



**FCC 47 CFR PART 22 SUBPART H AND PART 24 SUBPART E  
(Class II Permissive Change)**

**TEST REPORT**

**For**

**Gobi2000™ Module PCI Express Mini Card**

in support of Class II Permissive Change adding host Lenovo® model S10-3t, 20040, 0651

**Marketing Name: Lenovo IdeaPad S10-3t**

**Model: 20040XXXX, 0651XXXX (X=0~9, A~ Z or blank)**

**Trade Name: Qualcomm**

*Issued to*

**Qualcomm Incorporated**

**5775 Morehouse Dr.San Diego, CA 92121, U.S.A**

*Issued by*

**Compliance Certification Services Inc.**

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Testing Laboratory  
1309

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# 1. TEST RESULT CERTIFICATION

**Applicant:** Qualcomm Incorporated  
5775 Morehouse Dr. San Diego, CA 92121, U.S.A

**Equipment Under Test:** Gobi2000™ Module PCI Express Mini Card

**Trade Name:** Qualcomm

**Marketing Name:** Lenovo IdeaPad S10-3t

**Model:** 20040XXXX, 0651XXXX (X=0~9, A~ Z or blank)

**Date of Test:** May 22 ~ June 4, 2010

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:

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Rex Lai  
Section Manager  
Compliance Certification Services Inc.

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Gina Lo  
Section Manager  
Compliance Certification Services Inc.



## 2. EUT DESCRIPTION

<b>Product</b>	Gobi2000™ Module PCI Express Mini Card
<b>Trade Name</b>	Qualcomm
<b>Marketing Name</b>	Lenovo IdeaPad S10-3t
<b>Model Number</b>	20040XXXX, 0651XXXX (X=0~9, A~ Z or blank)
<b>Model Discrepancy</b>	All the above models are identical except for the designation of model numbers. The suffix of “XXXX” (X= 0~9, A~Z or Blank) on model number is just for marketing purpose only.
<b>Power Supply</b>	Powered by host device
<b>Frequency Range</b>	GSM / GPRS / EDGE: 850: 824.2 ~ 848.8 MHz GSM / GPRS / EDGE: 1900: 1850.2 ~ 1909.8 MHz
<b>Modulation Technique</b>	GSM: GMSK GPRS: GMSK EDGE: 8PSK
<b>Antenna Gain</b>	GSM / GPRS / EDGE 850 MHz: 0.6 dBi GSM / GPRS / EDGE 1900 MHz: -0.1 dBi
<b>Antenna Type</b>	PIFA Antenna
<b>Class II Permissive Change</b>	Add portable category for the Lenovo Bixby platform Product name: Notebook / Brand name: lenovo Model: Lenovo IdeaPad S10-3t 20040, 0651

**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: **J9CGOBI2000-L** 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: 20040XXXX, 0651XXXX (X=0~9, A~ Z or blank)) had been tested under operating condition.

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

EUT staying in continuous transmitting mode was programmed.

GSM / GPRS / 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.



## **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.*

3M Semi Anechoic Chamber				
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due
Spectrum Analyzer	Agilent	E4446A	US42510252	10/26/2010
EMI Test Receiver	R&S	ESCI	100064	02/04/2011
Pre-Amplifier	Mini-Circults	ZFL-1000LN	SF350700823	01/13/2011
Pre-Amplifier	MITEQ	AFS44-00102650-42-10P-44	1415367	11/20/2010
Bilog Antenna	Sunol Sciences	JB3	A030105	09/11/2010
Horn Antenna	EMCO	3117	00055165	12/07/2010
Loop Antenna	EMCO	6502	8905/2356	05/27/2011
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	12/31/2010
Test S/W	EZ-EMC (CCS-3A1RE)			





### 4.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
3M Semi Anechoic Chamber / 30M~200M	+/- 4.0606
3M Semi Anechoic Chamber / 200M~1000M	+/- 3.9979
3M Semi Anechoic Chamber / 1G~8G	+/- 2.5790
3M Semi Anechoic Chamber / 8G~18G	+/- 2.5928
3M Semi Anechoic Chamber / 18G~26G	+/- 2.7212
3M Semi Anechoic Chamber / 26G~40G	+/- 2.9520

**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

No.11, Wugong 6th Rd., Wugu Industrial Park, Taipei Hsien 248, Taiwan

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

No.81-1, Lane 210, Bade 2nd Rd., Luchu Hsiang, Taoyuan Hsien 338, Taiwan

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	 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 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	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 ERP & EIRP MEASUREMENT

#### LIMIT

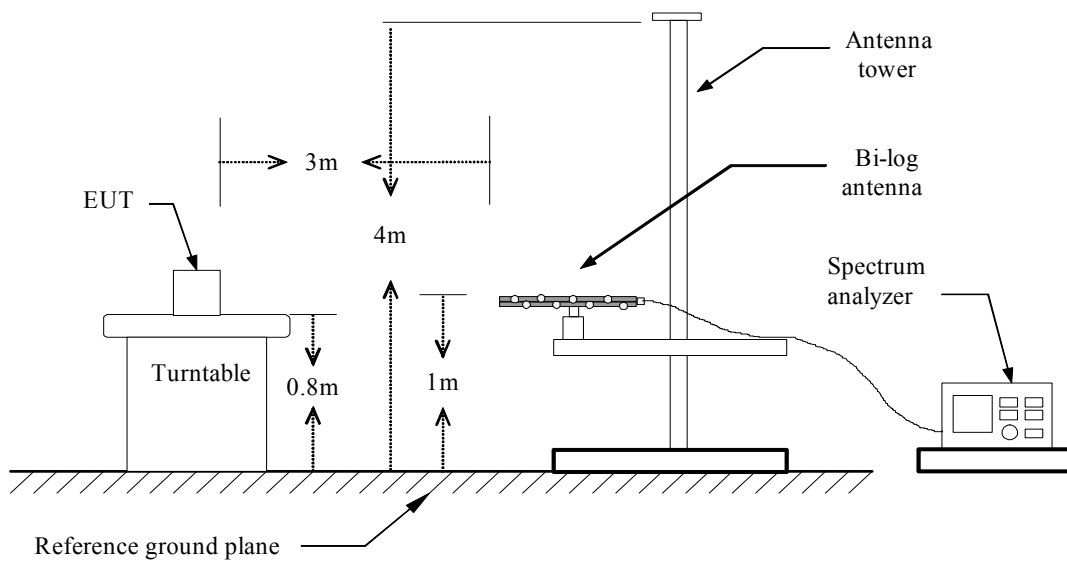
According to FCC §2.1046

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

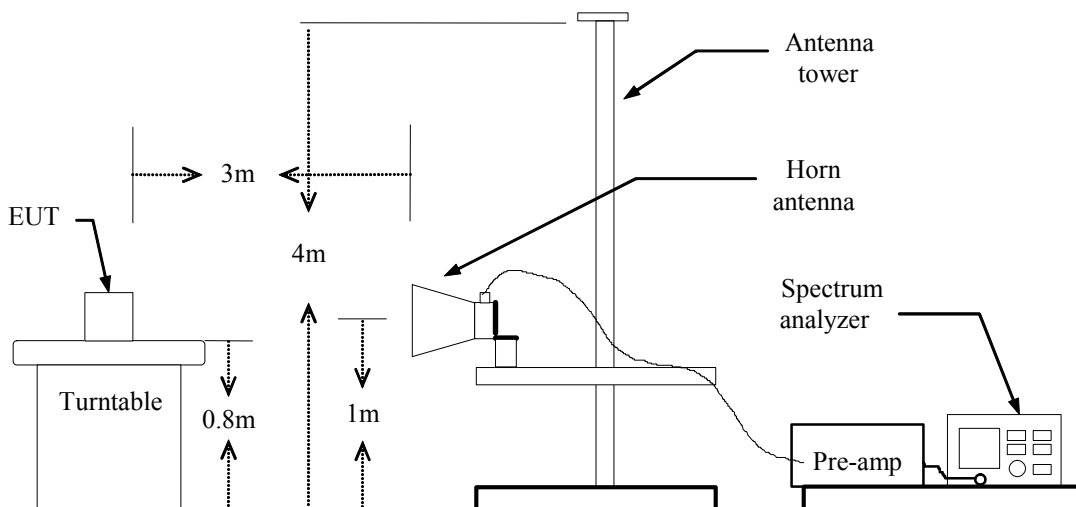
FCC 24.232(b): The equivalent Isotropic Radiated Power (EIRP) must not exceed 2 Watts.

#### Test Configuration

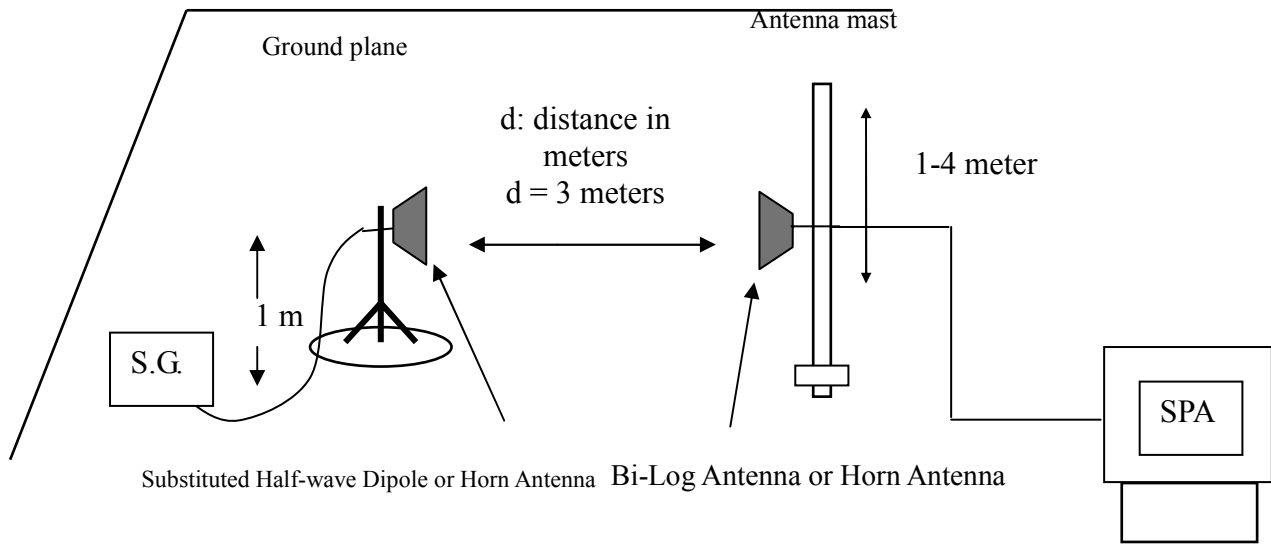
##### Below 1 GHz



##### Above 1 GHz



**For Substituted Method Test Set-UP**



**TEST PROCEDURE**

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

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

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

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

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

**TEST RESULTS**

*No non-compliance noted.*

**GSM 850 TEST DATA (CLASS B)**

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.20	V	-3.24	34.62	31.38	38.45	-7.07
	824.20	H	-2.55	34.65	32.09	38.45	-6.36
190	836.40	V	-3.98	34.53	30.55	38.45	-7.9
	836.40	H	-2.67	34.63	31.97	38.45	-6.48
251	848.80	V	-6.86	34.64	27.77	38.45	-10.68
	848.80	H	-3.69	34.75	31.06	38.45	-7.39

**GPRS 850 TEST DATA (CLASS 10)**

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.20	V	-3.42	34.62	31.20	38.45	-7.25
	824.20	H	-2.45	34.65	32.20	38.45	-6.25
190	836.40	V	-3.90	34.53	30.63	38.45	-7.82
	836.40	H	-2.50	34.63	32.14	38.45	-6.31
251	848.80	V	-7.05	34.64	27.59	38.45	-10.86
	848.80	H	-3.71	34.75	31.04	38.45	-7.41

**GSM 1900 TEST DATA (CLASS B)**

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.20	V	-12.30	41.17	28.87	33.00	-4.13
	1850.20	H	-18.94	40.79	21.85	33.00	-11.15
661	1880.00	V	-13.09	41.23	28.14	33.00	-4.86
	1880.00	H	-19.77	41.14	21.37	33.00	-11.63
810	1909.80	V	-12.81	41.30	28.49	33.00	-4.51
	1909.80	H	-19.86	41.38	21.52	33.00	-11.48

**GPRS 1900 TEST DATA (CLASS 10)**

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.20	V	-12.28	41.17	28.89	33.00	-4.11
	1850.20	H	-18.85	40.79	21.94	33.00	-11.06
661	1880.00	V	-13.10	41.23	28.13	33.00	-4.87
	1880.00	H	-19.34	41.14	21.80	33.00	-11.20
810	1909.80	V	-12.94	41.30	28.36	33.00	-4.64
	1909.80	H	-19.47	41.38	21.91	33.00	-11.09



**EDGE 850 Test Data (Class 12)**

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.27	V	-8.84	34.62	25.78	38.45	-12.67
	824.27	H	-8.26	34.65	26.39	38.45	-12.06
190	836.64	V	-9.23	34.53	25.29	38.45	-13.16
	836.64	H	-8.22	34.63	26.42	38.45	-12.03
251	848.79	V	-10.83	34.64	23.81	38.45	-14.64
	848.79	H	-9.29	34.75	25.46	38.45	-12.99

**EDGE 1900 Test Data (Class 12)**

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.16	V	-15.55	41.17	25.62	33.00	-7.38
	1849.98	H	-22.15	40.79	18.64	33.00	-14.36
661	1879.86	V	-16.66	41.23	24.57	33.00	-8.43
	1879.86	H	-23.30	41.15	17.84	33.00	-15.16
810	1910.01	V	-16.53	41.30	24.77	33.00	-8.23
	1910.01	H	-23.29	41.38	18.08	33.00	-14.92



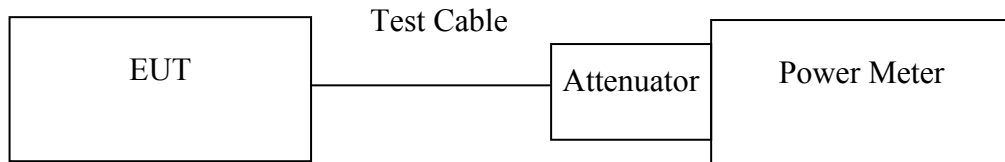


## 7.2 AVERAGE POWER

### 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 (Class B)	128	824.20	32.20	1.6596
	190	836.40	32.10	1.6218
	251	848.80	31.80	1.5136
GPRS 850 (Class 12)	128	824.20	32.10	1.6218
	190	836.40	32.00	1.5849
	251	848.80	31.70	1.4791
EDGE 850 (Class 12)	128	824.20	27.70	0.5888
	190	836.40	27.50	0.5623
	251	848.80	27.30	0.5370

Test Mode	CH	Frequency (MHz)	AVG Power (dBm)	Output Power (W)
GSM 1900 (Class B)	512	1850.20	29.00	0.7943
	661	1880.00	28.90	0.7762
	810	1909.80	29.10	0.8128
GPRS 1900 (Class 12)	512	1850.20	28.90	0.7762
	661	1880.00	28.80	0.7586
	810	1909.80	29.00	0.7943
EDGE 1900 (Class 12)	512	1850.20	25.50	0.3548
	661	1880.00	25.40	0.3467
	810	1909.80	25.60	0.3631

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

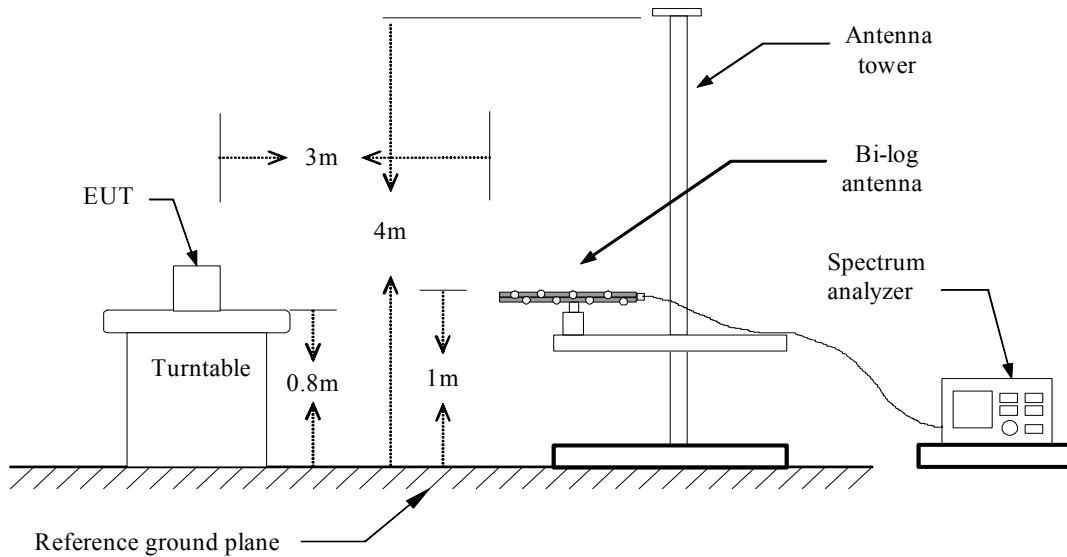
## 7.3 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

### LIMIT

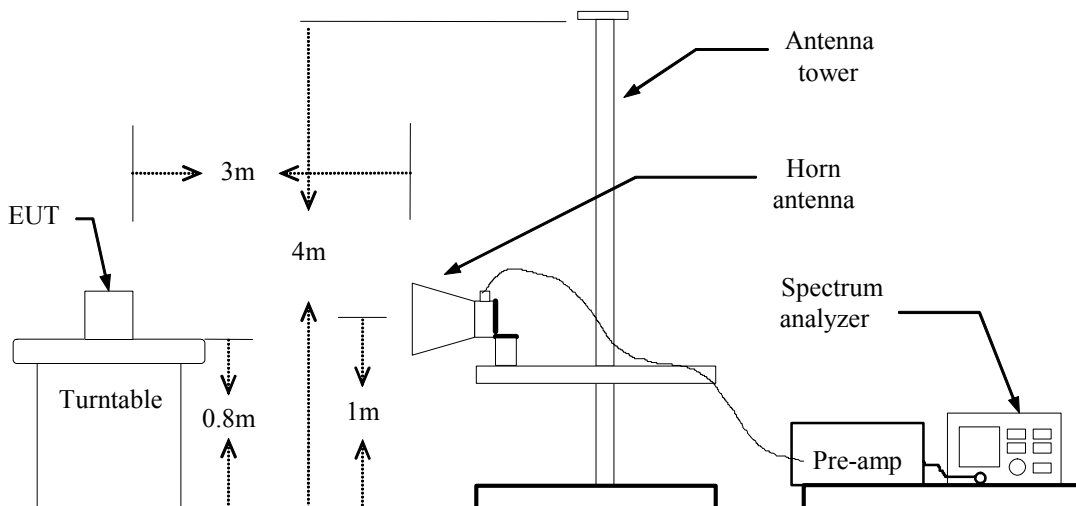
According to FCC §2.1053

### Test Configuration

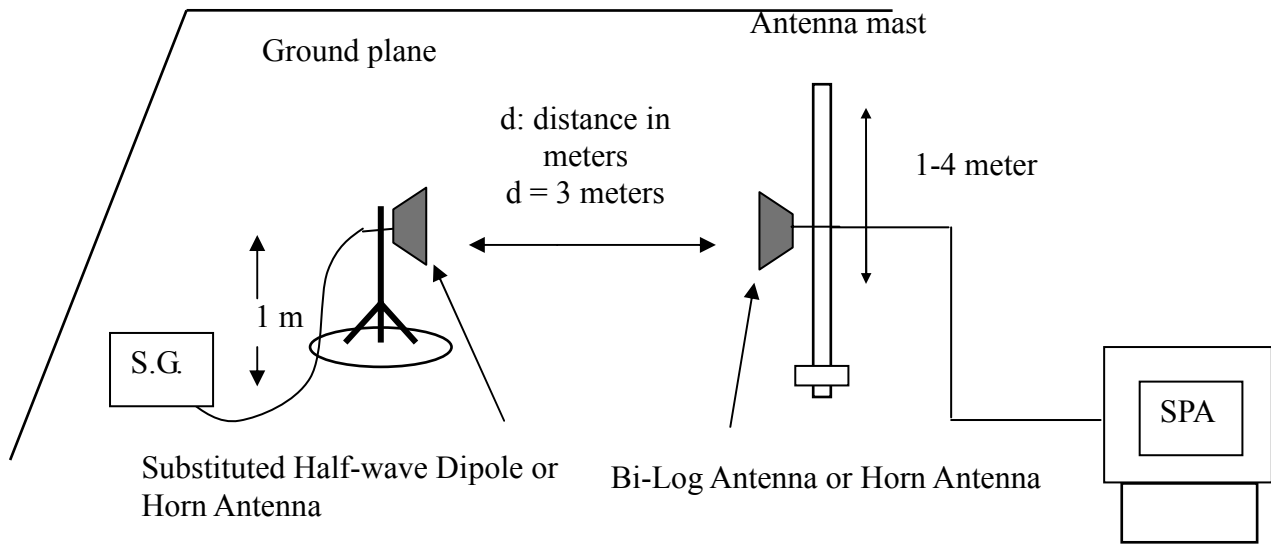
#### Below 1 GHz



#### 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.

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

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

**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:** May 22, 2010

**Temperature:** 25°C

**Tested by:** Ming Chen

**Humidity:** 55 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
99.84	V	-46.11	-18.10	-64.20	-13.00	-51.20
191.99	V	-53.17	-15.13	-68.31	-13.00	-55.31
399.57	V	-55.35	-12.10	-67.45	-13.00	-54.45
408.30	V	-53.71	-11.56	-65.27	-13.00	-52.27
682.81	V	-60.48	-6.57	-67.05	-13.00	-54.05
703.18	V	-60.53	-6.42	-66.95	-13.00	-53.95
99.84	H	-46.40	-18.04	-64.44	-13.00	-51.44
191.99	H	-57.38	-14.14	-71.52	-13.00	-58.52
399.57	H	-55.73	-11.72	-67.45	-13.00	-54.45
408.30	H	-53.31	-11.22	-64.53	-13.00	-51.53
512.09	H	-60.45	-8.65	-69.10	-13.00	-56.10
681.84	H	-61.02	-6.57	-67.59	-13.00	-54.59

**Remark:**

- The emission behaviour belongs to narrowband spurious emission.*
- 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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
130.88	V	-46.78	-12.79	-59.57	-13.00	-46.57
191.99	V	-53.31	-15.13	-68.45	-13.00	-55.45
288.02	V	-58.06	-12.08	-70.14	-13.00	-57.14
453.89	V	-54.85	-9.93	-64.78	-13.00	-51.78
523.73	V	-60.75	-8.40	-69.15	-13.00	-56.15
967.99	V	-60.56	-3.14	-63.70	-13.00	-50.70
130.88	H	-46.51	-14.14	-60.66	-13.00	-47.66
191.99	H	-57.72	-14.14	-71.86	-13.00	-58.86
322.94	H	-57.21	-14.16	-71.37	-13.00	-58.37
453.89	H	-54.58	-9.83	-64.41	-13.00	-51.41
523.73	H	-61.46	-8.50	-69.97	-13.00	-56.97
967.99	H	-60.39	-3.31	-63.70	-13.00	-50.70

**Remark:**

- The emission behaviour belongs to narrowband spurious emission.*
- 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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
161.92	V	-48.60	-14.34	-62.94	-13.00	-49.94
191.99	V	-53.24	-15.13	-68.38	-13.00	-55.38
322.94	V	-56.26	-13.59	-69.85	-13.00	-56.85
585.81	V	-61.11	-7.87	-68.99	-13.00	-55.99
644.98	V	-61.78	-6.67	-68.46	-13.00	-55.46
706.09	V	-60.76	-6.36	-67.12	-13.00	-54.12
160.95	H	-48.45	-14.37	-62.83	-13.00	-49.83
322.94	H	-57.69	-14.16	-71.85	-13.00	-58.85
498.51	H	-60.45	-8.82	-69.27	-13.00	-56.27
585.81	H	-60.16	-7.83	-67.99	-13.00	-54.99
645.95	H	-60.93	-6.63	-67.57	-13.00	-54.57
706.09	H	-64.61	-6.49	-71.10	-13.00	-58.10

**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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
191.99	V	-52.14	-15.13	-67.27	-13.00	-54.27
322.94	V	-52.76	-13.59	-66.35	-13.00	-53.35
353.01	V	-51.79	-13.22	-65.01	-13.00	-52.01
408.30	V	-53.40	-11.56	-64.96	-13.00	-51.96
682.81	V	-60.30	-6.57	-66.87	-13.00	-53.87
703.18	V	-60.23	-6.42	-66.65	-13.00	-53.65
99.84	H	-46.35	-18.04	-64.40	-13.00	-51.40
322.94	H	-54.06	-14.16	-68.22	-13.00	-55.22
352.04	H	-54.38	-13.36	-67.74	-13.00	-54.74
408.30	H	-52.53	-11.22	-63.76	-13.00	-50.76
512.09	H	-62.31	-8.65	-70.97	-13.00	-57.97
681.84	H	-60.03	-6.57	-66.60	-13.00	-53.60

**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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
130.88	V	-46.27	-12.79	-59.05	-13.00	-46.05
322.94	V	-52.45	-13.59	-66.04	-13.00	-53.04
353.01	V	-50.57	-13.22	-63.79	-13.00	-50.79
452.92	V	-54.45	-9.95	-64.40	-13.00	-51.40
706.09	V	-60.38	-6.36	-66.75	-13.00	-53.75
967.02	V	-60.47	-3.16	-63.63	-13.00	-50.63
130.88	H	-46.47	-14.14	-60.62	-13.00	-47.62
191.99	H	-56.83	-14.14	-70.97	-13.00	-57.97
322.94	H	-55.02	-14.16	-69.18	-13.00	-56.18
452.92	H	-54.54	-9.87	-64.41	-13.00	-51.41
522.76	H	-60.74	-8.52	-69.25	-13.00	-56.25
967.02	H	-61.92	-3.33	-65.24	-13.00	-52.24

**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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
161.92	V	-48.38	-14.34	-62.72	-13.00	-49.72
191.99	V	-52.12	-15.13	-67.25	-13.00	-54.25
322.94	V	-52.80	-13.59	-66.39	-13.00	-53.39
352.04	V	-52.44	-13.25	-65.69	-13.00	-52.69
585.81	V	-60.19	-7.87	-68.07	-13.00	-55.07
705.12	V	-59.48	-6.38	-65.86	-13.00	-52.86
160.95	H	-47.70	-14.37	-62.08	-13.00	-49.08
191.99	H	-56.22	-14.14	-70.36	-13.00	-57.36
322.94	H	-54.52	-14.16	-68.68	-13.00	-55.68
352.04	H	-56.52	-13.36	-69.88	-13.00	-56.88
585.81	H	-60.11	-7.83	-67.94	-13.00	-54.94
644.98	H	-61.95	-6.63	-68.58	-13.00	-55.58

**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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
36.79	V	-43.37	-14.41	-57.78	-13.00	-44.78
60.07	V	-42.65	-16.07	-58.72	-13.00	-45.72
115.36	V	-42.52	-14.79	-57.31	-13.00	-44.31
352.04	V	-45.80	-13.25	-59.05	-13.00	-46.05
602.30	V	-53.63	-7.60	-61.24	-13.00	-48.24
704.15	V	-52.04	-6.40	-58.44	-13.00	-45.44
36.79	H	-51.49	-13.71	-65.21	-13.00	-52.21
86.26	H	-40.66	-21.26	-61.92	-13.00	-48.92
113.42	H	-45.34	-15.47	-60.82	-13.00	-47.82
322.94	H	-47.61	-14.16	-61.77	-13.00	-48.77
352.04	H	-49.21	-13.36	-62.57	-13.00	-49.57
703.18	H	-56.98	-6.51	-63.49	-13.00	-50.49

**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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
37.76	V	-42.58	-13.86	-56.44	-13.00	-43.44
86.26	V	-39.56	-20.48	-60.04	-13.00	-47.04
114.39	V	-42.84	-15.01	-57.86	-13.00	-44.86
352.04	V	-46.57	-13.25	-59.82	-13.00	-46.82
603.27	V	-53.01	-7.57	-60.58	-13.00	-47.58
704.15	V	-52.83	-6.40	-59.24	-13.00	-46.24
86.26	H	-40.69	-21.26	-61.95	-13.00	-48.95
115.36	H	-46.21	-15.05	-61.26	-13.00	-48.26
191.99	H	-51.57	-14.14	-65.71	-13.00	-52.71
322.94	H	-48.25	-14.16	-62.41	-13.00	-49.41
352.04	H	-47.57	-13.36	-60.93	-13.00	-47.93
705.12	H	-55.83	-6.50	-62.32	-13.00	-49.32

**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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
36.79	V	-43.53	-14.41	-57.94	-13.00	-44.94
116.33	V	-42.90	-14.58	-57.48	-13.00	-44.48
191.99	V	-47.97	-15.13	-63.10	-13.00	-50.10
352.04	V	-46.17	-13.25	-59.42	-13.00	-46.42
604.24	V	-54.28	-7.53	-61.81	-13.00	-48.81
704.15	V	-53.95	-6.40	-60.35	-13.00	-47.35
36.79	H	-53.06	-13.71	-66.78	-13.00	-53.78
86.26	H	-41.06	-21.26	-62.32	-13.00	-49.32
118.27	H	-46.84	-14.40	-61.24	-13.00	-48.24
191.99	H	-51.95	-14.14	-66.09	-13.00	-53.09
353.01	H	-48.59	-13.33	-61.92	-13.00	-48.92
704.15	H	-56.10	-6.50	-62.60	-13.00	-49.60

**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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
37.76	V	-42.74	-13.86	-56.60	-13.00	-43.60
62.01	V	-43.16	-15.98	-59.14	-13.00	-46.14
114.39	V	-42.59	-15.01	-57.60	-13.00	-44.60
308.39	V	-46.89	-13.62	-60.51	-13.00	-47.51
605.21	V	-53.44	-7.49	-60.93	-13.00	-47.93
706.09	V	-53.65	-6.36	-60.01	-13.00	-47.01
86.26	H	-40.80	-21.26	-62.06	-13.00	-49.06
116.33	H	-45.36	-14.83	-60.19	-13.00	-47.19
195.87	H	-51.81	-13.76	-65.57	-13.00	-52.57
312.27	H	-48.72	-14.24	-62.95	-13.00	-49.95
574.17	H	-56.19	-7.84	-64.03	-13.00	-51.03
703.18	H	-57.49	-6.51	-64.01	-13.00	-51.01

**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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
37.76	V	-42.15	-13.86	-56.01	-13.00	-43.01
60.07	V	-43.20	-16.07	-59.26	-13.00	-46.26
114.39	V	-42.62	-15.01	-57.63	-13.00	-44.63
280.26	V	-47.90	-12.13	-60.02	-13.00	-47.02
603.27	V	-52.81	-7.57	-60.38	-13.00	-47.38
706.09	V	-52.80	-6.36	-59.16	-13.00	-46.16
41.64	H	-53.34	-11.68	-65.03	-13.00	-52.03
86.26	H	-40.65	-21.26	-61.92	-13.00	-48.92
115.36	H	-45.82	-15.05	-60.86	-13.00	-47.86
191.99	H	-51.28	-14.14	-65.43	-13.00	-52.43
322.94	H	-49.06	-14.16	-63.22	-13.00	-50.22
706.09	H	-56.35	-6.49	-62.84	-13.00	-49.84

**Remark:**

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



Operation Mode: GPRS 1900 / TX / CH 810

Test Date: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
37.76	V	-43.21	-13.86	-57.07	-13.00	-44.07
59.10	V	-43.51	-16.13	-59.64	-13.00	-46.64
114.39	V	-42.48	-15.01	-57.50	-13.00	-44.50
308.39	V	-47.23	-13.62	-60.85	-13.00	-47.85
602.30	V	-54.02	-7.60	-61.63	-13.00	-48.63
704.15	V	-53.93	-6.40	-60.33	-13.00	-47.33
85.29	H	-40.85	-21.28	-62.13	-13.00	-49.13
116.33	H	-45.36	-14.83	-60.19	-13.00	-47.19
191.99	H	-52.34	-14.14	-66.48	-13.00	-53.48
307.42	H	-48.30	-14.25	-62.55	-13.00	-49.55
703.18	H	-57.16	-6.51	-63.67	-13.00	-50.67
771.08	H	-59.46	-5.45	-64.92	-13.00	-51.92

**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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
99.84	V	-46.44	-18.10	-64.53	-13.00	-51.53
191.99	V	-52.98	-15.13	-68.11	-13.00	-55.11
407.33	V	-53.07	-11.62	-64.69	-13.00	-51.69
603.27	V	-58.76	-7.57	-66.32	-13.00	-53.32
681.84	V	-60.69	-6.58	-67.27	-13.00	-54.27
706.09	V	-60.98	-6.36	-67.34	-13.00	-54.34
99.84	H	-46.64	-18.04	-64.68	-13.00	-51.68
191.99	H	-57.52	-14.14	-71.66	-13.00	-58.66
398.60	H	-55.53	-11.73	-67.26	-13.00	-54.26
407.33	H	-53.58	-11.28	-64.86	-13.00	-51.86
512.09	H	-61.61	-8.65	-70.27	-13.00	-57.27
681.84	H	-61.02	-6.57	-67.59	-13.00	-54.59

**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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
130.88	V	-46.31	-12.79	-59.10	-13.00	-46.10
191.99	V	-52.78	-15.13	-67.91	-13.00	-54.91
322.94	V	-55.23	-13.59	-68.82	-13.00	-55.82
452.92	V	-57.38	-9.95	-67.34	-13.00	-54.34
603.27	V	-59.80	-7.57	-67.36	-13.00	-54.36
967.02	V	-60.69	-3.16	-63.85	-13.00	-50.85
130.88	H	-46.11	-14.14	-60.26	-13.00	-47.26
191.99	H	-57.44	-14.14	-71.58	-13.00	-58.58
322.94	H	-57.47	-14.16	-71.63	-13.00	-58.63
453.89	H	-53.65	-9.83	-63.48	-13.00	-50.48
522.76	H	-60.08	-8.52	-68.60	-13.00	-55.60
967.99	H	-61.64	-3.31	-64.95	-13.00	-51.95

**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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
161.92	V	-50.27	-14.34	-64.61	-13.00	-51.61
191.99	V	-51.52	-15.13	-66.66	-13.00	-53.66
322.94	V	-52.16	-13.59	-65.76	-13.00	-52.76
351.07	V	-53.82	-13.28	-67.10	-13.00	-54.10
602.30	V	-59.40	-7.60	-67.00	-13.00	-54.00
706.09	V	-59.85	-6.36	-66.22	-13.00	-53.22
160.95	H	-49.23	-14.37	-63.60	-13.00	-50.60
191.99	H	-57.37	-14.14	-71.51	-13.00	-58.51
322.94	H	-55.55	-14.16	-69.71	-13.00	-56.71
387.93	H	-61.40	-11.91	-73.31	-13.00	-60.31
585.81	H	-64.50	-7.83	-72.33	-13.00	-59.33
644.98	H	-62.35	-6.63	-68.99	-13.00	-55.99

**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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
37.76	V	-42.90	-13.86	-56.77	-13.00	-43.77
112.45	V	-42.44	-15.45	-57.89	-13.00	-44.89
305.48	V	-46.30	-13.63	-59.93	-13.00	-46.93
353.01	V	-48.13	-13.22	-61.36	-13.00	-48.36
603.27	V	-53.63	-7.57	-61.20	-13.00	-48.20
704.15	V	-52.83	-6.40	-59.23	-13.00	-46.23
38.73	H	-53.42	-12.47	-65.89	-13.00	-52.89
86.26	H	-41.15	-21.26	-62.41	-13.00	-49.41
113.42	H	-46.37	-15.47	-61.85	-13.00	-48.85
191.02	H	-52.55	-14.24	-66.79	-13.00	-53.79
332.64	H	-46.50	-13.95	-60.45	-13.00	-47.45
705.12	H	-56.23	-6.50	-62.73	-13.00	-49.73

**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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
37.76	V	-42.90	-13.86	-56.76	-13.00	-43.76
58.13	V	-43.13	-16.20	-59.33	-13.00	-46.33
114.39	V	-41.89	-15.01	-56.90	-13.00	-43.90
291.90	V	-47.63	-12.37	-60.00	-13.00	-47.00
602.30	V	-53.36	-7.60	-60.96	-13.00	-47.96
706.09	V	-53.49	-6.36	-59.85	-13.00	-46.85
37.76	H	-52.47	-13.09	-65.56	-13.00	-52.56
86.26	H	-40.19	-21.26	-61.46	-13.00	-48.46
115.36	H	-45.98	-15.05	-61.02	-13.00	-48.02
191.99	H	-50.71	-14.14	-64.85	-13.00	-51.85
315.18	H	-48.99	-14.23	-63.22	-13.00	-50.22
703.18	H	-56.50	-6.51	-63.02	-13.00	-50.02

**Remark:**

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



Operation Mode: EDGE 1900 / TX / CH 810

Test Date: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
37.76	V	-43.43	-13.86	-57.30	-13.00	-44.30
61.04	V	-43.70	-16.02	-59.72	-13.00	-46.72
115.36	V	-43.23	-14.79	-58.02	-13.00	-45.02
280.26	V	-47.53	-12.13	-59.66	-13.00	-46.66
605.21	V	-53.55	-7.49	-61.04	-13.00	-48.04
706.09	V	-52.37	-6.36	-58.73	-13.00	-45.73
39.70	H	-54.22	-11.85	-66.07	-13.00	-53.07
85.29	H	-40.77	-21.28	-62.05	-13.00	-49.05
116.33	H	-46.62	-14.83	-61.46	-13.00	-48.46
203.63	H	-50.26	-14.03	-64.29	-13.00	-51.29
554.77	H	-58.03	-7.92	-65.94	-13.00	-52.94
705.12	H	-56.82	-6.50	-63.32	-13.00	-50.32

**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:** May 22, 2010

**Temperature:** 25°C

**Tested by:** Ming Chen

**Humidity:** 55 % RH

**Polarity:** Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1651.00	V	-44.74	1.61	-43.13	-13.00	-30.13
1812.00	V	-54.13	1.71	-52.42	-13.00	-39.42
2470.00	V	-51.23	4.41	-46.82	-13.00	-33.82
N/A						
1651.00	H	-52.12	1.42	-50.70	-13.00	-37.70
2470.00	H	-48.17	4.43	-43.74	-13.00	-30.74
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1672.00	V	-43.87	1.63	-42.24	-13.00	-29.24
1812.00	V	-56.09	1.71	-54.37	-13.00	-41.37
2512.00	V	-49.24	4.62	-44.62	-13.00	-31.62
6691.00	V	-59.15	13.85	-45.29	-13.00	-32.29
N/A						
1672.00	H	-52.55	1.40	-51.15	-13.00	-38.15
1840.00	H	-57.78	1.28	-56.50	-13.00	-43.50
2512.00	H	-47.94	4.69	-43.25	-13.00	-30.25
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1700.00	V	-47.54	1.64	-45.89	-13.00	-32.89
2547.00	V	-46.67	4.76	-41.92	-13.00	-28.92
N/A						
1700.00	H	-54.31	1.38	-52.93	-13.00	-39.93
1826.00	H	-57.95	1.29	-56.66	-13.00	-43.66
2547.00	H	-48.90	4.82	-44.07	-13.00	-31.07
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1651.00	V	-44.48	1.61	-42.86	-13.00	-29.86
2470.00	V	-51.31	4.41	-46.91	-13.00	-33.91
3296.00	V	-59.25	8.35	-50.90	-13.00	-37.90
N/A						
1651.00	H	-53.16	1.42	-51.74	-13.00	-38.74
2470.00	H	-48.33	4.43	-43.90	-13.00	-30.90
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1672.00	V	-43.96	1.63	-42.33	-13.00	-29.33
2512.00	V	-48.71	4.62	-44.09	-13.00	-31.09
6691.00	V	-57.54	13.85	-43.69	-13.00	-30.69
N/A						
1672.00	H	-50.27	1.40	-48.87	-13.00	-35.87
2512.00	H	-48.87	4.69	-44.18	-13.00	-31.18
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1651.00	V	-44.48	1.61	-42.86	-13.00	-29.86
2470.00	V	-51.31	4.41	-46.91	-13.00	-33.91
3296.00	V	-59.25	8.35	-50.90	-13.00	-37.90
N/A						
1651.00	H	-53.16	1.42	-51.74	-13.00	-38.74
2470.00	H	-48.33	4.43	-43.90	-13.00	-30.90
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3702.00	V	-58.41	9.11	-49.30	-13.00	-36.30
5550.00	V	-58.46	10.32	-48.14	-13.00	-35.14
N/A						
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3758.00	V	-59.03	8.98	-50.05	-13.00	-37.05
5641.00	V	-60.24	10.40	-49.84	-13.00	-36.84
N/A						
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3821.00	V	-60.97	8.83	-52.14	-13.00	-39.14
5732.00	V	-52.20	10.48	-41.72	-13.00	-28.72
N/A						
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3702.00	V	-56.80	9.11	-47.70	-13.00	-34.70
5550.00	V	-59.51	10.32	-49.19	-13.00	-36.19
N/A						
3702.00	H	-61.22	8.89	-52.33	-13.00	-39.33
5550.00	H	-60.79	10.12	-50.67	-13.00	-37.67
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3758.00	V	-60.08	8.98	-51.10	-13.00	-38.10
5641.00	V	-59.02	10.40	-48.61	-13.00	-35.61
N/A						
3758.00	H	-60.06	8.76	-51.30	-13.00	-38.30
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3821.00	V	-59.51	8.83	-50.68	-13.00	-37.68
5732.00	V	-52.55	10.48	-42.07	-13.00	-29.07
N/A						
3821.00	H	-62.17	8.62	-53.55	-13.00	-40.55
5732.00	H	-59.46	10.33	-49.13	-13.00	-36.13
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1651.00	V	-53.29	1.61	-51.68	-13.00	-38.68
1826.00	V	-57.53	1.72	-55.81	-13.00	-42.81
2302.00	V	-58.71	3.48	-55.23	-13.00	-42.23
N/A						
2470.00	H	-58.36	4.43	-53.93	-13.00	-40.93
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1672.00	V	-52.72	1.63	-51.10	-13.00	-38.10
1833.00	V	-55.64	1.73	-53.92	-13.00	-40.92
2512.00	V	-58.99	4.62	-54.38	-13.00	-41.38
N/A						
1770.00	H	-58.19	1.33	-56.86	-13.00	-43.86
2512.00	H	-57.19	4.69	-52.50	-13.00	-39.50
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1770.00	V	-55.80	1.69	-54.11	-13.00	-41.11
2547.00	V	-57.80	4.76	-53.04	-13.00	-40.04
2995.00	V	-59.15	6.55	-52.59	-13.00	-39.59
N/A						
1812.00	H	-59.64	1.30	-58.34	-13.00	-45.34
2547.00	H	-59.96	4.82	-55.13	-13.00	-42.13
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3702.00	V	-58.92	9.11	-49.82	-13.00	-36.82
N/A						
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3758.00	V	-60.92	8.98	-51.95	-13.00	-38.95
N/A						
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: May 22, 2010

Temperature: 25°C

Tested by: Ming Chen

Humidity: 55 % RH

Polarity: Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
5732.00	V	-57.73	10.48	-47.25	-13.00	-34.25
N/A						
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.