



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

TEST REPORT

For

UE910-NA V2

Trade Name: Telit

Model: UE910-NA V2

Issued to

**Telit Communications S.p.A.
Via Stazione di Prosecco, 5/B 34010 Sgonico [TS] Italy**

Issued by

**Compliance Certification Services Inc.
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Issued Date: March 18, 2014



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Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	March 18, 2014	Initial Issue	ALL	Angel Cheng



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1. TEST RESULT CERTIFICATION

Applicant: Telit Communications S.p.A.
Via Stazione di Prosecco, 5/B 34010 Sgonico [TS] Italy

Manufacturer: Telit Communications S.p.A.
Via Stazione di Prosecco, 5/B 34010 Sgonico [TS] Italy

Equipment Under Test: UE910-NA V2

Trade Name: Telit

Model Number: UE910-NA V2

Date of Test: March 11, 2014

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
FCC 47 CFR PART 22 SUBPART H AND PART 24 SUBPART E & IC RSS-132 Issue 3: January, 2013 and IC RSS-133 Issue 6: January, 2013	No non-compliance noted

We hereby certify that:

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in TIA/EIA-603-C and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC Rule FCC PART 22 Subpart H, PART 24 Subpart E, IC RSS-132 Issue 2 and IC RSS-133 Issue 4.

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

Approved by:

Reviewed by:

Miller Lee
Section Manager
Compliance Certification Services Inc.

Angel Cheng
Section Manager
Compliance Certification Services Inc.



2. EUT DESCRIPTION

Product	UE910-NA V2
Trade Name	Telit
Model Number	UE910-NA V2
Model Discrepancy	N/A
Received Date	March 11, 2014
Power Supply	Powered from Host device. (DC 3.8V)
Frequency Range	GSM / GPRS / EDGE: 850: 824.2 ~ 848.8 MHz GSM / GPRS / EDGE: 1900: 1850.2 ~ 1909.8 MHz WCDMA / HSDPA Band II: 1852.4 ~ 1907.6 MHz WCDMA / HSDPA Band V: 826.4 ~ 846.6MHz
Modulation Technique	GMSK, 8PSK and QPSK
Antenna Gain	Antenna gain including cable loss must not exceed 8.2dBi in the GSM850, 3.7dBi in the PCS1900, 10.22dBi in the FDD-II and 17.27dBi in the FDD-V for satisfying the requirement of 2.1043 and 2.1091.
Antenna Type	Dipole Antenna
Multislot class	Class 10

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



Mode	ERP Power (dBm)	ERP Power (w)	Type of Emission (99% Bandwidth)	Type of Emission (Occupied Bandwidth)
GSM 850MHz	30.86	1.2190	247KGXW	326KGXW
GPRS 850MHz	25.56	0.3597	245KGXW	325KGXW
EDGE 850MHz	23.46	0.2218	244KG7W	325KG7W
WCDMA Band V	21.51	0.1416	4M17F9W	4M67F9W
WCDMA HSDPA Band V	21.40	0.1380	4M18F9W	4M68F9W

Mode	ERP Power (dBm)	ERP Power (w)	Type of Emission (99% Bandwidth)	Type of Emission (Occupied Bandwidth)
GSM 1900MHz	26.64	0.4613	246KGXW	324KGXW
GPRS 1900MHz	22.72	0.1871	246KGXW	324KGXW
EDGE 1900MHz	20.79	0.1199	247KG7W	331KG7W
WCDMA Band II	23.92	0.2466	4M16F9W	4M68F9W
WCDMA HSDPA Band II	23.41	0.2193	4M16F9W	4M68F9W



3. TEST METHODOLOGY

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

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

3.1 EUT CONFIGURATION

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

3.2 EUT EXERCISE

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

3.3 GENERAL TEST PROCEDURES

Conducted Emissions

The EUT is placed on the turntable, which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4: 2009. Conducted emissions from the EUT measured in the frequency range between 0.15 MHz and 30MHz using CISPR Quasi-peak and average detector modes.

Radiated Emissions

The EUT is placed on a turn table, which is 0.8 m above ground plane. The turntable shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna, which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the maximum emissions, exploratory radiated emission measurements were made according to the requirements in Section 13.1.4.1 of ANSI C63.4: 2009.



3.4 DESCRIPTION OF TEST MODES

The EUT (model: UE910-NA V2) had been tested under operating condition.

EUT staying in continuous transmitting mode was programmed.

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

GSM / GPRS / EDGE 850MHz:

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

GSM / GPRS / EDGE 1900MHz:

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

WCDMA Band II:

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

WCDMA Band V:

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

WCDMA / HSDPA Band II:

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

WCDMA / HSDPA Band V:

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

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



4. INSTRUMENT CALIBRATION

4.1 MEASURING INSTRUMENT CALIBRATION

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



4.2 MEASUREMENT EQUIPMENT USED

Equipment Used for Emissions Measurement

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

Conducted Emissions Test Site				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	MY43360131	03/20/2014
Power Meter	Anritsu	ML2495A	1012009	06/04/2014
Power Sensor	Anritsu	MA2411A	0917072	06/04/2014

3M Semi Anechoic Chamber				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	US42510268	11/05/2014
EMI Test Receiver	R&S	ESCI	100064	02/16/2015
Pre-Amplifier	Mini-Circuits	ZFL-1000LN	SF350700823	01/11/2015
Bilog Antenna	Sunol Sciences	JB3	A030105	02/16/2015
Bilog Antenna	Sunol Sciences	JB3	A030205	10/01/2014
Horn Antenna	EMCO	3117	00055165	02/16/2015
Horn Antenna	EMCO	3117	00055167	01/27/2015
Horn Antenna	EMCO	3116	26370	01/06/2015
Loop Antenna	EMCO	6502	8905/2356	06/11/2015
Turn Table	CCS	CC-T-1F	N/A	N.C.R
Antenna Tower	CCS	CC-A-1F	N/A	N.C.R
Controller	CCS	CC-C-1F	N/A	N.C.R
Site NSA	CCS	N/A	N/A	12/21/2014
Test S/W	EZ-EMC (CCS-3A1RE)			



4.3 MEASUREMENT UNCERTAINTY

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

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



5. FACILITIES AND ACCREDITATIONS

5.1 FACILITIES

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

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

No.11, Wugong 6th Rd., Wugu Dist., New Taipei City 24891, Taiwan. (R.O.C.)
Tel: 886-2-2299-9720 / Fax: 886-2-2298-4045

No.81-1, Lane 210, Bade 2nd Rd., Lujhu Township, Taoyuan County 33841, TAIWAN,
R.O.C.
Tel: 886-3-324-0332 / Fax: 886-3-324-5235

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4: 2009 and CISPR Publication 22.

5.2 EQUIPMENT

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

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

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




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

5.3 LABORATORY ACCREDITATIONS AND LISTING

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



5.4 TABLE OF ACCREDITATIONS AND LISTINGS

Country	Agency	Scope of Accreditation	Logo
USA	FCC	3M Semi Anechoic Chamber (FCC MRA: TW1039) to perform FCC Part 15 measurements	 FCC MRA: TW1039
Taiwan	TAF	LP0002, RTTE01, FCC Method-47 CFR Part 15 Subpart C, D, E, RSS-210, RSS-310 IDA TS SRD, AS/NZS 4268, AS/NZS 4771, TS 12.1 & 12.2, ETSI EN 300 440-1, ETSI EN 300 440-2, ETSI EN 300 328, ETSI EN 300 220-1, ETSI EN 300 220-2, ETSI EN 301 893, ETSI EN 301 489-1/3/7/17 FCC OET Bulletin 65 + Supplement C, EN 50360, EN 50361, EN 50371, RSS 102, EN 50383, EN 50385, EN 50392, IEC 62209, CNS 14958-1, CNS 14959 FCC Method -47 CFR Part 15 Subpart B IEC / EN 61000-3-2, IEC / EN 61000-3-3, IEC / EN 61000-4-2/3/4/5/6/8/11	 Testing Laboratory 1309
Canada	Industry Canada	3M Semi Anechoic Chamber (IC 2324G-1 / IC 2324G-2) to perform	 IC 2324G-1 IC 2324G-2

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



6. SETUP OF EQUIPMENT UNDER TEST

6.1 SETUP CONFIGURATION OF EUT

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

6.2 SUPPORT EQUIPMENT

No.	Device Type	Brand	Model	Series No.	FCC ID	Data Cable	Power Cord
1.	Test Kit	N/A	N/A	N/A	N/A	N/A	N/A
2.	8960 Series 10 Wireless Communication test set (Remote)	Agilent	E5515C	GB44051665	N/A	N/A	Unshielded, 1.8m

Remark:

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



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

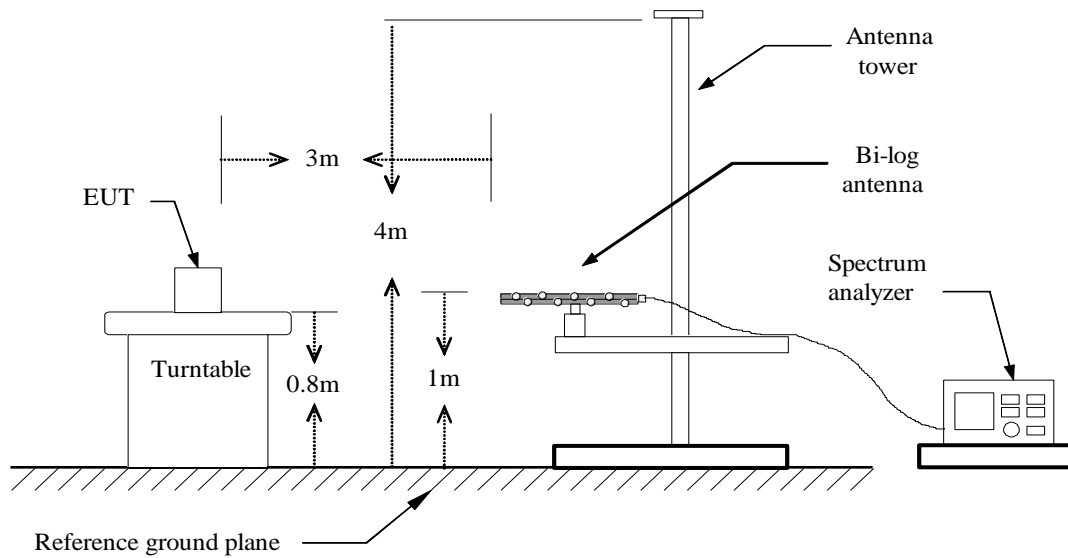
7.1 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

LIMIT

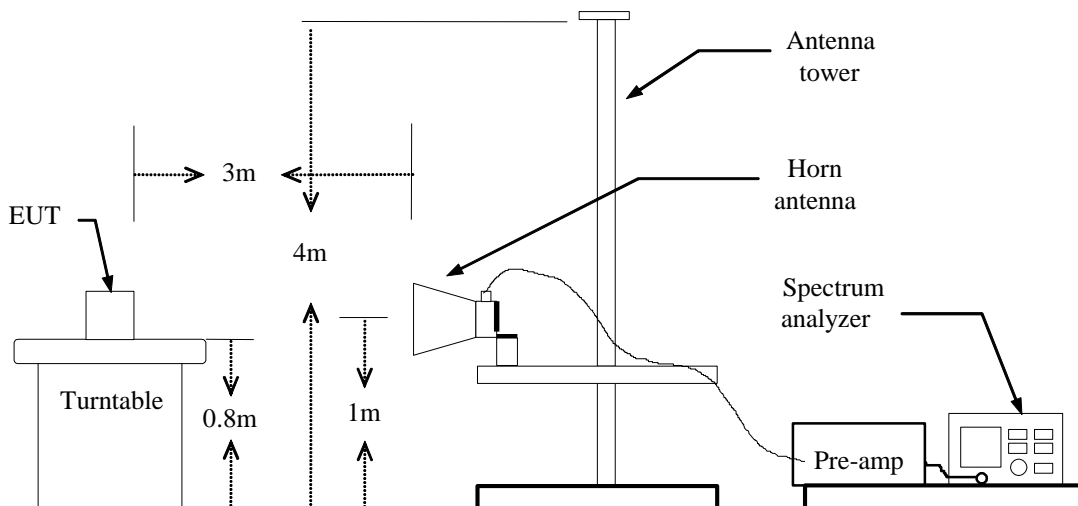
According to FCC §2.1053, RSS-132 (4.6) & RSS-133 (6.5).

Test Configuration

Below 1 GHz

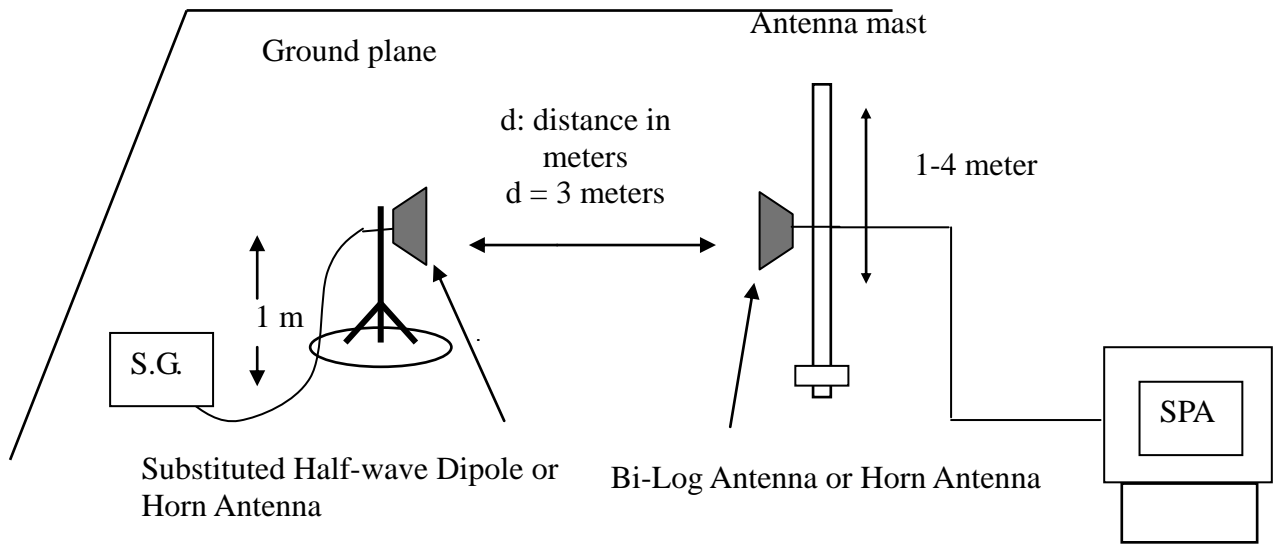


Above 1 GHz





Substituted Method Test Set-up



TEST PROCEDURE

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

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

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

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

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

The radiation spurious emission was perform at EUT antenna port terminated.

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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
138.6400	-68.09	1.39	-0.38	-69.86	-13.00	-56.86	V
342.3400	-78.19	2.18	5.8	-74.57	-13.00	-61.57	V
390.8400	-80.91	2.32	6	-77.23	-13.00	-64.23	V
448.0700	-81.63	2.58	5.74	-78.47	-13.00	-65.47	V
516.9400	-80.77	2.7	6.07	-77.40	-13.00	-64.40	V
612.9700	-80.01	2.94	6.23	-76.72	-13.00	-63.72	V
101.7800	-62.55	1.16	-0.64	-64.35	-13.00	-51.35	H
150.2800	-53.67	1.43	0.71	-54.39	-13.00	-41.39	H
342.3400	-69.46	2.18	5.8	-65.84	-13.00	-52.84	H
448.0700	-73.29	2.58	5.74	-70.13	-13.00	-57.13	H
472.3200	-74.97	2.62	5.72	-71.87	-13.00	-58.87	H
612.9700	-74.54	2.94	6.23	-71.25	-13.00	-58.25	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
138.6400	-67.76	1.39	-0.38	-69.53	-13.00	-56.53	V
174.5300	-74.73	1.59	3	-73.32	-13.00	-60.32	V
342.3400	-77.72	2.18	5.8	-74.10	-13.00	-61.10	V
390.8400	-80.96	2.32	6	-77.28	-13.00	-64.28	V
459.7100	-81.56	2.6	5.88	-78.28	-13.00	-65.28	V
612.9700	-81.42	2.94	6.23	-78.13	-13.00	-65.13	V
120.2100	-58.59	1.27	-2.06	-61.92	-13.00	-48.92	H
150.2800	-56.27	1.43	0.71	-56.99	-13.00	-43.99	H
161.9200	-60.72	1.5	1.61	-60.61	-13.00	-47.61	H
342.3400	-72.94	2.18	5.8	-69.32	-13.00	-56.32	H
379.2000	-73.87	2.31	5.98	-70.20	-13.00	-57.20	H
516.9400	-77.12	2.7	6.07	-73.75	-13.00	-60.75	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
48.4300	-67.65	0.79	-5.83	-74.27	-13.00	-61.27	V
138.6400	-68.53	1.39	-0.38	-70.30	-13.00	-57.30	V
342.3400	-79.27	2.18	5.8	-75.65	-13.00	-62.65	V
448.0700	-82.19	2.58	5.74	-79.03	-13.00	-66.03	V
516.9400	-80.7	2.7	6.07	-77.33	-13.00	-64.33	V
612.9700	-82.13	2.94	6.23	-78.84	-13.00	-65.84	V
120.2100	-58.77	1.27	-2.06	-62.10	-13.00	-49.10	H
150.2800	-56.42	1.43	0.71	-57.14	-13.00	-44.14	H
234.6700	-76.52	1.8	5.38	-72.94	-13.00	-59.94	H
342.3400	-72.32	2.18	5.8	-68.70	-13.00	-55.70	H
448.0700	-76.52	2.58	5.74	-73.36	-13.00	-60.36	H
516.9400	-76.66	2.7	6.07	-73.29	-13.00	-60.29	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
138.6400	-67.79	1.39	-0.38	-69.56	-13.00	-56.56	V
342.3400	-78.06	2.18	5.8	-74.44	-13.00	-61.44	V
390.8400	-81.57	2.32	6	-77.89	-13.00	-64.89	V
450.9800	-81.29	2.59	5.74	-78.14	-13.00	-65.14	V
516.9400	-80.94	2.7	6.07	-77.57	-13.00	-64.57	V
625.5800	-80.54	2.96	6.16	-77.34	-13.00	-64.34	V
101.7800	-64.42	1.16	-0.64	-66.22	-13.00	-53.22	H
150.2800	-55.87	1.43	0.71	-56.59	-13.00	-43.59	H
234.6700	-76.01	1.8	5.38	-72.43	-13.00	-59.43	H
342.3400	-72.07	2.18	5.8	-68.45	-13.00	-55.45	H
390.8400	-72.78	2.32	6	-69.10	-13.00	-56.10	H
516.9400	-76.34	2.7	6.07	-72.97	-13.00	-59.97	H

Remark:

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



Operation Mode: GPRS 850 / TX / CH 190

Test Date: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
71.7100	-71.44	0.97	-1.61	-74.02	-13.00	-61.02	V
150.2800	-70.69	1.43	0.71	-71.41	-13.00	-58.41	V
171.6200	-74.84	1.57	2.69	-73.72	-13.00	-60.72	V
342.3400	-78.11	2.18	5.8	-74.49	-13.00	-61.49	V
450.9800	-81.93	2.59	5.74	-78.78	-13.00	-65.78	V
625.5800	-80.41	2.96	6.16	-77.21	-13.00	-64.21	V
101.7800	-65.22	1.16	-0.64	-67.02	-13.00	-54.02	H
150.2800	-56.54	1.43	0.71	-57.26	-13.00	-44.26	H
234.6700	-76.78	1.8	5.38	-73.20	-13.00	-60.20	H
342.3400	-72.93	2.18	5.8	-69.31	-13.00	-56.31	H
390.8400	-74.31	2.32	6	-70.63	-13.00	-57.63	H
459.7100	-77.21	2.6	5.88	-73.93	-13.00	-60.93	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
48.4300	-67.35	0.79	-5.83	-73.97	-13.00	-60.97	V
138.6400	-68.36	1.39	-0.38	-70.13	-13.00	-57.13	V
342.3400	-77.32	2.18	5.8	-73.70	-13.00	-60.70	V
450.9800	-81.07	2.59	5.74	-77.92	-13.00	-64.92	V
585.8100	-81.65	2.89	6.11	-78.43	-13.00	-65.43	V
625.5800	-80.84	2.96	6.16	-77.64	-13.00	-64.64	
101.7800	-64.6	1.16	-0.64	-66.40	-13.00	-53.40	H
150.2800	-56.78	1.43	0.71	-57.50	-13.00	-44.50	H
342.3400	-73.14	2.18	5.8	-69.52	-13.00	-56.52	H
402.4800	-74.86	2.41	5.97	-71.30	-13.00	-58.30	H
516.9400	-76.47	2.7	6.07	-73.10	-13.00	-60.10	H
612.9700	-77.56	2.94	6.23	-74.27	-13.00	-61.27	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 1900 / TX / CH 512

Test Date: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
138.6400	-68.03	1.39	-0.38	-69.80	-13.00	-56.80	V
150.2800	-71.42	1.43	0.71	-72.14	-13.00	-59.14	V
174.5300	-75.76	1.59	3	-74.35	-13.00	-61.35	V
342.3400	-79.25	2.18	5.8	-75.63	-13.00	-62.63	V
574.1700	-82.19	2.88	6.07	-79.00	-13.00	-66.00	V
709.9700	-80.31	3.14	6.32	-77.13	-13.00	-64.13	V
150.2800	-57.68	1.43	0.71	-58.40	-13.00	-45.40	H
177.4400	-65.4	1.6	3.31	-63.69	-13.00	-50.69	H
342.3400	-72.76	2.18	5.8	-69.14	-13.00	-56.14	H
448.0700	-75.85	2.58	5.74	-72.69	-13.00	-59.69	H
757.5000	-71.28	3.22	6.25	-68.25	-13.00	-55.25	H
781.7500	-72.73	3.31	6.13	-69.91	-13.00	-56.91	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
138.6400	-67.93	1.39	-0.38	-69.70	-13.00	-56.70	V
342.3400	-78.41	2.18	5.8	-74.79	-13.00	-61.79	V
448.0700	-80.88	2.58	5.74	-77.72	-13.00	-64.72	V
529.5500	-82.23	2.75	6	-78.98	-13.00	-65.98	V
721.6100	-79.21	3.17	6.49	-75.89	-13.00	-62.89	V
769.1400	-77.67	3.27	6.39	-74.55	-13.00	-61.55	V
150.2800	-57.17	1.43	0.71	-57.89	-13.00	-44.89	H
342.3400	-72.48	2.18	5.8	-68.86	-13.00	-55.86	H
448.0700	-76.52	2.58	5.74	-73.36	-13.00	-60.36	H
516.9400	-77.69	2.7	6.07	-74.32	-13.00	-61.32	H
612.9700	-76.52	2.94	6.23	-73.23	-13.00	-60.23	H
757.5000	-71.97	3.22	6.25	-68.94	-13.00	-55.94	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: GSM 1900 / TX / CH 810

Test Date: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
71.7100	-71.45	0.97	-1.61	-74.03	-13.00	-61.03	V
150.2800	-71	1.43	0.71	-71.72	-13.00	-58.72	V
330.7000	-79.19	2.16	5.71	-75.64	-13.00	-62.64	V
450.9800	-81.35	2.59	5.74	-78.20	-13.00	-65.20	V
721.6100	-80.56	3.17	6.49	-77.24	-13.00	-64.24	V
770.1100	-76.87	3.27	6.38	-73.76	-13.00	-60.76	V
150.2800	-57.07	1.43	0.71	-57.79	-13.00	-44.79	H
352.0400	-73.42	2.24	5.78	-69.88	-13.00	-56.88	H
390.8400	-74.4	2.32	6	-70.72	-13.00	-57.72	H
529.5500	-77.75	2.75	6	-74.50	-13.00	-61.50	H
637.2200	-76.26	3	6.15	-73.11	-13.00	-60.11	H
757.5000	-71.37	3.22	6.25	-68.34	-13.00	-55.34	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
138.6400	-67.18	1.39	-0.38	-68.95	-13.00	-55.95	V
171.6200	-74.27	1.57	2.69	-73.15	-13.00	-60.15	V
342.3400	-79.18	2.18	5.8	-75.56	-13.00	-62.56	V
390.8400	-82.12	2.32	6	-78.44	-13.00	-65.44	V
625.5800	-80.59	2.96	6.16	-77.39	-13.00	-64.39	V
859.3500	-78.07	3.43	6.4	-75.10	-13.00	-62.10	V
138.6400	-57.25	1.39	-0.38	-59.02	-13.00	-46.02	H
171.6200	-61.28	1.57	2.69	-60.16	-13.00	-47.16	H
354.9500	-72.8	2.25	5.75	-69.30	-13.00	-56.30	H
379.2000	-73.89	2.31	5.98	-70.22	-13.00	-57.22	H
589.6900	-77.66	2.89	6.19	-74.36	-13.00	-61.36	H
745.8600	-70.85	3.2	6.1	-67.95	-13.00	-54.95	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
150.2800	-72.11	1.43	0.71	-72.83	-13.00	-59.83	V
174.5300	-75.24	1.59	3	-73.83	-13.00	-60.83	V
342.3400	-78.87	2.18	5.8	-75.25	-13.00	-62.25	V
625.5800	-80.86	2.96	6.16	-77.66	-13.00	-64.66	V
769.1400	-78.86	3.27	6.39	-75.74	-13.00	-62.74	V
907.8500	-77.53	3.56	6.6	-74.49	-13.00	-61.49	V
150.2800	-57.86	1.43	0.71	-58.58	-13.00	-45.58	H
345.2500	-72.79	2.2	5.8	-69.19	-13.00	-56.19	H
448.0700	-75.44	2.58	5.74	-72.28	-13.00	-59.28	H
637.2200	-76.28	3	6.15	-73.13	-13.00	-60.13	H
757.5000	-70.93	3.22	6.25	-67.90	-13.00	-54.90	H
924.3400	-75.35	3.59	6.51	-72.43	-13.00	-59.43	H

Remark:

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



Operation Mode: GPRS 1900 / TX / CH 810

Test Date: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
138.6400	-68.09	1.39	-0.38	-69.86	-13.00	-56.86	V
342.3400	-78.69	2.18	5.8	-75.07	-13.00	-62.07	V
448.0700	-82.3	2.58	5.74	-79.14	-13.00	-66.14	V
519.8500	-82.52	2.7	6.1	-79.12	-13.00	-66.12	V
625.5800	-80.62	2.96	6.16	-77.42	-13.00	-64.42	V
781.7500	-77.76	3.31	6.13	-74.94	-13.00	-61.94	V
150.2800	-57.22	1.43	0.71	-57.94	-13.00	-44.94	H
171.6200	-62.11	1.57	2.69	-60.99	-13.00	-47.99	H
342.3400	-73.31	2.18	5.8	-69.69	-13.00	-56.69	H
448.0700	-76.56	2.58	5.74	-73.40	-13.00	-60.40	H
604.2400	-77.69	2.92	6.36	-74.25	-13.00	-61.25	H
757.5000	-71.92	3.22	6.25	-68.89	-13.00	-55.89	H

Remark:

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



Operation Mode: EDGE 850 / TX / CH 128

Test Date: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
138.6400	-66.46	1.39	-0.38	-68.23	-13.00	-55.23	V
171.6200	-74.75	1.57	2.69	-73.63	-13.00	-60.63	V
330.7000	-77.62	2.16	5.71	-74.07	-13.00	-61.07	V
402.4800	-81.5	2.41	5.97	-77.94	-13.00	-64.94	V
483.9600	-80.64	2.65	5.6	-77.69	-13.00	-64.69	V
625.5800	-80.91	2.96	6.16	-77.71	-13.00	-64.71	V
150.2800	-55.91	1.43	0.71	-56.63	-13.00	-43.63	H
171.6200	-60.93	1.57	2.69	-59.81	-13.00	-46.81	H
342.3400	-72.07	2.18	5.8	-68.45	-13.00	-55.45	H
390.8400	-72.85	2.32	6	-69.17	-13.00	-56.17	H
448.0700	-75.65	2.58	5.74	-72.49	-13.00	-59.49	H
625.5800	-76.86	2.96	6.16	-73.66	-13.00	-60.66	H

Remark:

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



Operation Mode: EDGE 850 / TX / CH 190

Test Date: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
48.4300	-67.34	0.79	-5.83	-73.96	-13.00	-60.96	V
138.6400	-68.01	1.39	-0.38	-69.78	-13.00	-56.78	V
174.5300	-74.77	1.59	3	-73.36	-13.00	-60.36	V
342.3400	-78.05	2.18	5.8	-74.43	-13.00	-61.43	V
450.9800	-81.74	2.59	5.74	-78.59	-13.00	-65.59	V
612.9700	-81.65	2.94	6.23	-78.36	-13.00	-65.36	V
90.1400	-68.37	1.11	1.07	-68.41	-13.00	-55.41	H
150.2800	-56.35	1.43	0.71	-57.07	-13.00	-44.07	H
171.6200	-61.74	1.57	2.69	-60.62	-13.00	-47.62	H
342.3400	-73.04	2.18	5.8	-69.42	-13.00	-56.42	H
516.9400	-75.57	2.7	6.07	-72.20	-13.00	-59.20	H
691.5400	-78.55	3.13	6.48	-75.20	-13.00	-62.20	H

Remark:

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



Operation Mode: EDGE 850 / TX / CH 251

Test Date: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
71.7100	-71.57	0.97	-1.61	-74.15	-13.00	-61.15	V
138.6400	-67.91	1.39	-0.38	-69.68	-13.00	-56.68	V
174.5300	-75.72	1.59	3	-74.31	-13.00	-61.31	V
342.3400	-78.42	2.18	5.8	-74.80	-13.00	-61.80	V
516.9400	-81.52	2.7	6.07	-78.15	-13.00	-65.15	V
625.5800	-80.4	2.96	6.16	-77.20	-13.00	-64.20	V
120.2100	-58.42	1.27	-2.06	-61.75	-13.00	-48.75	H
150.2800	-56.31	1.43	0.71	-57.03	-13.00	-44.03	H
234.6700	-76.42	1.8	5.38	-72.84	-13.00	-59.84	H
354.9500	-72.39	2.25	5.75	-68.89	-13.00	-55.89	H
448.0700	-77.35	2.58	5.74	-74.19	-13.00	-61.19	H
612.9700	-76.98	2.94	6.23	-73.69	-13.00	-60.69	H

Remark:

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



Operation Mode: EDGE 1900 / TX / CH 512

Test Date: March 11, 2014

Temperature: 26°C

Tested by: Jerry Lin

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
138.6400	-68.05	1.39	-0.38	-69.82	-13.00	-56.82	V
171.6200	-74.87	1.57	2.69	-73.75	-13.00	-60.75	V
342.3400	-79.01	2.18	5.8	-75.39	-13.00	-62.39	V
516.9400	-82.14	2.7	6.07	-78.77	-13.00	-65.77	V
637.2200	-79.38	3	6.15	-76.23	-13.00	-63.23	V
715.7900	-79.55	3.16	6.41	-76.30	-13.00	-63.30	V
150.2800	-57.66	1.43	0.71	-58.38	-13.00	-45.38	H
354.9500	-73.04	2.25	5.75	-69.54	-13.00	-56.54	H
390.8400	-74.99	2.32	6	-71.31	-13.00	-58.31	H
516.9400	-76	2.7	6.07	-72.63	-13.00	-59.63	H
601.3300	-76.87	2.91	6.39	-73.39	-13.00	-60.39	H
769.1400	-72.51	3.27	6.39	-69.39	-13.00	-56.39	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 1900 / TX / CH 661

Test Date: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
150.2800	-57.66	1.43	0.71	-58.38	-13.00	-45.38	V
354.9500	-73.04	2.25	5.75	-69.54	-13.00	-56.54	V
390.8400	-74.99	2.32	6	-71.31	-13.00	-58.31	V
516.9400	-76	2.7	6.07	-72.63	-13.00	-59.63	V
601.3300	-76.87	2.91	6.39	-73.39	-13.00	-60.39	V
769.1400	-72.51	3.27	6.39	-69.39	-13.00	-56.39	V
150.2800	-56.99	1.43	0.71	-57.71	-13.00	-44.71	H
171.6200	-61.3	1.57	2.69	-60.18	-13.00	-47.18	H
342.3400	-72.22	2.18	5.8	-68.60	-13.00	-55.60	H
516.9400	-78.67	2.7	6.07	-75.30	-13.00	-62.30	H
637.2200	-76.54	3	6.15	-73.39	-13.00	-60.39	H
769.1400	-72	3.27	6.39	-68.88	-13.00	-55.88	H

Remark:

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



Operation Mode: EDGE 1900 / TX / CH 810

Test Date: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
138.6400	-67.96	1.39	-0.38	-69.73	-13.00	-56.73	V
171.6200	-74.78	1.57	2.69	-73.66	-13.00	-60.66	V
342.3400	-78.41	2.18	5.8	-74.79	-13.00	-61.79	V
448.0700	-80.98	2.58	5.74	-77.82	-13.00	-64.82	V
691.5400	-80.5	3.13	6.48	-77.15	-13.00	-64.15	V
770.1100	-78.34	3.27	6.38	-75.23	-13.00	-62.23	V
138.6400	-56.13	1.39	-0.38	-57.90	-13.00	-44.90	H
171.6200	-61.46	1.57	2.69	-60.34	-13.00	-47.34	H
342.3400	-72.99	2.18	5.8	-69.37	-13.00	-56.37	H
459.7100	-76.61	2.6	5.88	-73.33	-13.00	-60.33	H
757.5000	-71.67	3.22	6.25	-68.64	-13.00	-55.64	H
770.1100	-72.53	3.27	6.38	-69.42	-13.00	-56.42	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2470.000	-51.71	6.3	6.06	-51.95	-13.00	-38.95	V
4122.000	-51.01	8.47	9.5	-49.98	-13.00	-36.98	V
4948.000	-37.92	9.33	10.52	-36.73	-13.00	-23.73	V
N/A							
2512.000	-52.29	6.37	6.13	-52.53	-13.00	-39.53	H
5018.000	-46.73	9.42	10.61	-45.54	-13.00	-32.54	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1672.000	-47.08	5.07	5.99	-46.16	-13.00	-33.16	V
5018.000	-37.24	9.42	10.61	-36.05	-13.00	-23.05	V
5858.000	-49.26	10.41	10.87	-48.80	-13.00	-35.80	V
N/A							
1966.000	-43.88	5.63	5.46	-44.05	-13.00	-31.05	H
5018.000	-47.08	9.42	10.61	-45.89	-13.00	-32.89	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2547.000	-51.41	6.42	6.22	-51.61	-13.00	-38.61	V
4241.000	-50.52	8.54	9.59	-49.47	-13.00	-36.47	V
5095.000	-38.37	9.45	10.64	-37.18	-13.00	-24.18	V
N/A							
2547.000	-50.69	6.42	6.22	-50.89	-13.00	-37.89	H
5095.000	-46.72	9.45	10.64	-45.53	-13.00	-32.53	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
5018.000	-32.94	9.42	10.61	-31.75	-13.00	-18.75	V
6208.000	-51.54	11.18	11.07	-51.65	-13.00	-38.65	V
N/A							
2512.000	-53.18	6.37	6.13	-53.42	-13.00	-40.42	H
5018.000	-45.78	9.42	10.61	-44.59	-13.00	-31.59	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
4185.000	-52.8	8.49	9.55	-51.74	-13.00	-38.74	V
5018.000	-36.46	9.42	10.61	-35.27	-13.00	-22.27	V
N/A							
2512.000	-51.85	6.37	6.13	-52.09	-13.00	-39.09	H
4752.000	-51.86	9.23	10.2	-50.89	-13.00	-37.89	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2547.000	-50.63	6.42	6.22	-50.83	-13.00	-37.83	V
5095.000	-47.49	9.45	10.64	-46.30	-13.00	-33.30	V
N/A							
2547.000	-50.92	6.42	6.22	-51.12	-13.00	-38.12	H
4241.000	-50.67	8.54	9.59	-49.62	-13.00	-36.62	H
5095.000	-38.07	9.45	10.64	-36.88	-13.00	-23.88	H
N/A							

Remark:

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



Operation Mode: GSM 1900 / TX / CH 512

Test Date: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3702.000	-26.62	8.2	9.1	-25.72	-13.00	-12.72	V
5550.000	-36.12	10.06	10.81	-35.37	-13.00	-22.37	V
7398.000	-38.87	12.09	12.54	-38.42	-13.00	-25.42	V
N/A							
3702.000	-31.76	8.2	9.1	-30.86	-13.00	-17.86	H
5550.000	-42.26	10.06	10.81	-41.51	-13.00	-28.51	H
N/A							

Remark:

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



Operation Mode: GSM 1900 / TX / CH 661

Test Date: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3758.000	-27.83	8.23	9.16	-26.90	-13.00	-13.90	V
5641.000	-36.89	10.18	10.83	-36.24	-13.00	-23.24	V
7517.000	-41.83	12.24	12.72	-41.35	-13.00	-28.35	V
N/A							
3758.000	-32.5	8.23	9.16	-31.57	-13.00	-18.57	H
5641.000	-41.66	10.18	10.83	-41.01	-13.00	-28.01	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3821.000	-29.13	8.29	9.22	-28.20	-13.00	-15.20	V
5732.000	-36.73	10.24	10.85	-36.12	-13.00	-23.12	V
7643.000	-42.5	12.26	12.84	-41.92	-13.00	-28.92	V
N/A							
3821.000	-33.92	8.29	9.22	-32.99	-13.00	-19.99	H
5732.000	-40.96	10.24	10.85	-40.35	-13.00	-27.35	H
6915.000	-46.48	11.53	11.8	-46.21	-13.00	-33.21	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3702.000	-26.87	8.2	9.1	-25.97	-13.00	-12.97	V
5550.000	-36.07	10.06	10.81	-35.32	-13.00	-22.32	V
7398.000	-39.67	12.09	12.54	-39.22	-13.00	-26.22	V
N/A							
3702.000	-30.9	8.2	9.1	-30.00	-13.00	-17.00	H
5550.000	-43.59	10.06	10.81	-42.84	-13.00	-29.84	H
7398.000	-42.59	12.09	12.54	-42.14	-13.00	-29.14	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3758.000	-28.23	8.23	9.16	-27.30	-13.00	-14.30	V
5641.000	-37.53	10.18	10.83	-36.88	-13.00	-23.88	V
7517.000	-41.07	12.24	12.72	-40.59	-13.00	-27.59	V
N/A							
3758.000	-32.46	8.23	9.16	-31.53	-13.00	-18.53	H
5641.000	-40.52	10.18	10.83	-39.87	-13.00	-26.87	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3821.000	-28.06	8.29	9.22	-27.13	-13.00	-14.13	V
5732.000	-36.23	10.24	10.85	-35.62	-13.00	-22.62	V
7636.000	-42.97	12.24	12.84	-42.37	-13.00	-29.37	V
N/A							
3821.000	-33.41	8.29	9.22	-32.48	-13.00	-19.48	H
5732.000	-40.42	10.24	10.85	-39.81	-13.00	-26.81	H
N/A							

Remark:

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



Operation Mode: EDGE 850 / TX / CH 128

Test Date: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2512.000	-51.69	6.37	6.13	-51.93	-13.00	-38.93	V
5018.000	-38.67	9.42	10.61	-37.48	-13.00	-24.48	V
N/A							
2512.000	-52.77	6.37	6.13	-53.01	-13.00	-40.01	H
5018.000	-47.65	9.42	10.61	-46.46	-13.00	-33.46	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
1966.000	-45.48	5.63	5.46	-45.65	-13.00	-32.65	V
5018.000	-37.16	9.42	10.61	-35.97	-13.00	-22.97	V
N/A							
1966.000	-41.61	5.63	5.46	-41.78	-13.00	-28.78	H
5018.000	-47.19	9.42	10.61	-46.00	-13.00	-33.00	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
2547.000	-51.07	6.42	6.22	-51.27	-13.00	-38.27	V
4241.000	-50.71	8.54	9.59	-49.66	-13.00	-36.66	V
5095.000	-38.61	9.45	10.64	-37.42	-13.00	-24.42	V
N/A							
2547.000	-51.92	6.42	6.22	-52.12	-13.00	-39.12	H
5095.000	-45.27	9.45	10.64	-44.08	-13.00	-31.08	H
N/A							

Remark:

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



Operation Mode: EDGE 1900 / TX / CH 512

Test Date: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3702.000	-27.19	8.2	9.1	-26.29	-13.00	-13.29	V
5550.000	-38.1	10.06	10.81	-37.35	-13.00	-24.35	V
7398.000	-39.14	12.09	12.54	-38.69	-13.00	-25.69	V
N/A							
3702.000	-31.41	8.2	9.1	-30.51	-13.00	-17.51	H
5550.000	-41.98	10.06	10.81	-41.23	-13.00	-28.23	H
7363.000	-43.7	12.07	12.48	-43.29	-13.00	-30.29	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: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3758.000	-27.85	8.23	9.16	-26.92	-13.00	-13.92	V
5641.000	-37.2	10.18	10.83	-36.55	-13.00	-23.55	V
7517.000	-40.72	12.24	12.72	-40.24	-13.00	-27.24	
3758.000	-32.63	8.23	9.16	-31.70	-13.00	-18.70	H
5641.000	-42.38	10.18	10.83	-41.73	-13.00	-28.73	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 1900 / TX / CH 810

Test Date: March 11, 2014

Temperature: 26°C

Tested by: David Shu

Humidity: 60 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	S.G. (dBm)	Cable loss (dB)	Ant.Gain (dBi)	Emission level (dBm)	Limit (dBm)	Margin (dB)	Antenna Polarization (V/H)
3821.000	-29.25	8.29	9.22	-28.32	-13.00	-15.32	V
5732.000	-36.71	10.24	10.85	-36.10	-13.00	-23.10	V
7636.000	-42.67	12.24	12.84	-42.07	-13.00	-29.07	V
N/A							
3821.000	-34.01	8.29	9.22	-33.08	-13.00	-20.08	H
5732.000	-39.23	10.24	10.85	-38.62	-13.00	-25.62	H
N/A							

Remark:

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



Calculation of maximum antenna gain

GSM850

Operation Mode	Frequency	Emission level	Max. Ant.Gain	Result	Limit	Margin
	(MHz)	(dBm)	(dBi)	(dBm)	(dBm)	(dB)
Low	4948	-36.73	8.2	-28.53	-13	-15.53
Mid	5018	-36.05	8.2	-27.85	-13	-14.85
High	5095	-37.18	8.2	-28.98	-13	-15.98

GPRS850

Operation Mode	Frequency	Emission level	Max. Ant.Gain	Result	Limit	Margin
	(MHz)	(dBm)	(dBi)	(dBm)	(dBm)	(dB)
Low	5018	-31.75	8.2	-23.55	-13	-10.55
Mid	5018	-35.27	8.2	-27.07	-13	-14.07
High	5095	-36.88	8.2	-28.68	-13	-15.68

EGPRS850

Operation Mode	Frequency	Emission level	Max. Ant.Gain	Result	Limit	Margin
	(MHz)	(dBm)	(dBi)	(dBm)	(dBm)	(dB)
Low	5018	-37.48	8.2	-29.28	-13	-16.28
Mid	5018	-35.97	8.2	-27.77	-13	-14.77
High	5095	-37.42	8.2	-29.22	-13	-16.22



GSM1900

Operation Mode	Frequency	Emission level	Max. Ant.Gain	Result	Limit	Margin
	(MHz)	(dBm)	(dBi)	(dBm)	(dBm)	(dB)
Low	3702	-25.72	3.7	-22.02	-13	-9.02
Mid	3758	-26.9	3.7	-23.2	-13	-10.2
High	3821	-28.2	3.7	-24.5	-13	-11.5

GPRS1900

Operation Mode	Frequency	Emission level	Max. Ant.Gain	Result	Limit	Margin
	(MHz)	(dBm)	(dBi)	(dBm)	(dBm)	(dB)
Low	3702	-25.97	3.7	-22.27	-13	-9.27
Mid	3758	-27.3	3.7	-23.6	-13	-10.6
High	3821	-27.13	3.7	-23.43	-13	-10.43

EGPRS1900

Operation Mode	Frequency	Emission level	Max. Ant.Gain	Result	Limit	Margin
	(MHz)	(dBm)	(dBi)	(dBm)	(dBm)	(dB)
Low	3702	-26.29	3.7	-22.59	-13	-9.59
Mid	3758	-26.92	3.7	-23.22	-13	-10.22
High	3821	-28.32	3.7	-24.62	-13	-11.62