47 CFR PART 15 SUBPART B

TEST REPORT

of

GSM Dual Band GPRS Digital Mobile Phone

Model Name: ZMKN 110
Brand Name: ZONDA
Report No.: SZ08060155E01
FCC ID: UT3KK5061

prepared for

SHENZHEN KONKA TELECOMMUNICATIONS TECHNOLOGY CO., LTD
ShenNan Road 9008, Overseas Chinese Town, Shenzhen, Guangdong, China

prepared by

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1. TEST CERTIFICATION

Equipment under Test:	GSM Dual Band GPRS Digital Mobile Phone
Brand Name:	ZONDA
Model Name:	ZMKN 110
FCC ID:	UT3KK5061
Applicant:	SHENZHEN KONKA TELECOMMUNICATIONS TECHNOLOGY CO., LTD ShenNan Road 9008, Overseas Chinese Town, Shenzhen, Guangdong, China
Manufacturer:	SHENZHEN KONKA TELECOMMUNICATIONS TECHNOLOGY CO., LTD ShenNan Road 9008, Overseas Chinese Town, Shenzhen, Guangdong, China
Emission Designator	300KGXW
Test Standards:	47 CFR Part 15 Subpart B
Test Date(s):	July 1, 2008 –July 10, 2008
Test Result:	PASS

*** We Hereby Certify That:**

The equipment under test was tested by Shenzhen Electronic Product Quality Testing Center Morlab Laboratory. The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the requirement of related FCC rules.

The test results of this report only apply for the tested sample equipment identified above. The test report shall be invalid without all the signatures of the test engineer, the reviewer and the approver.

Tested by: Luo Biao Dated: 2008.07.11

Luo Biao

Reviewed by: Wei Yanbin Dated: 2008.07.11

Wei Yanbin

Approved by: Shu Luan Dated: 2008.07.11

Shu Luan

2. GENERAL INFORMATION

2.1 EUT Description

EUT Type ..... GSM Dual Band GPRS Digital Mobile Phone
Model Name..... ZMKN 110
Serial No. ..... (n.a, marked #1 by test site)
IMEI 351865020000833
Hardware Version..... V0.1
Software Version ..... KAAM5061_MXA_Sp_En_Fr_4.01.603
Modulation Type ..... GMSK
Power Supply ..... Battery
Brand name: ZONDA
Model Name: (n.a)
Capacitance: 800mAh
Rated voltage: 3.7V
Manufacturer: SHENZHEN KONKA TELECOMMUNICATIONS TECHNOLOGY CO., LTD
Manufacturer Address: ShenNan Road 9008, Overseas Chinese Town, Shenzhen, Guangdong, China
Ancillary Equipment 1 ... AC Adapter (Charger for Battery)
Brand Name: ZONDA
Model Name: ZMKN 111
Serial No.: (n.a. marked #1 by test site)
Rated Input: ~ 100-240V, 0.15A,50/60Hz
Rated Output: ⎓ 5V, 500mA
Manufacturer: SHENZHEN KONKA TELECOMMUNICATIONS TECHNOLOGY CO., LTD
Manufacturer Address: ShenNan Road 9008, Overseas Chinese Town, Shenzhen, Guangdong, China
Wire Length: 100cm

Note 1: The EUT is a GSM/GPRS Mobile phone; it supports GSM 850MHz, 1900MHz and ISM 2.4GHz Bluetooth module. GSM 850MHz and 1900MHz are tested in this report.

Note 2: The EUT is equipped with a T-Flash card slot; equipped with a special port which can be connected to the ancillary equipments supplied by the manufacturer e.g. the AC Adapter and the USB Adapter Cable. The EUT outfits an inner Camera.

Note 3: For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

2.2 Test Standards and Results

The objective of the report is to perform testing according to 47 CFR Part 15 Subpart B:

No.	Identity	Document Title
1	47 CFR Part 15 (10-1-05 Edition)	Radio Frequency Devices

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result	Test date
1	15.107	Conducted Emission	PASS	2008-07-04
2	15.109	Radiated Emission	PASS	2008-07-03

NOTE:

The tests were performed according to the method of measurements prescribed in ANSI C63.4 2003.

2.3 Facilities and Accreditations

2.3.1 Facilities

Shenzhen Electronic Product Quality Testing Center Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L1659.

All measurement facilities used to collect the measurement data are located at Electronic Testing Building, Shahe Road, Xili, Nanshan District, Shenzhen 518055 CHINA. The test site is constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22; the FCC registration number is 741109.

2.3.2 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	20 - 25
Relative Humidity (%):	40 - 60
Atmospheric Pressure (kPa):	96

3. TEST CONDITIONS SETTING

3.1 Test Mode

1. GSM Test Mode

(1) The first test mode (GSM)

The EUT configuration of the emission tests is EUT + Battery + Charger+ Bluetooth earphone.

During the measurement of Traffic operating mode, a communication link was established between the EUT and a System Simulator (SS). The EUT operated at GSM 850MHz mid ARFCN (190) and maximum output power (level 5).

A communication link was established between the EUT and the Bluetooth earphone, and maintained until test end.

(2) The second test mode (GPRS)

The EUT configuration of the emission tests is EUT + Battery + Charger+ Bluetooth earphone.

In this test mode, a GPRS link was established between the EUT and a System Simulator (SS); date was transmitted between EUT and System Simulator (SS), and maintained during the measurement.

NOTE: All test modes are performed, only the worst cases are recorded in this report.

2. USB Test Mode

(1) The first test mode (USB)

The EUT configuration of the emission tests is TransFlash Card + EUT + Battery + PC.

In this test mode, the EUT with a TransFlash Card embedded is connected with a PC via a special USB cable supplied by applicant. During the measurement, a communication link was established between the EUT and a System Simulator (SS), simultaneity, the date is transmitting between the PC and the TransFlash Card of the EUT.

(2) The second test mode (PC Web Camera)

The EUT configuration of the emission tests is EUT + Battery + PC.

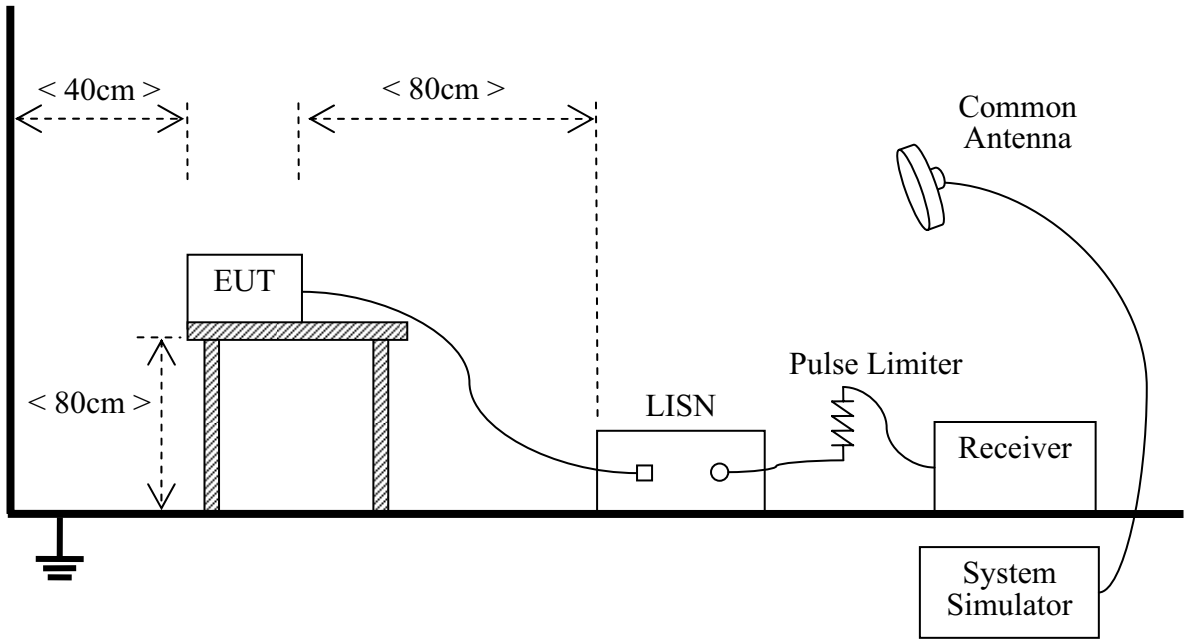
The EUT supports PC Web Camera function. During the measurement, the EUT was connected with a PC via a special USB cable supplied by applicant, and the EUT working by way of the PC Web Camera.

NOTE: These test modes are performed, only the worst cases are recorded in this report.

3.2 Test Setup and Equipments List

3.2.1 Conducted Emission

A. Test Setup:



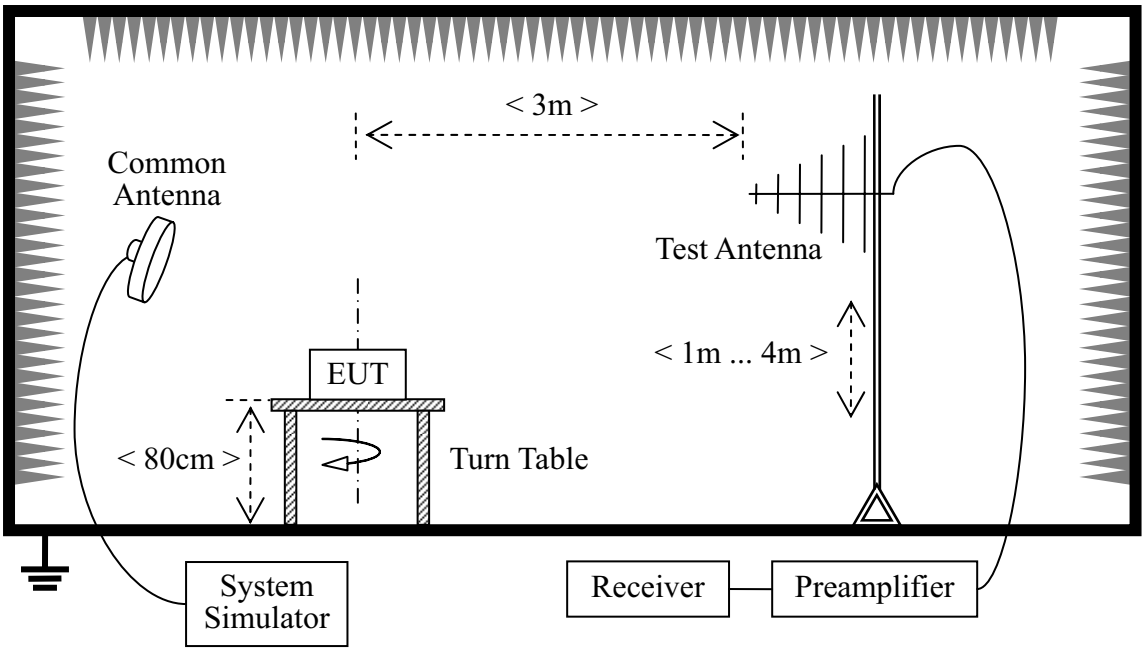
The EUT is placed on a 0.8m high insulating table, which stands on the grounded conducting floor, and keeps 0.4m away from the grounded conducting wall. The EUT is connected to the power mains through a LISN which provides 50Ω/50μH of coupling impedance for the measuring instrument. The Common Antenna is used for the call between the EUT and the System Simulator (SS). A Pulse Limiter is used to protect the measuring instrument. The factors of the whole test system are calibrated to correct the reading.

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2007.07	1year
LISN	Schwarzbeck	NSLK 8127	812744	2007.08	1year
Pulse Limiter (20dB)	Schwarzbeck	VTSD 9561-D	9391	(n.a.)	(n.a.)
System Simulator	Agilent	E5515C	GB43130131	2007.06	1year
Personal Computer	IBM	T20	78-N7117	(n.a.)	(n.a.)
Bluetooth-Headset	Nokia	HS-36W	(n.a.)	(n.a.)	(n.a.)
T-Flash Card	SanDisk	256MB	(n.a.)	(n.a.)	(n.a.)

3.2.2 Radiated Emission

C. Test Setup:



The test is performed in a 3m Semi-Anechoic Chamber; the antenna factor, cable loss and so on of the site (factors) is calculated to correct the reading. The EUT is placed on a 0.8m high insulating Turn Table, and keeps 3m away from the Test Antenna, which is mounted on a variable-height antenna master tower. The Common Antenna is used for the call between the EUT and the System Simulator (SS).

D. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2007.07	1year
Semi-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2006.08	2year
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2007.07	1year
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2007.07	1year
System Simulator	Agilent	E5515C	GB43130131	2007.06	1year
Personal Computer	IBM	T20	78-N7117	(n.a.)	(n.a.)
Bluetooth-Headset	Nokia	HS-36W	(n.a.)	(n.a.)	(n.a.)
T-Flash Card	SanDisk	256MB	(n.a.)	(n.a.)	(n.a.)

4. 47 CFR PART 15B REQUIREMENTS

4.1 Conducted Emission

4.1.1 Requirement

According to FCC section 15.107, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150kHz to 30MHz shall not exceed the limits in the following table, as measured using a 50μH/50Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dBμV)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
5 - 30	60	50

NOTE:

a) The limit subjects to the Class B digital device.

b) The lower limit shall apply at the band edges.

c) The limit decreases linearly with the logarithm of the frequency in the range 0.15 - 0.50MHz.

4.1.2 Test Description

See section 3.2.1 of this report.

4.1.3 Test Result

The maximum conducted interference is searched using Peak (PK), Quasi-peak (QP) and Average (AV) detectors; the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. All test modes are considered, refer to recorded points and plots below.

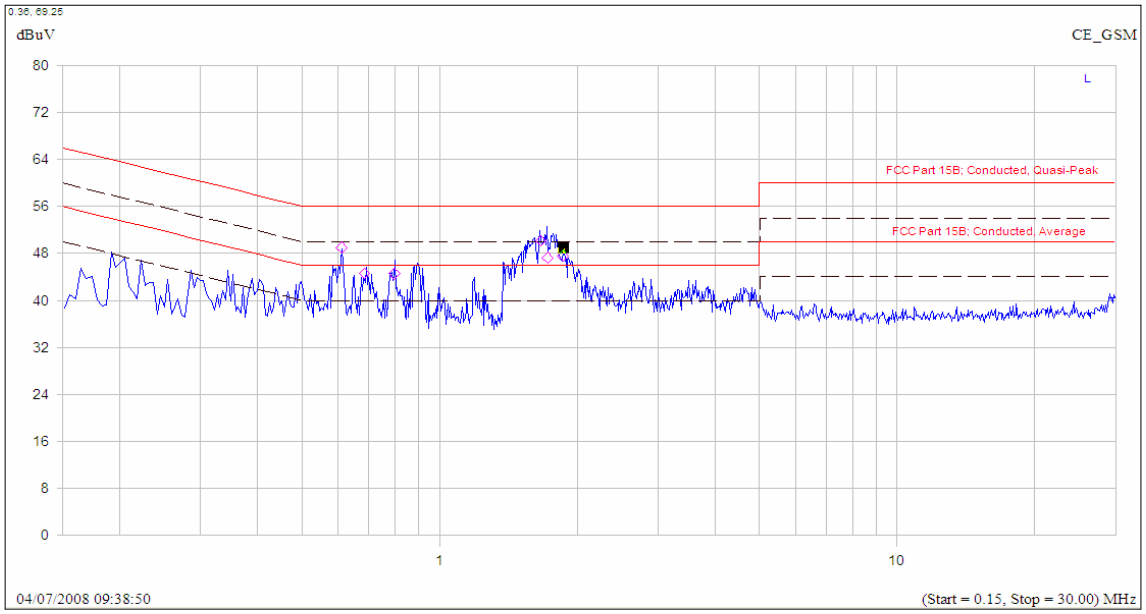
1. GSM Test Mode

A. Test Verdict Recorded for Suspicious Points:

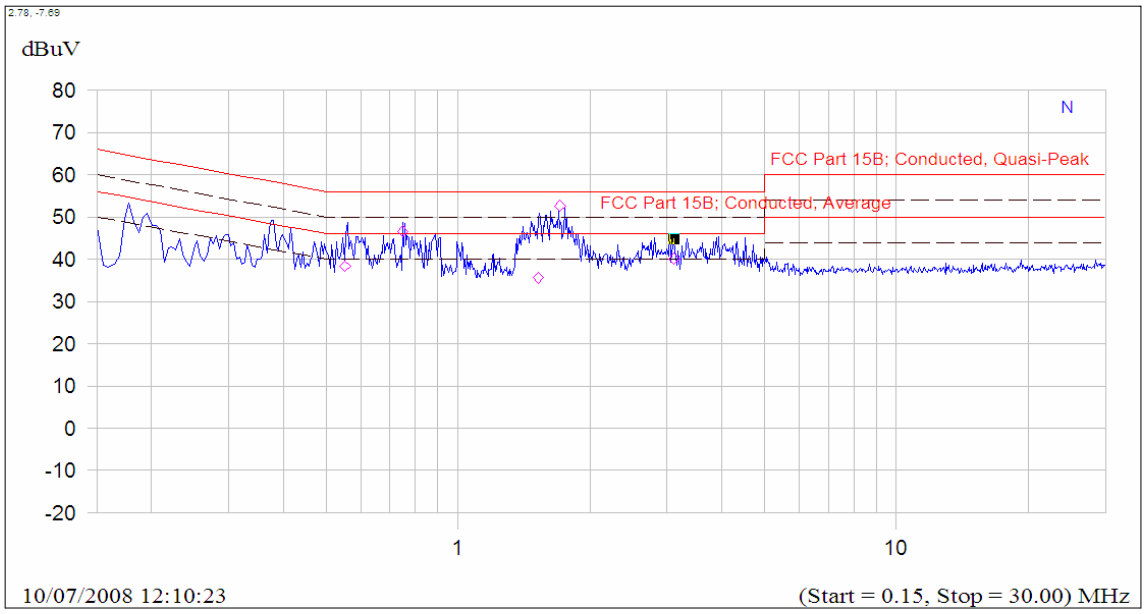
No.	@Frequency (MHz)	Measured Emission Level (dBμV)				Limit (dBμV)		Verdict
		PK	QP	AV	Phase	QP	AV	
1	0.611	49.0	44.8	35.7	L	56.0	46.0	PASS
2	0.684	44.6	38.8	27.6	L	56.0	46.0	PASS
3	0.796	44.6	41.5	29.8	L	56.0	46.0	PASS

No.	@Frequency (MHz)	Measured Emission Level (dBμV)				Limit (dBμV)		Verdict
		PK	QP	AV	Phase	QP	AV	
4	1.665	50.2	45.0	29.7	L	56.0	46.0	PASS
5	1.724	47.3	44.1	27.9	L	56.0	46.0	PASS
6	1.860	47.6	39.8	27.0	L	56.0	46.0	PASS
7	0.553	39.3	39.0	25.7	N	56.0	46.0	PASS
8	0.749	46.6	38.5	25.3	N	56.0	46.0	PASS
9	1.526	45.6	42.2	27.5	N	56.0	46.0	PASS
10	1.712	52.7	45.3	28.0	N	56.0	46.0	PASS
11	3.112	40.1	32.8	23.3	N	56.0	46.0	PASS

B. Test Plot:



(Plot A: L Phase)



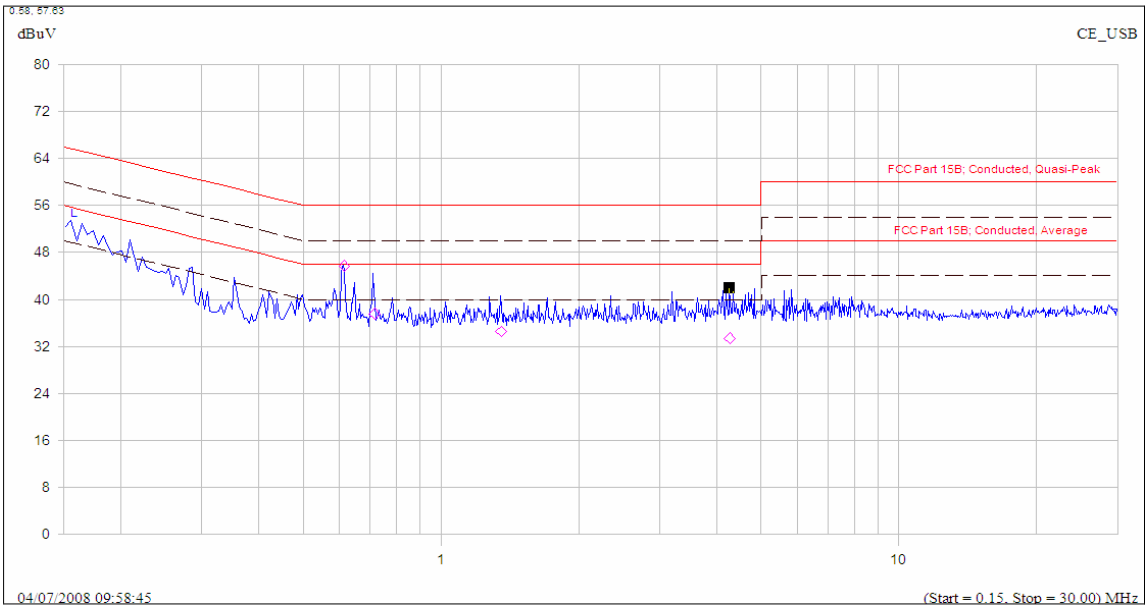
(Plot B: N Phase)

2. USB Test Mode

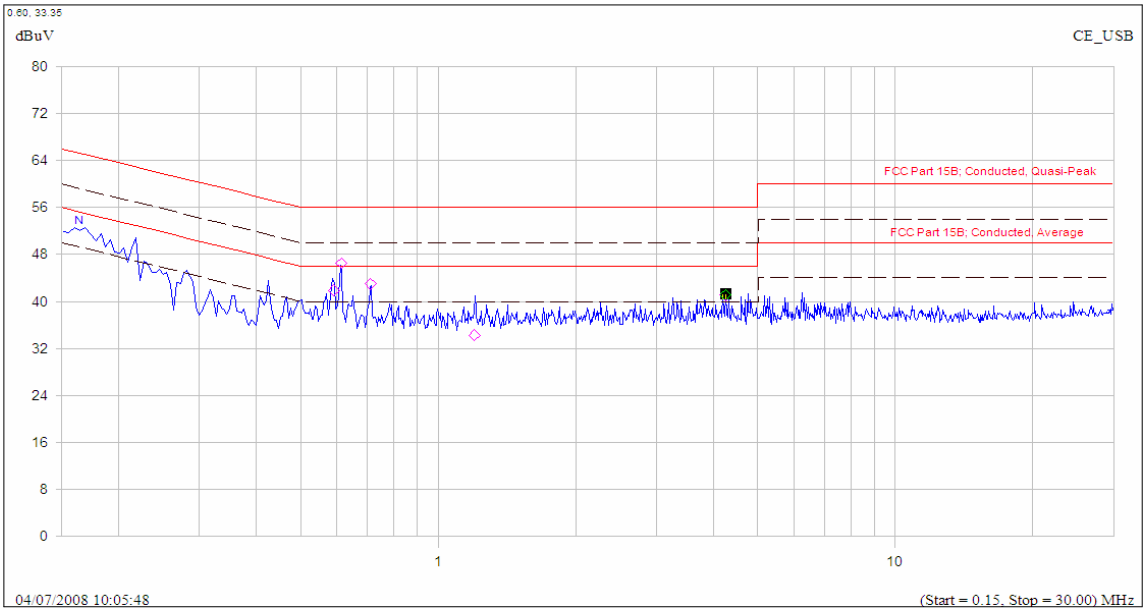
C. Test Verdict Recorded for Suspicious Points:

No.	@Frequency (MHz)	Measured Emission Level (dBμV)				Limit (dBμV)		Verdict
		PK	QP	AV	Phase	QP	AV	
1	0.615	45.7	43.6	33.3	L	56.0	46.0	PASS
2	0.716	37.5	33.3	26.7	L	56.0	46.0	PASS
3	(n.a)	(n.a)	(n.a)	(n.a)	L	(n.a)	(n.a)	(n.a)
4	(n.a)	(n.a)	(n.a)	(n.a)	L	(n.a)	(n.a)	(n.a)
5	(n.a)	(n.a)	(n.a)	(n.a)	L	(n.a)	(n.a)	(n.a)
6	(n.a)	(n.a)	(n.a)	(n.a)	L	(n.a)	(n.a)	(n.a)
7	0.591	41.9	37.3	28.5	N	56.0	46.0	PASS
8	0.613	46.5	43.5	34.0	N	56.0	46.0	PASS
9	0.710	43.0	40.2	34.3	N	56.0	46.0	PASS
10	4.252	41.1	36.5	32.6	N	56.0	46.0	PASS
11	(n.a)	(n.a)	(n.a)	(n.a)	N	(n.a)	(n.a)	(n.a)

D. Test Plot:



(Plot A: L Phase)



(Plot B: N Phase)

4.2 Radiated Emission

4.2.1 Requirement

According to FCC section 15.109, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency range (MHz)	Field Strength	
	μV/m	dBμV/m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

NOTE:

a) Field Strength (dBμV/m) = 20*log[Field Strength (μV/m)].

b) In the emission tables above, the tighter limit applies at the band edges.

4.2.2 Test Description

See section 3.2.2 of this report.

4.2.3 Test Result

The maximum radiated emission is searched using PK, QP and AV detectors; the emission levels more than the limits, and that have narrow margins from the limits will be re-measured with AV and QP detectors. Both the vertical and the horizontal polarizations of the Test Antenna are considered to perform the tests. All test modes are considered, refer to recorded points and plots below.

1. GSM Test Mode

A. Test Verdict Recorded for Suspicious Points:

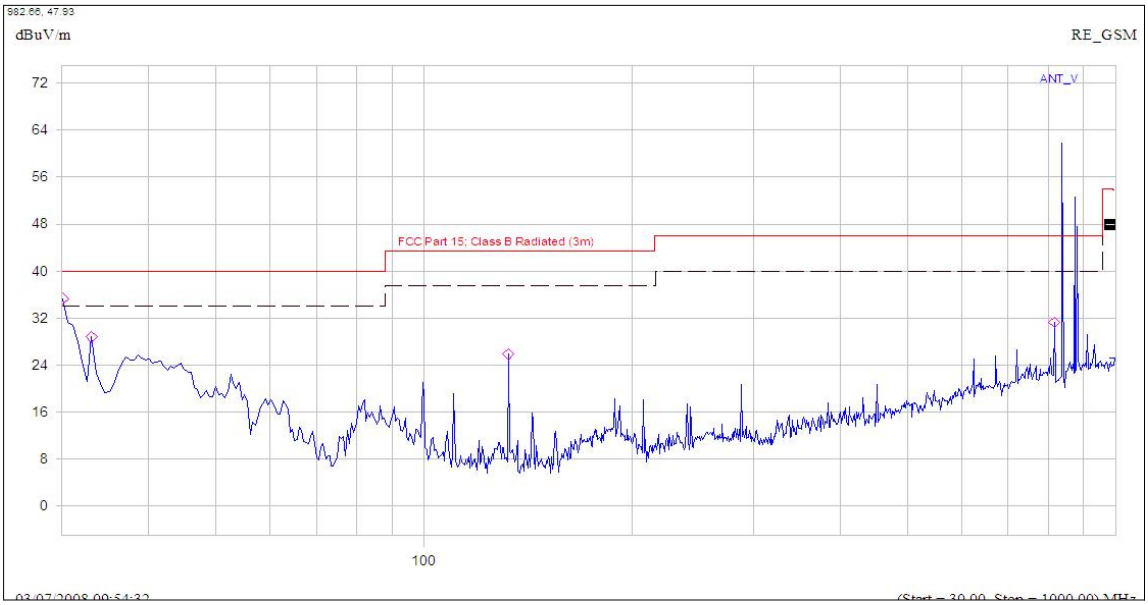
No.	@Frequency (MHz)	Emission Level (dBμV/m)			Quasi-Peak Limit (dBμV/m)	Result
		PK	QP	Antenna Polarization		
1	30.100	35.3	31.4	Vertical	40	PASS
2	33.100	28.8	--	Vertical	40	PASS
3	132.60	25.8	--	Vertical	43.5	PASS
4	816.40	31.3	--	Vertical	46	PASS
5	(n.a)	(n.a)	(n.a)	Vertical	(n.a)	(n.a)
6	(n.a)	(n.a)	(n.a)	Vertical	(n.a)	(n.a)
7	55.100	21.0	--	Horizontal	40	PASS
8	99.600	21.7	--	Horizontal	43.5	PASS

No.	@Frequency (MHz)	Emission Level (dBμV/m)			Quasi-Peak Limit (dBμV/m)	Result
		PK	QP	Antenna Polarization		
9	132.60	21.5	--	Horizontal	43.5	PASS
10	208.10	26.2	--	Horizontal	43.5	PASS
11	(n.a)	(n.a)	(n.a)	Horizontal	(n.a)	(n.a)
12	(n.a)	(n.a)	(n.a)	Horizontal	(n.a)	(n.a)

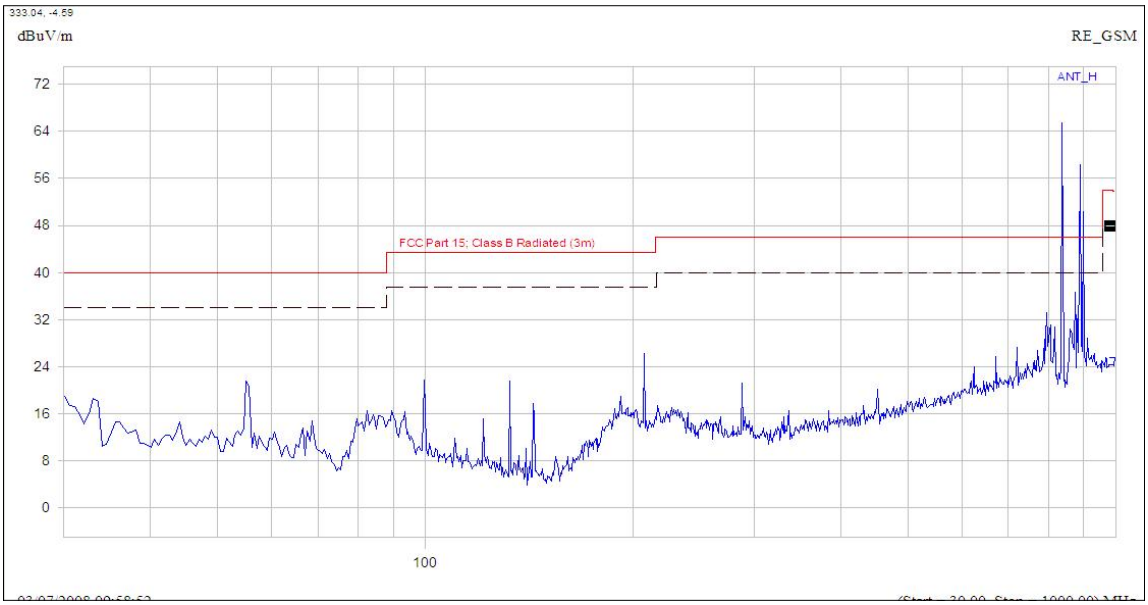
Note: "--" in the table above means that the emissions are too small to be measured and are at least 10 dB below the limit.

B. Test Plot:

Note: Following is the plots for emission measurement; please note that marked spikes with circle should be ignored because they are MS and SS carrier frequency.



(Plot A: Test Antenna Vertical)



(Plot B: Test Antenna Horizontal)

2. USB Test Mode

C. Test Verdict Recorded for Suspicious Points:

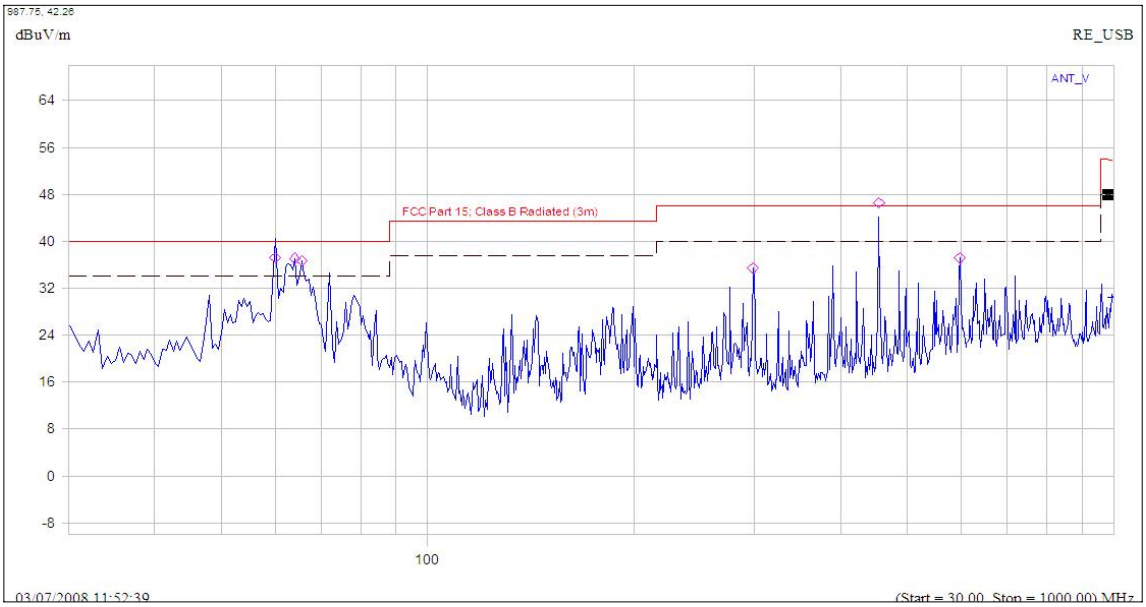
No.	@Frequency (MHz)	Emission Level (dBμV/m)			Quasi-Peak Limit (dBμV/m)	Result
		PK	QP	Antenna Polarization		
1	59.975	37.2	31.6	Vertical	40	PASS
2	64.100	37.1	32.0	Vertical	40	PASS
3	65.600	36.7	31.0	Vertical	40	PASS
4	298.20	35.4	--	Vertical	46	PASS
5	454.87	46.6	44.1	Vertical	46	PASS
6	597.30	37.1	--	Vertical	46	PASS
7	60.007	40.2	38.5	Horizontal	40	PASS
8	72.030	36.5	34.0	Horizontal	40	PASS
9	76.758	37.1	29.8	Horizontal	40	PASS
10	78.789	46.1	32.9	Horizontal	40	PASS
11	263.999	47.2	43.7	Horizontal	46	PASS
12	276.012	46.1	43.1	Horizontal	46	PASS

Note: "--" in the table above means that the emissions are too small to be measured and are at least 10 dB below the limit.

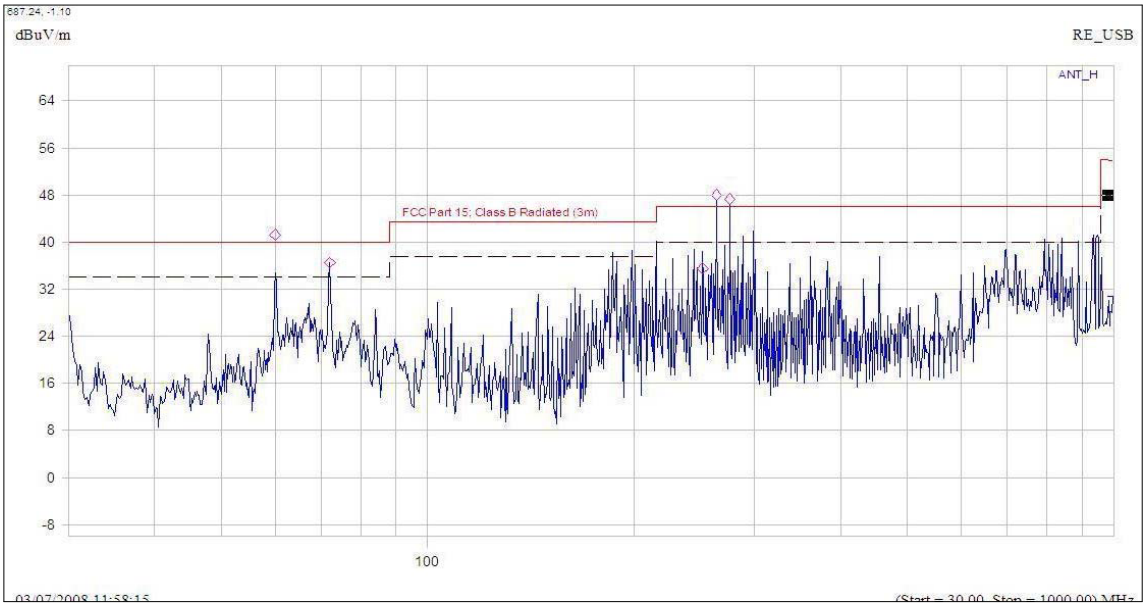
D. Test Plot:

Note: Following is the plots for emission measurement; please note that marked spikes with circle

should be ignored because they are MS and SS carrier frequency.



(Plot A: Test Antenna Vertical)



(Plot B: Test Antenna Horizontal)

** END OF REPORT **