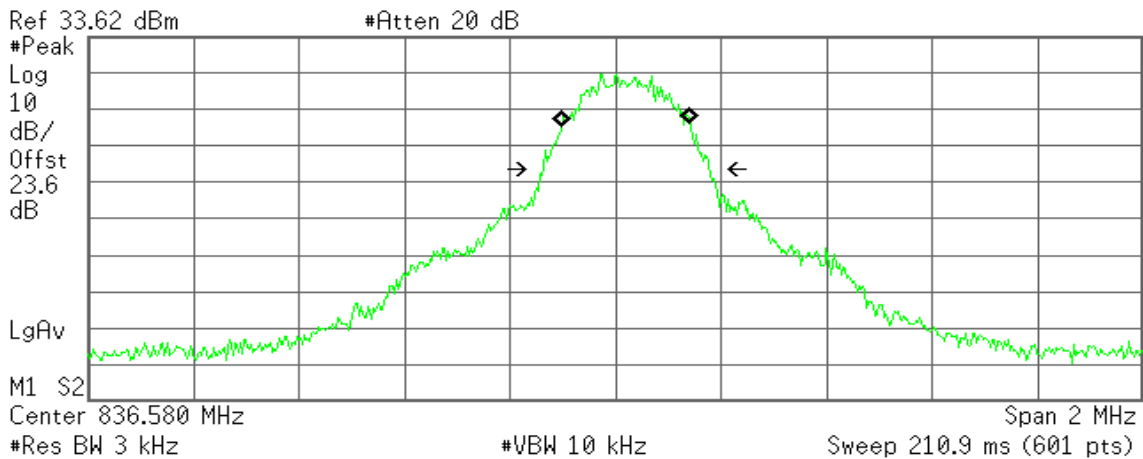
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 10.086 kHz
x dB Bandwidth 319.850 kHz

GSM 850 (CH Mid)

Agilent 13:35:58 Aug 25, 2011

R T



Occupied Bandwidth
244.3352 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

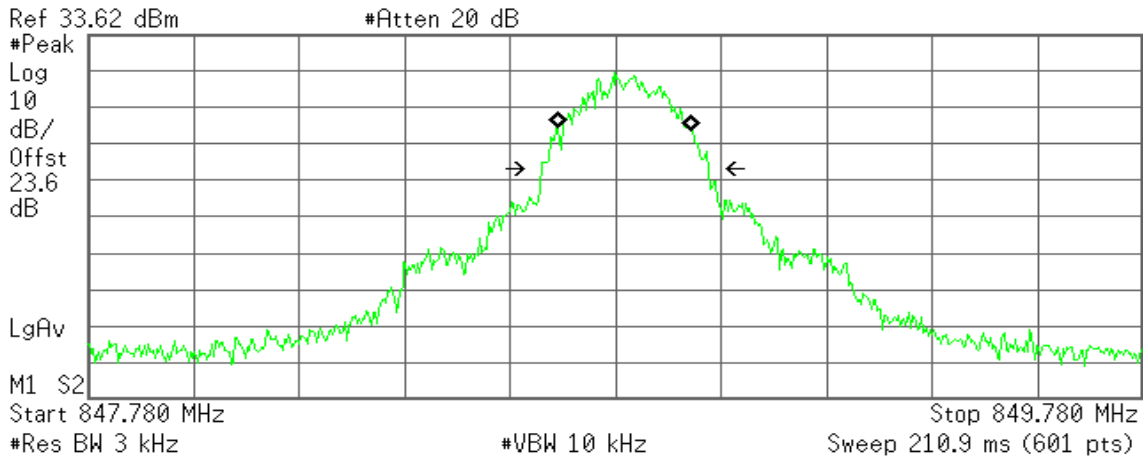
Transmit Freq Error 19.406 kHz
x dB Bandwidth 316.185 kHz



GSM 850 (CH High)

Agilent 13:36:36 Aug 25, 2011

R T



Occupied Bandwidth
253.5271 kHz

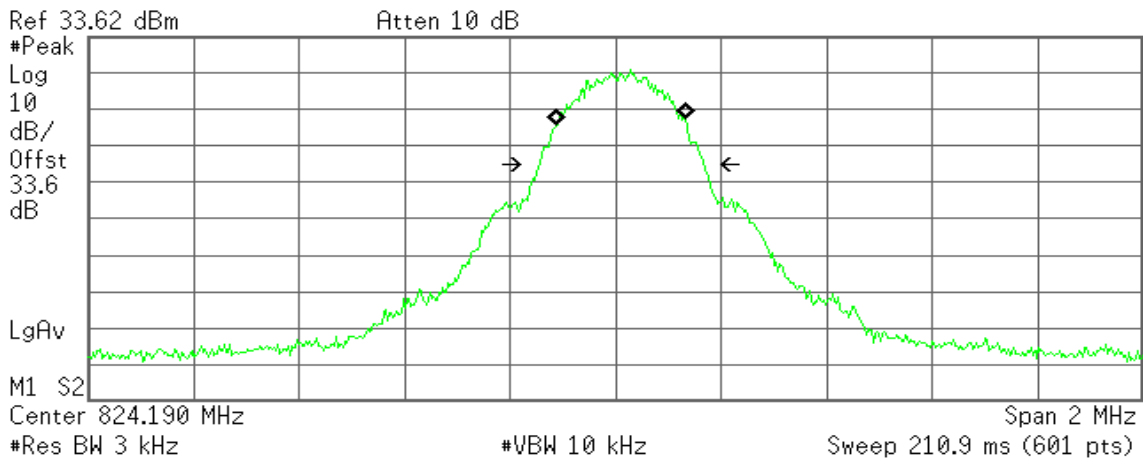
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 16.615 kHz
x dB Bandwidth 317.501 kHz

GPRS 850 (CH Low)

Agilent 10:26:40 Sep 6, 2011

R T



Occupied Bandwidth
244.8477 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

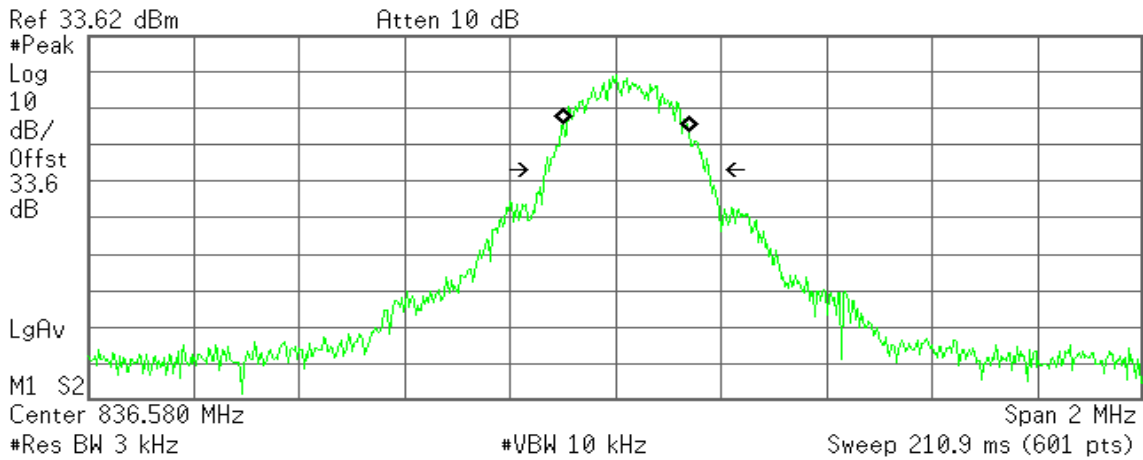
Transmit Freq Error 10.221 kHz
x dB Bandwidth 313.370 kHz



GPRS 850 (CH Mid)

Agilent 10:28:33 Sep 6, 2011

R T



Occupied Bandwidth
241.1793 kHz

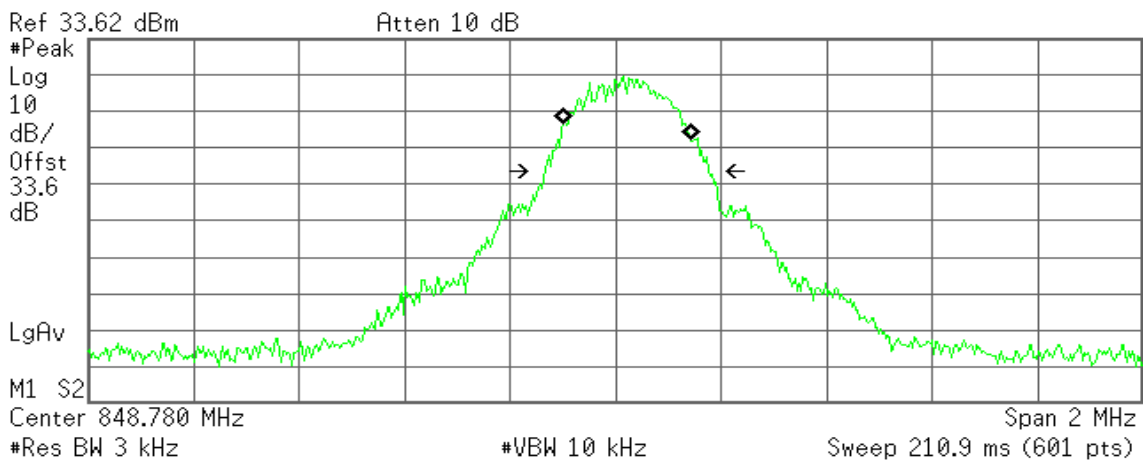
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 19.388 kHz
x dB Bandwidth 310.541 kHz

GPRS 850(CH High)

Agilent 10:29:46 Sep 6, 2011

R T



Occupied Bandwidth
242.8479 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

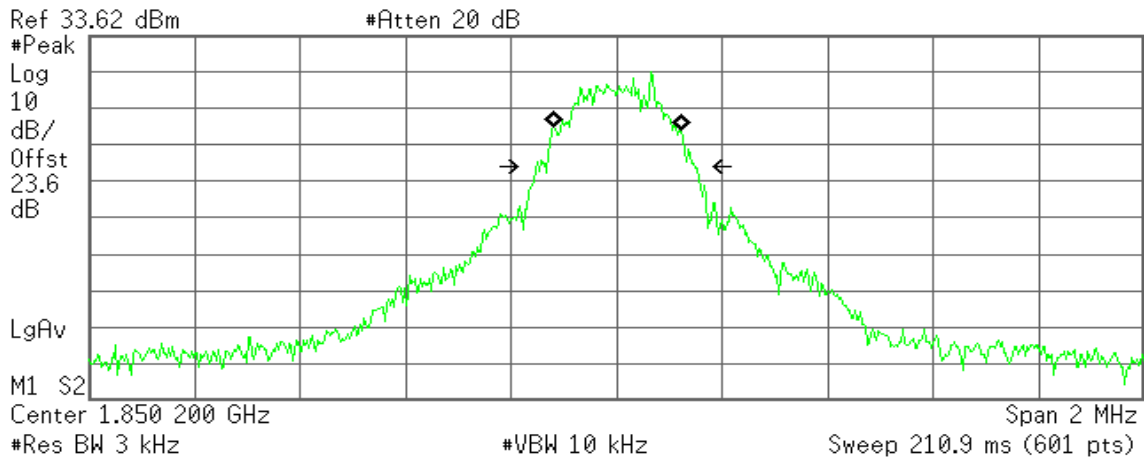
Transmit Freq Error 20.657 kHz
x dB Bandwidth 311.356 kHz



GSM 1900 (CH Low)

Agilent 14:07:00 Aug 25, 2011

R T



Occupied Bandwidth
242.0784 kHz

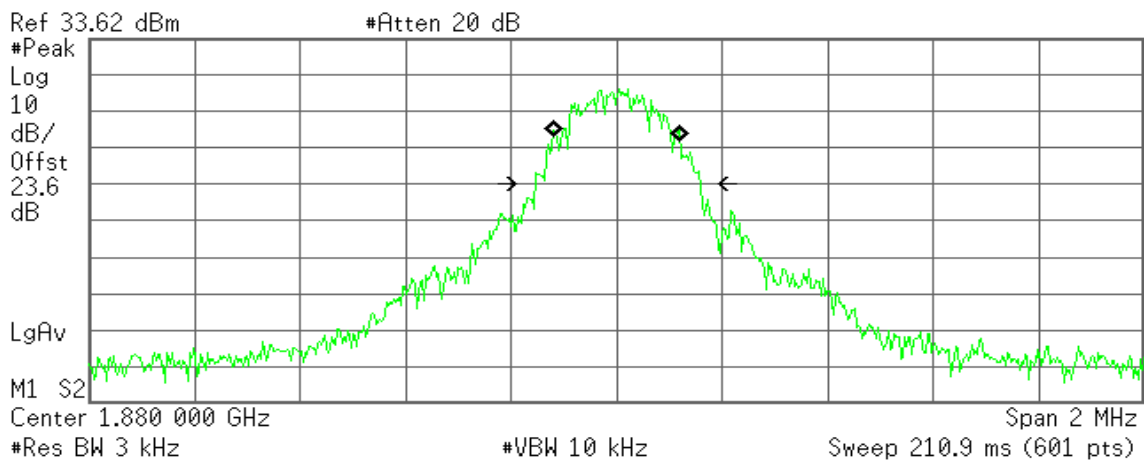
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 761.389 Hz
x dB Bandwidth 301.880 kHz

GSM 1900 (CH Mid)

Agilent 14:07:28 Aug 25, 2011

R T



Occupied Bandwidth
242.4145 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

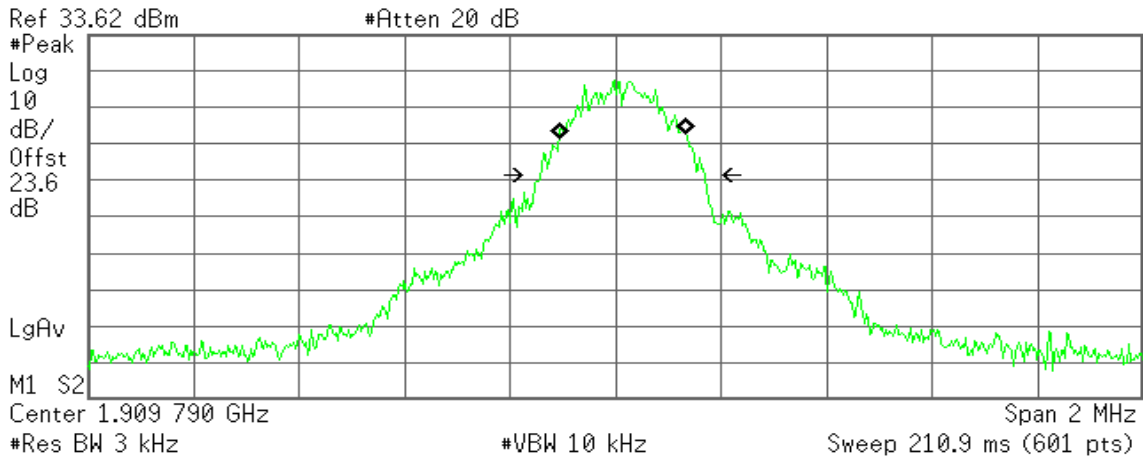
Transmit Freq Error 82.825 Hz
x dB Bandwidth 314.518 kHz



GSM 1900 (CH High)

Agilent 14:08:06 Aug 25, 2011

R T



Occupied Bandwidth
241.8228 kHz

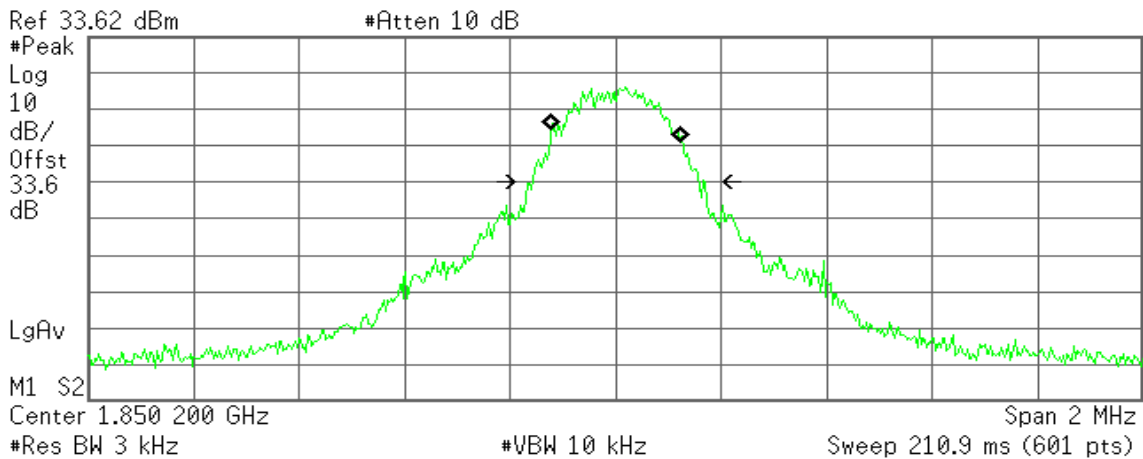
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 13.119 kHz
x dB Bandwidth 312.132 kHz

GPRS 1900 (CH Low)

Agilent 11:03:51 Sep 6, 2011

R T



Occupied Bandwidth
245.2222 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

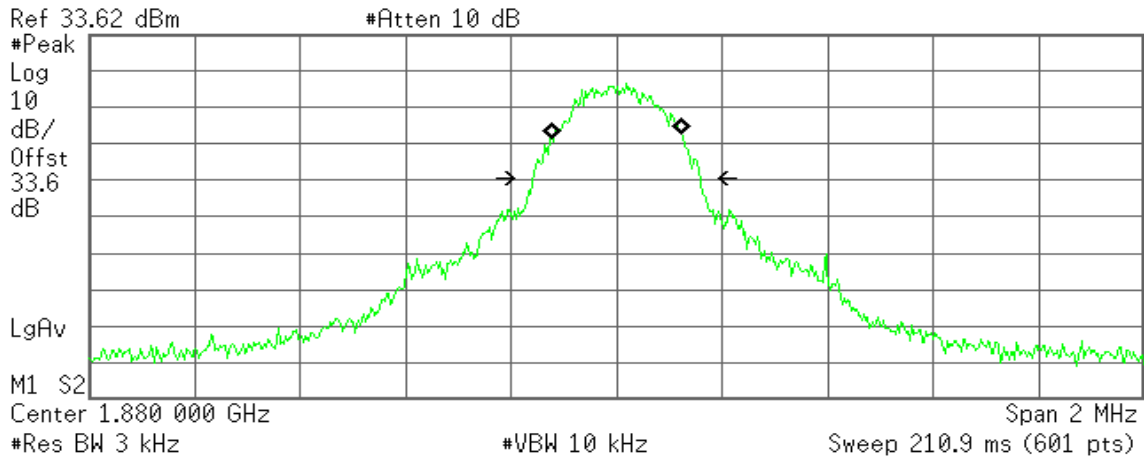
Transmit Freq Error 819.700 Hz
x dB Bandwidth 328.491 kHz



GPRS 1900 (CH Mid)

Agilent 11:06:03 Sep 6, 2011

R T



Occupied Bandwidth
247.7830 kHz

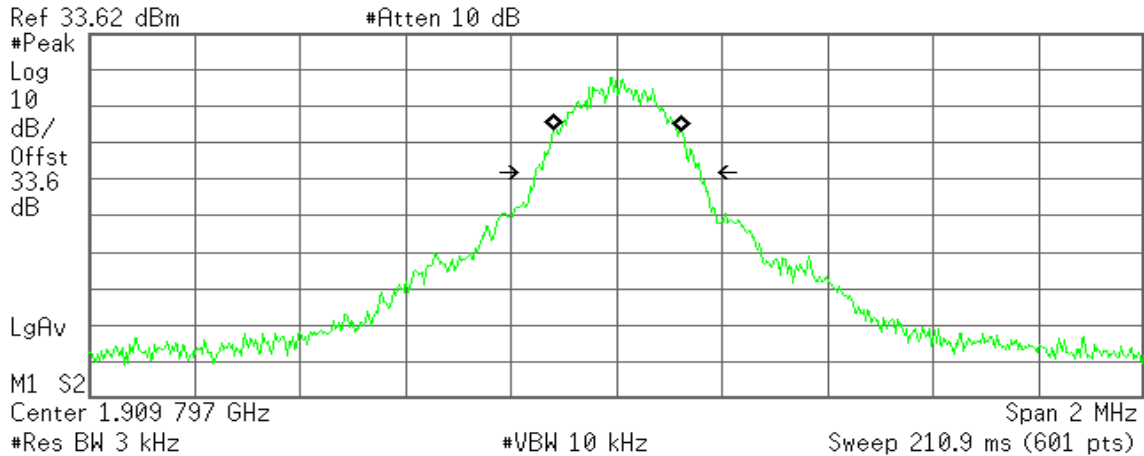
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 522.893 Hz
x dB Bandwidth 318.011 kHz

GPRS 1900 (CH High)

Agilent 11:07:34 Sep 6, 2011

R T



Occupied Bandwidth
244.0941 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

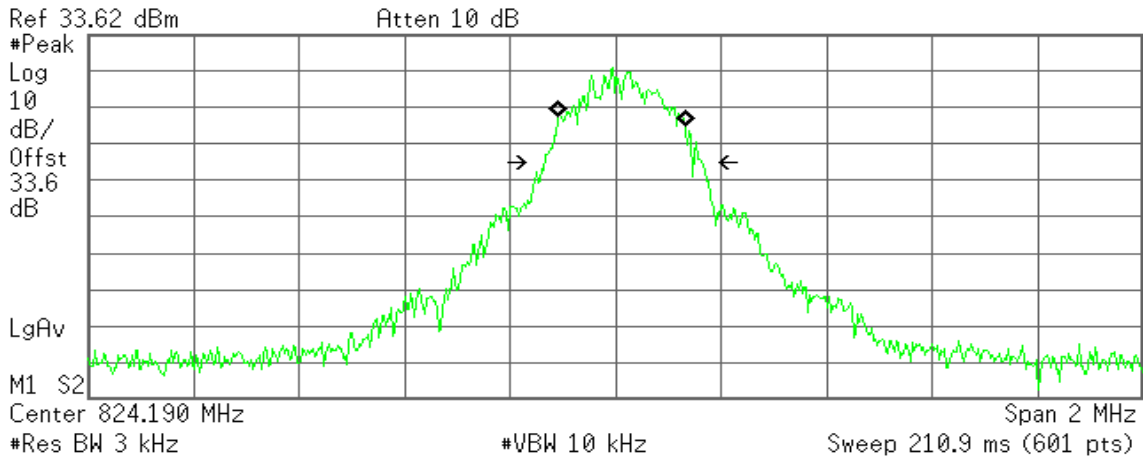
Transmit Freq Error 2.544 kHz
x dB Bandwidth 313.587 kHz



EDGE 850 (CH Low)

Agilent 10:27:34 Sep 6, 2011

R T



Occupied Bandwidth
241.7602 kHz

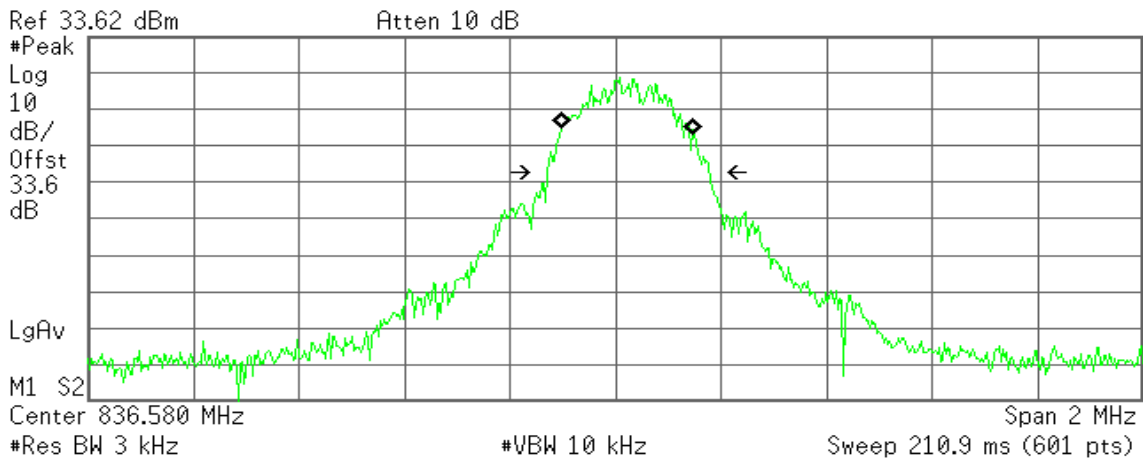
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 11.061 kHz
x dB Bandwidth 300.427 kHz

EDGE 850 (CH Mid)

Agilent 10:28:16 Sep 6, 2011

R T



Occupied Bandwidth
249.2961 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

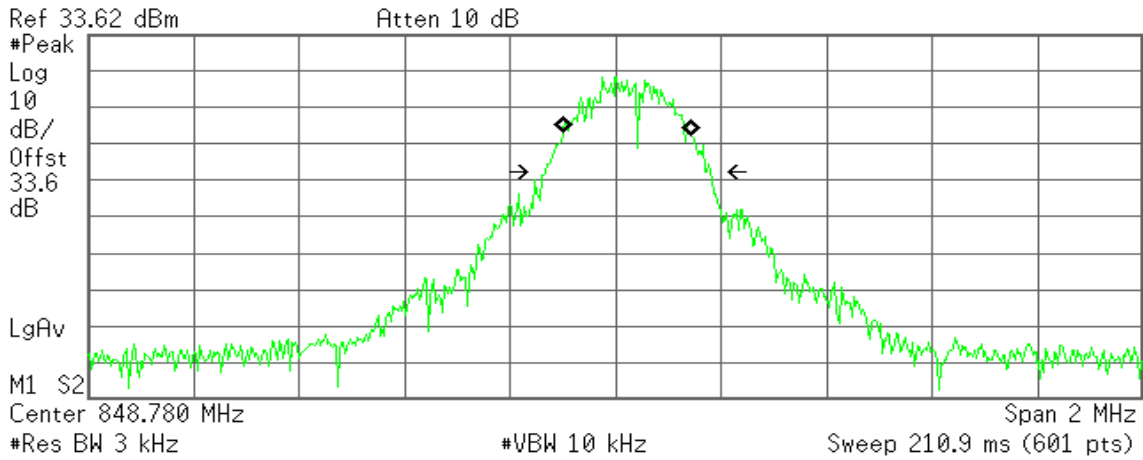
Transmit Freq Error 21.460 kHz
x dB Bandwidth 308.952 kHz



EDGE 850 (CH High)

Agilent 10:30:04 Sep 6, 2011

R T



Occupied Bandwidth
244.2241 kHz

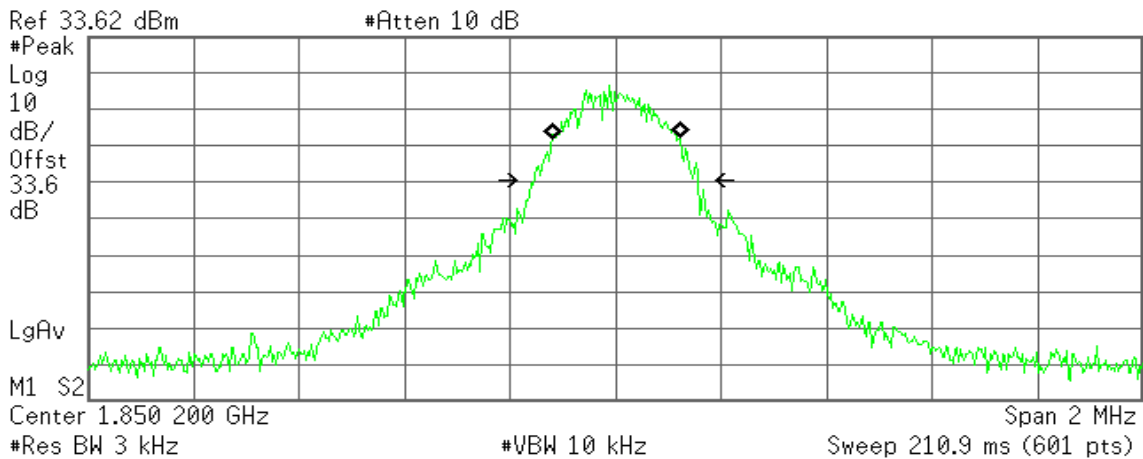
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 21.885 kHz
x dB Bandwidth 312.641 kHz

EDGE 1900 (CH Low)

Agilent 11:04:07 Sep 6, 2011

R T



Occupied Bandwidth
244.6014 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

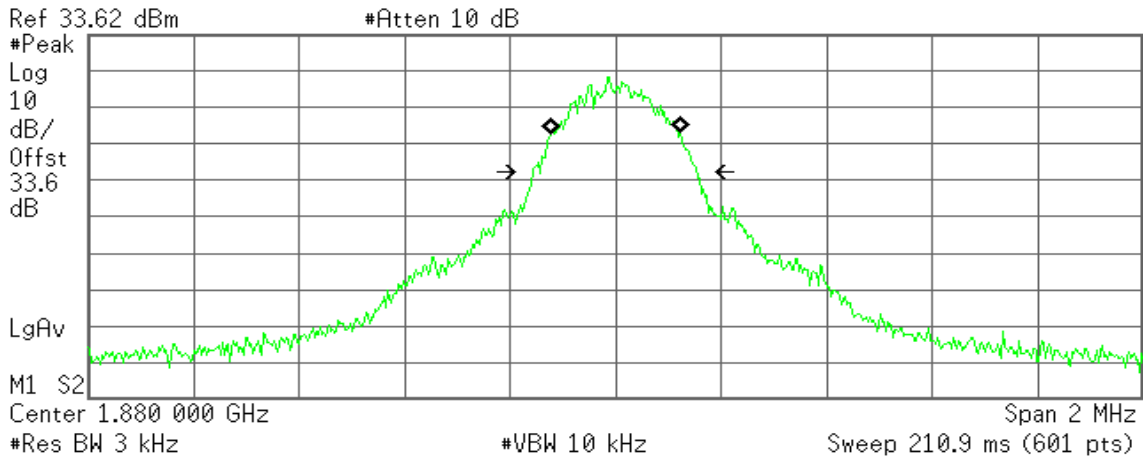
Transmit Freq Error 1.092 kHz
x dB Bandwidth 312.670 kHz



EDGE 1900 (CH Mid)

Agilent 11:05:00 Sep 6, 2011

R T



Occupied Bandwidth
245.0883 kHz

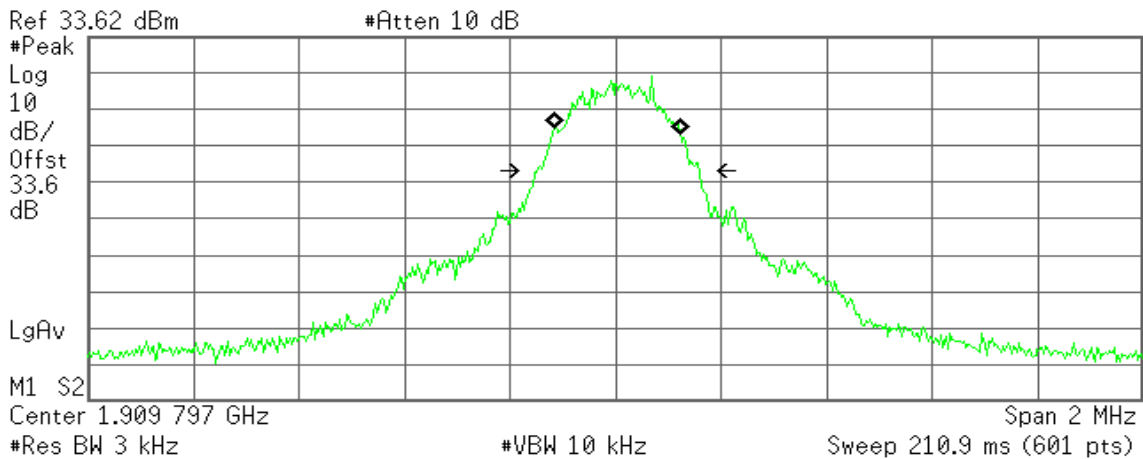
Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 347.737 Hz
x dB Bandwidth 312.459 kHz

EDGE 1900 (CH High)

Agilent 11:08:49 Sep 6, 2011

R T



Occupied Bandwidth
242.1485 kHz

Occ BW % Pwr 99.00 %
x dB -26.00 dB

Transmit Freq Error 2.967 kHz
x dB Bandwidth 308.592 kHz



7.5 OUT OF BAND EMISSION AT ANTENNA TERMINALS

LIMIT

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

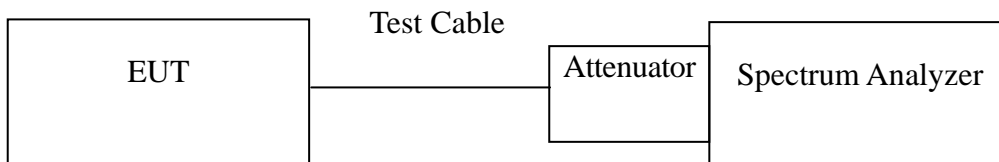
Out of Band Emissions: The mean power of emission must be attenuated below the mean power of the non-modulated carrier (P) on any frequency twice or more than twice the fundamental frequency by at least $43 + 10 \log P$ dB.

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

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

Test Configuration

Out of band emission at antenna terminals:



TEST PROCEDURE

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

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

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

TEST RESULTS

No non-compliance noted.



Test Data

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

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

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

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



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

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



Test Plot

GSM 850

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

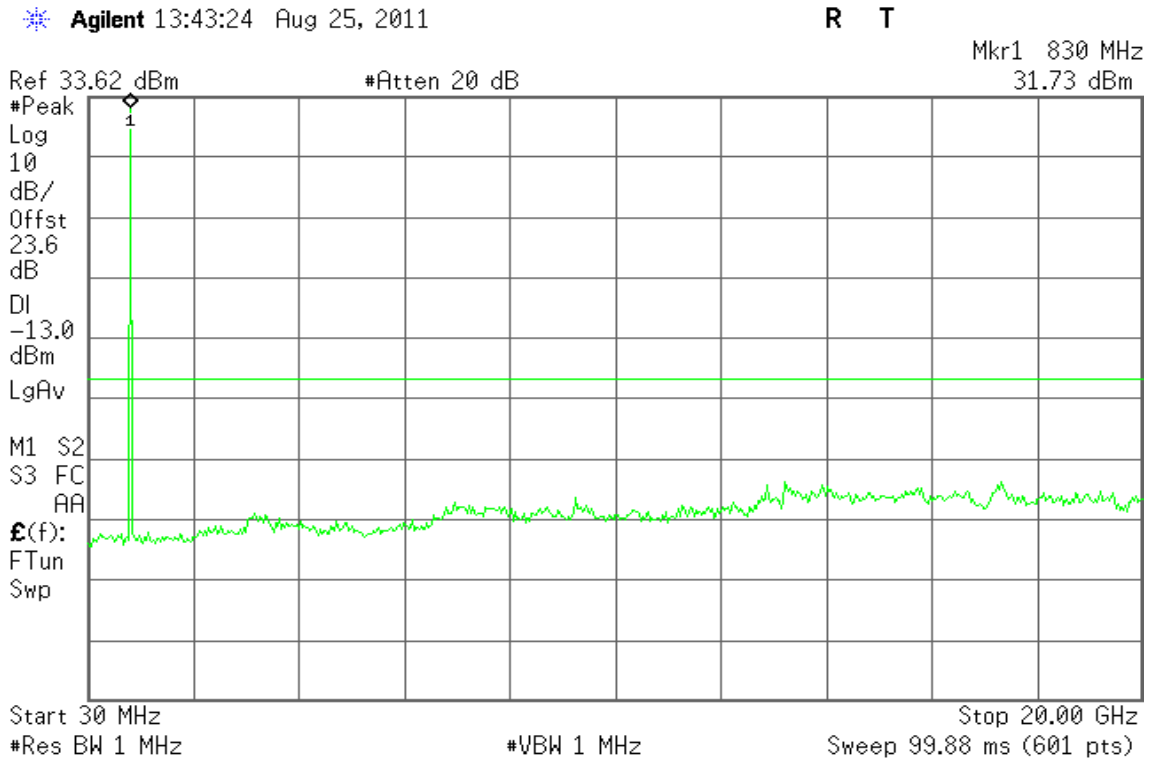


Figure 7-2: Out of Band emission at antenna terminals – GSM CH Mid

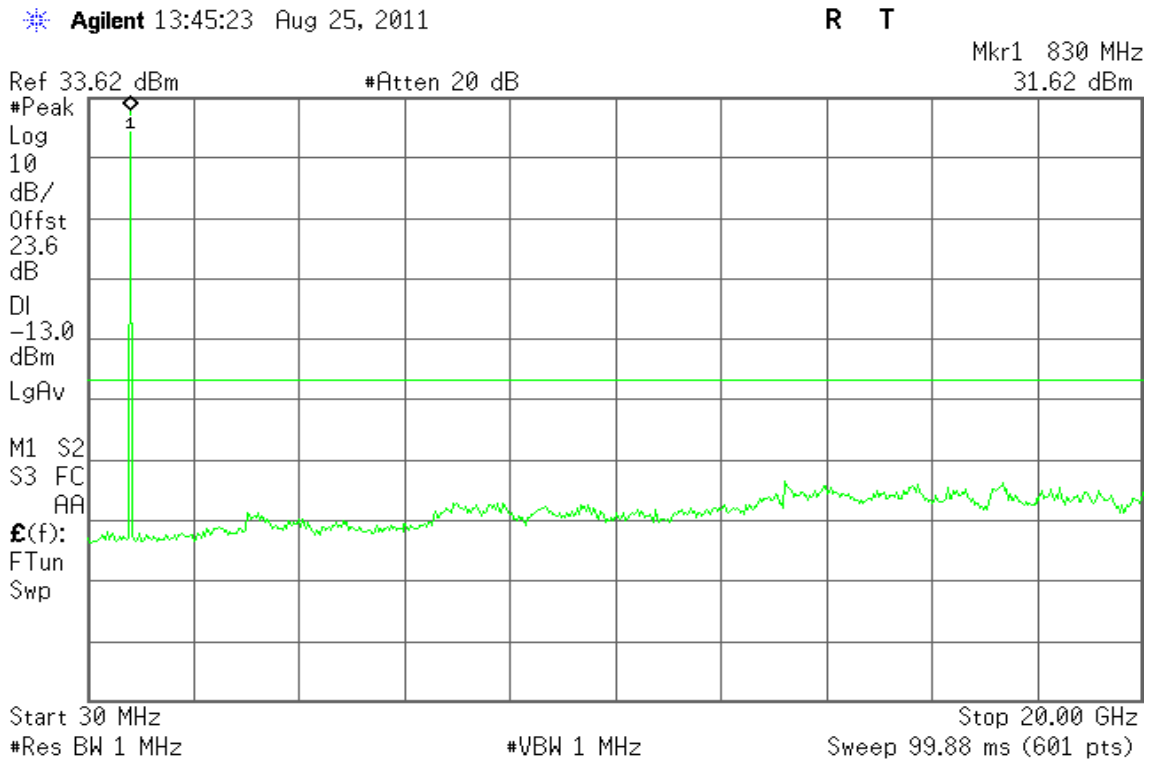
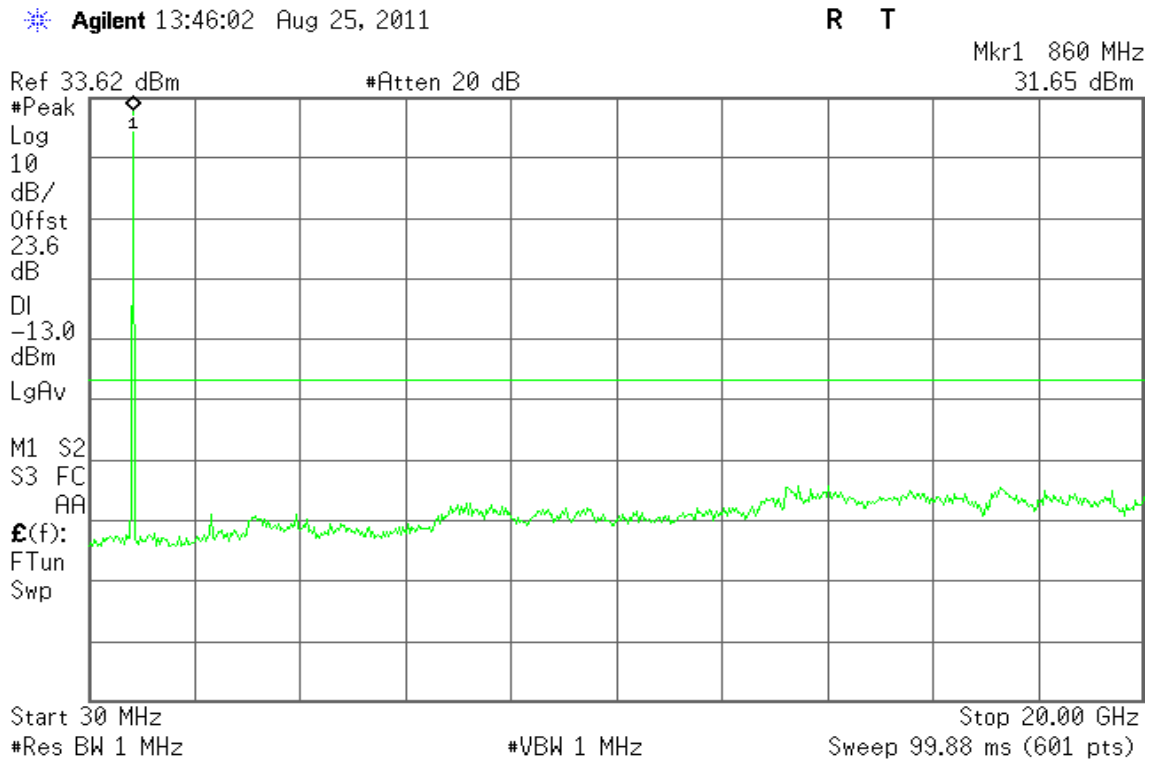




Figure 7-3: Out of Band emission at antenna terminals – GSM CH High



GPRS 850

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

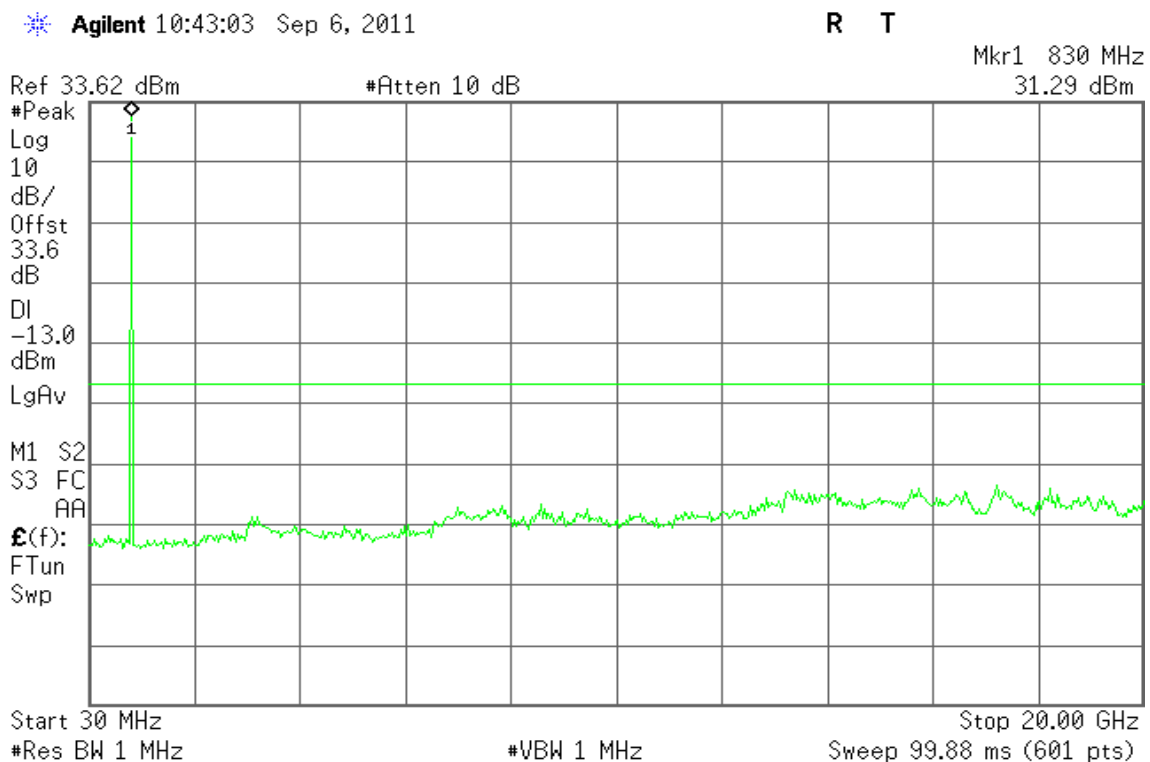




Figure 8-2: Out of Band emission at antenna terminals – GPRS CH Mid

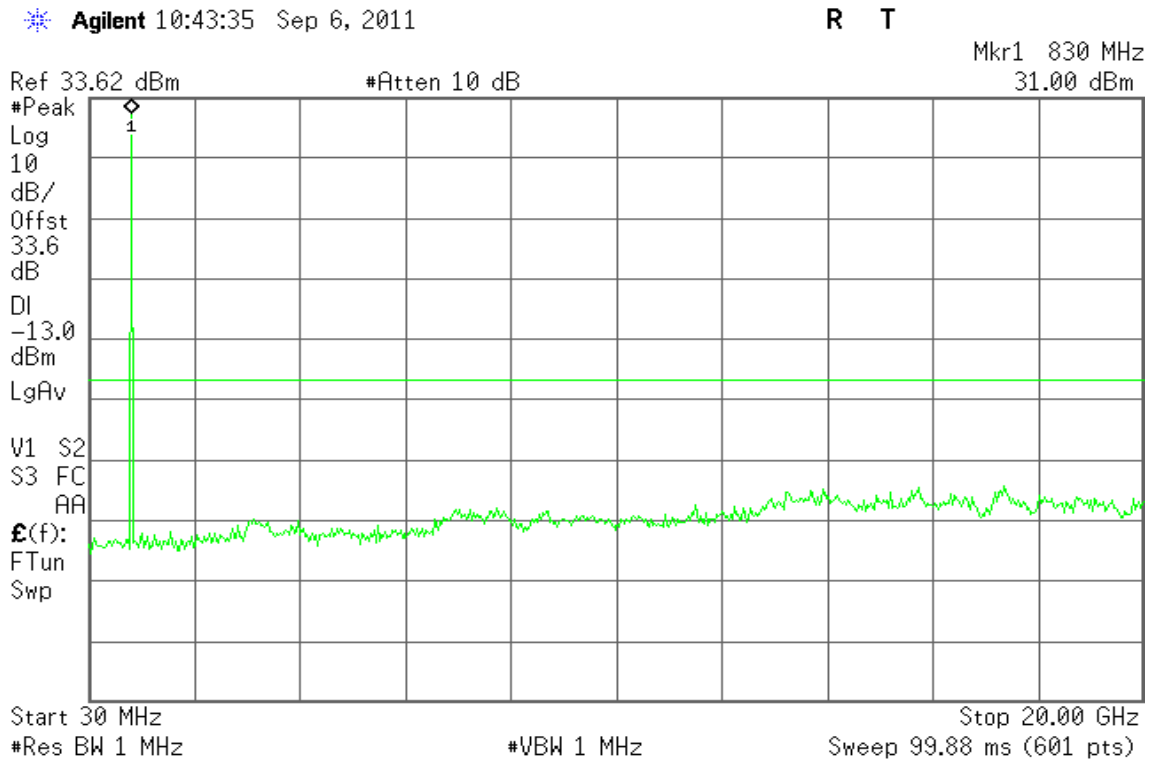
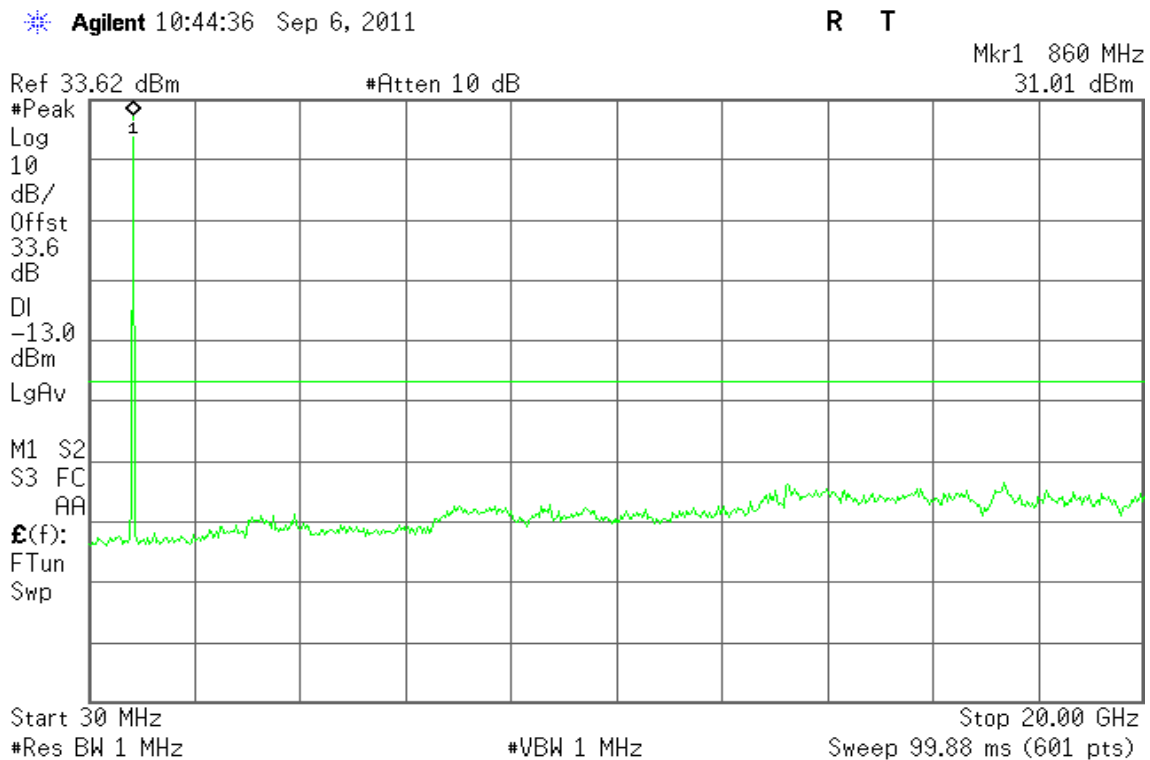


Figure 8-3: Out of Band emission at antenna terminals –GPRS CH High





GSM 1900

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

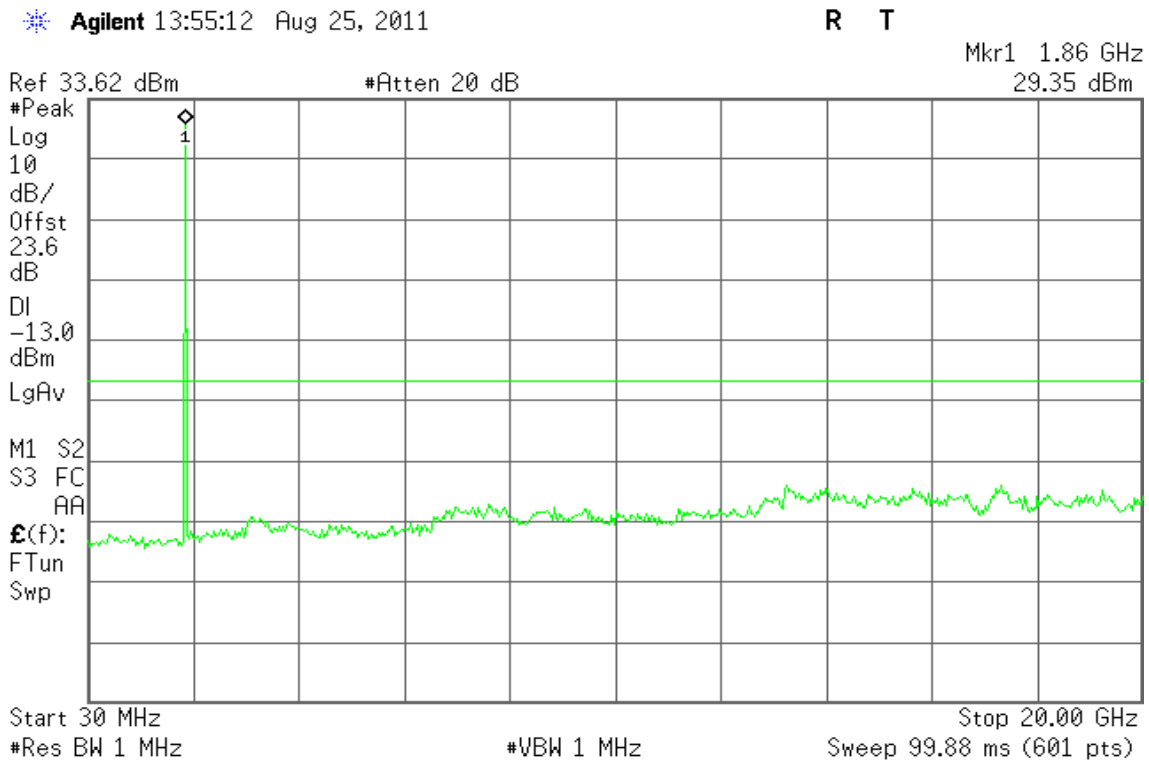


Figure 9-2: Out of Band emission at antenna terminals – GSM CH Mid

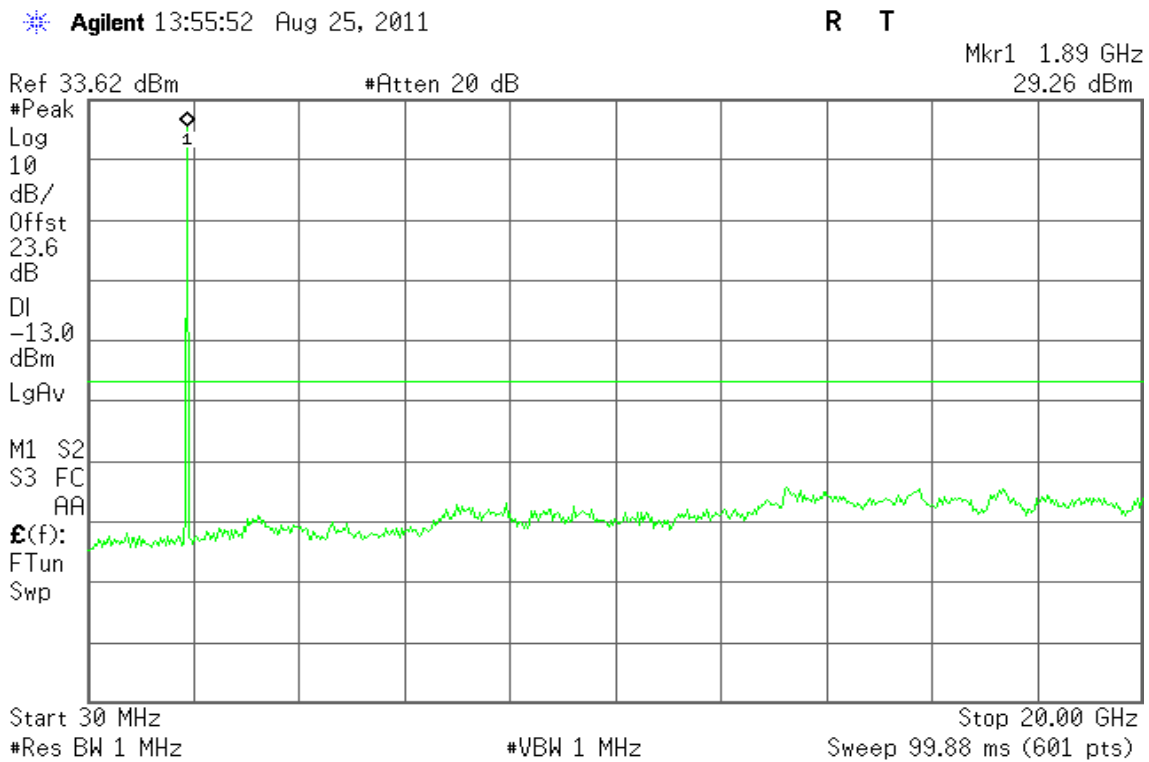
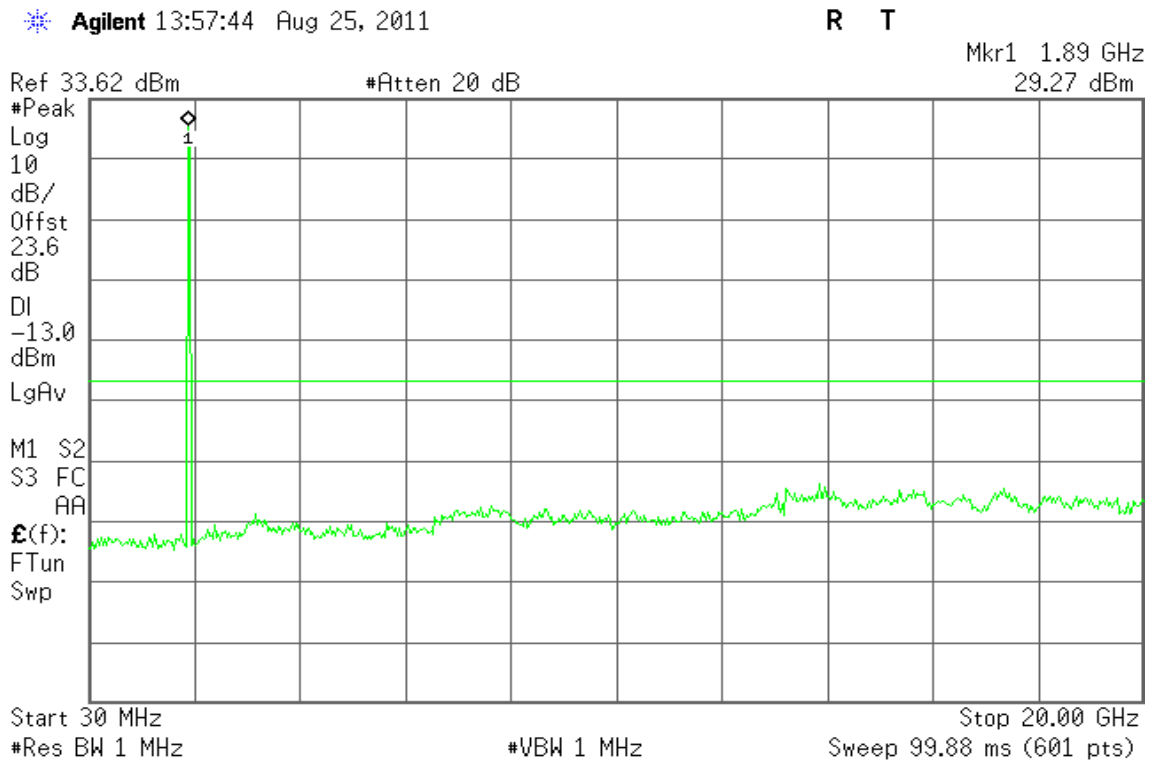




Figure 9-3: Out of Band emission at antenna terminals – GSM CH High



GPRS 1900

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

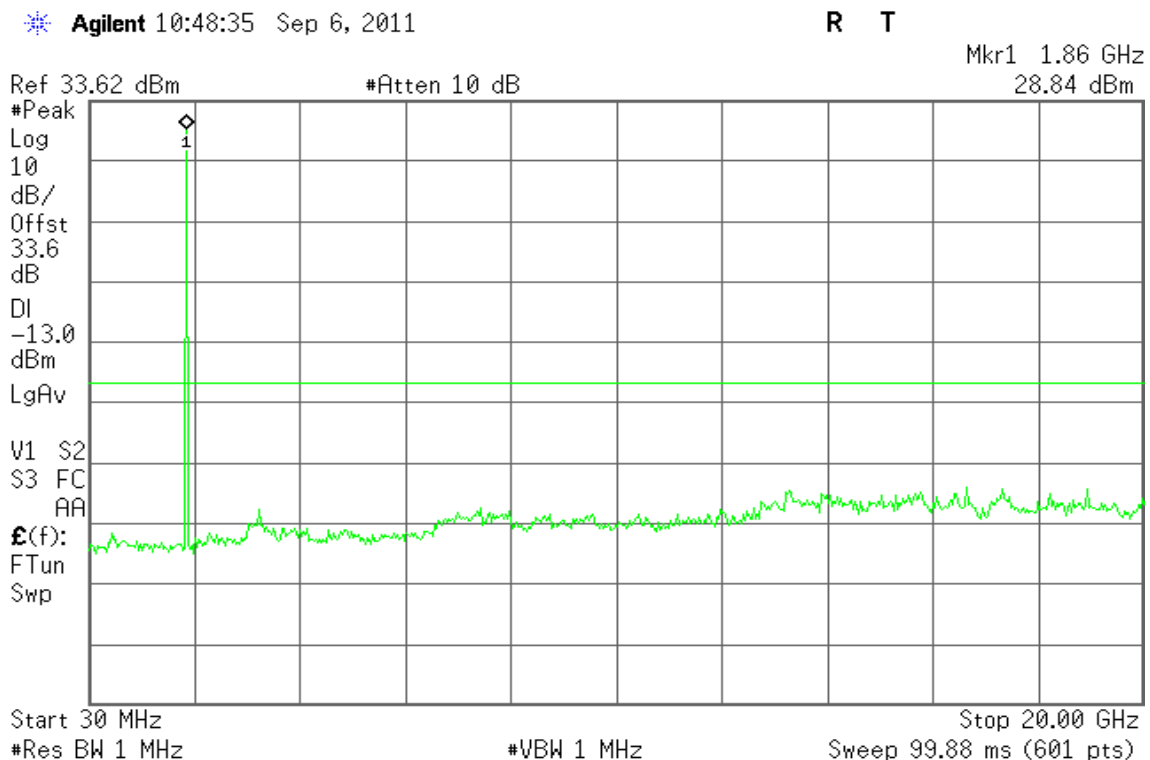




Figure 10-2: Out of Band emission at antenna terminals – GSM CH Mid

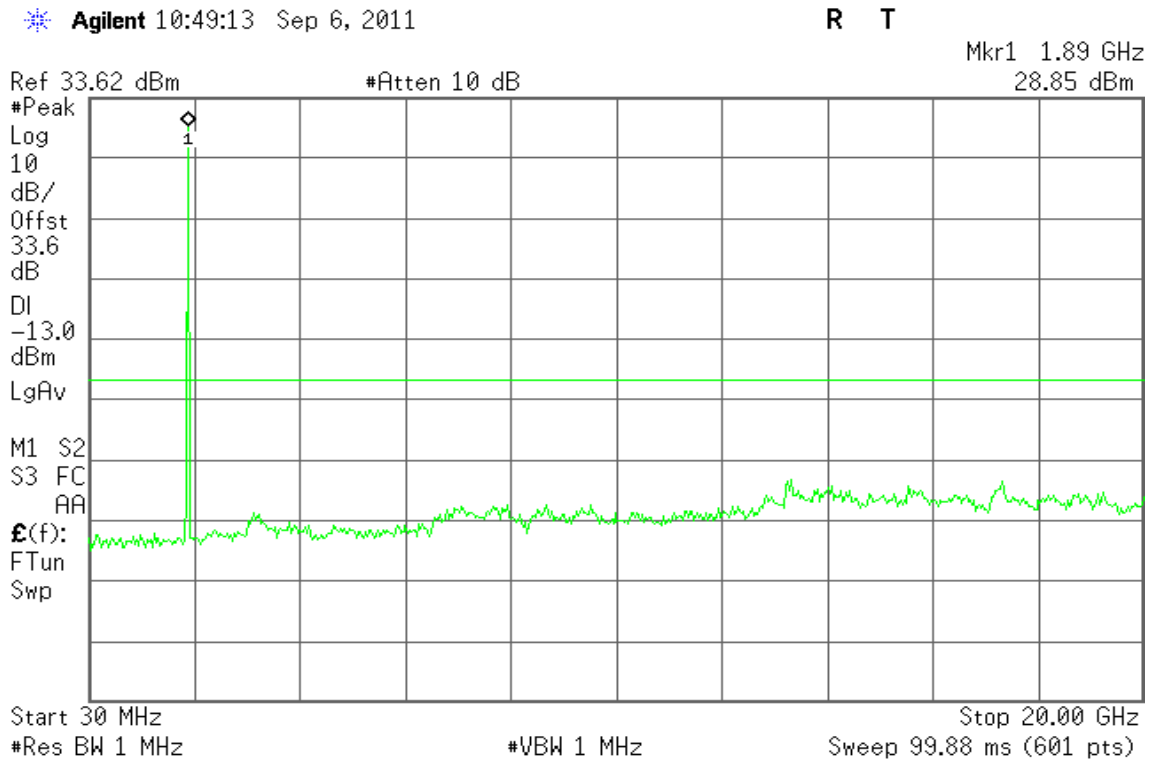
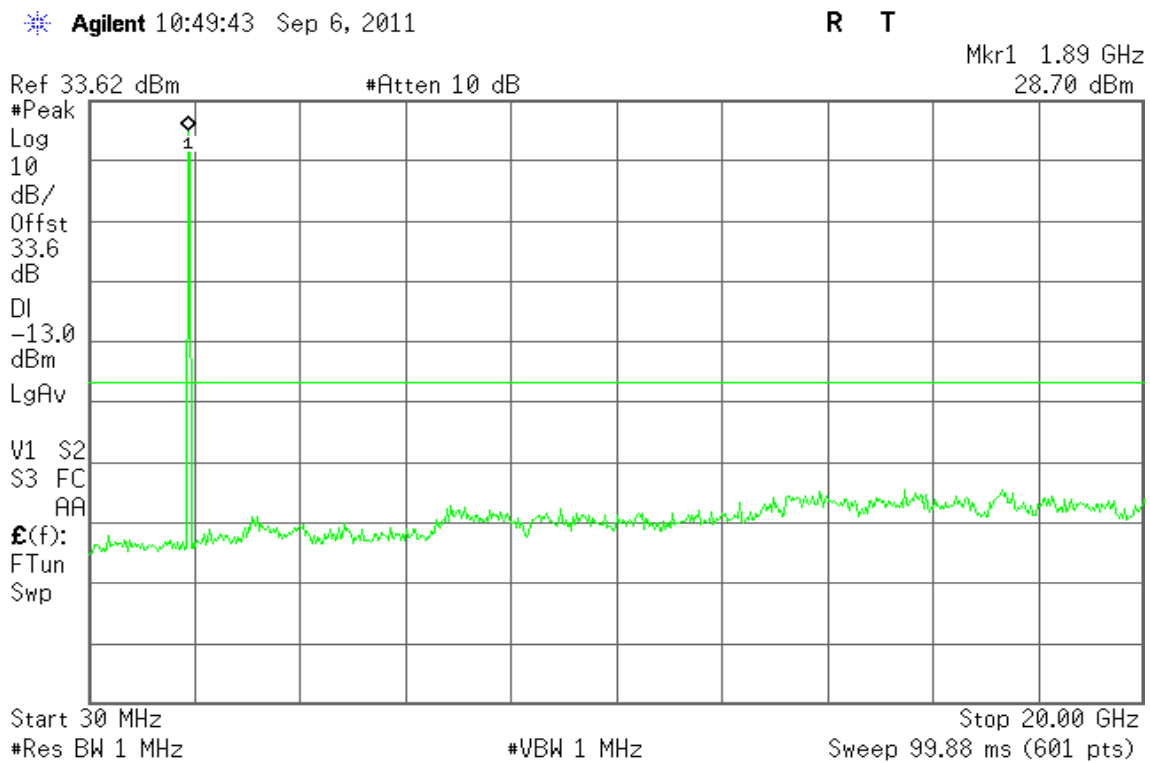


Figure 10-3: Out of Band emission at antenna terminals – GSM CH High





GSM 850

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

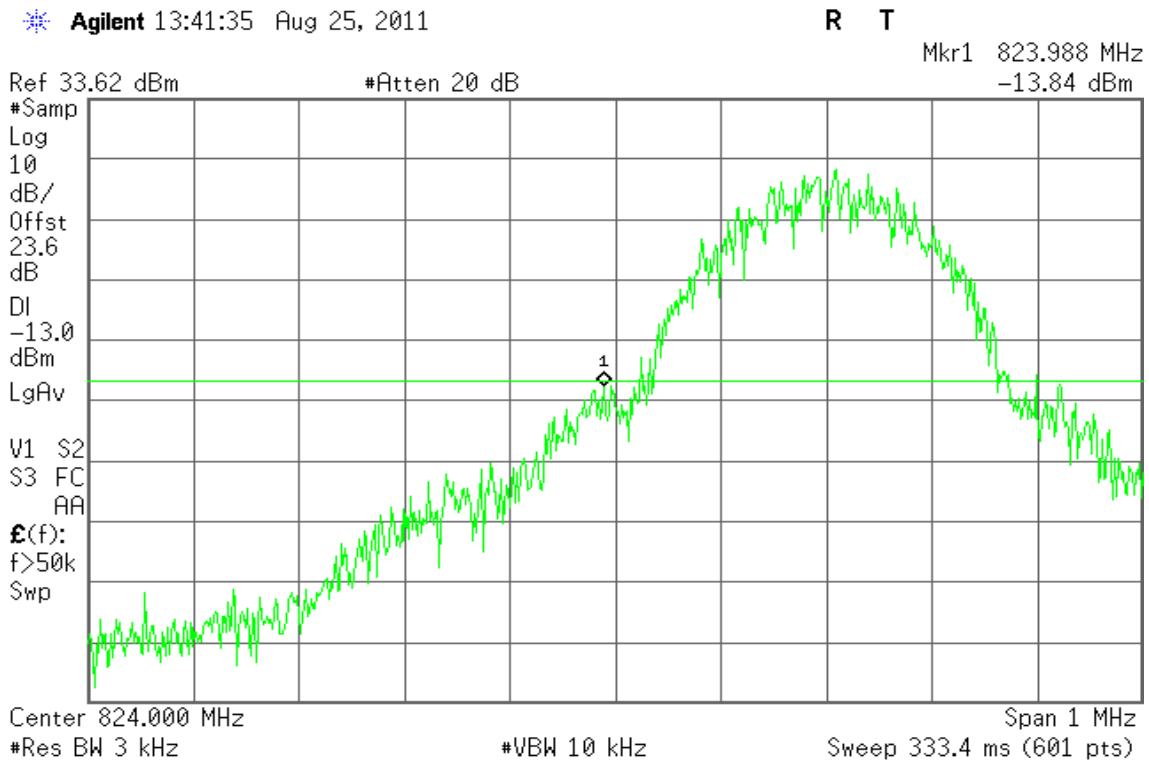
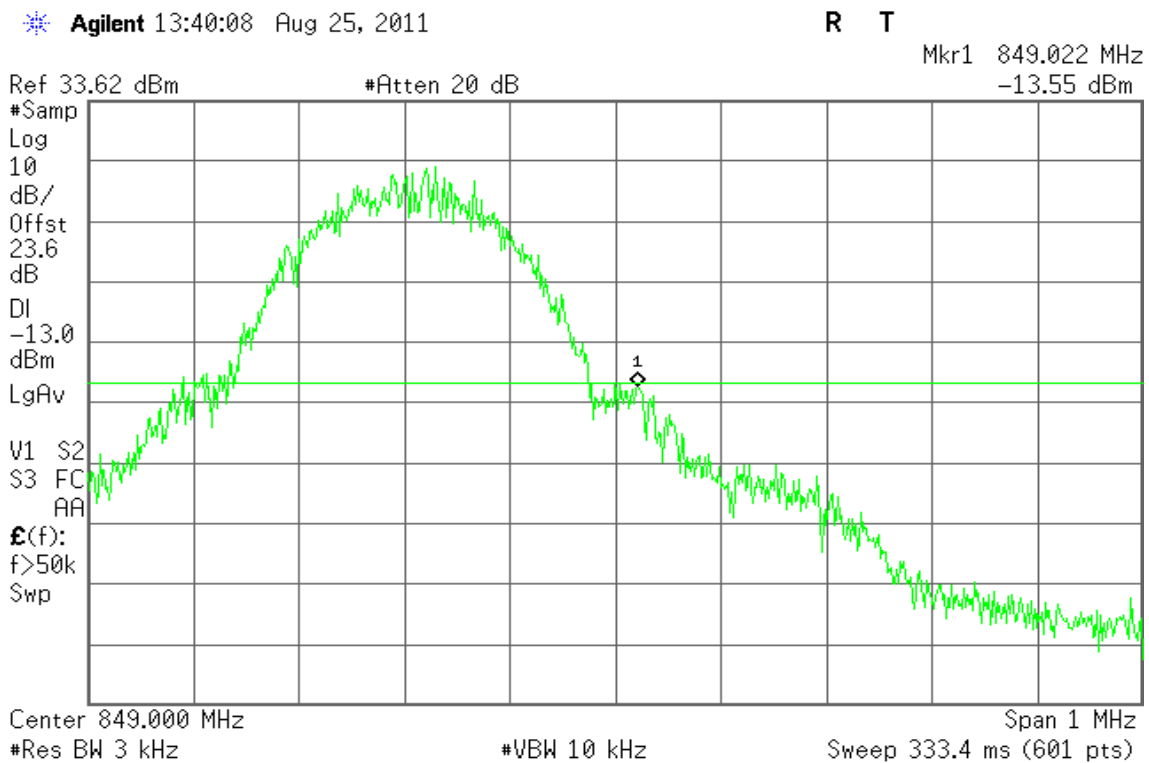


Figure 11-2: Band Edge emissions – GSM CH High





GPRS 850

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

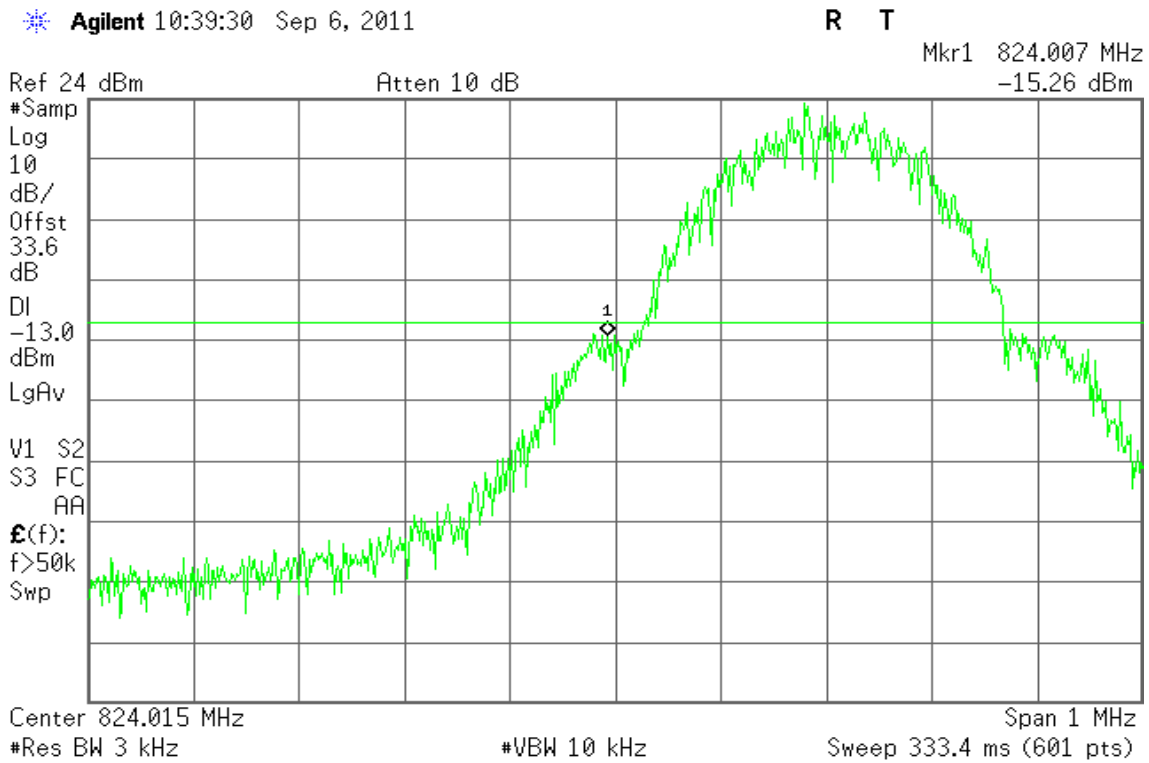
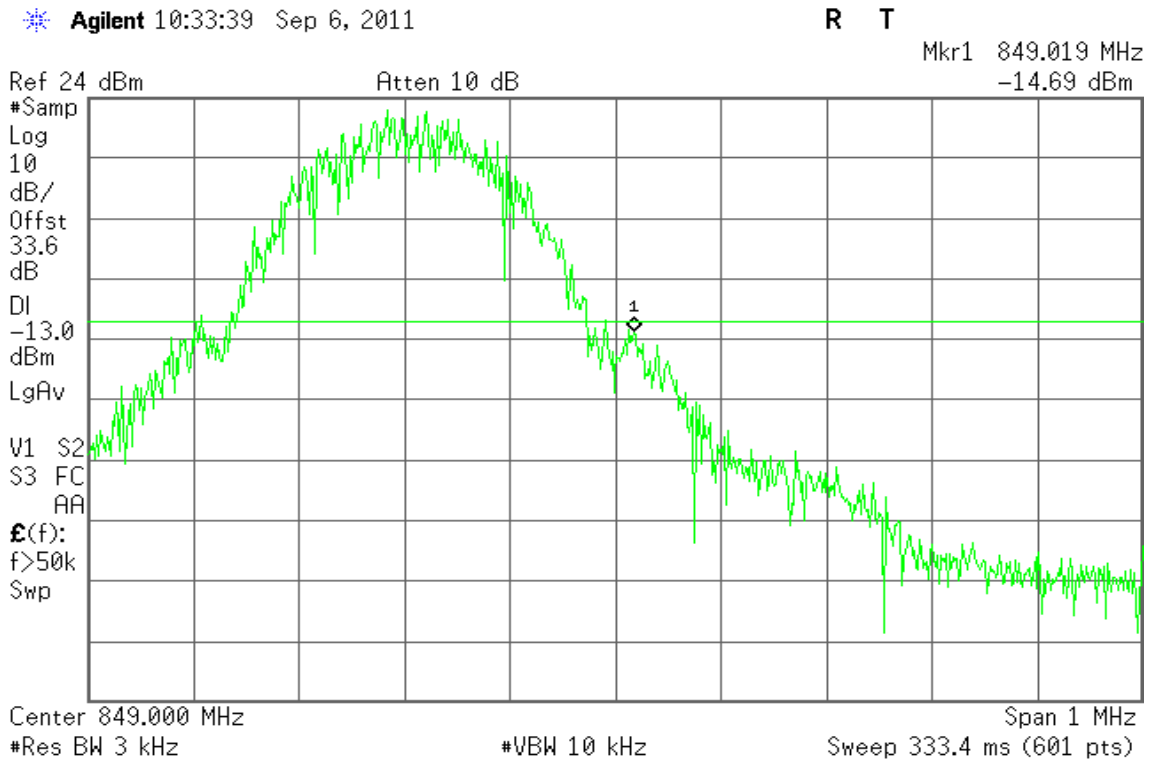


Figure 12-2: Band Edge emissions –GPRS CH High





GSM 1900

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

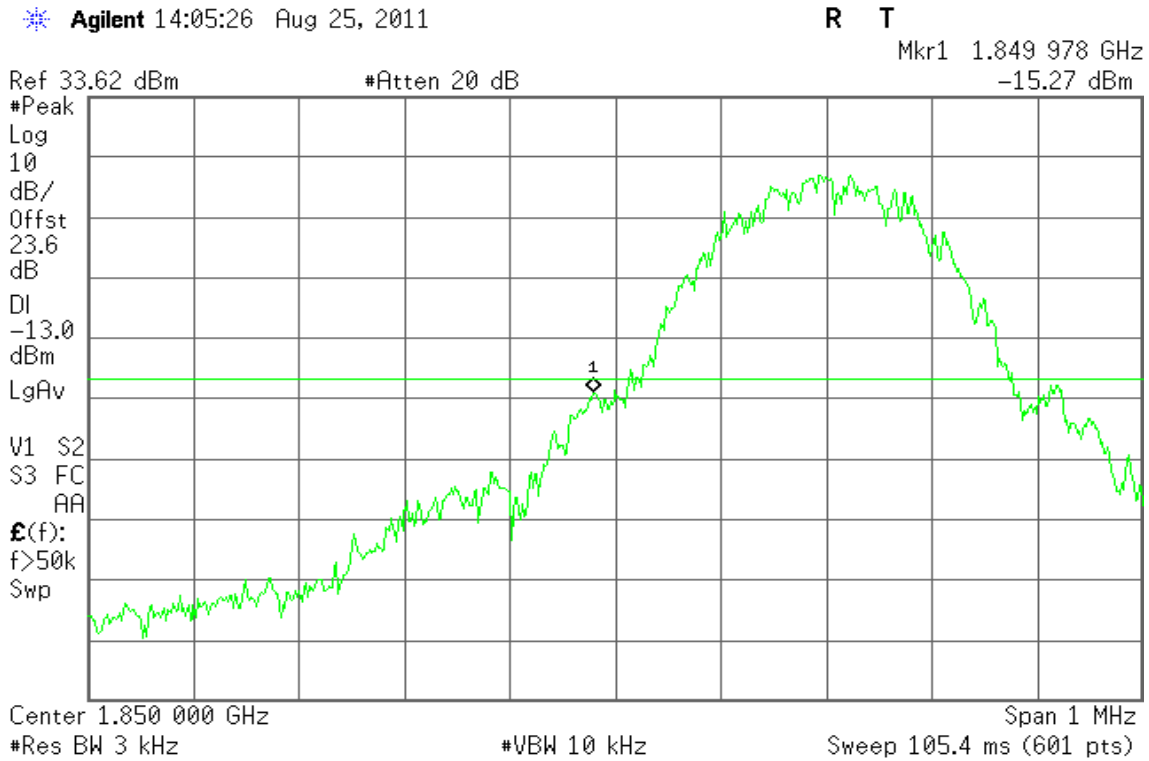
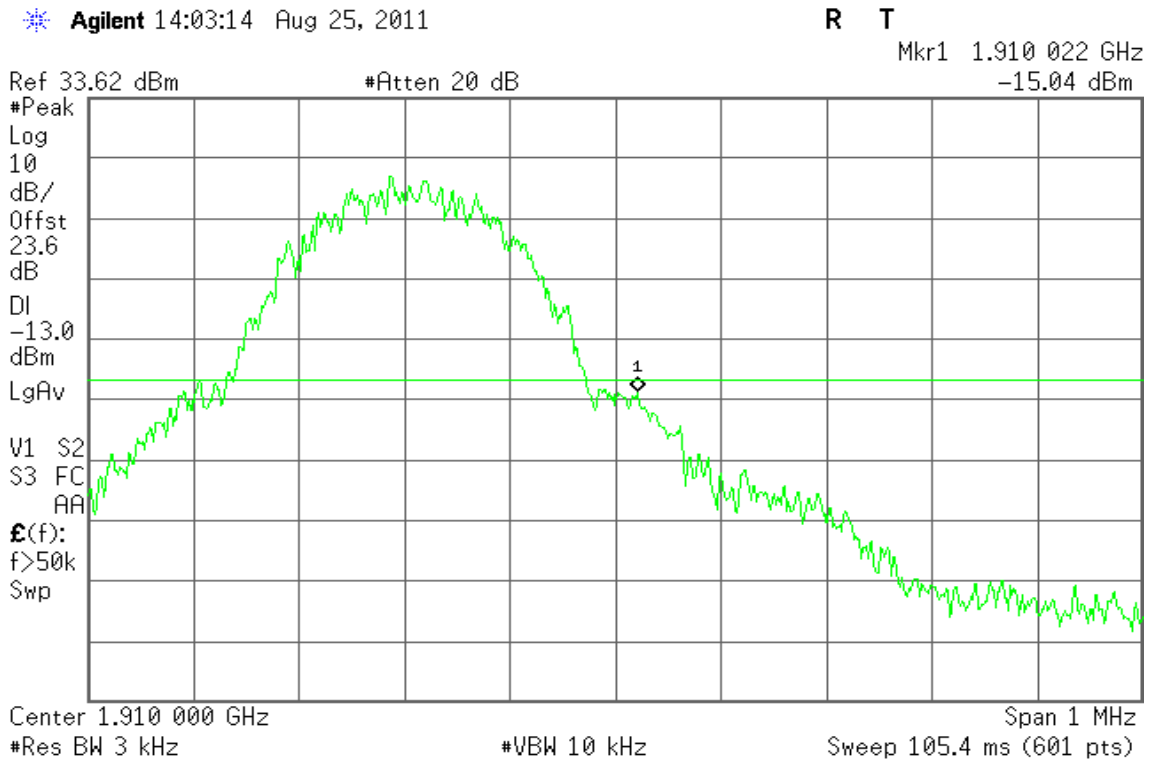


Figure 13-2: Band Edge emissions – GSM CH High





GPRS 1900

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

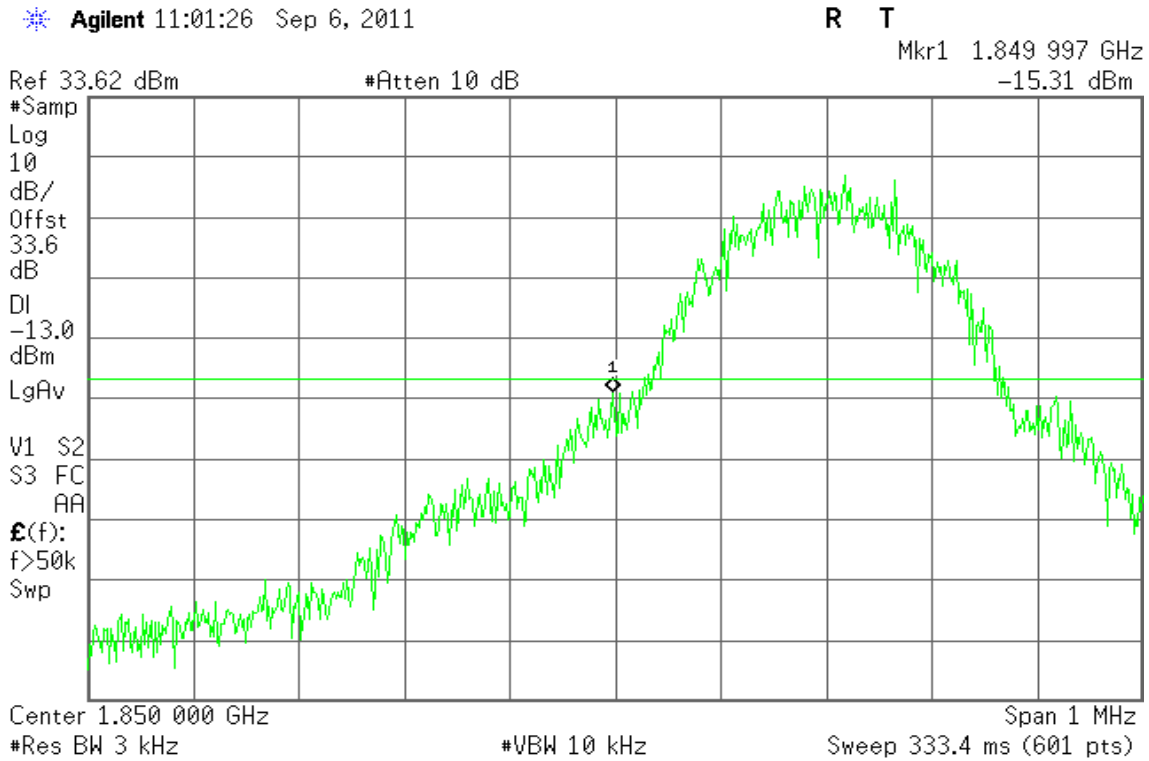
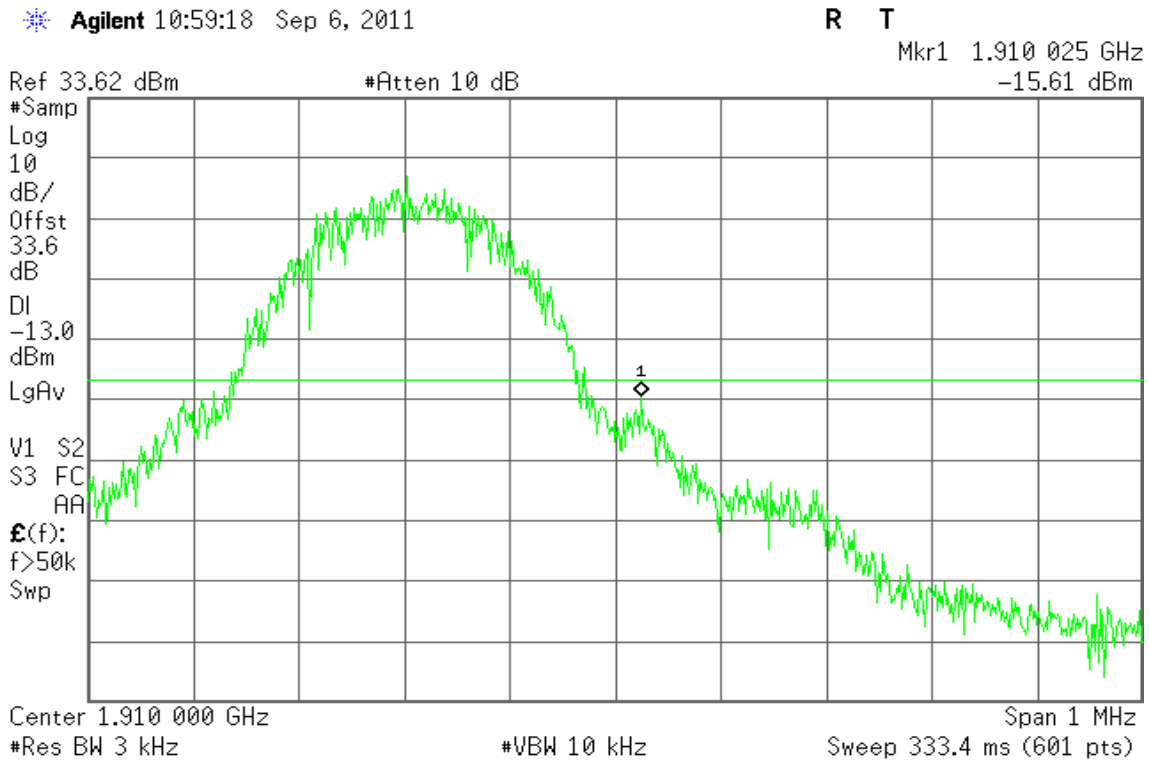


Figure 14-2: Band Edge emissions – GPRS CH High





EDGE 850

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

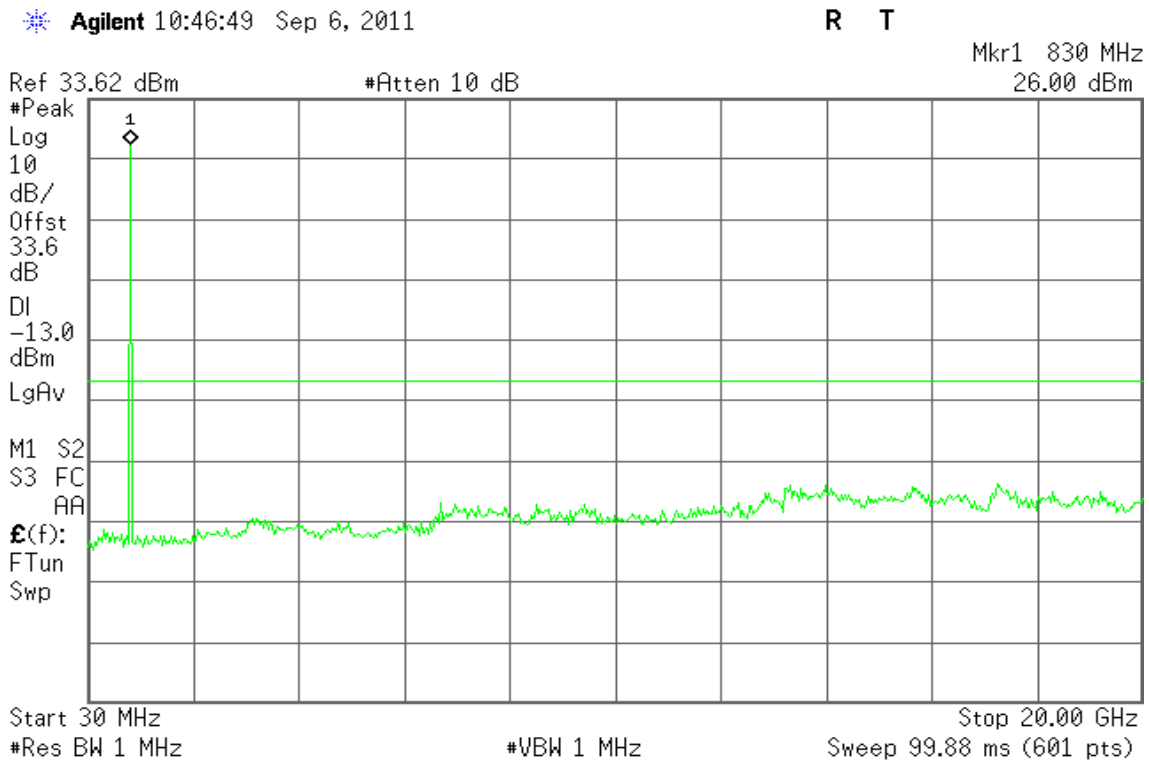


Figure 15-2: Out of Band emission at antenna terminals –EDGE CH Mid

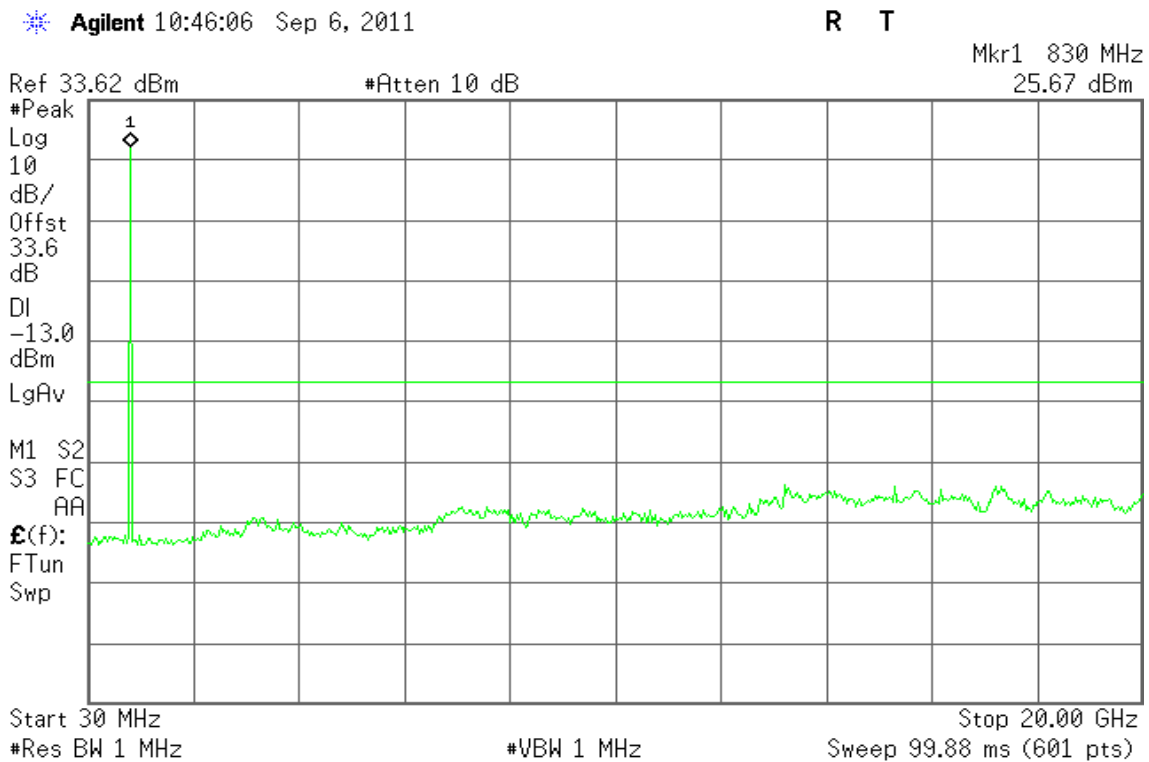
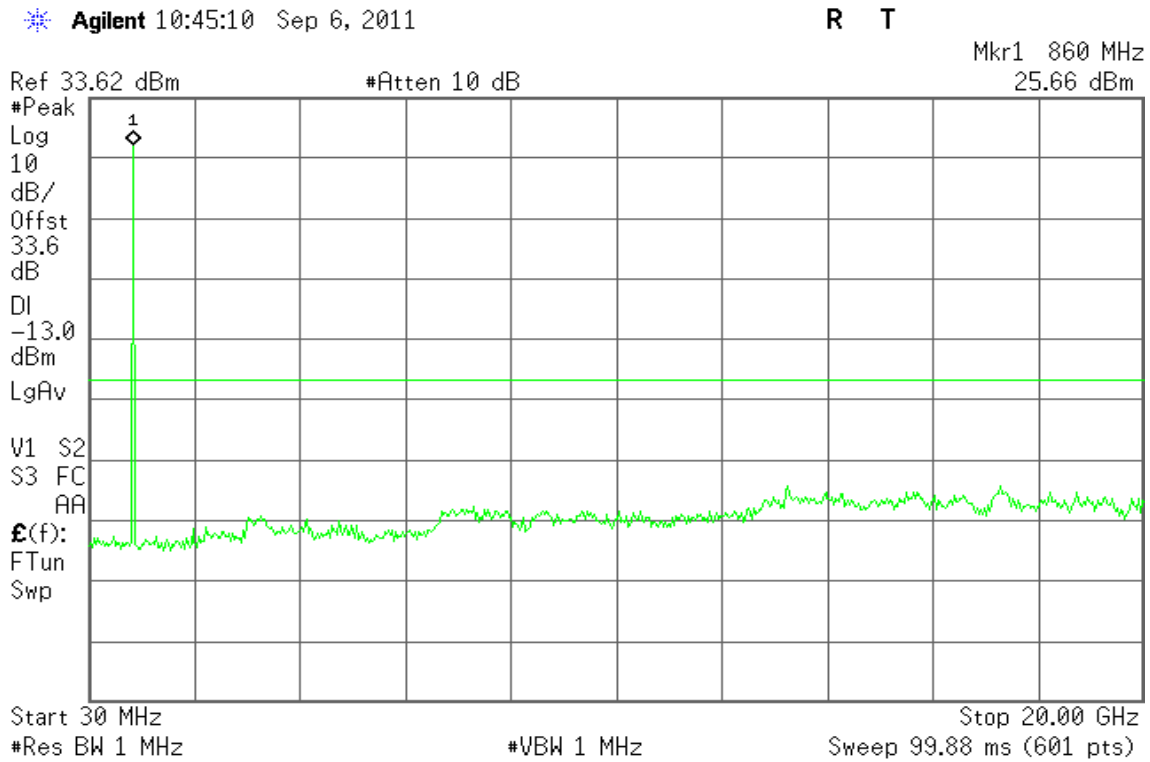




Figure 15-3: Out of Band emission at antenna terminals –EDGE CH High



EDGE 1900

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

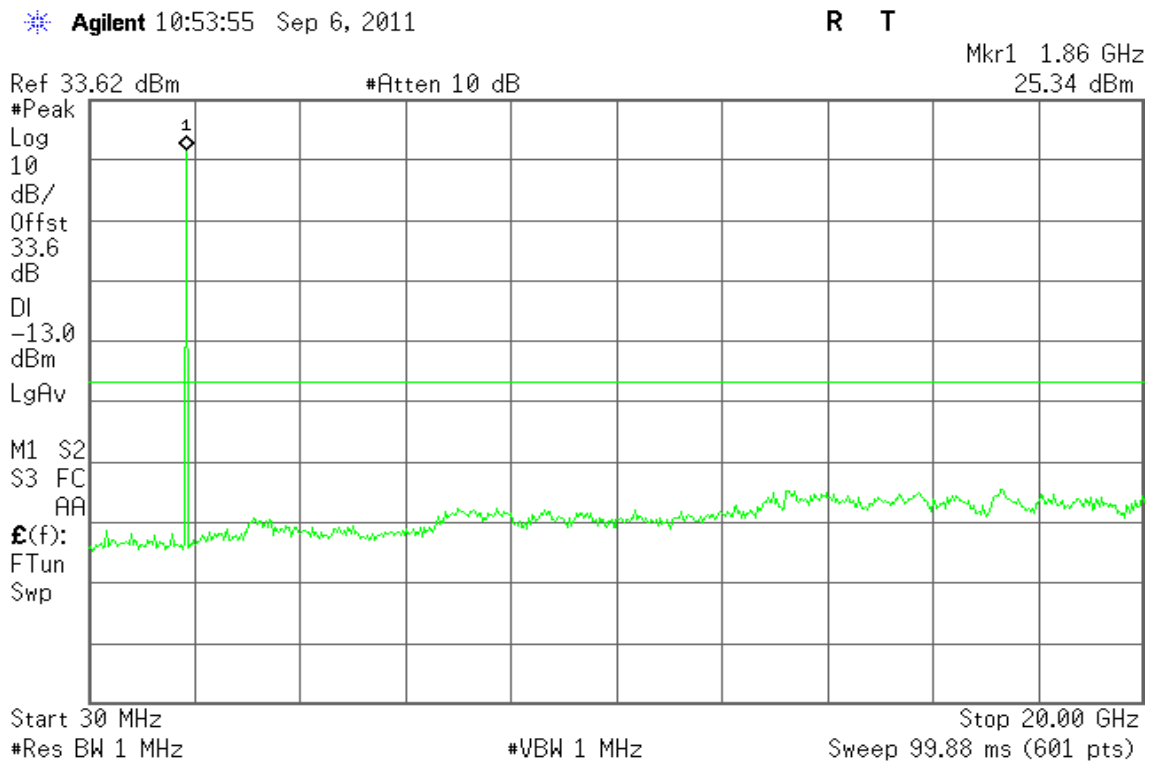




Figure 16-2: Out of Band emission at antenna terminals –EDGE CH Mid

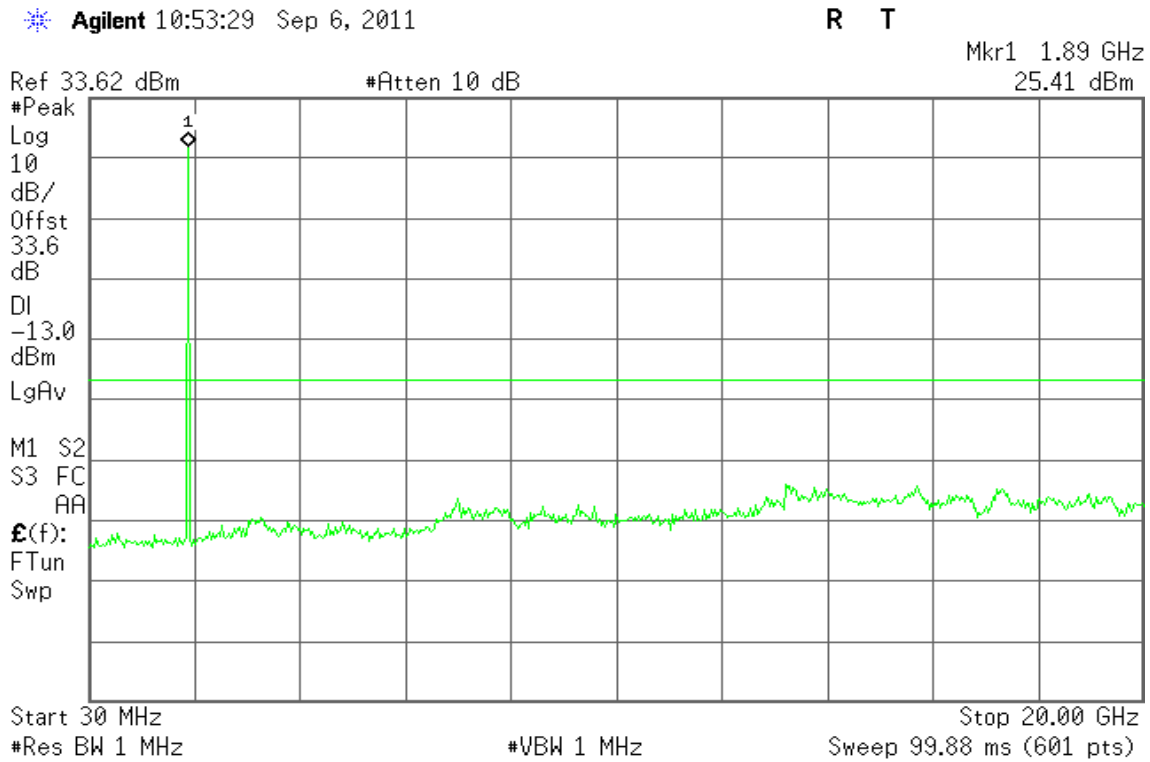
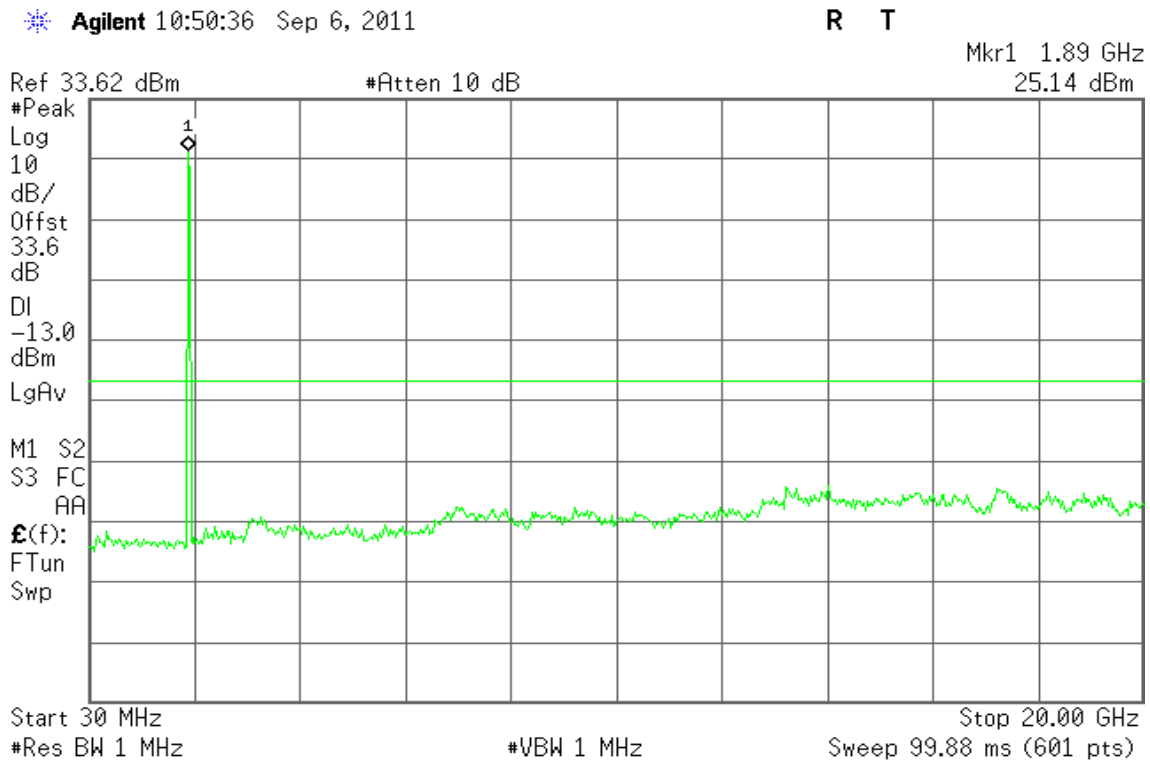


Figure 16-3: Out of Band emission at antenna terminals –EDGE CH High





EDGE 850

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

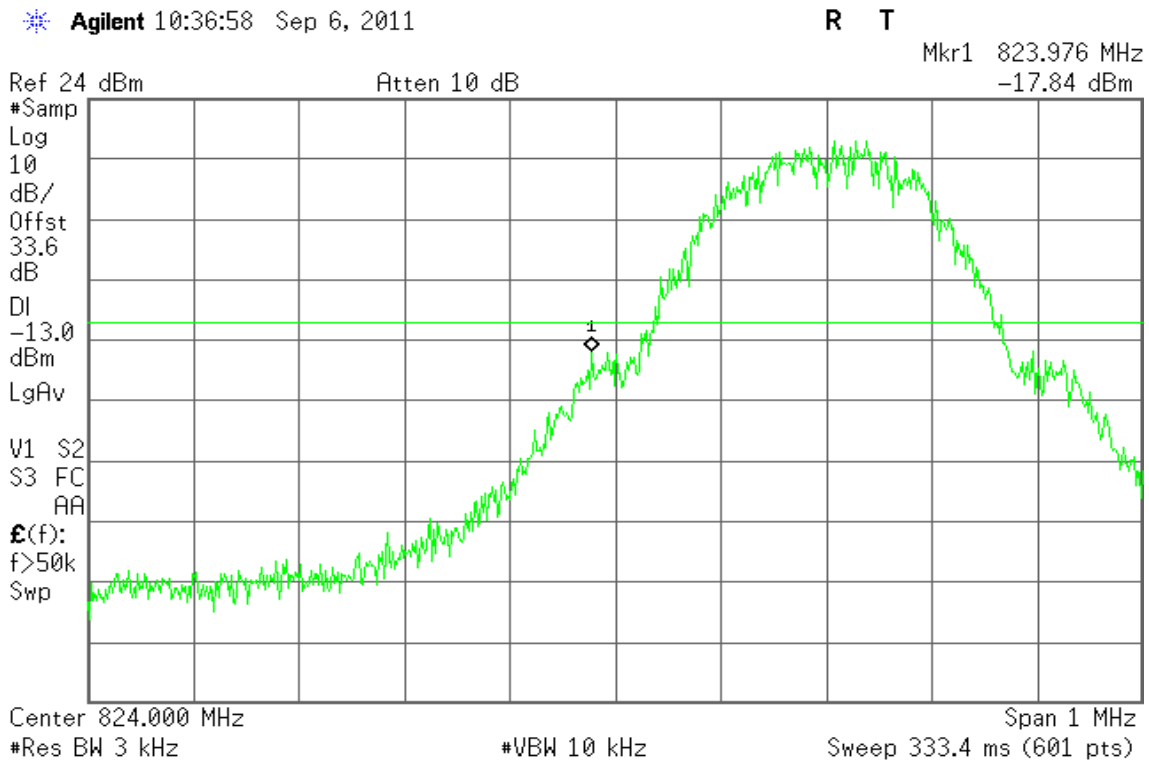
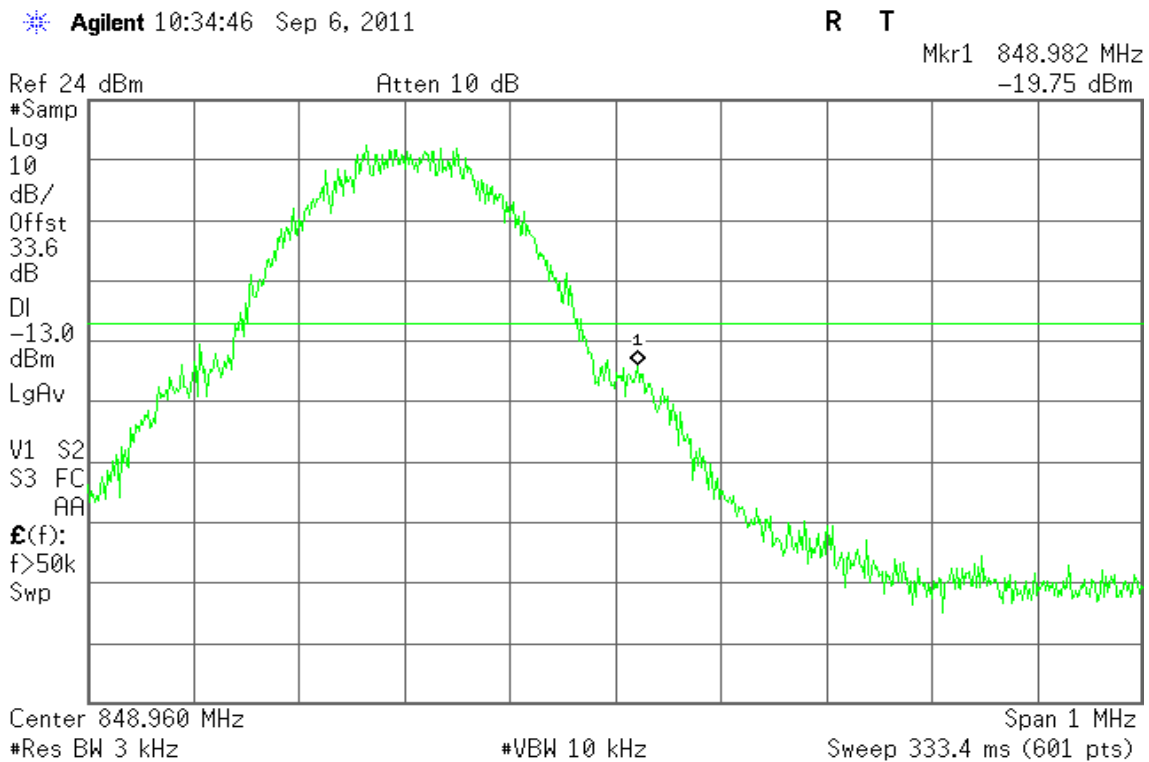


Figure 17-2: Band Edge emissions – EDGE CH High





EDGE 1900

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

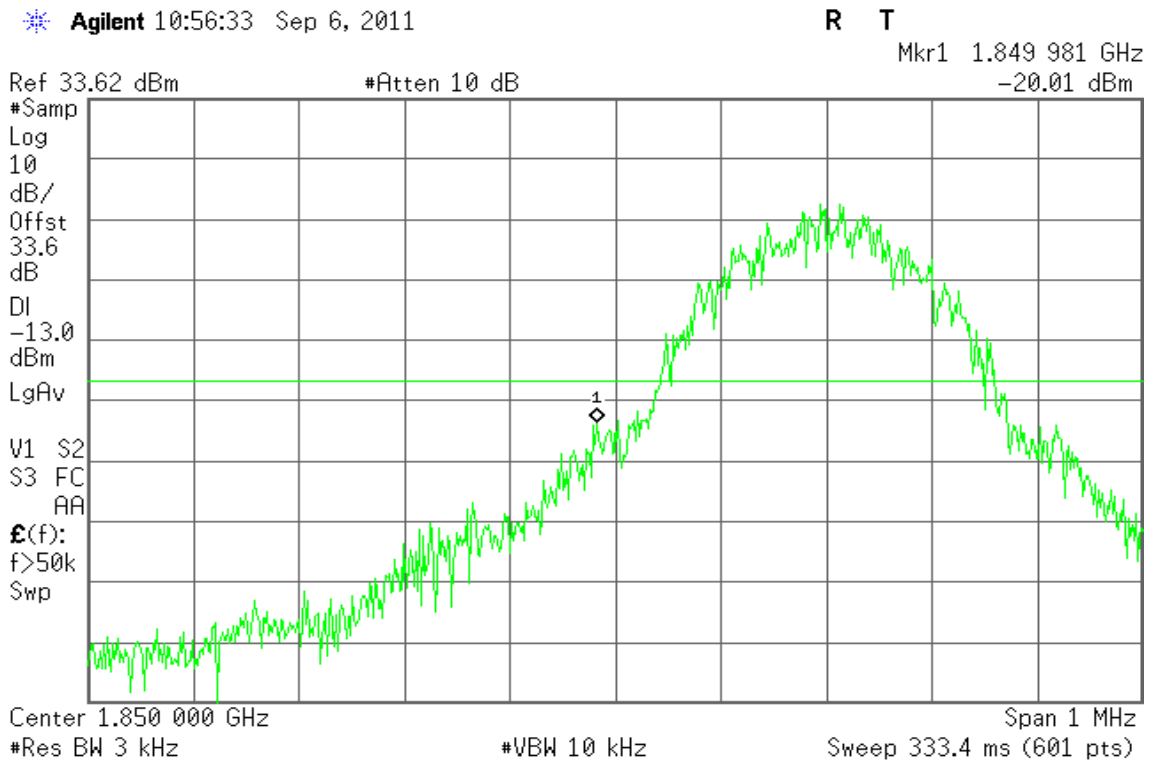
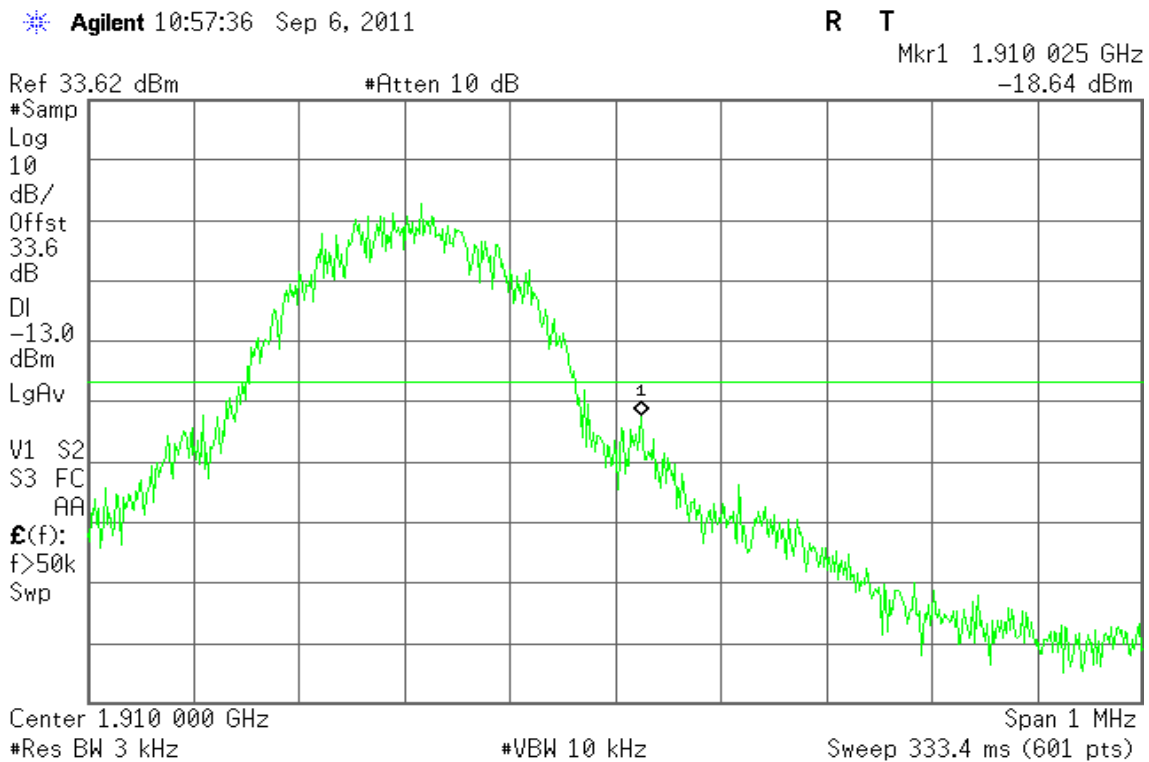


Figure 18-2: Band Edge emissions – EDGE CH High





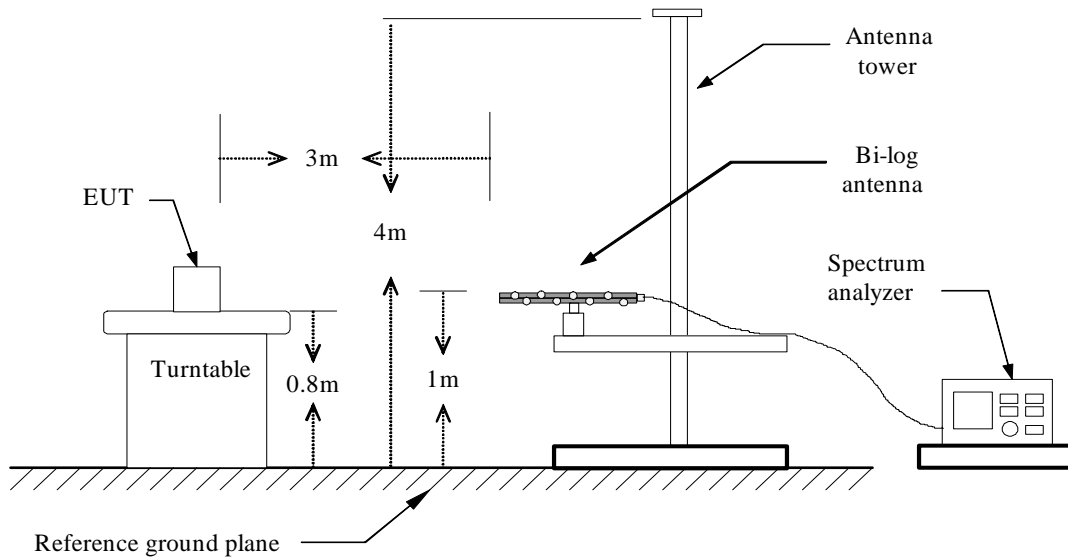
7.6 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

LIMIT

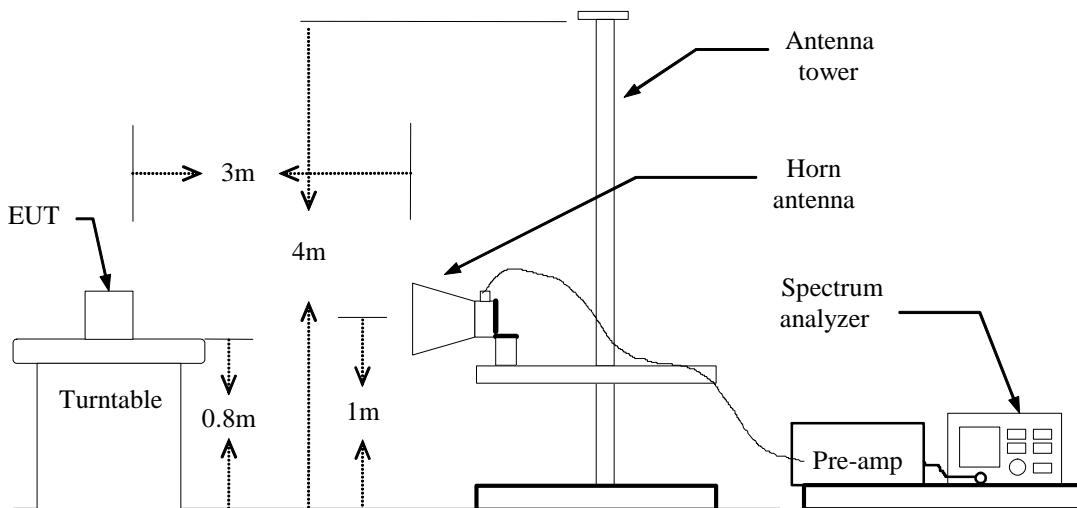
According to FCC §2.1053

Test Configuration

Below 1 GHz

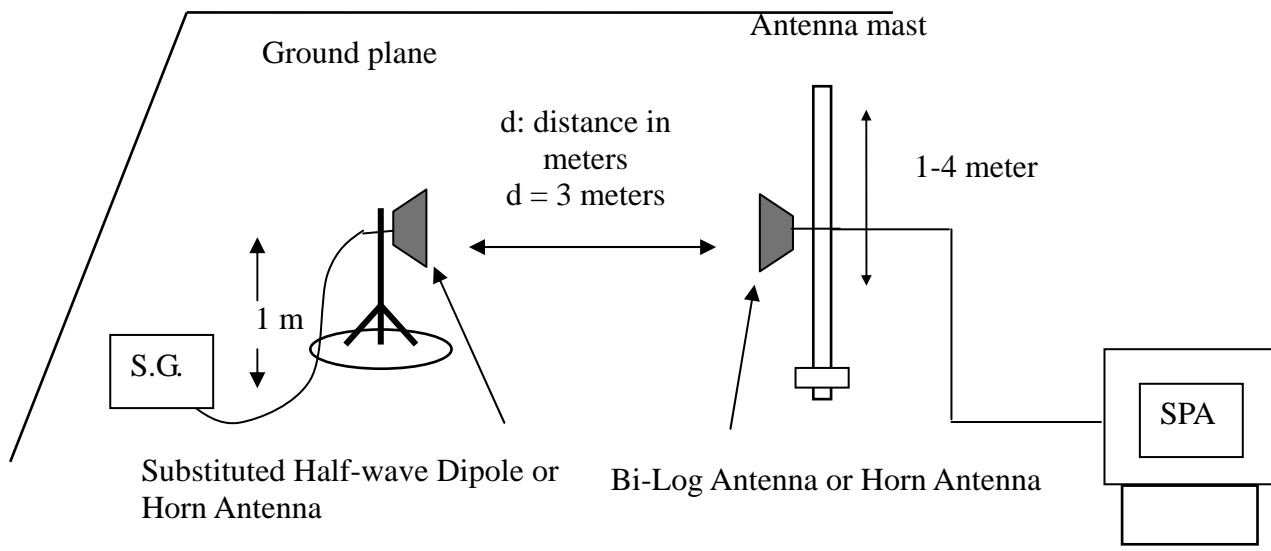


Above 1 GHz





Substituted Method Test Set-up



TEST PROCEDURE

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

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

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

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

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

TEST RESULTS

Refer to the attached tabular data sheets.

**Radiated Spurious Emission Measurement Result / Below 1GHz****Operation Mode:** GSM 850 / TX / CH 128**Test Date:** August 20, 2011**Temperature:** 26°C**Tested by:** Edward Lin**Humidity:** 50% RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
63.9500	-63.39	0.91	-2.02	-66.32	-13.00	-53.32	V
112.4500	-65.35	1.22	-1.8	-68.37	-13.00	-55.37	V
185.2000	-76.32	1.61	3.81	-74.12	-13.00	-61.12	V
267.6500	-79.11	1.96	5.22	-75.85	-13.00	-62.85	V
333.1250	-79.24	2.16	5.73	-75.67	-13.00	-62.67	V
786.6000	-82.04	3.32	6.18	-79.18	-13.00	-66.18	V
63.9500	-64.09	0.91	-2.02	-67.02	-13.00	-54.02	H
119.7250	-55.44	1.27	-2.09	-58.80	-13.00	-45.80	H
192.4750	-70.43	1.62	3.74	-68.31	-13.00	-55.31	H
287.0500	-75.99	2.01	5.37	-72.63	-13.00	-59.63	H
468.9250	-79.98	2.62	5.8	-76.80	-13.00	-63.80	H
725.9750	-78.54	3.17	6.44	-75.27	-13.00	-62.27	H

Remark:

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

**Operation Mode:** GSM 850 / TX / CH 190**Test Date:** August 20, 2011**Temperature:** 26°C**Tested by:** Edward Lin**Humidity:** 50% RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
63.9500	-65.49	0.91	-2.02	-68.42	-13.00	-55.42	V
136.7000	-71.86	1.38	-0.61	-73.85	-13.00	-60.85	V
185.2000	-78.98	1.61	3.81	-76.78	-13.00	-63.78	V
323.4250	-83.07	2.18	5.7	-79.55	-13.00	-66.55	V
563.5000	-84.59	2.85	6.02	-81.42	-13.00	-68.42	V
767.2000	-81.52	3.26	6.37	-78.41	-13.00	-65.41	V
83.3500	-64.39	1.07	0.28	-65.18	-13.00	-52.18	H
112.4500	-56.55	1.22	-1.8	-59.57	-13.00	-46.57	H
194.9000	-70.69	1.63	3.47	-68.85	-13.00	-55.85	H
321.0000	-75.99	2.18	5.7	-72.47	-13.00	-59.47	H
468.9250	-79.13	2.62	5.8	-75.95	-13.00	-62.95	H
772.0500	-78.6	3.28	6.32	-75.56	-13.00	-62.56	H

Remark:

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

**Operation Mode:** GSM 850 / TX / CH 251**Test Date:** August 20, 2011**Temperature:** 26°C**Tested by:** Edward Lin**Humidity:** 50% RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
83.3500	-63.21	1.07	0.28	-64.00	-13.00	-51.00	V
114.8750	-63.65	1.24	-1.9	-66.79	-13.00	-53.79	V
182.7750	-75.87	1.61	3.72	-73.76	-13.00	-60.76	V
330.7000	-79.02	2.16	5.71	-75.47	-13.00	-62.47	V
468.9250	-83.93	2.62	5.8	-80.75	-13.00	-67.75	V
633.8250	-82.95	2.99	6.18	-79.76	-13.00	-66.76	V
83.3500	-64.55	1.07	0.28	-65.34	-13.00	-52.34	H
112.4500	-56.61	1.22	-1.8	-59.63	-13.00	-46.63	H
194.9000	-70.25	1.63	3.47	-68.41	-13.00	-55.41	H
325.8500	-75.46	2.17	5.71	-71.92	-13.00	-58.92	H
468.9250	-77.87	2.62	5.8	-74.69	-13.00	-61.69	H
621.7000	-78.88	2.95	6.13	-75.70	-13.00	-62.70	H

Remark:

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

**Operation Mode:** GPRS 850 / TX / CH 128**Test Date:** August 20, 2011**Temperature:** 26°C**Tested by:** Edward Lin**Humidity:** 50% RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
66.3750	-63.43	0.93	-1.91	-66.27	-13.00	-53.27	V
112.4500	-64.58	1.22	-1.8	-67.60	-13.00	-54.60	V
209.4500	-76.65	1.68	5.45	-72.88	-13.00	-59.88	V
330.7000	-79.9	2.16	5.71	-76.35	-13.00	-63.35	V
614.4250	-83.18	2.94	6.21	-79.91	-13.00	-66.91	V
769.6250	-81.85	3.27	6.39	-78.73	-13.00	-65.73	V
83.3500	-65.45	1.07	0.28	-66.24	-13.00	-53.24	H
117.3000	-56.29	1.26	-1.99	-59.54	-13.00	-46.54	H
194.9000	-71.49	1.63	3.47	-69.65	-13.00	-56.65	H
284.6250	-75.15	2.01	5.35	-71.81	-13.00	-58.81	H
468.9250	-79.5	2.62	5.8	-76.32	-13.00	-63.32	H
636.2500	-79.66	3	6.16	-76.50	-13.00	-63.50	H

Remark:

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



Operation Mode: GPRS 850 / TX / CH 190

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
83.3500	-64.88	1.07	0.28	-65.67	-13.00	-52.67	V
112.4500	-64.78	1.22	-1.8	-67.80	-13.00	-54.80	V
182.7750	-76.67	1.61	3.72	-74.56	-13.00	-61.56	V
323.4250	-79.14	2.18	5.7	-75.62	-13.00	-62.62	V
427.7000	-84.83	2.48	5.8	-81.51	-13.00	-68.51	V
670.2000	-83.31	3.07	6.3	-80.08	-13.00	-67.08	V
83.3500	-64.71	1.07	0.28	-65.50	-13.00	-52.50	H
112.4500	-56.3	1.22	-1.8	-59.32	-13.00	-46.32	H
194.9000	-68.76	1.63	3.47	-66.92	-13.00	-53.92	H
219.1500	-74.66	1.76	5.32	-71.10	-13.00	-58.10	H
337.9750	-76.92	2.17	5.78	-73.31	-13.00	-60.31	H
468.9250	-78.3	2.62	5.8	-75.12	-13.00	-62.12	H

Remark:

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



Operation Mode: GPRS 850 / TX / CH 251

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
83.3500	-64.74	1.07	0.28	-65.53	-13.00	-52.53	V
114.8750	-64.63	1.24	-1.9	-67.77	-13.00	-54.77	V
182.7750	-76.92	1.61	3.72	-74.81	-13.00	-61.81	V
321.0000	-78.33	2.18	5.7	-74.81	-13.00	-61.81	V
427.7000	-84.38	2.48	5.8	-81.06	-13.00	-68.06	V
626.5500	-83.72	2.96	6.16	-80.52	-13.00	-67.52	V
83.3500	-65.24	1.07	0.28	-66.03	-13.00	-53.03	H
117.3000	-56.95	1.26	-1.99	-60.20	-13.00	-47.20	H
192.4750	-69.83	1.62	3.74	-67.71	-13.00	-54.71	H
291.9000	-76.35	2.04	5.44	-72.95	-13.00	-59.95	H
468.9250	-79.03	2.62	5.8	-75.85	-13.00	-62.85	H
633.8250	-79.17	2.99	6.18	-75.98	-13.00	-62.98	H

Remark:

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



Operation Mode: GSM 1900 / TX / CH 512

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
63.9500	-62.99	0.91	-2.02	-65.92	-13.00	-52.92	V
112.4500	-64.45	1.22	-1.8	-67.47	-13.00	-54.47	V
185.2000	-76.37	1.61	3.81	-74.17	-13.00	-61.17	V
321.0000	-78.84	2.18	5.7	-75.32	-13.00	-62.32	V
427.7000	-83.4	2.48	5.8	-80.08	-13.00	-67.08	V
624.1250	-82.74	2.96	6.15	-79.55	-13.00	-66.55	V
80.9250	-65.12	1.05	-0.01	-66.18	-13.00	-53.18	H
119.7250	-56.21	1.27	-2.09	-59.57	-13.00	-46.57	H
192.4750	-71.69	1.62	3.74	-69.57	-13.00	-56.57	H
333.1250	-76.88	2.16	5.73	-73.31	-13.00	-60.31	H
403.4500	-78.96	2.41	5.96	-75.41	-13.00	-62.41	H
551.3750	-80.05	2.81	6.17	-76.69	-13.00	-63.69	H

Remark:

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

**Operation Mode:** GSM 1900 / TX / CH 661**Test Date:** August 20, 2011**Temperature:** 26°C**Tested by:** Edward Lin**Humidity:** 50% RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
80.9250	-64.88	1.05	-0.01	-65.94	-13.00	-52.94	V
112.4500	-65.61	1.22	-1.8	-68.63	-13.00	-55.63	V
185.2000	-77.64	1.61	3.81	-75.44	-13.00	-62.44	V
321.0000	-78.52	2.18	5.7	-75.00	-13.00	-62.00	V
427.7000	-82.88	2.48	5.8	-79.56	-13.00	-66.56	V
641.1000	-82.63	3.01	6.12	-79.52	-13.00	-66.52	V
83.3500	-66.98	1.07	0.28	-67.77	-13.00	-54.77	H
117.3000	-58.28	1.26	-1.99	-61.53	-13.00	-48.53	H
194.9000	-70.34	1.63	3.47	-68.50	-13.00	-55.50	H
335.5500	-77.08	2.17	5.75	-73.50	-13.00	-60.50	H
454.3750	-80.92	2.59	5.79	-77.72	-13.00	-64.72	H
575.6250	-79.85	2.88	6.05	-76.68	-13.00	-63.68	H

Remark:

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



Operation Mode: GSM 1900 / TX / CH 810

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
83.3500	-65.99	1.07	0.28	-66.78	-13.00	-53.78	V
112.4500	-66.26	1.22	-1.8	-69.28	-13.00	-56.28	V
182.7750	-77.19	1.61	3.72	-75.08	-13.00	-62.08	V
323.4250	-78.94	2.18	5.7	-75.42	-13.00	-62.42	V
415.5750	-81.9	2.45	5.85	-78.50	-13.00	-65.50	V
624.1250	-81.91	2.96	6.15	-78.72	-13.00	-65.72	V
83.3500	-67.67	1.07	0.28	-68.46	-13.00	-55.46	H
119.7250	-58.75	1.27	-2.09	-62.11	-13.00	-49.11	H
192.4750	-71.79	1.62	3.74	-69.67	-13.00	-56.67	H
333.1250	-77.01	2.16	5.73	-73.44	-13.00	-60.44	H
403.4500	-79.39	2.41	5.96	-75.84	-13.00	-62.84	H
793.8750	-77.65	3.33	6.34	-74.64	-13.00	-61.64	H

Remark:

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



Operation Mode: GPRS 1900 / TX / CH 512

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
61.5250	-64.4	0.89	-2.12	-67.41	-13.00	-54.41	V
112.4500	-65.2	1.22	-1.8	-68.22	-13.00	-55.22	V
190.0500	-77.99	1.62	4	-75.61	-13.00	-62.61	V
321.0000	-79.07	2.18	5.7	-75.55	-13.00	-62.55	V
415.5750	-81.31	2.45	5.85	-77.91	-13.00	-64.91	V
624.1250	-82.84	2.96	6.15	-79.65	-13.00	-66.65	V
83.3500	-65.85	1.07	0.28	-66.64	-13.00	-53.64	H
117.3000	-57.54	1.26	-1.99	-60.79	-13.00	-47.79	H
194.9000	-71.54	1.63	3.47	-69.70	-13.00	-56.70	H
330.7000	-76.38	2.16	5.71	-72.83	-13.00	-59.83	H
401.0250	-80.39	2.4	5.98	-76.81	-13.00	-63.81	H
624.1250	-78.77	2.96	6.15	-75.58	-13.00	-62.58	H

Remark:

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



Operation Mode: GPRS 1900 / TX / CH 661

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
63.9500	-63.65	0.91	-2.02	-66.58	-13.00	-53.58	V
114.8750	-65.9	1.24	-1.9	-69.04	-13.00	-56.04	V
185.2000	-78.64	1.61	3.81	-76.44	-13.00	-63.44	V
328.2750	-79.46	2.17	5.71	-75.92	-13.00	-62.92	V
454.3750	-83.58	2.59	5.79	-80.38	-13.00	-67.38	V
658.0750	-83.01	3.05	6.3	-79.76	-13.00	-66.76	V
83.3500	-65.97	1.07	0.28	-66.76	-13.00	-53.76	H
114.8750	-58.71	1.24	-1.9	-61.85	-13.00	-48.85	H
194.9000	-70.79	1.63	3.47	-68.95	-13.00	-55.95	H
325.8500	-76.79	2.17	5.71	-73.25	-13.00	-60.25	H
454.3750	-80.12	2.59	5.79	-76.92	-13.00	-63.92	H
636.2500	-79.1	3	6.16	-75.94	-13.00	-62.94	H

Remark:

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



Operation Mode: GPRS 1900 / TX / CH 810

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
63.9500	-62.87	0.91	-2.02	-65.80	-13.00	-52.80	V
83.3500	-66.28	1.07	0.28	-67.07	-13.00	-54.07	V
117.3000	-65.41	1.26	-1.99	-68.66	-13.00	-55.66	V
185.2000	-78.18	1.61	3.81	-75.98	-13.00	-62.98	V
323.4250	-79.59	2.18	5.7	-76.07	-13.00	-63.07	V
624.1250	-82.99	2.96	6.15	-79.80	-13.00	-66.80	V
63.9500	-64.92	0.91	-2.02	-67.85	-13.00	-54.85	H
117.3000	-57.38	1.26	-1.99	-60.63	-13.00	-47.63	H
192.4750	-70.13	1.62	3.74	-68.01	-13.00	-55.01	H
328.2750	-75.73	2.17	5.71	-72.19	-13.00	-59.19	H
401.0250	-79.38	2.4	5.98	-75.80	-13.00	-62.80	H
645.9500	-79.58	3.02	6.21	-76.39	-13.00	-63.39	H

Remark:

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



Operation Mode: EDGE 850 / TX / CH 128

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
83.3500	-66.54	1.07	0.28	-67.33	-13.00	-54.33	V
114.8750	-67.53	1.24	-1.9	-70.67	-13.00	-57.67	V
185.2000	-80.18	1.61	3.81	-77.98	-13.00	-64.98	V
277.3500	-81.92	2	5.25	-78.67	-13.00	-65.67	V
570.7750	-84.26	2.87	6.1	-81.03	-13.00	-68.03	V
772.0500	-81.8	3.28	6.32	-78.76	-13.00	-65.76	V
39.7000	-61.41	0.72	-12.6	-74.73	-13.00	-61.73	H
110.0250	-66.22	1.21	-1.7	-69.13	-13.00	-56.13	H
194.9000	-80.17	1.63	3.47	-78.33	-13.00	-65.33	H
260.3750	-81.56	1.91	5.58	-77.89	-13.00	-64.89	H
415.5750	-82.2	2.45	5.85	-78.80	-13.00	-65.80	H
551.3750	-79.8	2.81	6.17	-76.44	-13.00	-63.44	H

Remark:

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



Operation Mode: EDGE 850 / TX / CH 190

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
83.3500	-66.32	1.07	0.28	-67.11	-13.00	-54.11	V
112.4500	-67.96	1.22	-1.8	-70.98	-13.00	-57.98	V
182.7750	-79.36	1.61	3.72	-77.25	-13.00	-64.25	V
333.1250	-81.41	2.16	5.73	-77.84	-13.00	-64.84	V
454.3750	-85.08	2.59	5.79	-81.88	-13.00	-68.88	V
643.5250	-83.28	3.01	6.16	-80.13	-13.00	-67.13	V
80.9250	-65.88	1.05	-0.01	-66.94	-13.00	-53.94	H
114.8750	-59.56	1.24	-1.9	-62.70	-13.00	-49.70	H
192.4750	-71.06	1.62	3.74	-68.94	-13.00	-55.94	H
282.2000	-78.01	2.01	5.33	-74.69	-13.00	-61.69	H
405.8750	-80.3	2.42	5.94	-76.78	-13.00	-63.78	H
636.2500	-78.9	3	6.16	-75.74	-13.00	-62.74	H

Remark:

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



Operation Mode: EDGE 850 / TX / CH 251

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
61.5250	-64.15	0.89	-2.12	-67.16	-13.00	-54.16	V
112.4500	-67.93	1.22	-1.8	-70.95	-13.00	-57.95	V
194.9000	-77.98	1.63	3.47	-76.14	-13.00	-63.14	V
330.7000	-81.75	2.16	5.71	-78.20	-13.00	-65.20	V
597.4500	-83.73	2.9	6.35	-80.28	-13.00	-67.28	V
808.4250	-81	3.34	6.29	-78.05	-13.00	-65.05	V
117.3000	-57.03	1.26	-1.99	-60.28	-13.00	-47.28	H
194.9000	-71.63	1.63	3.47	-69.79	-13.00	-56.79	H
284.6250	-77.31	2.01	5.35	-73.97	-13.00	-60.97	H
398.6000	-79.5	2.38	5.98	-75.90	-13.00	-62.90	H
624.1250	-78.31	2.96	6.15	-75.12	-13.00	-62.12	H
915.1250	-76.85	3.58	6.6	-73.83	-13.00	-60.83	H

Remark:

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



Operation Mode: EDGE 1900 / TX / CH 512

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
83.3500	-65.29	1.07	0.28	-66.08	-13.00	-53.08	V
117.3000	-66.22	1.26	-1.99	-69.47	-13.00	-56.47	V
185.2000	-78.27	1.61	3.81	-76.07	-13.00	-63.07	V
328.2750	-79.93	2.17	5.71	-76.39	-13.00	-63.39	V
403.4500	-83.7	2.41	5.96	-80.15	-13.00	-67.15	V
624.1250	-82.4	2.96	6.15	-79.21	-13.00	-66.21	V
83.3500	-67.02	1.07	0.28	-67.81	-13.00	-54.81	H
119.7250	-58.49	1.27	-2.09	-61.85	-13.00	-48.85	H
192.4750	-71.14	1.62	3.74	-69.02	-13.00	-56.02	H
330.7000	-76.88	2.16	5.71	-73.33	-13.00	-60.33	H
454.3750	-80.34	2.59	5.79	-77.14	-13.00	-64.14	H
645.9500	-78.87	3.02	6.21	-75.68	-13.00	-62.68	H

Remark:

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

**Operation Mode:** EDGE 1900 / TX / CH 661**Test Date:** August 20, 2011**Temperature:** 26°C**Tested by:** Edward Lin**Humidity:** 50 % RH**Polarity:** Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
83.3500	-65.29	1.07	0.28	-66.08	-13.00	-53.08	V
112.4500	-65.85	1.22	-1.8	-68.87	-13.00	-55.87	V
182.7750	-77.47	1.61	3.72	-75.36	-13.00	-62.36	V
321.0000	-77.47	2.18	5.7	-73.95	-13.00	-60.95	V
624.1250	-83.02	2.96	6.15	-79.83	-13.00	-66.83	V
815.7000	-81.23	3.37	6.2	-78.40	-13.00	-65.40	V
61.5250	-67.49	0.89	-2.12	-70.50	-13.00	-57.50	H
119.7250	-66.71	1.27	-2.09	-70.07	-13.00	-57.07	H
192.4750	-79.91	1.62	3.74	-77.79	-13.00	-64.79	H
461.6500	-80.78	2.6	5.86	-77.52	-13.00	-64.52	H
529.5500	-80.04	2.75	6	-76.79	-13.00	-63.79	H
658.0750	-79.33	3.05	6.3	-76.08	-13.00	-63.08	H

Remark:

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



Operation Mode: EDGE 1900 / TX / CH 810

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
83.3500	-64.82	1.07	0.28	-65.61	-13.00	-52.61	V
112.4500	-66.33	1.22	-1.8	-69.35	-13.00	-56.35	V
185.2000	-78.66	1.61	3.81	-76.46	-13.00	-63.46	V
221.5750	-81.75	1.77	5.34	-78.18	-13.00	-65.18	V
405.8750	-84.69	2.42	5.94	-81.17	-13.00	-68.17	V
624.1250	-82.37	2.96	6.15	-79.18	-13.00	-66.18	V
83.3500	-66.31	1.07	0.28	-67.10	-13.00	-54.10	H
119.7250	-57.46	1.27	-2.09	-60.82	-13.00	-47.82	H
192.4750	-74.5	1.62	3.74	-72.38	-13.00	-59.38	H
287.0500	-77.38	2.01	5.37	-74.02	-13.00	-61.02	H
328.2750	-78.09	2.17	5.71	-74.55	-13.00	-61.55	H
585.3250	-80.12	2.89	6.11	-76.90	-13.00	-63.90	H

Remark:

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



Above 1GHz

Operation Mode: GSM 850 / TX / CH 128

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1752.500	-55.3	5.2	5.85	-54.65	-13.00	-41.65	V
3310.000	-56.51	7.47	8.33	-55.65	-13.00	-42.65	V
N/A							
1647.500	-60.17	5.04	6.03	-59.18	-13.00	-46.18	H
2470.000	-56.66	6.3	6.06	-56.90	-13.00	-43.90	H
3310.000	-54.16	7.47	8.33	-53.30	-13.00	-40.30	H
N/A							

Remark:

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



Operation Mode: GSM 850 / TX / CH 190

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1770.000	-57.92	5.24	5.81	-57.35	-13.00	-44.35	V
3345.000	-54.95	7.51	8.44	-54.02	-13.00	-41.02	V
5042.500	-55.06	9.43	10.62	-53.87	-13.00	-40.87	V
N/A							
2522.500	-56.08	6.38	6.16	-56.30	-13.00	-43.30	H
3345.000	-52.98	7.51	8.44	-52.05	-13.00	-39.05	H
N/A							

Remark:

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



Operation Mode: GSM 850 / TX / CH 251

Test Date: August 20, 2011

Temperature: 26C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1787.500	-56.67	5.27	5.78	-56.16	-13.00	-43.16	V
3397.500	-54.34	7.57	8.59	-53.32	-13.00	-40.32	V
N/A							
2557.500	-56.65	6.43	6.25	-56.83	-13.00	-43.83	H
3397.500	-52.96	7.57	8.59	-51.94	-13.00	-38.94	H
N/A							

Remark:

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



Operation Mode: GPRS 850 / TX / CH 128

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1752.500	-57.57	5.2	5.85	-56.92	-13.00	-43.92	V
3310.000	-56.41	7.47	8.33	-55.55	-13.00	-42.55	V
N/A							
1752.500	-58.31	5.2	5.85	-57.66	-13.00	-44.66	H
2487.500	-56.32	6.33	6.08	-56.57	-13.00	-43.57	H
3310.000	-55.24	7.47	8.33	-54.38	-13.00	-41.38	H
N/A							

Remark:

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



Operation Mode: GPRS 850 / TX / CH 190

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1770.000	-56.99	5.24	5.81	-56.42	-13.00	-43.42	V
3432.500	-56.57	7.67	8.7	-55.54	-13.00	-42.54	V
N/A							
2522.500	-55.42	6.38	6.16	-55.64	-13.00	-42.64	H
3345.000	-55.32	7.51	8.44	-54.39	-13.00	-41.39	H
N/A							

Remark:

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



Operation Mode: GPRS 850 / TX / CH 251

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1770.000	-57.54	5.24	5.81	-56.97	-13.00	-43.97	V
3397.500	-55.4	7.57	8.59	-54.38	-13.00	-41.38	V
4570.000	-54.8	9.06	9.91	-53.95	-13.00	-40.95	V
N/A							
2557.500	-56.68	6.43	6.25	-56.86	-13.00	-43.86	H
3397.500	-53.29	7.57	8.59	-52.27	-13.00	-39.27	H
4622.500	-54.13	9.13	10	-53.26	-13.00	-40.26	H
N/A							

Remark:

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



Operation Mode: GSM 1900 / TX / CH 512

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3712.500	-49.81	8.21	9.11	-48.91	-13.00	-35.91	V
N/A							
3712.500	-50.13	8.21	9.11	-49.23	-13.00	-36.23	H
N/A							

Remark:

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



Operation Mode: GSM 1900 / TX / CH 661

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3765.000	-49.1	8.24	9.16	-48.18	-13.00	-35.18	V
N/A							
3765.000	-50.8	8.24	9.16	-49.88	-13.00	-36.88	H
5760.000	-53.24	10.32	10.85	-52.71	-13.00	-39.71	H
N/A							

Remark:

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



Operation Mode: GSM 1900 / TX / CH 810

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3817.500	-50.25	8.28	9.22	-49.31	-13.00	-36.31	V
N/A							
3835.000	-48.6	8.31	9.23	-47.68	-13.00	-34.68	H
N/A							

Remark:

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



Operation Mode: GPRS 1900 / TX / CH 512

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3712.500	-51.96	8.21	9.11	-51.06	-13.00	-38.06	V
N/A							
3712.500	-50	8.21	9.11	-49.10	-13.00	-36.10	H
6197.500	-51.25	11.21	11.06	-51.40	-13.00	-38.40	H
N/A							

Remark:

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



Operation Mode: GPRS 1900 / TX / CH 661

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3765.000	-50.49	8.24	9.16	-49.57	-13.00	-36.57	V
N/A							
3765.000	-50.25	8.24	9.16	-49.33	-13.00	-36.33	H
6075.000	-51.68	10.67	10.96	-51.39	-13.00	-38.39	H
N/A							

Remark:

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



Operation Mode: GPRS 1900 / TX / CH 810

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50% RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3817.500	-49.37	8.28	9.22	-48.43	-13.00	-35.43	V
N/A							
3817.500	-49.42	8.28	9.22	-48.48	-13.00	-35.48	H
5042.500	-53.92	9.43	10.62	-52.73	-13.00	-39.73	H
N/A							

Remark:

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



Operation Mode: EDGE 850 / TX / CH 128

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1752.500	-55.97	5.2	5.85	-55.32	-13.00	-42.32	V
3310.000	-56.19	7.47	8.33	-55.33	-13.00	-42.33	V
4675.000	-54.24	9.13	10.08	-53.29	-13.00	-40.29	V
5725.000	-54.45	10.22	10.84	-53.83	-13.00	-40.83	V
N/A							
3327.500	-54.34	7.49	8.38	-53.45	-13.00	-40.45	H
5690.000	-53.67	10.16	10.84	-52.99	-13.00	-39.99	H
N/A							

Remark:

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



Operation Mode: EDGE 850 / TX / CH 190

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1770.000	-57.49	5.24	5.81	-56.92	-13.00	-43.92	V
3345.000	-56.23	7.51	8.44	-55.30	-13.00	-42.30	V
4412.500	-54.58	8.67	9.73	-53.52	-13.00	-40.52	V
N/A							
2540.000	-57.33	6.41	6.2	-57.54	-13.00	-44.54	H
3345.000	-55.66	7.51	8.44	-54.73	-13.00	-41.73	H
N/A							

Remark:

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



Operation Mode: EDGE 850 / TX / CH 251

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1787.500	-57.77	5.27	5.78	-57.26	-13.00	-44.26	V
3397.500	-54.79	7.57	8.59	-53.77	-13.00	-40.77	V
N/A							
3397.500	-54	7.57	8.59	-52.98	-13.00	-39.98	H
N/A							

Remark:

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



Operation Mode: EDGE 1900 / TX / CH 512

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3712.500	-53.12	8.21	9.11	-52.22	-13.00	-39.22	V
N/A							
3712.500	-52.25	8.21	9.11	-51.35	-13.00	-38.35	H
6495.000	-50.29	11.05	11.3	-50.04	-13.00	-37.04	H
N/A							

Remark:

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



Operation Mode: EDGE 1900 / TX / CH 661

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3765.000	-50.96	8.24	9.16	-50.04	-13.00	-37.04	V
N/A							
3765.000	-51.89	8.24	9.16	-50.97	-13.00	-37.97	H
N/A							

Remark:

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



Operation Mode: EDGE 1900 / TX / CH 810

Test Date: August 20, 2011

Temperature: 26°C

Tested by: Edward Lin

Humidity: 50 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3817.500	-49.12	8.28	9.22	-48.18	-13.00	-35.18	V
N/A							
3537.500	-53.92	7.96	8.94	-52.94	-13.00	-39.94	H
3817.500	-52.05	8.28	9.22	-51.11	-13.00	-38.11	H
N/A							

Remark:

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



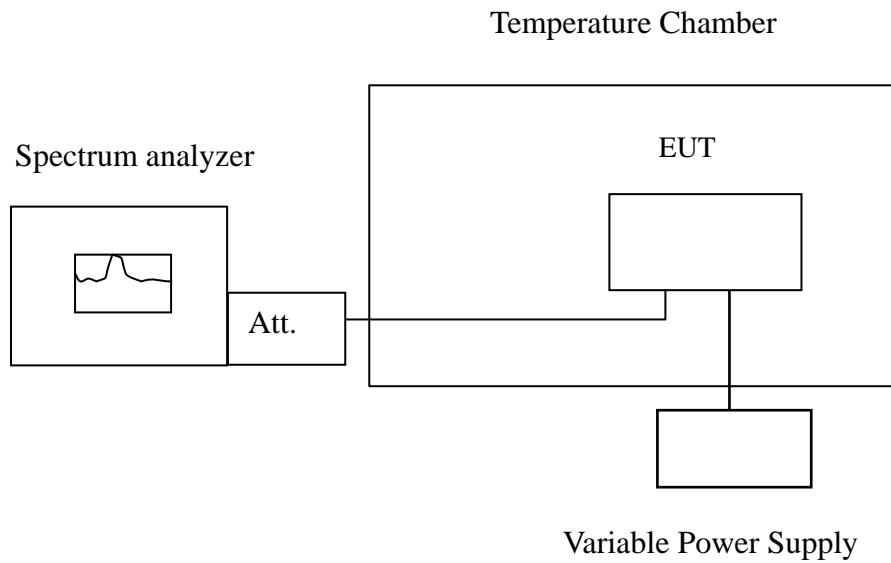
7.7 FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

LIMIT

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

Frequency Tolerance: 2.5 ppm

Test Configuration



Remark: Measurement setup for testing on Antenna connector



TEST PROCEDURE

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

TEST RESULTS

No non-compliance noted.

Reference Frequency: GSM Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
120	50	836600005	12	2090
	40	836600001	8	
	30	836600006	13	
	20	836599993	0	
	10	836600008	15	
	0	836600011	18	
	-10	836599999	6	
	-20	836600010	17	
	-30	836600012	19	

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)
120	50	1879999997	5	4700
	40	1879999999	7	
	30	1880000004	12	
	20	1879999992	0	
	10	1879999990	-2	
	0	1879999998	6	
	-10	1880000007	15	
	-20	1880000008	16	
	-30	1879999987	-5	



Reference Frequency: GPRS Mid Channel 836.6 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
120	50	836599997	-11	2090
	40	836599996	-12	
	30	836599989	-19	
	20	836600008	0	
	10	836599979	-29	
	0	836599982	-26	
	-10	836599968	-40	
	-20	836599976	-32	
	-30	836599973	-35	

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
120	50	1879999997	-7	4700
	40	1879999996	-8	
	30	1880000005	1	
	20	1880000004	0	
	10	1879999999	-5	
	0	1880000011	7	
	-10	1879999997	-7	
	-20	1879999995	-9	
	-30	1880000016	12	



Reference Frequency: EDGE Mid Channel 836.6 MHz @ 20°C				
Limit: +/- 2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
120	50	836599997	2	2090
	40	836599992	-3	
	30	836599998	3	
	20	836599995	0	
	10	836599979	-16	
	0	836599982	-13	
	-10	836599984	-11	
	-20	836599999	4	
	-30	836599969	-26	

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
120	50	1879999997	6	4700
	40	1879999996	5	
	30	1880000001	10	
	20	1879999991	0	
	10	1880000002	11	
	0	1880000006	15	
	-10	1880000011	20	
	-20	1879999996	5	
	-30	1880000018	27	

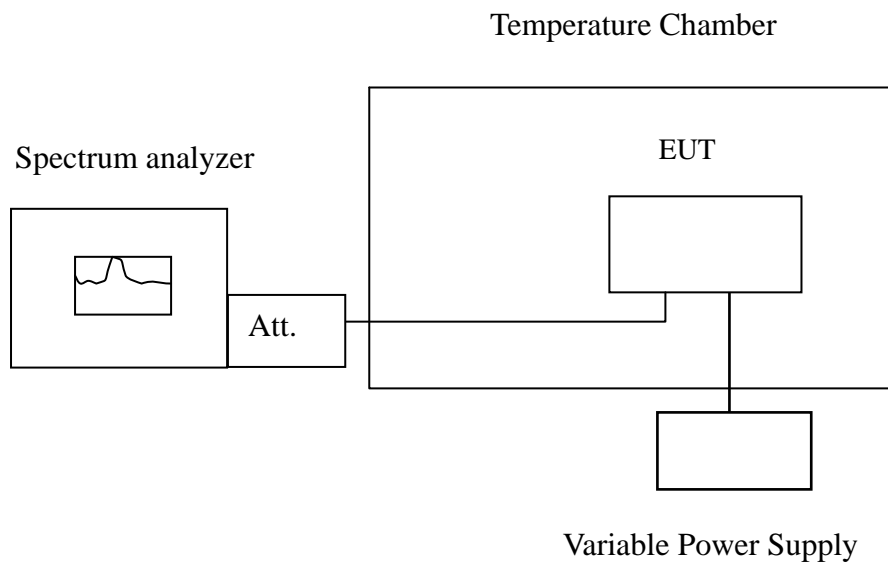


7.8 FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

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.

TEST RESULTS

No non-compliance noted.

Reference Frequency: GSM Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
132	20	836599992	-1	2090
120		836599993	0	
108		836599987	-6	
97 (End Point)		836599652	-341	

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)
132	20	1880000003	11	4700
120		1879999992	0	
108		1879999989	-3	
97 (End Point)		1879999754	-238	



Reference Frequency: GPRS Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
132	20	836600004	-4	2090
120		836600008	0	
108		836600006	-2	
97 (End Point)		836600098	90	

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
132	20	1880000003	-1	4700
120		1880000004	0	
108		1880000008	4	
97 (End Point)		1879999865	-139	



Reference Frequency: EDGE Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
132	20	836599993	-2	2090
120		836599995	0	
108		836600002	7	
97 (End Point)		836600116	121	

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C				
Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
132	20	1880000004	13	4700
120		1879999991	0	
108		1879999994	3	
97 (End Point)		1879999782	-209	



7.9 POWERLINE CONDUCTED EMISSIONS

LIMIT

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

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

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

Test Configuration

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

TEST PROCEDURE

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



TEST RESULTS

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

Operation Mode: Normal Link **Test Date:** August 24, 2011
Temperature: 26°C **Tested by:** Moore Cheng
Humidity: 60% RH

Freq. (MHz)	QP Reading (dBuV)	AV Reading (dBuV)	Corr. factor (dB)	QP Result (dBuV)	AV Result (dBuV)	QP Limit (dBuV)	AV Limit (dBuV)	QP Margin (dB)	AV Margin (dB)	Note
0.1521	34.25	13.05	9.82	44.07	22.87	65.88	55.88	-21.81	-33.01	L1
0.1726	38.19	17.50	9.76	47.95	27.26	64.83	54.83	-16.88	-27.57	L1
0.2011	35.97	18.27	9.67	45.64	27.94	63.57	53.57	-17.93	-25.63	L1
0.4847	16.70	7.22	9.72	26.42	16.94	56.26	46.26	-29.84	-29.32	L1
1.7377	13.37	8.23	9.72	23.09	17.95	56.00	46.00	-32.91	-28.05	L1
17.3458	19.71	15.23	9.95	29.66	25.18	60.00	50.00	-30.34	-24.82	L1
0.1505	39.80	19.85	9.60	49.40	29.45	65.97	55.97	-16.57	-26.52	L2
0.1744	34.83	17.62	9.63	44.46	27.25	64.75	54.75	-20.29	-27.50	L2
0.2059	35.00	16.89	9.66	44.66	26.55	63.37	53.37	-18.71	-26.82	L2
0.4865	18.32	9.90	9.72	28.04	19.62	56.23	46.23	-28.19	-26.61	L2
0.8564	16.79	9.24	9.73	26.52	18.97	56.00	46.00	-29.48	-27.03	L2
17.6959	18.32	13.89	10.01	28.33	23.90	60.00	50.00	-31.67	-26.10	L2

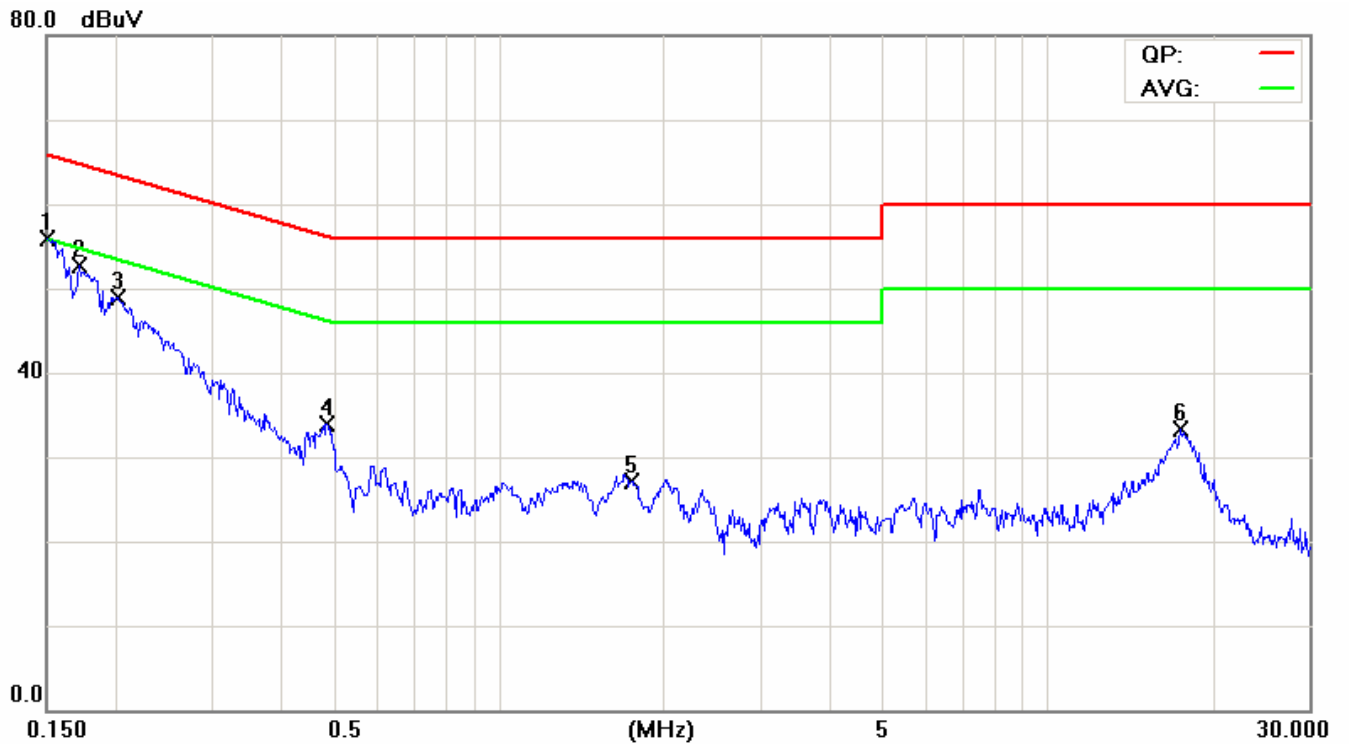
Remark:

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



Test Plots

Conducted emissions (Line 1)



Conducted emissions (Line 2)

