

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

TEST REPORT

For

Intelligent Vehicle Telematics Computer

Model: VTC6110

Trade Name: NEXCOM

Issued to

NEXCOM international Co.,LTD 18F NO, 716 , Chung-Cheng, Chung-Ho, Taipei Hsien235 ,Taiwan ,R. O. C.

Issued by



Compliance Certification Services Inc. No. 11, Wu-Gong 6th Rd., Wugu Industrial Park, Taipei Hsien 24891, Taiwan (R.O.C.) http://www.ccsrf.com service@ccsrf.com



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1. TEST RESULT CERTIFICATION

Applicant:	NEXCOM international Co.,LTD 18F NO, 716 , Chung-Cheng, Chung-Ho, Taipei Hsien235 ,Taiwan ,R. O. C.
Equipment Under Test:	Intelligent Vehicle Telematics Computer
Trade Name:	NEXCOM
Model Number:	VTC6110
Date of Test:	June 2 ~ 12, 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:

Rex Lai Section Manager Compliance Certification Services Inc.

Reviewed by:

Gina Lo

Gina Lo Section Manager Compliance Certification Services Inc.



2. EUT DESCRIPTION

Product	Intelligent Vehicle Telematics Computer
Trade Name	NEXCOM
Model Number	VTC6110
Model Discrepancy	N/A
Power Supply	Brand / Model FSP / FSP120-AAB I/P: 100-240V, 50-60Hz, 2A O/P: 19V, 6.32A
Frequency Range	GSM / GPRS / EDGE: 850: 824.2 ~ 848.8 MHz GSM / GPRS / EDGE: 1900: 1850.2 ~ 1909.8 MHz WCDMA / HSDPA / HSUPA Band II: 1852.4 ~ 1907.6 MHz WCDMA / HSDPA / HSUPA Band V: 826.4 ~ 846.6MHz
Transmit Power (ERP & EIRP Power)	GSM 850: 29.23dBm GSM 1900: 27.73 dBm GPRS 850: 24.66 dBm GPRS 1900: 24.99 dBm EDGE 850: 25.81 dBm EDGE 1900: 27.74 dBm WCDMA Band II: 24.61 dBm HSDPA Band II: 23.83 dBm HSUPA Band II: 23.91 dBm WCDMA Band V: 21.75 dBm HSDPA Band V: 21.75 dBm
Modulation Technique	GSM: GMSK GPRS: GMSK EDGE: 8PSK WCDMA: Quadrature Phase Shift Keying (QPSK) with Root-raised cosine pulse shaping filters (roll off = 0.22)



	GSM 850: 247KGXW
	GSM 1900: 243KGXW
	GPRS 850: 246KGXW
	GPRS 1900: 247KGXW
	EDGE 850: 248KG7W
T	EDGE 1900: 247KG7W
Type of Emission	WCDMA Band II: 4M16F9W
	WCDMA Band V: 4M17F9W
	WCDMA HSDPA Band II: 4M17F9W
	WCDMA HSDPA Band V: 4M18F9W
	WCDMA HSUPA Band II: 4M16F9W
	WCDMA HSUPA Band V: 4M17F9W
	GSM / GPRS / EDGE 850: -0.97 dBi
	GSM / GPRS / EDGE 1900: 3.75 dBi
Antenna Gain	WCDMA band II: 3.75 dBi
	WCDMA band V: -0.97 dBi
	Din 1. Antonno
Antenna Type	Dipole Antenna

Remark:

- 1. The sample selected for test was engineering sample that approximated to production product and was provided by manufacturer.
- 2. This submittal(s) (test report) is intended for FCC ID: <u>YHI-VTC6110X00</u> 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: VTC6110) had been tested under operating condition.

EUT staying in continuous transmitting mode was programmed.

GSM / GPRS / EDGE 850:

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

GSM / GPRS / EDGE 1900:

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

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.

WCDMA / HSUPA 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.

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.

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 / HSUPA Band II / HSUPA 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	03/03/2011				
Power Meter	Agilent	E4416A	GB41291611	06/27/2011				
Power Sensor	Agilent	E9327A	US40441097	06/27/2011				
Temp. / Humidity Chamber	Terchy	MHG-150LF	930619	09/15/2010				
DC Power Source	Agilent	E3640A	MY40001774	01/08/2011				

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	06/10/2013			
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)							

Powerline Conducted Emissions Test Site							
Name of Equipment	Manufacturer	Model	Serial Number	Calibration Due			
EMI Test Receiver	R&S	ESHS30	828144/003	12/06/2010			
LISN	EMCO	3825/2	9106-1809	05/02/2011			
LISN	SCHAFFNER	NNB 41	03/10013	12/03/2010			
Test S/W		CCS	-3A1-CE				



4.3 MEASUREMENT UNCERTAINTY

PARAMETER	UNCERTAINTY
Powerline Conducted Emission	+/- 1.6202
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 24891, 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	Canada 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	LCD Monitor	DELL	2407WFPb	CN-0FC255-4663 3-675-22TJS	FCC DoC	Shielded, 1.8m with 2 cores	Unshielded, 1.8m
2	USB Keyboard	Logitech	M-BB48	LZE01360732	FCC DoC	Shielded, 1.8m	N/A
3	USB Mouse	DELL	MO56UO	408031121	FCC DoC	Shielded, 1.8m	N/A
4	Modem	ACEEX	DM-1414	0405026756	IFAXDM1414	Shielded, 1.8m	Unshielded, 1.8m
5	Modem	ACEEX	DM-1414	0405026757	IFAXDM1414	Shielded, 1.8m	Unshielded, 1.8m
6	Modem	ACEEX	DM-1414	0405026747	IFAXDM1414	Shielded, 1.8m	Unshielded, 1.8m
7	320GB 2.5" HDD	Seagate	9ZA2MG-500	538224 2806	FCC DoC	Shielded, 1.8m	N/A
8	Multimedia Earphone	Ergotech	ET-E220	N/A	FCC DoC	Unshielded, 1.8m*2	N/A
9	Multimedia Earphone	Ergotech	ET-E220	N/A	FCC DoC	Unshielded, 1.8m*2	N/A
10	SIM Card	N/A	N/A	N/A	N/A	N/A	N/A
11	Universal Radio Communication Tester (Remote)	R&S	CMU200	101245	N/A	N/A	Unshielded, 1.8m
12	Notebook PC (Remote)	DELL	PP19L	GK102 A00	QDS-BRCM1021	LAN Cable: Unshielded, 10m	AC I/P: Unshielded, 1.8m DC O/P: Unshielded, 1.8m with a core
13	Wireless Pre-N Router (Remote)	BELKIN	F5D8230-4	N/A	SA3-AGN0901AP 0100	N/A	AC I/P: Unshielded, 1.8m DC O/P: Unshielded, 1.8m with a core
14	GPS Simulator (Remote)	HWAJEAT	GPS-101	EN001	N/A	N/A	N/A

Remark:

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



7. FCC PART 22 & 24 REQUIREMENTS

7.1 PEAK POWER

LIMIT

According to FCC §2.1046.

Test Configuration



Remark: Measurement setup for testing on Antenna connector

TEST PROCEDURE

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

TEST RESULTS

No non-compliance noted.



<u>Test Data</u>

Test Mode	СН	Frequency (MHz)	Peak Power (dBm)	Output Power W
	128	824.20	32.00	1.58489
GSM 850 (Class B)	190	836.40	31.90	1.54882
	251	848.80	31.70	1.47911
	128	824.20	26.10	0.40738
GPRS 850 (Class 12)	190	836.40	25.90	0.38905
· · · ·	251	848.80	25.80	0.38019
	128	824.20	26.00	0.39811
EDGE 850 (Class 12)	190	836.40	25.90	0.38905
``´´	251	848.80	25.80	0.38019

Test Mode	СН	Frequency (MHz)	Peak Power (dBm)	Output Power W
	512	1850.20	28.50	0.70795
GSM 1900 (Class B)	661	1880.00	28.50	0.70795
× ,	810	1909.80	28.40	0.69183
	512	1850.20	22.60	0.18197
GPRS 1900 (Class 12)	661	1880.00	22.60	0.18197
	810	1909.80	22.40	0.17378
	512	1850.20	22.60	0.18197
EDGE 1900 (Class 12)	661	1880.00	22.60	0.18197
	810	1909.80	22.40	0.17378

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



Test Mode	СН	Frequency (MHz)	Peak Power (dBm)	Output Power W	
	9262	1852.40	26.03	0.40087	
WCDMA (BAND II)	9400	1880.00	26.18	0.41495	
	9538	1907.60	26.19	0.41591	
	4132	826.40	26.16	0.41305	
WCDMA (BAND V)	4182	836.40	26.94	0.49431	
	4233	846.60	26.41	0.43752	

Test Mode	СН	Frequency (MHz)	Peak Power (dBm)	Output Power W	
WCDMA /	9262	1852.40	26.49	0.44566	
HSDPA (BAND II)	9400	1880.00	26.61	0.45814	
	9538	1907.60	26.44	0.44055	
WCDMA /	4132	826.40	26.75	0.47315	
HSDPA (BAND V)	4182	836.40	27.37	0.54576	
	4233	846.60	27.12	0.51523	

Test Mode	СН	Frequency (MHz)	Peak Power (dBm)	Output Power W	
WCDMA/	9262	1852.40	26.49	0.44566	
HSUPA (BAND II)	9400	1880.00	26.64	0.46132	
	9538	1907.60	26.70	0.46774	
WCDMA /	4132	826.40	26.51	0.44771	
HSUPA (BAND V)	4182	836.40	27.13	0.51642	
	4233	846.60	26.81	0.47973	

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



7.2 AVERAGE POWER

LIMIT

For reporting purposes only.

Test Configuration



Remark: Measurement setup for testing on Antenna connector

TEST PROCEDURE

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

TEST RESULTS

No non-compliance noted.



TEST RESULTS

No non-compliance noted.

<u>Test Data</u>

Test Mode	СН	Frequency (MHz)	AVG Power (dBm)	Output Power W
	128	824.20	22.97	0.19811
GSM 850 (Class B)	190	836.40	22.87	0.19360
	251	848.80	22.67	0.18489
	128	824.20	23.09	0.20369
GPRS 850 (Class 12)	190	836.40	22.89	0.19452
	251	848.80	22.79	0.19009
	128	824.20	22.99	0.19905
EDGE 850 (Class 12)	190	836.40	22.89	0.19452
	251	848.80	22.79	0.19009

Test Mode	СН	Frequency (MHz)	AVG Power (dBm)	Output Power W
	512	1850.20	19.47	0.08849
GSM 1900 (Class B)	661	1880.00	19.47	0.08849
(Chubb D)	810	1909.80	19.37	0.08648
	512	1850.20	19.59	0.09099
GPRS 1900 (Class 12)	661	1880.00	19.59	0.09099
()	810	1909.80	19.39	0.08689
	512	1850.20	19.59	0.09099
EDGE 1900 (Class 12)	661	1880.00	19.59	0.09099
	810	1909.80	19.39	0.08689

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



Test Mode	CH Frequency (MHz)		AVG Power (dBm)	Output Power W	
	9262	1852.40	22.71	0.18664	
WCDMA (BAND II)	9400	1880.00	22.73	0.18750	
	9538	1907.60	22.83	0.19187	
	4132	826.40	22.69	0.18578	
WCDMA (BAND V)	4182	836.40	23.55	0.22646	
	4233	846.60	22.95	0.19724	

Test Mode	СН	Frequency (MHz)	AVG Power (dBm)	Output Power W	
WCDMA /	9262	1852.40	22.61	0.18239	
HSDPA	9400	1880.00	22.57	0.18072	
(BAND II)	9538	1907.60	22.61	0.18239	
WCDMA /	4132	826.40	22.61	0.18239	
HSDPA (BAND V)	4182	836.40	23.30	0.21380	
	4233	846.60	22.89	0.19454	

Test Mode	CH Frequency (MHz)		Peak Power (dBm)	Output Power W	
WCDMA /	9262	1852.40	22.57	0.18072	
HSUPA	9400	1880.00	22.69	0.18578	
(BAND II)	9538	1907.60	22.91	0.19543	
WCDMA /	4132	826.40	22.37	0.17258	
HSUPA (BAND V)	4182	836.40	23.11	0.20464	
	4233	846.60	22.61	0.18239	

 42.53
 640.00
 22.01

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



7.3 ERP & EIRP MEASUREMENT

LIMIT

According to FCC §2.1046

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

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

Test Configuration

Below 1 GHz



Above 1 GHz





For Substituted Method Test Set-UP



TEST PROCEDURE

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

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

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

ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable (dB) EIRP = S.G. output (dBm) + Antenna Gain (dBi) – Cable (dB)

TEST RESULTS

No non-compliance noted.



Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
129	824.20	V	-8.19	34.62	26.43	38.45	-12.02
128	824.20	Н	-6.22	34.65	28.43	38.45	-10.02
190	836.40	V	-6.59	34.52	27.93	38.45	-10.52
	836.40	Н	-5.40	34.63	*29.23	38.45	-9.22
251	848.80	V	-8.07	34.64	26.56	38.45	-11.89
231	848.80	Н	-7.09	34.75	27.66	38.45	-10.79

GSM 850 TEST DATA (CLASS B)

GPRS 850 TEST DATA (CLASS 12)

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
129	824.20	V	-10.70	34.62	23.92	38.45	-14.53
128	824.20	Н	-10.70	34.65	23.95	38.45	-14.5
190	836.40	V	-10.57	34.53	23.95	38.45	-14.5
	836.40	Н	-10.39	34.63	24.24	38.45	-14.21
251	848.80	V	-10.89	34.64	23.74	38.45	-14.71
231	848.80	Н	-10.08	34.75	*24.66	38.45	-13.79

GSM 1900 TEST DATA (CLASS B)

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.20	V	-14.80	41.17	26.37	33.00	-6.63
512	1850.20	Н	-17.37	40.79	23.42	33.00	-9.58
661	1880.00	V	-14.53	41.23	26.70	33.00	-6.30
	1880.00	Н	-17.40	41.14	23.74	33.00	-9.26
010	1909.80	V	-13.58	41.30	*27.73	33.00	-5.27
810	1909.80	Н	-16.29	41.38	25.08	33.00	-7.92

GPRS 1900 TEST DATA (CLASS 12)

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.20	V	-17.61	41.17	23.57	33.00	-9.43
	1850.20	Н	-19.45	40.79	21.34	33.00	-11.66
661	1880.00	V	-17.41	41.23	23.82	33.00	-9.18
	1880.00	Н	-18.60	41.14	22.55	33.00	-10.45
<u> </u>	1909.80	V	-16.31	41.30	*24.99	33.00	-8.01
810	1909.80	Н	-16.93	41.38	24.44	33.00	-8.56



EDGE 850 Test Data (Class 12)

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
128	824.27	V	-9.31	34.62	25.31	38.45	-13.14
	824.27	Н	-9.35	34.65	25.30	38.45	-13.15
190	836.64	V	-9.51	34.52	25.02	38.45	-13.43
	836.64	Н	-9.27	34.63	25.36	38.45	-13.09
251	848.79	V	-9.66	34.64	24.98	38.45	-13.47
231	848.79	Н	-8.95	34.75	*25.81	38.45	-12.64

EDGE 1900 Test Data (Class 12)

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
512	1850.16	V	-14.81	41.17	26.36	33.00	-6.64
	1849.98	Н	-17.02	40.79	23.77	33.00	-9.23
661	1879.86	V	-14.89	41.23	26.33	33.00	-6.67
	1879.86	Н	-15.77	41.15	25.37	33.00	-7.63
810	1910.01	V	-13.56	41.30	*27.74	33.00	-5.26
	1910.01	Н	-14.46	41.38	26.92	33.00	-6.08

WCDMA Test Data (BAND II)

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
9262	1853.52	V	-17.23	41.18	23.94	33.00	-9.06
	1853.36	Н	-20.58	40.83	20.25	33.00	-12.75
9400	1880.88	V	-16.63	41.23	*24.61	33.00	-8.39
	1881.12	Н	-19.89	41.15	21.27	33.00	-11.73
9538	1908.32	V	-17.05	41.30	24.25	33.00	-8.75
	1908.40	Н	-20.02	41.38	21.36	33.00	-11.64

WCDMA Test Data (BAND V)

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	826.91	V	-13.13	34.60	21.47	38.45	-16.98
	826.91	Н	-14.31	34.64	20.33	38.45	-18.12
4182	837.49	V	-12.90	34.52	21.62	38.45	-16.83
	837.49	Н	-12.88	34.63	*21.75	38.45	-16.70
4022	845.59	V	-13.69	34.60	20.91	38.45	-17.54
4233	846.05	Н	-13.69	34.60	20.91	38.45	-17.54



WCDMA / HSDPA BAND II Test Data

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
9262	1851.20	V	-18.04	41.18	23.13	33.00	-9.87
	1851.36	Н	-20.15	40.83	20.68	33.00	-12.32
9400	1878.96	V	-17.57	41.23	23.66	33.00	-9.34
	1878.96	Н	-20.24	41.16	20.93	33.00	-12.07
9538	1906.64	V	-17.47	41.30	*23.83	33.00	-9.17
	1906.56	Н	-20.46	41.38	20.91	33.00	-12.09

WCDMA / HSDPA BAND V Test Data

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	827.33	V	-14.18	34.60	20.42	38.45	-18.03
	827.42	Н	-14.15	34.64	20.49	38.45	-17.96
4182	837.50	V	-14.06	34.52	20.46	38.45	-17.99
	837.50	Н	-13.62	34.63	*21.01	38.45	-17.44
4233	847.89	V	-14.35	34.59	20.24	38.45	-18.21
	845.82	Н	-14.91	34.70	19.79	38.45	-18.66

WCDMA / HSUPA BAND II Test Data

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
9262	1853.31	V	-18.14	41.17	23.04	33.00	-9.96
	1851.24	Н	-20.53	40.83	20.31	33.00	-12.69
9400	1880.22	V	-17.32	41.23	*23.91	33.00	-9.09
	1881.21	Н	-20.30	41.16	20.86	33.00	-12.14
0529	1908.03	V	-17.48	41.30	23.82	33.00	-9.18
9558	1907.85	Н	-20.75	41.38	20.62	33.00	-12.38

WCDMA / HSUPA BAND V Test Data

Channel	Frequency (MHz)	Antenna Pol.	Reading level (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4132	825.35	V	-13.52	34.59	21.08	38.45	-17.37
	826.16	Н	-13.81	34.64	20.83	38.45	-17.62
4182	835.61	V	-13.49	34.52	21.03	38.45	-17.42
	837.72	Н	-12.85	34.63	*21.79	38.45	-16.66
4233	845.73	V	-14.41	34.62	20.21	38.45	-18.24
	845.69	Н	-14.45	34.72	20.28	38.45	-18.17



7.4 OCCUPIED BANDWIDTH MEASUREMENT

LIMIT

According to §FCC 2.1049.

Test Configuration



Remark: Measurement setup for testing on Antenna connector

TEST PROCEDURE

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

TEST RESULTS

No non-compliance noted



<u>Test Data</u>

Test Mode	СН	Frequency (MHz)	99% Bandwidth (kHz)
	128	824.190	247.8367
GSM 850 (Class B)	190	836.580	243.8112
(01400 2)	251	848.780	243.9323
	128	824.190	246.1135
GPRS 850 (Class 12)	190	836.580	246.5325
(2.022.)	251	848.780	244.7103
	128	824.190	240.7853
EDGE 850 (Class 12)	190	836.580	248.5793
	251	848.780	241.3589

Test Mode	СН	Frequency (MHz)	99% Bandwidth (kHz)
GSM 1900 (Class B)	512	1850.200	242.9698
	661	1880.000	239.7227
	810	1909.790	243.7852
	512	1850.200	244.5651
GPRS 1900 (Class 12)	661	1880.000	247.2381
(0.000)	810	1909.790	246.7434
EDGE 1900 (Class 12)	512	1850.200	241.8027
	661	1880.000	236.8053
	810	1909.790	247.4988



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Test Mode	СН	Frequency (MHz)	99% Bandwidth (MHz)
	9262	1852.40	4.1669
WCDMA (Band II)	9400	1880.00	4.1694
	9538	1907.60	4.1592
	4132	826.40	4.1684
WCDMA (Band V)	4182	836.40	4.1782
(2010 1)	4233	846.60	4.1794
WCDMA /	9262	1852.40	4.1673
HSDPA	9400	1880.00	4.1749
(BAND II)	9538	1907.60	4.1694
WCDMA /	4132	826.40	4.1624
HSDPA	4182	836.40	4.1838
(BAND V)	4233	846.60	4.1861
WCDMA /	9262	1852.40	4.1666
HSUPA	9400	1880.00	4.1699
(BAND II)	9538	1907.60	4.1667
WCDMA /	4132	826.40	4.1713
HSUPA	4182	836.40	4.1749
(BAND V)	4233	846.60	4.1695



Test Plot

GSM 850 (CH Low)



Transmit Freq Error	11.080 kHz
x dB Bandwidth	311.893 kHz

GSM 850 (CH Mid)



Transmit Freq Error x dB Bandwidth 18.899 kHz 311.163 kHz



GSM 850 (CH High)



Transmit Freq Error10.741 kHzx dB Bandwidth319.024 kHz



GPRS 850 (CH Mid)





Transmit Freq Error x dB Bandwidth 20.332 kHz 314.630 kHz



GSM 1900 (CH Low)





Transmit Freq Error x dB Bandwidth 1.126 kHz 316.610 kHz



GSM 1900 (CH High)



Transmit Freq Error	445.050 Hz
x dB Bandwidth	315.861 kHz



GPRS 1900 (CH Mid)



Transmit Freq Error10.198 kHzx dB Bandwidth319.130 kHz



EDGE 850 (CH Low)

Transmit Freq Error

x dB Bandwidth

20.324 kHz

317.695 kHz





EDGE 850 (CH High)



Transmit Freq Error	113.023 Hz
x dB Bandwidth	317.319 kHz



EDGE 1900 (CH Mid)



Transmit Freq Error10.295 kHzx dB Bandwidth311.990 kHz


WCDMA Band II (CH Low)



Transmit Freq Error	3.025 kHz
x dB Bandwidth	4.643 MHz



WCDMA Band II (CH High)



5.910 kHz

Transmit Freq Error



WCDMA Band V (CH Mid)





Transmit Freq Error

x dB Bandwidth

847.638 Hz

4.635 MHz

WCDMA / HSDPA Band II (CH Low)





WCDMA / HSDPA Band II (CH High)



Transmit Freq Error	8.347 kHz
x dB Bandwidth	4.633 MHz



WCDMA / HSDPA Band V (CH Mid)





WCDMA / HSUPA Band II (CH Low)





WCDMA / HSUPA Band II (CH High)





Transmit Freq Error

x dB Bandwidth

-12.615 kHz

4.636 MHz

WCDMA / HSUPA Band V (CH Mid)





7.5 OUT OF BAND EMISSION AT ANTENNA TERMINALS

LIMIT

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

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

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

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

Test Configuration

Out of band emission at antenna terminals:



TEST PROCEDURE

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

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

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

TEST RESULTS

No non-compliance noted.



Test	Data

Mode	СН	Location	Description
GSM 850 (Class B) 251	128	Figure 7-1	Conducted spurious emissions, 30MHz - 20GHz
	190	Figure 7-2	Conducted spurious emissions, 30MHz - 20GHz
	251	Figure 7-3	Conducted spurious emissions, 30MHz - 20GHz
	128	Figure 8-1	Conducted spurious emissions, 30MHz - 20GHz
GPRS 850 (Class 12)	190	Figure 8-2	Conducted spurious emissions, 30MHz - 20GHz
	251	Figure 8-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	СН	Location	Description
GSM 1900 (Class B)	512	Figure 9-1	Conducted spurious emissions, 30MHz - 20GHz
	661	Figure 9-2	Conducted spurious emissions, 30MHz - 20GHz
	810	Figure 9-3	Conducted spurious emissions, 30MHz - 20GHz
	512	Figure 10-1	Conducted spurious emissions, 30MHz - 20GHz
GPRS 1900 (Class 12)	661	Figure 10-2	Conducted spurious emissions, 30MHz - 20GHz
	810	Figure 10-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	СН	Location	Description
GSM 850	128	Figure 11-1	Band Edge emissions
(Class B)	251	Figure 11-2	Band Edge emissions
GPRS 850	128	Figure 12-1	Band Edge emissions
(Class 12)	251	Figure 12-2	Band Edge emissions

Mode	СН	Location	Description
GSM 1900	512	Figure 13-1	Band Edge emissions
(Class B)	810	Figure 13-2	Band Edge emissions
GPRS 1900	512	Figure 14-1	Band Edge emissions
(Class 12)	810	Figure 14-2	Band Edge emissions



Mode	СН	Location	Description
EDGE 850 (Class 12) 12 25	128	Figure 15-1	Conducted spurious emissions, 30MHz - 20GHz
	190	Figure 15-2	Conducted spurious emissions, 30MHz - 20GHz
	251	Figure 15-3	Conducted spurious emissions, 30MHz - 20GHz
EDGE 1900 (Class 12)	512	Figure 16-1	Conducted spurious emissions, 30MHz - 20GHz
	661	Figure 16-2	Conducted spurious emissions, 30MHz - 20GHz
	810	Figure 16-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	СН	Location	Description
EDGE 850	128	Figure 17-1	Band Edge emissions
(Class 12)	251	Figure 17-2	Band Edge emissions
EDGE 1900	512	Figure 18-1	Band Edge emissions
(Class 12)	810	Figure 18-2	Band Edge emissions



Mode	СН	Location	Description
WCDMA (Band II) 9262 9400 9538	9262	Figure 19-1	Conducted spurious emissions, 30MHz - 20GHz
	9400	Figure 19-2	Conducted spurious emissions, 30MHz - 20GHz
	9538	Figure 19-3	Conducted spurious emissions, 30MHz - 20GHz
	4132	Figure 20-1	Conducted spurious emissions, 30MHz - 20GHz
WCDMA (Band V)	4182	Figure 20-2	Conducted spurious emissions, 30MHz - 20GHz
	4233	Figure 20-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	СН	Location	Description
WCDMA	9262	Figure 21-1	Band Edge emissions
(Band II)	9538	Figure 21-2	Band Edge emissions
WCDMA	4132	Figure 22-1	Band Edge emissions
(Band V)	4233	Figure 22-2	Band Edge emissions

Mode	СН	Location	Description
HSDPA	9262	Figure 23-1	Conducted spurious emissions, 30MHz - 20GHz
WCDMA	9400	Figure 23-2	Conducted spurious emissions, 30MHz - 20GHz
(Band II)	9538	Figure 23-3	Conducted spurious emissions, 30MHz - 20GHz
HSDPA	4132	Figure 24-1	Conducted spurious emissions, 30MHz - 20GHz
WCDMA (Band V)	4182	Figure 24-2	Conducted spurious emissions, 30MHz - 20GHz
	4233	Figure 24-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	СН	Location	Description
HSDPA	9262	Figure 25-1	Band Edge emissions
(Band II)	9538	Figure 25-2	Band Edge emissions
HSDPA	4132	Figure 26-1	Band Edge emissions
(Band V)	4233	Figure 26-2	Band Edge emissions



Mode	СН	Location	Description
HSUPA WCDMA (Band II)	9262	Figure 27-1	Conducted spurious emissions, 30MHz - 20GHz
	9400	Figure 27-2	Conducted spurious emissions, 30MHz - 20GHz
	9538	Figure 27-3	Conducted spurious emissions, 30MHz - 20GHz
HSUPA WCDMA (Band V)	4132	Figure 28-1	Conducted spurious emissions, 30MHz - 20GHz
	4182	Figure 28-2	Conducted spurious emissions, 30MHz - 20GHz
	4233	Figure 28-3	Conducted spurious emissions, 30MHz - 20GHz

Mode	СН	Location	Description
HSUPA	9262	Figure 29-1	Band Edge emissions
(Band II)	9538	Figure 29-2	Band Edge emissions
HSUPA	4132	Figure 30-1	Band Edge emissions
(Band V)	4233	Figure 30-2	Band Edge emissions



Test Plot

<u>GSM 850</u>

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



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





R T 🔆 Agilent 20:19:48 Jun 3, 2010 Mkr1 850 MHz Ref 33.6 dBm #Atten 10 dB 31.65 dBm #Peak Log 10 dB/ Offst 33.6 dB DI -13.0 dBm LgAv M1 S2 \$3 FC AA ¤(f): FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.87 ms (1001 pts)

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

GPRS 850

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





🔆 Agilent 00:19:35 Jun 3, 2010 R Т Mkr1 830 MHz Ref 33.62 dBm #Atten 10 dB 25.83 dBm #Peak Log ٥ 10 dB/ Offst 33.6 dB DL -13.0 dBm LgAv M1 S2 \$3 FC AA ¤(f): FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.88 ms (601 pts)

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











<u>GSM 1900</u>

🔆 Agilent 20:22:44 Jun 3, 2010 R Т Mkr1 1.85 GHz Ref 33.3 dBm #Atten 10 dB 27.93 dBm #Peak ¢ Log 10 dB/ Offst 33.3 dB DI -13.0 dBm LgA∨ M1 S2 \$3 FC AA ¤(f): والمخطخا FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.87 ms (1001 pts) Figure 9-2: Out of Band emission at antenna terminals – GSM CH Mid 🔆 Agilent 20:22:59 Jun 3, 2010 R Т Mkr1 1.89 GHz Ref 33.3 dBm 28.15 dBm #Atten 10 dB #Peak ¢ Log 10 dB/ Offst 33.3 dB DI -13.0 dBm LgAv M1 S2 \$3 FC AA mark broket bours ¤(f): 1.1 T AND THE REAL PROPERTY OF FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.87 ms (1001 pts)

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



🔆 Agilent 20:23:12 Jun 3, 2010 R T Mkr1 1.91 GHz Ref 33.3 dBm #Atten 10 dB 28.13 dBm #Peak ¢ Log 10 dB/ Offst 33.3 dB DI -13.0 dBm LgAv M1 S2 \$3 FC AA ¤(f): FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.87 ms (1001 pts)

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

GPRS 1900

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





🔆 Agilent 00:33:14 Jun 3, 2010 R Т Mkr1 1.89 GHz Ref 33.35 dBm #Atten 10 dB 22.54 dBm #Peak Log 10 dB/ Offst 33.3 dB DI -13.0 dBm LgAv M1 S2 \$3 FC AA ¤(f): FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.88 ms (601 pts)

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







<u>GSM 850</u>

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





<u>GPRS 850</u>

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





<u>GSM 1900</u>

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





GPRS 1900

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





EDGE 850







🔆 Agilent 00:21:29 Jun 3, 2010 R T Mkr1 860 MHz Ref 33.62 dBm #Atten 10 dB 25.64 dBm #Peak Log Ó 10 dB/ Offst 33.6 dB DI -13.0 dBm LgA∨ M1 S2 \$3 FC AΑ ¤(f): FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.88 ms (601 pts)

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

EDGE 1900

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





🔆 Agilent 00:44:01 Jun 3, 2010 R T Mkr1 1.89 GHz Ref 33.35 dBm #Atten 10 dB 22.50 dBm #Peak Log 10 dB/ Offst 33.3 dB DI -13.0 dBm LgA∨ M1 S2 \$3 FC AΑ ¤(f): FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.88 ms (601 pts) Figure 16-3: Out of Band emission at antenna terminals -EDGE CH High 🔆 Agilent 00:43:51 Jun 3, 2010 R T Mkr1 1.89 GHz Ref 33.35 dBm #Atten 10 dB 22.53 dBm #Peak Log 10 dB/ Offst 33.3 dB DL -13.0 dBm LgAv M1 S2 \$3 FC AA ¤(f): FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.88 ms (601 pts)

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



EDGE 850

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





EDGE 1900

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





WCDMA Band II

Figure 19-1: Out of Band emission at antenna terminals - WCDMA CH Low





🔆 Agilent 21:02:20 Jun 3, 2010 R T Mkr1 1.91 GHz Ref 33.3 dBm #Atten 10 dB 22.82 dBm #Peak Log 10 dB/ Offst 33.3 dB DI -13.0 dBm LgA∨ M1 S2 \$3 FC AΑ ¤(f): FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.87 ms (1001 pts)

Figure 19-3: Out of Band emission at antenna terminals - WCDMA CH High

WCDMA Band V

Figure 20-1: Out of Band emission at antenna terminals - WCDMA CH Low





🔆 Agilent 21:07:19 Jun 3, 2010 R T Mkr1 830 MHz Ref 33.3 dBm #Atten 10 dB 21.91 dBm #Peak Log 10 dB/ Offst 33.6 dB DI -13.0 dBm LgA∨ M1 S2 \$3 FC AΑ الواحبة فيقطون وراد where the ¤(f): FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.87 ms (1001 pts) Figure 20-3: Out of Band emission at antenna terminals - WCDMA CH High 🔆 Agilent 21:08:38 Jun 3, 2010 R Т Mkr1 850 MHz #Atten 10 dB 20.72 dBm Ref 33.3 dBm #Peak Log 10 dB/ Offst 33.6 dB DL -13.0 dBm LgAv M1 S2 \$3 FC AA ¤(f): FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.87 ms (1001 pts)

Figure 20-2: Out of Band emission at antenna terminals - WCDMA CH Mid



WCDMA Band II

Figure 21-1: Band Edge emissions - WCDMA CH Low 🔆 Agilent 20:59:55 Jun 3, 2010 R Т Mkr1 1.849 965 GHz Ref 33.3 dBm #Atten 10 dB -26.23 dBm #Peak Log 10 dB/ Offst 33.3 dB DI -13.0 dBm LgA∨ V1 S2 \$3 FC ash. ۵. AA ¤(f): f>50k Swp Center 1.850 000 GHz Span 5 MHz #Res BW 51 kHz #VBW 160 kHz Sweep 1.867 ms (1001 pts) Figure 21-2: Band Edge emissions –WCDMA CH High 🔆 Agilent 21:01:43 Jun 3, 2010 R Т Mkr1 1.910 040 GHz Ref 33.3 dBm #Atten 10 dB -24.92 dBm #Peak Log 10 dB/ Amann Offst 33.3 dB DI -13.0 dBm LgAv V1 S2 \$3 FC mound mough AA ¤(f): f>50k Swp Span 5 MHz Center 1.910 000 GHz #Res BW 51 kHz #VBW 160 kHz Sweep 1.867 ms (1001 pts)

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WCDMA Band V

Figure 22-1: Band Edge emissions -WCDMA CH Low





WCDMA / HSDPA Band II

Figure 23-1: Out of Band emission at antenna terminals - HSDPA CH Low



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🔆 Agilent 21:02:45 Jun 3, 2010 R T Mkr1 1.91 GHz Ref 33.3 dBm #Atten 10 dB 22.68 dBm #Peak Log 10 dB/ Offst 33.3 dB DI -13.0 dBm LgA∨ M1 S2 \$3 FC AΑ ¤(f): FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.87 ms (1001 pts)

Figure 23-3: Out of Band emission at antenna terminals – HSDPA CH High

WCDMA / HSDPA Band V

Figure 24-1: Out of Band emission at antenna terminals - HSDPA CH Low




🔆 Agilent 21:07:54 Jun 3, 2010 R T Mkr1 830 MHz Ref 33.3 dBm #Atten 10 dB 22.08 dBm #Peak Log 10 dB/ Offst 33.6 dB DI -13.0 dBm LgA∨ M1 S2 \$3 FC AΑ ¤(f): . Oak FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.87 ms (1001 pts) Figure 24-3: Out of Band emission at antenna terminals - HSDPA CH High 🔆 Agilent 21:08:10 Jun 3, 2010 R Т Mkr1 850 MHz #Atten 10 dB Ref 33.3 dBm 20.88 dBm #Peak Log 10 dB/ Offst 33.6 dB DL -13.0 dBm LgAv M1 S2 \$3 FC AA Nesd ¤(f): FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.87 ms (1001 pts)

Figure 24-2: Out of Band emission at antenna terminals - HSDPA CH Mid



WCDMA / HSDPA Band II

Figure 25-1: Band Edge emissions - HSDPA CH Low





WCDMA / HSDPA Band V

Figure 26-1: Band Edge emissions – HSDPA CH Low





WCDMA / HSUPA Band II

Figure 27-1: Out of Band emission at antenna terminals - HSUPA CH Low







Figure 27-3: Out of Band emission at antenna terminals - HSUPA CH High

HSUPA / WCDMA Band V

Figure 28-1: Out of Band emission at antenna terminals - HSUPA CH Low





🔆 Agilent 21:07:32 Jun 3, 2010 R T Mkr1 830 MHz Ref 33.3 dBm #Atten 10 dB 22.09 dBm #Peak Log 10 dB/ Offst 33.6 dB DI -13.0 dBm LgA∨ M1 S2 \$3 FC AΑ ¤(f): FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.87 ms (1001 pts) Figure 28-3: Out of Band emission at antenna terminals - HSUPA CH High 🔆 Agilent 21:08:27 Jun 3, 2010 R Т Mkr1 850 MHz #Atten 10 dB Ref 33.3 dBm 20.69 dBm #Peak Log 10 dB/ Offst 33.6 dB DL -13.0 dBm LgAv M1 S2 \$3 FC AA and an arrival ¤(f): FTun Swp Start 30 MHz Stop 20.00 GHz #Res BW 1 MHz #VBW 1 MHz Sweep 99.87 ms (1001 pts)

Figure 28-2: Out of Band emission at antenna terminals - HSUPA CH Mid



WCDMA / HSUPA Band II

Figure 29-1: Band Edge emissions - HSUPA CH Low





WCDMA / HSUPA Band V

Figure 30-1: Band Edge emissions – HSUPA CH Low





7.6 FIELD STRENGTH OF SPURIOUS RADIATION MEASUREMENT

LIMIT

According to FCC §2.1053

Test Configuration

Below 1 GHz



Above 1 GHz





Substituted Method Test Set-up



TEST PROCEDURE

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

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

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

ERP = S.G. output (dBm) + Antenna Gain (dBd) – Cable (dB)

EIRP = S.G. output (dBm) + Antenna Gain (dBi) - 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:	June 2, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
30.00	V	-49.96	-18.30	-68.26	-13.00	-55.26
83.35	V	-49.07	-20.14	-69.21	-13.00	-56.21
149.31	V	-56.84	-13.10	-69.94	-13.00	-56.94
240.49	V	-54.99	-14.30	-69.29	-13.00	-56.29
427.70	V	-65.75	-10.61	-76.36	-13.00	-63.36
566.41	V	-63.01	-7.94	-70.95	-13.00	-57.95
41.64	Н	-64.31	-11.68	-75.99	-13.00	-62.99
145.43	Н	-67.03	-14.25	-81.27	-13.00	-68.27
198.78	Н	-68.69	-13.47	-82.16	-13.00	-69.16
376.29	Н	-67.04	-12.23	-79.27	-13.00	-66.27
562.53	Н	-69.14	-7.79	-76.93	-13.00	-63.93
652.74	Н	-69.03	-6.65	-75.68	-13.00	-62.68

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
42.61	V	-63.82	-12.79	-76.61	-13.00	-63.61
127.00	V	-67.11	-13.03	-80.14	-13.00	-67.14
144.46	V	-67.00	-13.30	-80.29	-13.00	-67.29
269.59	V	-67.87	-12.88	-80.75	-13.00	-67.75
488.81	V	-68.81	-8.86	-77.67	-13.00	-64.67
777.87	V	-68.24	-5.29	-73.53	-13.00	-60.53
44.55	Н	-63.57	-11.72	-75.29	-13.00	-62.29
118.27	Н	-66.15	-14.40	-80.55	-13.00	-67.55
171.62	Н	-67.04	-13.82	-80.86	-13.00	-67.86
508.21	Н	-70.18	-8.70	-78.89	-13.00	-65.89
638.19	Н	-68.85	-6.64	-75.50	-13.00	-62.50
744.89	Н	-69.23	-5.65	-74.88	-13.00	-61.88

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
30.00	V	-50.58	-18.30	-68.88	-13.00	-55.88
94.02	V	-50.76	-19.77	-70.52	-13.00	-57.52
139.61	V	-57.70	-13.45	-71.15	-13.00	-58.15
243.40	V	-54.76	-14.44	-69.20	-13.00	-56.20
277.35	V	-57.51	-12.31	-69.82	-13.00	-56.82
566.41	V	-65.54	-7.94	-73.48	-13.00	-60.48
43.58	Н	-64.19	-11.71	-75.90	-13.00	-62.90
144.46	Н	-66.63	-14.33	-80.96	-13.00	-67.96
199.75	Н	-67.17	-13.37	-80.55	-13.00	-67.55
244.37	Н	-67.61	-14.09	-81.71	-13.00	-68.71
288.99	Н	-67.84	-13.11	-80.96	-13.00	-67.96
455.83	Н	-68.31	-9.76	-78.07	-13.00	-65.07

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
37.76	V	-49.59	-13.86	-63.45	-13.00	-50.45
85.29	V	-43.07	-20.36	-63.43	-13.00	-50.43
166.77	V	-53.50	-14.49	-67.99	-13.00	-54.99
183.26	V	-51.73	-15.31	-67.03	-13.00	-54.03
252.13	V	-53.91	-14.68	-68.59	-13.00	-55.59
287.05	V	-57.41	-12.09	-69.50	-13.00	-56.50
85.20	н	-44-41	-21.28	65.69	-13.00	52.60
63.29	11	-44.41	-21.20	-03.09	-13.00	-32.09
103.72	Н	-48.94	-17.34	-66.27	-13.00	-53.27
166.77	Н	-50.75	-13.96	-64.71	-13.00	-51.71
240.49	Н	-54.04	-13.67	-67.71	-13.00	-54.71
366.59	Н	-58.30	-12.73	-71.03	-13.00	-58.03
566.41	Н	-58.17	-7.81	-65.98	-13.00	-52.98

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
39.70	V	-51.05	-12.78	-63.83	-13.00	-50.83
86.26	V	-43.82	-20.48	-64.30	-13.00	-51.30
166.77	V	-53.23	-14.49	-67.72	-13.00	-54.72
180.35	V	-51.61	-15.28	-66.90	-13.00	-53.90
242.43	V	-54.03	-14.40	-68.43	-13.00	-55.43
566.41	V	-62.68	-7.94	-70.62	-13.00	-57.62
85.20	н	-51.58	-21.28	72.86	-13.00	59.86
05.29	11	-51.56	-21.20	-72.00	-13.00	-39.80
148.34	Н	-56.22	-14.00	-70.22	-13.00	-57.22
166.77	Н	-55.43	-13.96	-69.39	-13.00	-56.39
235.64	Н	-55.63	-14.01	-69.64	-13.00	-56.64
366.59	Н	-61.72	-12.73	-74.45	-13.00	-61.45
566.41	Н	-65.40	-7.81	-73.21	-13.00	-60.21

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
39.70	V	-51.39	-12.78	-64.17	-13.00	-51.17
82.38	V	-45.15	-20.02	-65.17	-13.00	-52.17
166.77	V	-53.98	-14.49	-68.47	-13.00	-55.47
182.29	V	-52.44	-15.30	-67.74	-13.00	-54.74
243.40	V	-55.21	-14.44	-69.65	-13.00	-56.65
566.41	V	-63.48	-7.94	-71.42	-13.00	-58.42
42 61	Н	-63.06	-11 70	-74 76	-13.00	-61 76
42.01	11	05.00	11.70	-//0	15.00	01.70
118.27	Н	-65.72	-14.40	-80.12	-13.00	-67.12
275.41	Н	-66.67	-13.42	-80.09	-13.00	-67.09
628.49	Н	-68.00	-6.76	-74.76	-13.00	-61.76
705.12	Н	-68.31	-6.50	-74.80	-13.00	-61.80
740.04	Н	-68.61	-5.66	-74.27	-13.00	-61.27

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
43.58	V	-64.05	-12.85	-76.90	-13.00	-63.90
132.82	V	-67.19	-12.93	-80.12	-13.00	-67.12
284.14	V	-67.88	-12.11	-79.98	-13.00	-66.98
440.31	V	-68.45	-10.26	-78.71	-13.00	-65.71
566.41	V	-69.16	-7.94	-77.10	-13.00	-64.10
857.41	V	-69.13	-4.47	-73.60	-13.00	-60.60
45.52	Ц	63 70	12.08	75 78	13.00	62.78
45.52	11	-03.70	-12.08	-75.78	-15.00	-02.78
119.24	Н	-66.00	-14.19	-80.19	-13.00	-67.19
384.05	Н	-66.75	-11.97	-78.72	-13.00	-65.72
472.32	Н	-68.18	-9.21	-77.39	-13.00	-64.39
813.76	Н	-69.42	-4.94	-74.36	-13.00	-61.36
904.94	Н	-70.64	-3.74	-74.38	-13.00	-61.38

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:	June 2, 2010
Tested by:	Mark Yang
Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
30.00	V	-49.31	-18.30	-67.61	-13.00	-54.61
102.75	V	-50.47	-17.49	-67.96	-13.00	-54.96
147.37	V	-57.04	-13.18	-70.21	-13.00	-57.21
166.77	V	-56.69	-14.49	-71.18	-13.00	-58.18
182.29	V	-56.32	-15.30	-71.62	-13.00	-58.62
243.40	V	-53.42	-14.44	-67.87	-13.00	-54.87
40.67	Н	-63.19	-11.67	-74.85	-13.00	-61.85
135.73	Н	-66.00	-14.45	-80.45	-13.00	-67.45
169.68	Н	-66.89	-13.75	-80.64	-13.00	-67.64
425.76	Н	-68.00	-10.49	-78.49	-13.00	-65.49
762.35	Н	-68.91	-5.58	-74.49	-13.00	-61.49
887.48	Н	-68.97	-3.80	-72.76	-13.00	-59.76

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
39.70	V	-63.24	-12.78	-76.02	-13.00	-63.02
142.52	V	-66.57	-13.38	-79.95	-13.00	-66.95
280.26	V	-68.00	-12.13	-80.13	-13.00	-67.13
531.49	V	-68.55	-8.33	-76.88	-13.00	-63.88
623.64	V	-69.43	-6.87	-76.30	-13.00	-63.30
773.99	V	-69.08	-5.38	-74.47	-13.00	-61.47
43.58	Н	-62.80	-11.71	-74.51	-13.00	-61.51
140.58	Н	-66.99	-14.66	-81.65	-13.00	-68.65
165.80	Н	-67.32	-14.03	-81.35	-13.00	-68.35
240.49	Н	-67.79	-13.67	-81.46	-13.00	-68.46
810.85	Н	-69.43	-4.99	-74.42	-13.00	-61.42
844.80	Н	-68.90	-4.65	-73.55	-13.00	-60.55

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:	June 2, 2010
Tested by:	Mark Yang
Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
38.73	V	-55.46	-13.32	-68.78	-13.00	-55.78
101.78	V	-47.79	-17.69	-65.48	-13.00	-52.48
141.55	V	-56.27	-13.42	-69.68	-13.00	-56.68
244.37	V	-53.69	-14.49	-68.18	-13.00	-55.18
286.08	V	-56.75	-12.09	-68.84	-13.00	-55.84
566.41	V	-63.94	-7.94	-71.89	-13.00	-58.89
44.55	Н	-63.84	-11.72	-75.56	-13.00	-62.56
129.91	Н	-67.41	-14.09	-81.50	-13.00	-68.50
200.72	Н	-67.80	-13.48	-81.28	-13.00	-68.28
287.05	Н	-68.36	-13.11	-81.46	-13.00	-68.46
637.22	Н	-69.36	-6.65	-76.02	-13.00	-63.02
982.54	Н	-70.06	-3.00	-73.06	-13.00	-60.06

- 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.



June 2, 2010

Mark Yang

Ver. / Hor.

Operation Mode	:GPRS 1900 / TX / CH 661	Test Date:
Temperature:	25°C	Tested by:
Humidity:	50 % RH	Polarity:

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
41.64	V	-63.98	-12.72	-76.71	-13.00	-63.71
68.80	V	-64.90	-15.67	-80.57	-13.00	-67.57
123.12	V	-67.15	-13.43	-80.58	-13.00	-67.58
287.05	V	-67.91	-12.09	-80.00	-13.00	-67.00
587.75	V	-68.47	-7.85	-76.31	-13.00	-63.31
645.95	V	-68.60	-6.69	-75.28	-13.00	-62.28
				1		
40.67	Н	-63.54	-11.67	-75.21	-13.00	-62.21
143.49	Н	-66.89	-14.41	-81.30	-13.00	-68.30
239.52	Н	-67.72	-13.66	-81.39	-13.00	-68.39
359.80	Н	-66.66	-13.08	-79.74	-13.00	-66.74
472.32	Н	-68.94	-9.21	-78.14	-13.00	-65.14
661.47	Н	-69.11	-6.66	-75.77	-13.00	-62.77

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:	June 2, 2010
Tested by:	Mark Yang
Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
37.76	V	-53.19	-13.86	-67.05	-13.00	-54.05
101.78	V	-48.00	-17.69	-65.68	-13.00	-52.68
148.34	V	-55.85	-13.14	-68.98	-13.00	-55.98
252.13	V	-53.80	-14.68	-68.49	-13.00	-55.49
288.99	V	-56.21	-12.08	-68.28	-13.00	-55.28
566.41	V	-63.49	-7.94	-71.43	-13.00	-58.43
45.52	Н	-63.23	-12.08	-75.32	-13.00	-62.32
182.29	Н	-67.45	-14.28	-81.72	-13.00	-68.72
271.53	Н	-67.92	-13.72	-81.64	-13.00	-68.64
429.64	Н	-68.44	-10.45	-78.89	-13.00	-65.89
748.77	Н	-69.47	-5.64	-75.12	-13.00	-62.12
859.35	Н	-69.29	-4.43	-73.72	-13.00	-60.72

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mimic YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
43.58	V	-63.98	-12.85	-76.84	-13.00	-63.84
119.24	V	-66.32	-13.92	-80.24	-13.00	-67.24
148.34	V	-66.31	-13.14	-79.45	-13.00	-66.45
285.11	V	-68.15	-12.10	-80.25	-13.00	-67.25
454.86	V	-67.91	-9.91	-77.81	-13.00	-64.81
625.58	V	-68.85	-6.84	-75.70	-13.00	-62.70
44.55	Н	-62.64	-11.72	-74.36	-13.00	-61.36
150.28	Н	-66.87	-13.88	-80.75	-13.00	-67.75
202.66	Н	-67.81	-13.84	-81.66	-13.00	-68.66
414.12	Н	-67.06	-10.88	-77.94	-13.00	-64.94
447.10	Н	-68.45	-10.08	-78.53	-13.00	-65.53
484.93	Н	-68.38	-8.92	-77.30	-13.00	-64.30

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
39.70	V	-54.13	-12.78	-66.90	-13.00	-53.90
97.90	V	-49.19	-18.65	-67.84	-13.00	-54.84
181.32	V	-57.08	-15.29	-72.37	-13.00	-59.37
244.37	V	-57.70	-14.49	-72.19	-13.00	-59.19
303.54	V	-60.20	-13.63	-73.84	-13.00	-60.84
566.41	V	-64.70	-7.94	-72.64	-13.00	-59.64
44 55	Н	-63 37	-11 72	-75.09	-13.00	-62.09
	11	-05.57	-11.72	-75.07	-15.00	-02.07
201.69	Н	-67.64	-13.66	-81.31	-13.00	-68.31
237.58	Н	-67.70	-13.84	-81.54	-13.00	-68.54
389.87	Н	-67.02	-11.88	-78.89	-13.00	-65.89
559.62	Н	-68.62	-7.79	-76.41	-13.00	-63.41
612.00	Н	-68.99	-7.21	-76.20	-13.00	-63.20

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
39.70	V	-52.30	-12.78	-65.08	-13.00	-52.08
83.35	V	-45.32	-20.14	-65.46	-13.00	-52.46
101.78	V	-48.57	-17.69	-66.26	-13.00	-53.26
167.74	V	-54.12	-14.52	-68.64	-13.00	-55.64
181.32	V	-52.52	-15.29	-67.81	-13.00	-54.81
244.37	V	-55.96	-14.49	-70.45	-13.00	-57.45
41.64	Н	-63.10	-11.68	-74.78	-13.00	-61.78
120.21	Н	-67.17	-14.02	-81.19	-13.00	-68.19
200.72	Н	-67.65	-13.48	-81.13	-13.00	-68.13
397.63	Н	-67.29	-11.75	-79.04	-13.00	-66.04
533.43	Н	-68.74	-8.38	-77.13	-13.00	-64.13
588.72	Н	-69.11	-7.81	-76.92	-13.00	-63.92

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
40.67	V	-63.85	-12.66	-76.51	-13.00	-63.51
70.74	V	-64.99	-15.92	-80.91	-13.00	-67.91
150.28	V	-66.59	-13.10	-79.70	-13.00	-66.70
276.38	V	-67.94	-12.38	-80.32	-13.00	-67.32
640.13	V	-69.35	-6.62	-75.97	-13.00	-62.97
675.05	V	-69.05	-6.65	-75.70	-13.00	-62.70
41.64	ц	63 17	11.68	75.15	13.00	62 15
41.04	11	-03.47	-11.08	-73.13	-13.00	-02.13
170.65	Н	-67.52	-13.76	-81.29	-13.00	-68.29
245.34	Н	-67.83	-14.20	-82.03	-13.00	-69.03
644.98	Н	-69.16	-6.63	-75.79	-13.00	-62.79
787.57	Н	-69.63	-5.27	-74.90	-13.00	-61.90
870.99	Н	-68.97	-4.08	-73.05	-13.00	-60.05

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
38.73	V	-55.67	-13.32	-68.99	-13.00	-55.99
102.75	V	-48.76	-17.49	-66.25	-13.00	-53.25
153.19	V	-56.60	-13.46	-70.06	-13.00	-57.06
235.64	V	-54.84	-14.55	-69.40	-13.00	-56.40
286.08	V	-56.14	-12.09	-68.23	-13.00	-55.23
566.41	V	-63.56	-7.94	-71.51	-13.00	-58.51
11 55	ц	62.18	11.72	73.00	13.00	60.00
44.55	11	-02.18	-11.72	-73.90	-13.00	-00.90
145.43	Н	-67.05	-14.25	-81.30	-13.00	-68.30
207.51	Н	-68.13	-14.75	-82.87	-13.00	-69.87
235.64	Н	-67.55	-14.01	-81.56	-13.00	-68.56
637.22	Н	-69.81	-6.65	-76.46	-13.00	-63.46
857.41	Н	-70.00	-4.46	-74.46	-13.00	-61.46

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
46.49	V	-62.78	-14.08	-76.86	-13.00	-63.86
70.74	V	-65.19	-15.92	-81.11	-13.00	-68.11
137.67	V	-66.71	-13.30	-80.01	-13.00	-67.01
280.26	V	-68.04	-12.13	-80.17	-13.00	-67.17
438.37	V	-69.38	-10.31	-79.69	-13.00	-66.69
779.81	V	-69.60	-5.24	-74.84	-13.00	-61.84
42.61	II	62.66	11.70	75.25	12.00	62.25
42.01	П	-03.00	-11.70	-73.33	-13.00	-02.55
121.18	Н	-67.65	-14.03	-81.68	-13.00	-68.68
175.50	Н	-67.71	-14.02	-81.73	-13.00	-68.73
201.69	Н	-67.52	-13.66	-81.19	-13.00	-68.19
625.58	Н	-68.94	-6.79	-75.73	-13.00	-62.73
753.62	Н	-69.09	-5.63	-74.73	-13.00	-61.73

- 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: WCDMA Band II / TX / CH 9262

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-46.26	-16.26	-62.53	-13.00	-49.53
92.08	V	-47.85	-20.32	-68.18	-13.00	-55.18
286.08	V	-51.62	-12.09	-63.71	-13.00	-50.71
315.18	V	-49.46	-13.60	-63.06	-13.00	-50.06
372.41	V	-56.09	-13.02	-69.11	-13.00	-56.11
658.56	V	-62.31	-6.82	-69.14	-13.00	-56.14
57.16	Н	-53.42	-16.17	-69.59	-13.00	-56.59
286.08	Н	-55.27	-13.10	-68.37	-13.00	-55.37
315.18	Н	-57.60	-14.23	-71.83	-13.00	-58.83
499.48	Н	-66.01	-8.81	-74.82	-13.00	-61.82
566.41	Н	-64.71	-7.81	-72.52	-13.00	-59.52
658.56	Н	-67.48	-6.67	-74.15	-13.00	-61.15

- 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: WCDMA Band II / TX / CH 9400

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-46.71	-16.26	-62.97	-13.00	-49.97
286.08	V	-51.31	-12.09	-63.41	-13.00	-50.41
315.18	V	-49.51	-13.60	-63.11	-13.00	-50.11
372.41	V	-56.55	-13.02	-69.57	-13.00	-56.57
429.64	V	-60.89	-10.55	-71.44	-13.00	-58.44
658.56	V	-62.25	-6.82	-69.08	-13.00	-56.08
57.16	II	52.05	16 17	69.22	12.00	55 22
37.10	п	-32.03	-10.17	-08.22	-13.00	-33.22
101.78	Н	-54.37	-17.68	-72.04	-13.00	-59.04
286.08	Н	-54.86	-13.10	-67.96	-13.00	-54.96
315.18	Н	-52.75	-14.23	-66.98	-13.00	-53.98
372.41	Н	-58.53	-12.43	-70.96	-13.00	-57.96
566.41	Н	-62.37	-7.81	-70.18	-13.00	-57.18

- 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: WCDMA Band II / TX / CH 9538

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-46.27	-16.26	-62.54	-13.00	-49.54
101.78	V	-50.69	-17.69	-68.37	-13.00	-55.37
286.08	V	-51.81	-12.09	-63.90	-13.00	-50.90
315.18	V	-49.75	-13.60	-63.36	-13.00	-50.36
372.41	V	-56.04	-13.02	-69.06	-13.00	-56.06
658.56	V	-63.47	-6.82	-70.30	-13.00	-57.30
57.16	Н	-51 73	-16.17	-67 89	-13.00	-54 89
86.26	11	50.26	21.26	71.(2)	12.00	59.(2
80.20	п	-50.56	-21.20	-/1.02	-13.00	-38.02
99.84	Н	-52.71	-18.04	-70.75	-13.00	-57.75
286.08	Н	-55.41	-13.10	-68.51	-13.00	-55.51
315.18	Н	-52.87	-14.23	-67.10	-13.00	-54.10
658.56	Н	-63.02	-6.67	-69.69	-13.00	-56.69

- 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: WCDMA Band V / TX / CH 4132

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-46.52	-16.26	-62.78	-13.00	-49.78
101.78	V	-51.09	-17.69	-68.77	-13.00	-55.77
286.08	V	-51.75	-12.09	-63.84	-13.00	-50.84
315.18	V	-49.97	-13.60	-63.57	-13.00	-50.57
372.41	V	-57.41	-13.02	-70.43	-13.00	-57.43
429.64	V	-61.39	-10.55	-71.95	-13.00	-58.95
57.16	Н	-51.97	-16.17	-68.14	-13.00	-55.14
86.26	Н	-50.63	-21.26	-71.90	-13.00	-58.90
286.08	Н	-55.02	-13.10	-68.12	-13.00	-55.12
315.18	Н	-52.73	-14.23	-66.96	-13.00	-53.96
372.41	Н	-57.85	-12.43	-70.28	-13.00	-57.28
566.41	Н	-63.58	-7.81	-71.39	-13.00	-58.39

- 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: WCDMA Band V / TX / CH 4182

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-46.09	-16.26	-62.35	-13.00	-49.35
93.05	V	-47.77	-20.04	-67.81	-13.00	-54.81
286.08	V	-52.02	-12.09	-64.11	-13.00	-51.11
315.18	V	-49.71	-13.60	-63.32	-13.00	-50.32
372.41	V	-57.04	-13.02	-70.07	-13.00	-57.07
429.64	V	-62.28	-10.55	-72.83	-13.00	-59.83
57.16	Н	-51.22	-16.17	-67.38	-13.00	-54.38
286.08	Н	-55.30	-13.10	-68.40	-13.00	-55.40
315.18	Н	-52.91	-14.23	-67.14	-13.00	-54.14
372.41	Н	-58.65	-12.43	-71.08	-13.00	-58.08
429.64	Н	-64.35	-10.45	-74.80	-13.00	-61.80
566.41	Н	-63.95	-7.81	-71.75	-13.00	-58.75

- 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: WCDMA Band V / TX / CH 4233

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-46.11	-16.26	-62.37	-13.00	-49.37
91.11	V	-47.40	-20.60	-68.00	-13.00	-55.00
286.08	V	-51.80	-12.09	-63.89	-13.00	-50.89
315.18	V	-49.60	-13.60	-63.20	-13.00	-50.20
372.41	V	-56.75	-13.02	-69.77	-13.00	-56.77
429.64	V	-61.35	-10.55	-71.90	-13.00	-58.90
57.16	П	51.27	16.17	(7.52	12.00	54.52
37.10	П	-31.37	-10.17	-07.33	-13.00	-34.33
167.74	Н	-57.02	-13.89	-70.91	-13.00	-57.91
286.08	Н	-55.00	-13.10	-68.10	-13.00	-55.10
315.18	Н	-52.88	-14.23	-67.11	-13.00	-54.11
372.41	Н	-58.38	-12.43	-70.81	-13.00	-57.81
566.41	Н	-64.01	-7.81	-71.82	-13.00	-58.82

- 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:	WCDMA / HSDPA Band II / TX / CH 9262	Test Date:	June 2, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
34.85	V	-49.52	-15.50	-65.01	-13.00	-52.01
57.16	V	-46.53	-16.26	-62.80	-13.00	-49.80
92.08	V	-48.41	-20.32	-68.73	-13.00	-55.73
286.08	V	-51.67	-12.09	-63.77	-13.00	-50.77
315.18	V	-49.63	-13.60	-63.23	-13.00	-50.23
658.56	V	-62.10	-6.82	-68.93	-13.00	-55.93
57.16	Н	-52.45	-16.17	-68.61	-13.00	-55.61
99.84	Н	-54.02	-18.04	-72.06	-13.00	-59.06
168.71	Н	-57.80	-13.82	-71.62	-13.00	-58.62
286.08	Н	-55.10	-13.10	-68.20	-13.00	-55.20
315.18	Н	-53.46	-14.23	-67.69	-13.00	-54.69
566.41	Н	-62.23	-7.81	-70.04	-13.00	-57.04

- 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:	WCDMA / HSDPA Band II / TX / CH 9400	Test Date:	June 2, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-52.03	-16.17	-68.20	-13.00	-55.20
99.84	V	-53.42	-18.04	-71.47	-13.00	-58.47
286.08	V	-54.61	-13.10	-67.71	-13.00	-54.71
315.18	V	-52.86	-14.23	-67.09	-13.00	-54.09
566.41	V	-62.63	-7.81	-70.44	-13.00	-57.44
658.56	V	-62.59	-6.67	-69.26	-13.00	-56.26
57.16	Н	-46.64	-16.26	-62.91	-13.00	-49.91
101.78	Н	-50.54	-17.69	-68.22	-13.00	-55.22
286.08	Н	-51.80	-12.09	-63.90	-13.00	-50.90
315.18	Н	-49.60	-13.60	-63.20	-13.00	-50.20
372.41	Н	-57.22	-13.02	-70.24	-13.00	-57.24
658.56	Н	-63.21	-6.82	-70.04	-13.00	-57.04

- 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:	WCDMA / HSDPA Band II / TX / CH 9538	Test Date:	June 2, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-46.75	-16.26	-63.02	-13.00	-50.02
101.78	V	-51.21	-17.69	-68.89	-13.00	-55.89
286.08	V	-51.58	-12.09	-63.67	-13.00	-50.67
315.18	V	-49.03	-13.60	-62.64	-13.00	-49.64
372.41	V	-57.00	-13.02	-70.02	-13.00	-57.02
658.56	V	-62.70	-6.82	-69.52	-13.00	-56.52
57.16	Н	-51.35	-16.17	-67.52	-13.00	-54.52
286.08	Н	-55.61	-13.10	-68.71	-13.00	-55.71
315.18	Н	-53.07	-14.23	-67.30	-13.00	-54.30
372.41	Н	-58.72	-12.43	-71.15	-13.00	-58.15
566.41	Н	-62.70	-7.81	-70.51	-13.00	-57.51
658.56	Н	-63.80	-6.67	-70.47	-13.00	-57.47

- 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:	WCDMA / HSDPA Band V / TX / CH 4132	Test Date:	June 2, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-45.81	-16.26	-62.07	-13.00	-49.07
286.08	V	-51.35	-12.09	-63.44	-13.00	-50.44
315.18	V	-48.92	-13.60	-62.52	-13.00	-49.52
372.41	V	-56.11	-13.02	-69.13	-13.00	-56.13
429.64	V	-61.35	-10.55	-71.91	-13.00	-58.91
566.41	V	-64.26	-7.94	-72.20	-13.00	-59.20
57.16	Н	-50.70	-16.17	-66.86	-13.00	-53.86
99.84	Н	-53.95	-18.04	-71.99	-13.00	-58.99
166.77	Н	-57.24	-13.96	-71.20	-13.00	-58.20
286.08	Н	-54.78	-13.10	-67.88	-13.00	-54.88
315.18	Н	-52.49	-14.23	-66.72	-13.00	-53.72
372.41	Н	-57.81	-12.43	-70.24	-13.00	-57.24

- 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:	WCDMA / HSDPA Band V / TX / CH 4182	Test Date:	June 2, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-45.91	-16.26	-62.17	-13.00	-49.17
92.08	V	-47.40	-20.32	-67.72	-13.00	-54.72
286.08	V	-52.12	-12.09	-64.22	-13.00	-51.22
315.18	V	-49.69	-13.60	-63.29	-13.00	-50.29
372.41	V	-56.89	-13.02	-69.92	-13.00	-56.92
566.41	V	-64.25	-7.94	-72.19	-13.00	-59.19
57.16	TT	51.44	16.17	(7.(1	12.00	54 (1
57.16	Н	-51.44	-10.1/	-07.01	-13.00	-54.61
167.74	Н	-57.43	-13.89	-71.32	-13.00	-58.32
238.55	Н	-57.91	-13.75	-71.66	-13.00	-58.66
286.08	Н	-54.28	-13.10	-67.38	-13.00	-54.38
315.18	Н	-52.66	-14.23	-66.89	-13.00	-53.89
372.41	Н	-58.40	-12.43	-70.83	-13.00	-57.83

- 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:	WCDMA / HSDPA Band V / TX / CH 4233	Test Date:	June 2, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-46.27	-16.26	-62.54	-13.00	-49.54
286.08	V	-52.01	-12.09	-64.10	-13.00	-51.10
315.18	V	-50.03	-13.60	-63.63	-13.00	-50.63
372.41	V	-56.63	-13.02	-69.65	-13.00	-56.65
429.64	V	-61.56	-10.55	-72.12	-13.00	-59.12
566.41	V	-65.71	-7.94	-73.65	-13.00	-60.65
57.16	Н	-51.39	-16.17	-67.56	-13.00	-54.56
99.84	Н	-53.15	-18.04	-71.19	-13.00	-58.19
286.08	Н	-54.37	-13.10	-67.47	-13.00	-54.47
315.18	Н	-52.85	-14.23	-67.08	-13.00	-54.08
331.67	Н	-56.43	-13.97	-70.41	-13.00	-57.41
372.41	Н	-58.04	-12.43	-70.47	-13.00	-57.47

- 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:	WCDMA / HSUPA Band II / TX / CH 9262	Test Date:	June 2, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-46.55	-16.26	-62.81	-13.00	-49.81
101.78	V	-50.92	-17.69	-68.60	-13.00	-55.60
286.08	V	-51.68	-12.09	-63.77	-13.00	-50.77
315.18	V	-49.99	-13.60	-63.60	-13.00	-50.60
372.41	V	-56.37	-13.02	-69.39	-13.00	-56.39
658.56	V	-62.54	-6.82	-69.36	-13.00	-56.36
57.16	Н	-52.33	-16.17	-68.50	-13.00	-55.50
99.84	Н	-54.26	-18.04	-72.30	-13.00	-59.30
286.08	Н	-55.24	-13.10	-68.34	-13.00	-55.34
315.18	Н	-53.04	-14.23	-67.27	-13.00	-54.27
372.41	Н	-58.84	-12.43	-71.27	-13.00	-58.27
566.41	Н	-62.02	-7.81	-69.83	-13.00	-56.83

- 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:	WCDMA / HSUPA Band II / TX / CH 9400	Test Date:	June 2, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
34.85	V	-50.03	-15.50	-65.53	-13.00	-52.53
57.16	V	-46.22	-16.26	-62.48	-13.00	-49.48
100.81	V	-50.49	-17.88	-68.37	-13.00	-55.37
286.08	V	-52.01	-12.09	-64.10	-13.00	-51.10
315.18	V	-49.70	-13.60	-63.30	-13.00	-50.30
658.56	V	-61.94	-6.82	-68.76	-13.00	-55.76
57.16	Н	-52.03	-16.17	-68.20	-13.00	-55.20
101.78	Н	-55.15	-17.68	-72.83	-13.00	-59.83
166.77	Н	-57.80	-13.96	-71.76	-13.00	-58.76
286.08	Н	-55.15	-13.10	-68.25	-13.00	-55.25
315.18	Н	-53.71	-14.23	-67.94	-13.00	-54.94
372.41	Н	-58.39	-12.43	-70.82	-13.00	-57.82

- 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:	WCDMA / HSUPA Band II / TX / CH 9538	Test Date:	June 2, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
35.82	V	-50.00	-14.95	-64.95	-13.00	-51.95
57.16	V	-46.67	-16.26	-62.93	-13.00	-49.93
92.08	V	-47.93	-20.32	-68.25	-13.00	-55.25
286.08	V	-51.72	-12.09	-63.82	-13.00	-50.82
315.18	V	-49.68	-13.60	-63.28	-13.00	-50.28
658.56	V	-61.65	-6.82	-68.48	-13.00	-55.48
57.16	Н	-52.00	-16.17	-68.16	-13.00	-55.16
99.84	Н	-53.27	-18.04	-71.31	-13.00	-58.31
168.71	Н	-58.01	-13.82	-71.83	-13.00	-58.83
286.08	Н	-55.05	-13.10	-68.15	-13.00	-55.15
315.18	Н	-53.00	-14.23	-67.23	-13.00	-54.23
372.41	Н	-57.81	-12.43	-70.24	-13.00	-57.24

- 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:	WCDMA / HSUPA Band V / TX / CH 4132	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-45.17	-16.26	-61.44	-13.00	-48.44
92.08	V	-46.38	-20.32	-66.70	-13.00	-53.70
286.08	V	-51.15	-12.09	-63.24	-13.00	-50.24
315.18	V	-49.10	-13.60	-62.70	-13.00	-49.70
372.41	V	-56.47	-13.02	-69.49	-13.00	-56.49
429.64	V	-60.36	-10.55	-70.91	-13.00	-57.91
57.16	Н	-50.69	-16.17	-66.85	-13.00	-53.85
99.84	Н	-52.98	-18.04	-71.02	-13.00	-58.02
286.08	Н	-54.61	-13.10	-67.71	-13.00	-54.71
315.18	Н	-52.06	-14.23	-66.29	-13.00	-53.29
372.41	Н	-58.00	-12.43	-70.43	-13.00	-57.43
566.41	Н	-63.19	-7.81	-71.00	-13.00	-58.00

- 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:	WCDMA / HSUPA Band V / TX / CH 4182	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-44.26	-16.26	-60.52	-13.00	-47.52
93.05	V	-46.36	-20.04	-66.41	-13.00	-53.41
286.08	V	-49.79	-12.09	-61.89	-13.00	-48.89
315.18	V	-48.58	-13.60	-62.18	-13.00	-49.18
372.41	V	-55.78	-13.02	-68.81	-13.00	-55.81
566.41	V	-63.33	-7.94	-71.27	-13.00	-58.27
57.16	Ш	50.21	16.17	((20	12.00	52.20
57.16	Н	-50.21	-10.17	-00.38	-13.00	-55.38
100.81	Н	-53.26	-17.85	-71.11	-13.00	-58.11
166.77	Н	-56.29	-13.96	-70.25	-13.00	-57.25
286.08	Н	-54.02	-13.10	-67.12	-13.00	-54.12
315.18	Н	-51.32	-14.23	-65.55	-13.00	-52.55
372.41	Н	-56.07	-12.43	-68.50	-13.00	-55.50

- 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:	WCDMA / HSUPA Band V / TX / CH 4233	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
57.16	V	-43.83	-16.26	-60.10	-13.00	-47.10
91.11	V	-45.43	-20.60	-66.04	-13.00	-53.04
286.08	V	-49.51	-12.09	-61.60	-13.00	-48.60
315.18	V	-47.24	-13.60	-60.84	-13.00	-47.84
372.41	V	-53.93	-13.02	-66.95	-13.00	-53.95
566.41	V	-61.94	-7.94	-69.89	-13.00	-56.89
	I	I				I
57.16	Н	-48.12	-16.17	-64.28	-13.00	-51.28
168.71	Н	-54.75	-13.82	-68.57	-13.00	-55.57
286.08	Н	-51.78	-13.10	-64.88	-13.00	-51.88
315.18	Н	-50.20	-14.23	-64.43	-13.00	-51.43
372.41	Н	-56.17	-12.43	-68.60	-13.00	-55.60
566.41	Н	-60.41	-7.81	-68.22	-13.00	-55.22

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:	June 3, 2010
Tested by:	Mark Yang
Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1651.00	V	-40.56	1.61	-38.94	-13.00	-25.94
2470.00	V	-38.12	4.41	-33.72	-13.00	-20.72
4997.00	V	-59.23	10.42	-48.81	-13.00	-35.81
N/A						
1651.00	Н	-42.57	1.42	-41.15	-13.00	-28.15
1784.00	Н	-55.87	1.32	-54.56	-13.00	-41.56
2470.00	Н	-47.19	4.43	-42.76	-13.00	-29.76
N/A						

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1672.00	V	-41.97	1.63	-40.34	-13.00	-27.34
2512.00	V	-36.16	4.62	-31.54	-13.00	-18.54
N/A						
1672.00	Н	-42.16	1.40	-40.76	-13.00	-27.76
1973.00	Н	-56.31	1.18	-55.13	-13.00	-42.13
2512.00	Н	-47.89	4.69	-43.20	-13.00	-30.20
N/A						

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1700.00	V	-39.15	1.38	-37.76	-13.00	-24.76
2547.00	V	-41.30	4.82	-36.48	-13.00	-23.48
N/A						
1700.00	Н	-40.35	1.64	-38.70	-13.00	-25.70
2547.00	Н	-33.75	4.76	-28.99	-13.00	-15.99
N/A						

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1651.00	V	-44.27	1.61	-42.66	-13.00	-29.66
2470.00	V	-55.12	4.41	-50.71	-13.00	-37.71
4997.00	V	-58.98	10.42	-48.56	-13.00	-35.56
N/A						
1651.00	Н	-45.78	1.42	-44.36	-13.00	-31.36
2470.00	Н	-58.49	4.43	-54.06	-13.00	-41.06
N/A						

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1672.00	V	-45.04	1.63	-43.41	-13.00	-30.41
2512.00	V	-57.17	4.62	-52.55	-13.00	-39.55
3345.00	V	-61.64	8.64	-53.00	-13.00	-40.00
4997.00	V	-59.58	10.42	-49.15	-13.00	-36.15
N/A						
1672.00	TT	45.12	1.40	42.72	12.00	20.72
10/2.00	п	-43.12	1.40	-43.72	-13.00	-30.72
2512.00	Н	-60.16	4.69	-55.48	-13.00	-42.48
3296.00	Н	-61.13	8.22	-52.91	-13.00	-39.91
N/A						

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1700.00	V	-45.04	1.64	-43.40	-13.00	-30.40
2547.00	V	-57.16	4.76	-52.40	-13.00	-39.40
4997.00	V	-58.70	10.42	-48.28	-13.00	-35.28
N/A						
1700.00	Н	-44.15	1.38	-42.77	-13.00	-29.77
N/A						

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
5116.00	V	-60.52	10.40	-50.12	-13.00	-37.12
N/A						
4304.00	Н	-61.46	8.67	-52.78	-13.00	-39.78
N/A						

- 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
Temperature:	25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4997.00	V	-58.09	10.42	-47.67	-13.00	-34.67
N/A						
6194.00	Н	-60.24	11.52	-48.72	-13.00	-35.72
N/A						

- 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.



Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3821.00	V	-59.00	8.83	-50.17	-13.00	-37.17
4997.00	V	-56.42	10.42	-46.00	-13.00	-33.00
5732.00	V	-54.58	10.48	-44.10	-13.00	-31.10
N/A						
5613.00	Н	-59.57	10.19	-49.37	-13.00	-36.37
N/A						

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 2, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4997.00	V	-58.70	10.42	-48.28	-13.00	-35.28
N/A						
N/A						

- 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						
Temperature:	25°C					
Humidity:	50 % RH					

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4997.00	V	-59.56	10.42	-49.14	-13.00	-36.14
N/A						
3527.00	Н	-61.71	9.29	-52.42	-13.00	-39.42
N/A						

- 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.



Operatio	n N	Mode: GPRS	1900 / T	X / CH 810
T		2500		

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization	Reading level (dBuV)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4997.00	V	-58.30	10.42	-47.88	-13.00	-34.88
N/A						
N/A						

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1651.00	V	-47.79	1.61	-46.17	-13.00	-33.17
4997.00	V	-59.25	10.42	-48.82	-13.00	-35.82
N/A						
1651.00	Н	-46.72	1.42	-45.30	-13.00	-32.30
N/A						

- 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.



Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1672.00	V	-48.36	1.63	-46.74	-13.00	-33.74
2512.00	V	-59.70	4.62	-55.08	-13.00	-42.08
4997.00	V	-58.67	10.42	-48.25	-13.00	-35.25
N/A						
1672.00	Н	-47.26	1.40	-45.86	-13.00	-32.86
4724.00	Н	-61.64	9.49	-52.14	-13.00	-39.14
N/A						

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1700.00	V	-48.30	1.38	-46.92	-13.00	-33.92
N/A						
1700.00	Н	-48.25	1.64	-46.61	-13.00	-33.61
2547.00	Н	-59.66	4.76	-54.90	-13.00	-41.90
N/A						

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4997.00	V	-59.23	10.42	-48.81	-13.00	-35.81
N/A						
N/A						

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4997.00	V	-58.25	10.42	-47.83	-13.00	-34.83
N/A						
N/A						

- 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

Temperature: 25°C

Humidity: 50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
4997.00	V	-60.22	10.42	-49.80	-13.00	-36.80
N/A						
IN/A						

- 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:WCDMA Band II / TX / CH 9262Temperature:25°CHumidity:50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3709.00	V	-56.87	9.09	-47.78	-13.00	-34.78
4997.00	V	-59.07	10.42	-48.65	-13.00	-35.65
N/A						
3709.00	Н	-58.72	8.87	-49.84	-13.00	-36.84
N/A						

- 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.



June 3, 2010

Mark Yang

Ver. / Hor.

Operation Mode:	WCDMA Band II / TX / CH 9400	Test Date:
Temperature:	25°C	Tested by:
Humidity:	50 % RH	Polarity:

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3758.00	V	-52.63	8.98	-43.66	-13.00	-30.66
4997.00	V	-58.90	10.42	-48.47	-13.00	-35.47
N/A						
3758.00	Н	-56.74	8.76	-47.98	-13.00	-34.98
N/A						

- 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:WCDMA Band II / TX / CH 9538Test ITemperature:25°CTesterHumidity:50 % RHPolar

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3814.00	V	-46.98	8.85	-38.14	-13.00	-25.14
N/A						
3814.00	Н	-48.85	8.63	-40.22	-13.00	-27.22
N/A						

- 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.



Humidity:

Operation Mode:WCDMA Band V / TX / CH 4132**Temperature:**25°C

50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1658.00	V	-58.00	1.62	-56.38	-13.00	-43.38
N/A						
1658.00	Н	-59.72	1.41	-58.31	-13.00	-45.31
N/A						

- 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:WCDMA Band V / TX / CH 4182Temperature:25°CHumidity:50 % RH

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1672.00	V	-56.99	1.63	-55.37	-13.00	-42.37
N/A						
1 (7 2 . 0.0		50.05	1.40	57 0 (12.00	11.07
16/2.00	Н	-59.37	1.40	-57.96	-13.00	-44.96
N/A						

- 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:WCDMA Band V / TX / CH 4233Test Date:Temperature:25°CTested by:Humidity:50 % RHPolarity:

Test Date:June 3, 2010Tested by:Mark YangPolarity:Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1693.00	V	-54.32	1.64	-52.68	-13.00	-39.68
N/A						
1693.00	Н	-56.67	1.39	-55.28	-13.00	-42.28
N/A						

- 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:	WCDMA / HSDPA Band II / TX / CH 9262	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3709.00	V	-58.87	9.09	-49.78	-13.00	-36.78
4997.00	V	-58.80	10.42	-48.38	-13.00	-35.38
N/A						
		[ſ			
2316.00	Н	-61.77	3.36	-58.42	-13.00	-45.42
N/A						

- 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:	WCDMA / HSDPA Band II / TX / CH 9400	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3765.00	V	-59.31	8.96	-50.35	-13.00	-37.35
4997.00	V	-59.16	10.42	-48.74	-13.00	-35.74
N/A						
3765.00	Н	-59.84	8.75	-51.09	-13.00	-38.09
5249.00	Н	-61.02	10.11	-50.92	-13.00	-37.92
N/A						

- 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:	WCDMA / HSDPA Band II / TX / CH 9538	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3814.00	V	-54.52	8.85	-45.67	-13.00	-32.67
4997.00	V	-58.88	10.42	-48.46	-13.00	-35.46
N/A						
3814.00	Н	-56.82	8.63	-48.19	-13.00	-35.19
N/A						

- 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:	WCDMA / HSDPA Band V / TX / CH 4132	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1658.00	V	-58.60	1.41	-57.19	-13.00	-44.19
N/A						
1658.00	Н	-58.60	1.41	-57.19	-13.00	-44.19
N/A						

- 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:	WCDMA / HSDPA Band V / TX / CH 4182	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % 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	-56.18	1.63	-54.55	-13.00	-41.55
N/A						
1672.00	Н	-58.02	1.40	-56.62	-13.00	-43.62
N/A						

- 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:	WCDMA / HSDPA Band V / TX / CH 4233	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1693.00	V	-56.11	1.39	-54.73	-13.00	-41.73
N/A						
1693.00	Н	-53.21	1.64	-51.57	-13.00	-38.57
N/A						

- 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:	WCDMA / HSUPA Band II / TX / CH 9262	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3709.00	V	-60.50	9.09	-51.41	-13.00	-38.41
4997.00	V	-59.89	10.42	-49.46	-13.00	-36.46
N/A						
3709.00	Н	-62.98	8.87	-54.11	-13.00	-41.11
N/A						

- 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:	WCDMA / HSUPA Band II / TX / CH 9400	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % 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	-60.02	8.98	-51.04	-13.00	-38.04
4997.00	V	-60.42	10.42	-50.00	-13.00	-37.00
N/A						
3758.00	Н	-61.11	8.76	-52.35	-13.00	-39.35
N/A						

- 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:	WCDMA / HSUPA Band II / TX / CH 9538	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
3814.00	V	-52.03	8.85	-43.19	-13.00	-30.19
4997.00	V	-58.93	10.42	-48.50	-13.00	-35.50
N/A						
3814.00	Н	-57.75	8.63	-49.12	-13.00	-36.12
N/A						

- 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:	WCDMA / HSUPA Band V / TX / CH 4132	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1658.00	V	-59.24	1.62	-57.63	-13.00	-44.63
N/A						
1658.00	Н	-60.16	1.41	-58.75	-13.00	-45.75
3261.00	Н	-61.93	8.03	-53.90	-13.00	-40.90
N/A						

- 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:	WCDMA / HSUPA Band V / TX / CH 4182	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % 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	-55.34	1.63	-53.71	-13.00	-40.71
N/A						
1(72.00	Ш	(0.29	1.40	59.09	12.00	45.09
16/2.00	П	-00.38	1.40	-38.98	-13.00	-45.98
N/A						

- 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:	WCDMA / HSUPA Band V / TX / CH 4233	Test Date:	June 3, 2010
Temperature:	25°C	Tested by:	Mark Yang
Humidity:	50 % RH	Polarity:	Ver. / Hor.

Frequency (MHz)	Antenna Polarization (V/H)	Reading (dBm)	Correction Factor (dB)	Emission level (dBm)	Limit (dBm)	Margin (dB)
1693.00	V	-54.85	1.64	-53.21	-13.00	-40.21
N/A						
1693.00	Н	-58 30	1 39	-56.92	-13.00	-43 92
N/A	11	-38.50	1.57	-50.72	-15.00	-13.72

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



7.7 FREQUENCY STABILITY V.S. TEMPERATURE MEASUREMENT

LIMIT

According to FCC §2.1055, FCC §22.355, .FCC §24.235. Frequency Tolerance: 2.5 ppm

Test Configuration

Temperature Chamber



Variable Power Supply

Remark: Measurement setup for testing on Antenna connector



TEST PROCEDURE

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

TEST RESULTS

Reference Frequency: GSM Mid Channel 836.6 MHz @ 20°C						
	Limit: ±	2.5 ppm = 2090 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)		
	50	836000022	42			
	40	836000024	44			
	30	836000021	41			
	20	835999980	0			
120	10	836000021	41	2090		
	0	836000029	49			
	-10	836000019	39			
	-20	836000027	47			
	-30	836000024	44			

No non-compliance noted.

Reference Frequency: GSM Mid Channel 1880 MHz @ 20°C						
	Limit: ±	2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)		
	50	1880000057	110			
	40	1880000061	114			
	30	1880000043	96			
	20	1879999947	0			
120	10	1880000053	106	4700		
	0	1880000044	97			
	-10	1880000046	99			
	-20	1880000049	102			
	-30	1880000054	107			



Reference Frequency: GPRS Mid Channel 836.6 MHz @ 20°C						
	Limit: +/-	- 2.5 ppm = 2090 Hz	Z			
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)		
	50	836000027	60			
	40	836000030	63			
	30	836000025	58			
	20	835999967	0			
120	10	836000039	72	2090		
	0	836000034	67			
	-10	836000038	71			
	-20	836000034	67			
	-30	836000029	62			

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C						
	Limit: ±	2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)		
	50	1880000064	125			
	40	1880000066	127			
	30	1880000068	129			
	20	1879999939	0			
120	10	1880000078	139	4700		
	0	1880000069	130			
	-10	1880000072	133			
	-20	1880000073	134			
	-30	1880000084	145			



Reference Frequency: EDGE Mid Channel 836.6 MHz @ 20°C						
	Limit: +/- 2.5 ppm = 2090 Hz					
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)		
	50	836000031	73			
	40	836000027	69			
	30	836000028	70			
	20	835999958	0			
120	10	836000020	62	2090		
	0	836000026	68			
	-10	836000033	75			
	-20	836000025	67			
	-30	836000027	69			

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C				
	Limit: ±	2.5 ppm = 4700 Hz		
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
	50	1880000066	131	
120	40	1880000067	132	
	30	1880000069	134	
	20	1879999935	0	
	10	1880000064	129	4700
	0	1880000059	124	
	-10	1880000064	129	
	-20	1880000052	117	
	-30	1880000068	133	



Reference Frequency: WCDMA Band II Mid Channel 1880 MHz @ 20°C				
	Limit: ±	2.5 ppm = 4700 Hz		
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
	50	1880000023	45	
120	40	1880000017	39	
	30	1880000013	35	
	20	1879999978	0	
	10	188000007	29	4700
	0	1880000019	41	
	-10	1880000003	25	
	-20	188000001	23	
	-30	1880000015	37	

Reference Frequency: WCDMA Band V Mid Channel 836.6 MHz @ 20°C					
	Limit: +/-	- 2.5 ppm = 2090 Hz	Z		
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)	
	50	836000010	-6		
	40	835999984	-32		
	30	836000004	-12		
	20	836000016	0		
120	10	836000011	-5	2090	
	0	835999991	-25		
	-10	835999999	-17		
	-20	835999997	-19		
	-30	836000023	7		



Reference Frequency: WCDMA / HSDPA Band II Mid Channel 1880 MHz @ 20°C				
	Limit: ±	2.5 ppm = 4700 Hz		
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
	50	1879999998	3	
	40	1879999994	-1	
	30	188000009	14	
	20	1879999995	0	
120	10	1879999990	-5	4700
	0	1879999999	4	
	-10	1880000001	6	
	-20	1880000003	8	
	-30	1879999993	-2	

Reference Frequency: WCDMA / HSDPA Band V Mid Channel 836.6 MHz @ 20°C				
	Limit: +/-	- 2.5 ppm = 2090 Hz	Z	
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
	50	836000011	1	
120	40	835999991	-19	
	30	835999994	-16	
	20	836000010	0	
	10	836000013	3	2090
	0	835999995	-15	
	-10	836000004	-6	
	-20	836000002	-8	
	-30	835999985	-25	



Reference Frequency: WCDMA / HSUPA Band II Mid Channel 1880 MHz @ 20°C						
	Limit: $\pm 2.5 \text{ ppm} = 4700 \text{ Hz}$					
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)		
	50	1880000019	24			
	40	1880000012	17			
	30	1880000013	18			
	20	1879999995	0			
120	10	188000007	12	4700		
	0	1880000004	9			
	-10	1879999999	4			
	-20	1879999994	-1			
	-30	1880000018	23			

Reference Frequency: WCDMA / HSUPA Band V Mid Channel 836.6 MHz @ 20°C				
	Limit: +/-	- 2.5 ppm = 2090 Hz	Z	
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
	50	836000018	30	
120	40	836000013	25	
	30	836000020	32	
	20	835999988	0	
	10	836000007	19	2090
	0	836000004	16	
	-10	836000013	25	
	-20	835999999	11	
	-30	83600002	14	



7.8 FREQUENCY STABILITY V.S. VOLTAGE MEASUREMENT

LIMIT

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

Test Configuration





Variable Power Supply

Remark: Measurement setup for testing on Antenna connector.



TEST PROCEDURE

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

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

TEST RESULTS

No non-compliance noted.

Reference Frequency: GSM Mid Channel 836.6 MHz @ 20°C				
	Limit: ±	2.5 ppm = 2090Hz		
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
132	20	835999984	4	
120		835999980	0	2000
108		835999982	2	2090
98(End Point)		835999917	-63	

Reference Frequency: GSM Mid Channel 1880 MHz @ 20°C				
	Limit: ±	2.5 ppm = 4700 Hz		
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
132	20	1879999945	-2	
120		1879999947	0	4700
108		1879999954	7	4700
98(End Point)		1879999894	-53	



Reference Frequency: GPRS Mid Channel 836.6 MHz @ 20°C				
Limit: ± 2.5 ppm = 2090Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)
132	20	835999961	-6	
120		835999967	0	2000
108		835999972	5	2090
98(End Point)		835999906	-61	

Reference Frequency: GPRS Mid Channel 1880 MHz @ 20°C					
	Limit: ± 2.5 ppm = 4700 Hz				
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)	
132	20	1879999931	-8		
120		1879999939	0	4700	
108		1879999935	-4	4700	
98(End Point)		1879999906	-33		



Reference Frequency: EDGE Mid Channel 836.6 MHz @ 20°C					
	Limit: ±	2.5 ppm = 2090Hz			
Power SupplyEnvironmentFrequencyDeltaLVdcTemperature (°C)(Hz)(Hz)(Hz)					
132	132 120 108 End Point)	835999957	-1		
120		835999958	0	2000	
108		835999982	24	2090	
98(End Point)		835999785	-173		

Reference Frequency: EDGE Mid Channel 1880 MHz @ 20°C						
	Limit: ± 2.5 ppm = 4700 Hz					
Power SupplyEnvironmentFrequencyDeltaLimitVdcTemperature (°C)(Hz)(Hz)(Hz)						
132		1879999934	-1			
120		1879999935	0	4700		
108	20	1879999937	2	4700		
98(End Point)	pint)	1879999913	-22			



Reference Frequency: WCDMA Band II Mid Channel 1880 MHz @ 20°C					
	Limit: ±	2.5 ppm = 4700 Hz			
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)	
132	20	1879999971	-7		
120		1879999978	0	4700	
108		1879999991	13	4700	
98(End Point)		1879999916	-62		

Reference Frequency: WCDMA Band V Mid Channel 836.6 MHz @ 20°C					
	Limit: ±	2.5 ppm = 2090Hz			
Power SupplyEnvironmentFrequencyDeltaLinVdcTemperature (°C)(Hz)(Hz)(Hz)					
132	20	836000011	-5		
120		836000016	0	2000	
108		835999985	-31	2090	
98(End Point)		835999905	-111		



Reference Frequency: WCDMA HSDPA Band II Mid Channel 1880 MHz @ 20°C					
	Limit: ±	2.5 ppm = 4700 Hz			
Power Supply Vdc	Environment Temperature (°C)	Frequency (Hz)	Delta (Hz)	Limit (Hz)	
132	20	1880000007	12		
120		1879999995	0	4700	
108		1880000012	17	4700	
98(End Point)		1879999923	-72		

Reference Frequency: WCDMA HSDPA Band V Mid Channel 836.6 MHz @ 20°C						
	Limit: ± 2.5 ppm = 2090Hz					
Power SupplyEnvironmentFrequencyDeltaLimitVdcTemperature (°C)(Hz)(Hz)(Hz)						
132	20	836000012	2			
120		836000010	0	2000		
108		835999995	-15	2090		
98(End Point)		836000094	84			



Reference Frequency: WCDMA HSUPA Band II Mid Channel 1880 MHz @ 20°C					
	Limit: ±	2.5 ppm = 4700 Hz			
Power SupplyEnvironmentFrequencyDeltaLVdcTemperature (°C)(Hz)(Hz)(Hz)					
132	20	1879999988	-7		
120		1879999995	0	4700	
108		1879999992	-3	4700	
98(End Point)		1879999927	-68		

Reference Frequency: WCDMA HSUPA Band V Mid Channel 836.6 MHz @ 20°C						
	Limit: ± 2.5 ppm = 2090Hz					
Power Supply VdcEnvironment Temperature (°C)Frequency (Hz)Delta (Hz)Limit (Hz)						
132	132 120 20 108 3(End Point)	835999994	6			
120		835999988	0	2000		
108		835999979	-9	2090		
98(End Point)		835999915	-73			



7.9 POWERLINE CONDUCTED EMISSIONS

LIMIT

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

Frequency Range (MHz)	Limits (dBµV)			
Trequency Range (MIIIZ)	Quasi-peak	Average		
0.15 to 0.50	66 to 56	56 to 46		
0.50 to 5	56	46		
5 to 30	60	50		

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

Test Configuration

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

TEST PROCEDURE

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



TEST RESULTS

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

Operation Mode:	Normal Link	Test Date:	June 12, 2010
Temperature:	26°C	Tested by:	Ryan Chen
Humidity:	60% RH		

Freq. (MHz)	QP Reading (dBuV)	AV Reading (dBuV)	Corr. factor (dB)	QP Result (dBuV)	AV Result (dBuV)	QP Limit (dBuV)	AV Limit (dBuV)	QP Margin (dB)	AV Margin (dB)	Note
0.1891	46.35	42.15	0.05	46.40	42.20	64.08	54.08	-17.68	-11.88	L1
0.2828	44.97	43.17	0.03	45.00	43.20	60.73	50.73	-15.73	-7.53	L1
0.4742	44.18	43.78	0.02	44.20	43.80	56.44	46.44	-12.24	-2.64	L1
0.6656	43.38	41.68	0.02	43.40	41.70	56.00	46.00	-12.60	-4.30	L1
0.7594	39.79	38.29	0.01	39.80	38.30	56.00	46.00	-16.20	-7.70	L1
1.0328	38.29	16.89	0.01	38.30	16.90	56.00	46.00	-17.70	-29.10	L1
0.1891	46.25	41.85	0.05	46.30	41.90	64.08	54.08	-17.78	-12.18	L2
0.3805	42.88	38.58	0.02	42.90	38.60	58.27	48.27	-15.37	-9.67	L2
0.5758	37.38	35.38	0.02	37.40	35.40	56.00	46.00	-18.60	-10.60	L2
0.6734	37.08	35.98	0.02	37.10	36.00	56.00	46.00	-18.90	-10.00	L2
0.7594	35.69	38.89	0.01	35.70	38.90	56.00	46.00	-20.30	-7.10	L2
1.5172	32.18	18.98	0.02	32.20	19.00	56.00	46.00	-23.80	-27.00	L2

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



Test Plots

Conducted emissions (Line 1)



Conducted emissions (Line 2)

