

47 CFR PART 15 SUBPART B

TEST REPORT

of

CDMA 800MHZ Fixed Wireless Phone

Model Name: Topp
Brand Name: Topp
Report No: SH10050029E01
FCC ID: YJ2L100

prepared for

Topp Multitasking Group, C.A

Calle Norte Casa 189 Anexo 1. Santa Sofia. Caracas Venezuela



prepared by

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Bluetooth®

CTIA Authorized Test Lab
LAB CODE 20081223-00

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1. TEST CERTIFICATION

Equipment under Test: CDMA 800MHZ Fixed Wireless Phone

Brand Name: Topp
Model Name: Topp
FCC ID: YJ2L100
Applicant: Topp Multitasking Group, C.A
Manufacturer: Asiatelco Technologies Co.

Test Standards: 47 CFR Part 15 Subpart B

Test Date(s): Jun,17, 2010 –Jun, 22, 2010

Test Result: PASS

* We Hereby Certify That:

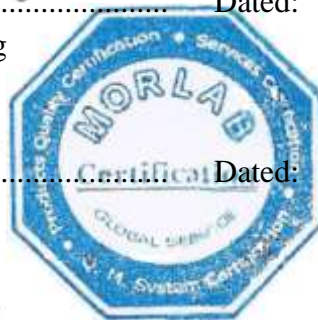
The equipment under test was tested by Shenzhen Electronic Product Quality Testing Center Morlab Laboratory. The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the requirement of related FCC rules.

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: Huangyunlong Dated: 2010-6-28
Huangyunlong

Reviewed by: Zhang Jun Dated: 2010-6-28
Zhang Jun

Approved by: Wei Bei Dated: 2010-6-28
Wei Bei



2. GENERAL INFORMATION

2.1 EUT Description

EUT Type.....: CDMA 800MHZ Fixed Wireless Phone
Model Name: Topp
Serial No.....: (n.a., marked #1 by test site)
Hardware Version: 328_HW
Software Version: 6681_M_1.84.74_2T
Modulation Type.....: QPSK

Note 1: A communication link between the EUT and a System Simulator (SS) is established at the start of the test, and maintained during the all test in this report.

Note 2: 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
1	15.107	Conducted Emission	PASS
2	15.109	Radiated Emission	PASS

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 Laboratories (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 -2003 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):	960

3. TEST CONDITIONS SETTING

3.1 CDMA Test Mode

1. During the measurement, the CDMA radio is working. The test modes of the EUT are showed as below:

- (1) Traffic operating CDMA 1xRTT mode

The EUT configuration of the emission tests is EUT + Base

A communication link was established between the EUT and a System Simulator (SS). The EUT operated at CDMA 800 mid ARFCN (384) and maximum output power (All up bit).

- (2) Traffic operating CDMA 1xRTT mode

The EUT configuration of the emission tests is EUT + Charger

A communication link was established between the EUT and a System Simulator (SS). The EUT operated at CDMA 800 mid ARFCN (384) and maximum output power (All up bit).

- (3) Traffic operating CDMA 1xRTT mode

The EUT configuration of the emission tests is EUT + USB+PC

A communication link was established between the EUT and a System Simulator (SS). The EUT operated at CDMA 800 mid ARFCN (384) and maximum output power (All up bit).

- (4) Idle operating mode

The EUT configuration of the emission tests is EUT

The EUT was registered to the base station simulator but no call was set up.

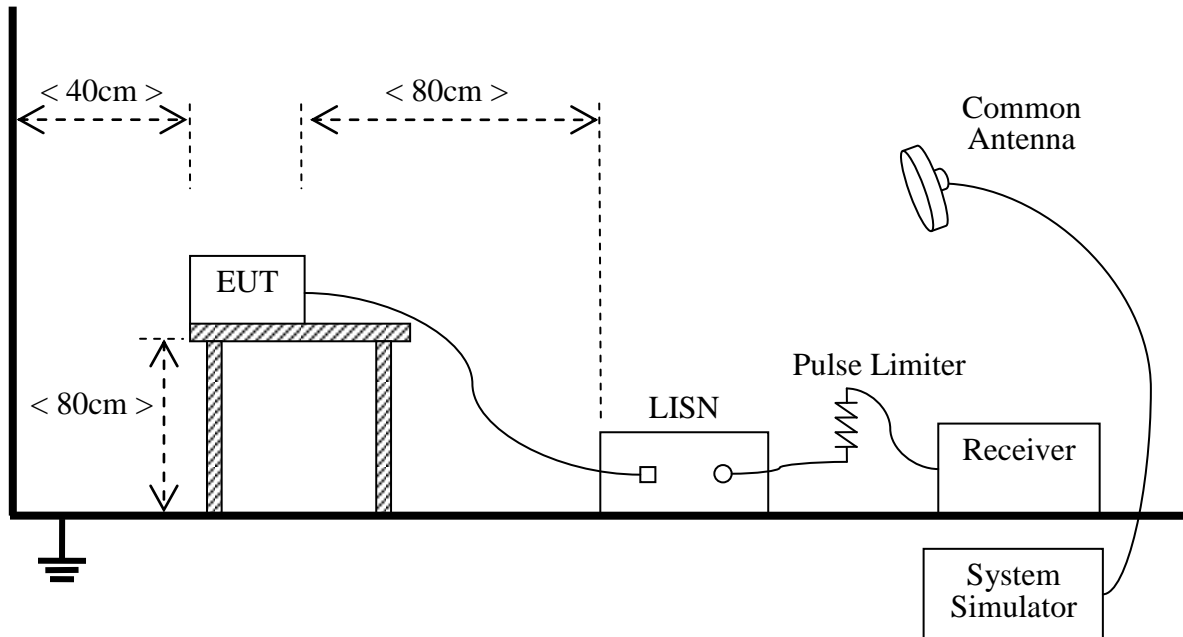
Note: All test modes are performed, only the worst cases are recorded in this report.

Note: In the Conducted Emission and Radiated Emission , the worst cases are operated at CDMA 1xRTT Cellular EUT + Base and EUT + Charger

3.2 Test Setup and Equipments List

3.2.1 Conducted Emission

A. Test Setup:



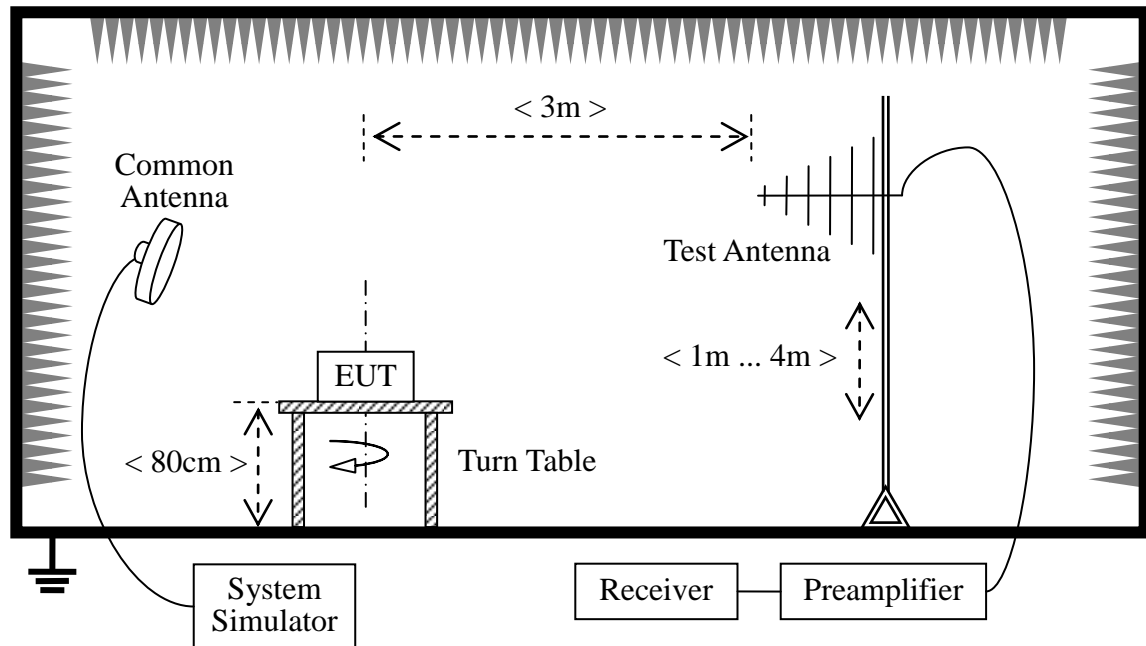
The EUT is placed on a 0.8m high insulating table, which stands on the grounded conducting floor, and keeps 0.4m away from the grounded conducting wall. The EUT is connected to the power mains through a LISN which provides $50\Omega/50\mu\text{H}$ of coupling impedance for the measuring instrument. The 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	Rohde&Schwarz	ESCI3	100666	2009.11	1year
LISN	Rohde&Schwarz	ENV216	812744	2009.11	1year
System Simulator	Rohde&Schwarz	CMU200	105571	2009.12.	1year
Personal Computer	Lenovo	(n.a.)	(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	Rohde&Schwarz	ESCI3	100666	2009.10	1year
Full-Anechoic Chamber	ETS • LINDGREN	9m*6m*6m	(n.a.)	2009.10	1year
Test Antenna - Bi-Log	Rohde&Schwarz	HL562	100385	2009.10	1year
System Simulator	Rohde&Schwarz	CMU200	105571	2009.10	1year
Personal Computer	Lenovo	(n.a.)	(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 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 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 2.3.1 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.

A. Test Verdict Recorded for Suspicious Points:

1. The EUT with base

Frequency (MHz)	QuasiPeak (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.545512	52.5	1000.000	9.000	N	9.7	3.5	56	PASS
0.817894	48.3	1000.000	9.000	N	9.7	7.7	56	PASS
1.094006	42.2	1000.000	9.000	N	9.7	13.8	56	PASS
1.37385	36.1	1000.000	9.000	N	9.7	19.9	56	PASS
1.638769	40	1000.000	9.000	N	9.7	16.0	56	PASS
2.743219	31.8	1000.000	9.000	N	9.8	24.2	56	PASS
0.552975	53.2	1000.000	9.000	L1	9.7	2.8	56	PASS
0.821625	38.6	1000.000	9.000	L1	9.7	17.4	56	PASS
1.101469	40.0	1000.000	9.000	L1	9.7	16.0	56	PASS
1.381312	47.6	1000.000	9.000	L1	9.7	8.4	56	PASS
3.336488	45.6	1000.000	9.000	L1	9.8	10.4	56	PASS
3.605138	39.6	1000.000	9.000	L1	9.8	16.4	56	PASS

Frequency (MHz)	Average (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.545512	38.6	1000.000	9.000	N	9.7	7.4	46	PASS
0.817894	34.6	1000.000	9.000	N	9.7	11.4	46	PASS
1.094006	27.6	1000.000	9.000	N	9.7	18.4	46	PASS
1.37385	21	1000.000	9.000	N	9.7	25.0	46	PASS
1.635038	29.2	1000.000	9.000	N	9.7	16.8	46	PASS
2.978288	37.2	1000.000	9.000	N	9.8	8.8	46	PASS
0.276862	47	1000.000	9.000	L1	9.7	3.7	50.7	PASS
0.552975	42.3	1000.000	9.000	L1	9.7	3.7	46	PASS
0.825356	30.9	1000.000	9.000	L1	9.7	15.1	46	PASS
1.101469	28.7	1000.000	9.000	L1	9.7	17.3	46	PASS
1.381312	33	1000.000	9.000	L1	9.7	13.0	46	PASS
3.605138	25.5	1000.000	9.000	L1	9.8	20.5	46	PASS

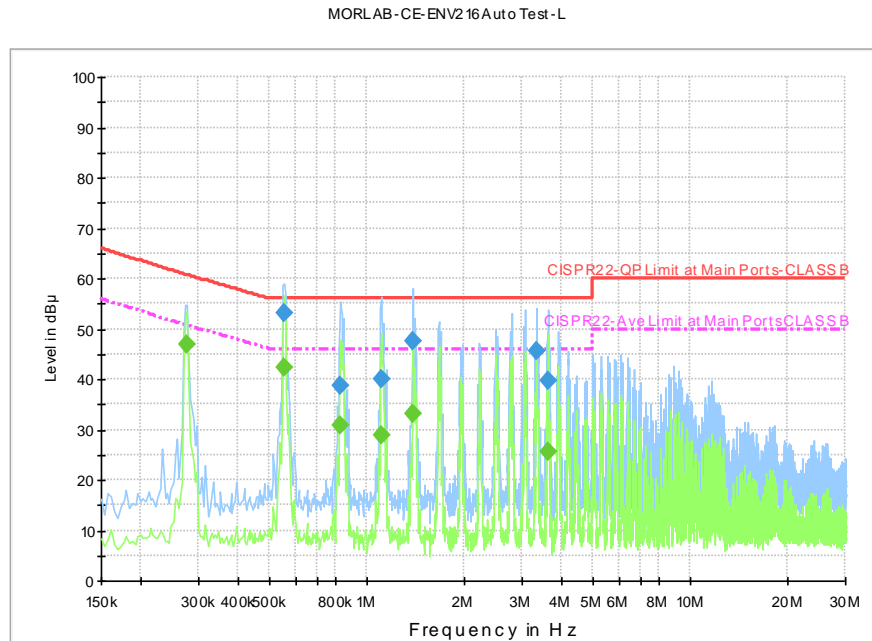
2. The EUT without base

Frequency (MHz)	QuasiPeak (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.679838	52.4	1000.000	9.000	N	9.7	3.6	56	PASS
0.914906	53.6	1000.000	9.000	N	9.7	2.4	56	PASS
2.052938	50.2	1000.000	9.000	N	9.7	5.8	56	PASS
2.265619	45.8	1000.000	9.000	N	9.8	10.2	56	PASS
2.288006	51.6	1000.000	9.000	N	9.8	4.4	56	PASS
2.523075	49.9	1000.000	9.000	N	9.8	6.1	56	PASS
0.452231	53.6	1000.000	9.000	L1	9.7	3.2	56.8	PASS
0.676106	51.3	1000.000	9.000	L1	9.7	4.7	56	PASS
1.120125	44.1	1000.000	9.000	L1	9.7	11.9	56	PASS
2.023088	46.6	1000.000	9.000	L1	9.8	9.4	56	PASS
2.261888	52.3	1000.000	9.000	L1	9.8	3.7	56	PASS
2.496956	50.9	1000.000	9.000	L1	9.8	5.1	56	PASS

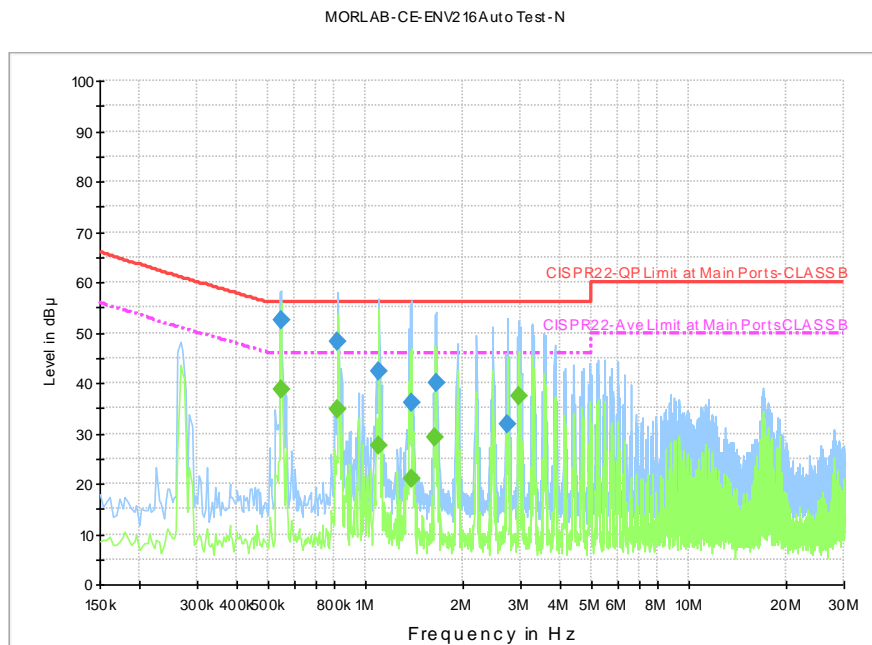
Frequency (MHz)	Average (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.459694	45	1000.000	9.000	N	9.7	1.6	46.6	PASS
0.679838	39.7	1000.000	9.000	N	9.7	6.3	46	PASS
0.911175	41.5	1000.000	9.000	N	9.7	4.5	46	PASS
2.052938	38.2	1000.000	9.000	N	9.7	7.8	46	PASS
2.288006	39.8	1000.000	9.000	N	9.8	6.2	46	PASS
2.504419	35.1	1000.000	9.000	N	9.8	10.9	46	PASS
0.452231	43.5	1000.000	9.000	L1	9.7	3.3	46.8	PASS
0.676106	40.8	1000.000	9.000	L1	9.7	5.2	46	PASS
0.903712	41.7	1000.000	9.000	L1	9.7	4.3	46	PASS
1.123856	35.4	1000.000	9.000	L1	9.7	10.6	46	PASS
2.026819	36.4	1000.000	9.000	L1	9.8	9.6	46	PASS
2.261888	41.7	1000.000	9.000	L1	9.8	4.3	46	PASS

B. Test Plot:

1. The EUT with base



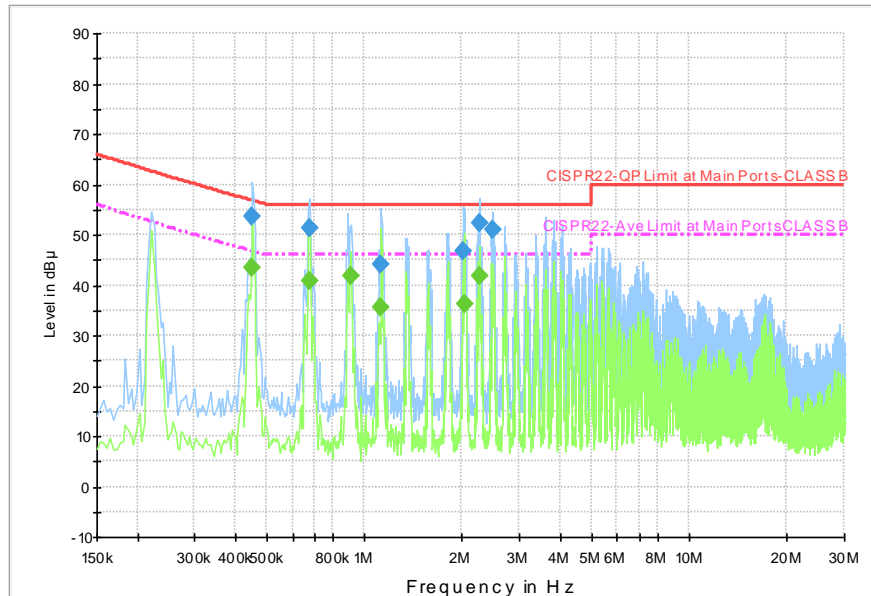
(Plot A: L Phase)



(Plot B: N Phase)

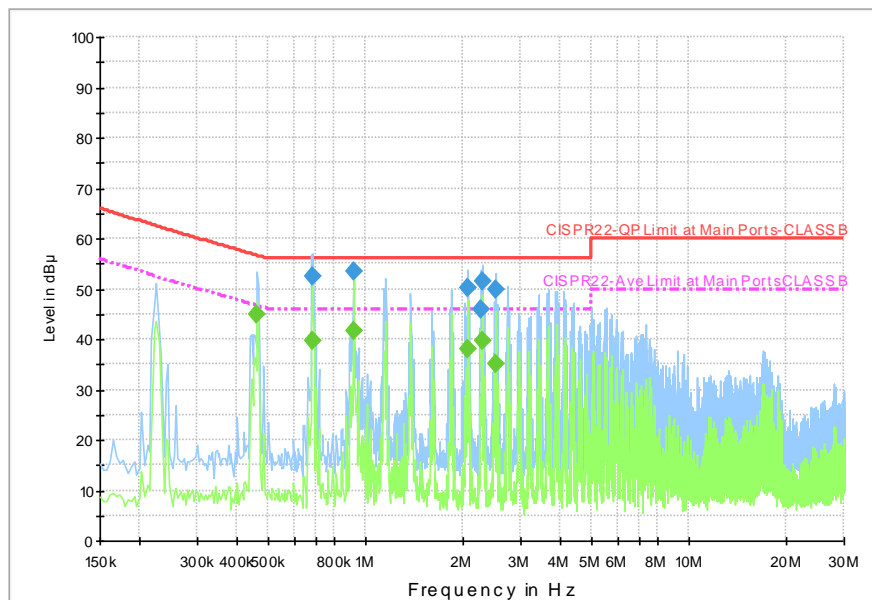
2. The EUT without base

MORLAB-CE-ENV216Auto Test -L



(Plot A: L Phase)

MORLAB-CE-ENV216Auto Test -N



(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	
	$\mu\text{V/m}$	$\text{dB } \mu\text{V/m}$
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

NOTE:

- a) Field Strength ($\text{dB } \mu\text{V/m}$) = $20 \cdot \log[\text{Field Strength } (\mu\text{V/m})]$.
- b) In the emission tables above, the tighter limit applies at the band edges.

4.2.2 Test Description

See section 2.3.2 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) Traffic operating mode

The EUT configuration of the emission tests is EUT + PC

A communication link was established between the EUT and a System Simulator (SS). The EUT operated at CDMA 1xRTT Cellular mid ARFCN (384) and maximum output power (All up bit).

A. Test Verdict Recorded for Suspicious Points:

1. The EUT with base

No.	@Frequency (MHz)	Emission Level (dB μ V/m)			Quasi-Peak Limit (dB μ V/m)	Result
		QP	Margin	Antenna Polarization		
1	35.213750	21.6	18.4	Vertical	40.0	PASS
2	37.638750	26.4	13.6	Vertical	40.0	PASS
3	50.976250	21.9	18.1	Vertical	40.0	PASS
4	69.891250	14.5	25.5	Vertical	40.0	PASS
5	75.590000	17.4	22.6	Vertical	40.0	PASS
6	101.295000	11.7	31.8	Vertical	43.5	PASS
4	79.348750	16.4	23.6	Horizontal	40.0	PASS
5	32.182500	17.6	22.4	Horizontal	40.0	PASS
6	37.396250	13.5	26.5	Horizontal	40.0	PASS
7	59.948750	7.9	32.1	Horizontal	40.0	PASS
8	107.842500	11.8	31.7	Horizontal	43.5	PASS
9	222.666250	16.0	30.0	Horizontal	46.0	PASS

2. The EUT without base

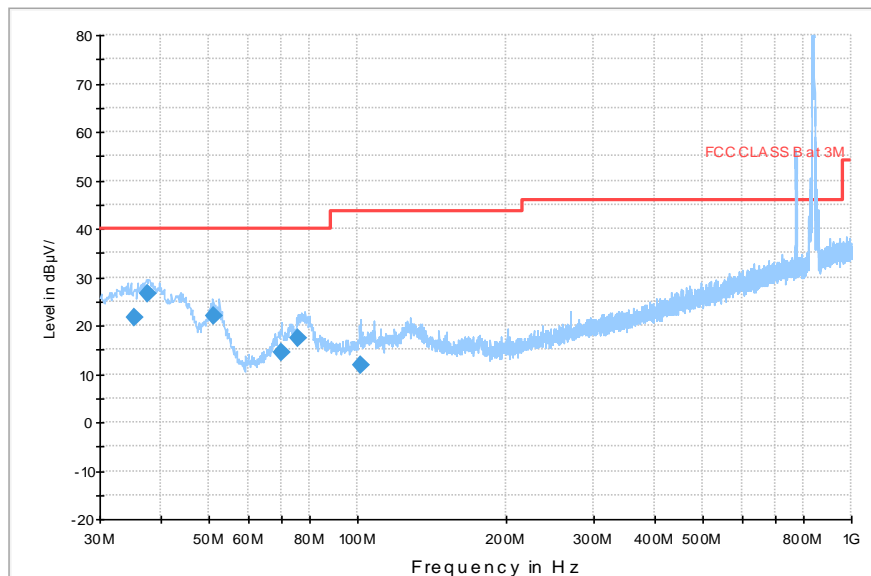
No.	@Frequency (MHz)	Emission Level (dB μ V/m)			Quasi-Peak Limit (dB μ V/m)	Result
		QP	Margin	Antenna Polarization		
1	37.39625	29.6	10.4	Vertical	40	PASS
2	40.54875	25.1	14.9	Vertical	40	PASS
3	45.64125	21.7	18.3	Vertical	40	PASS
4	50.37000	22.0	18.0	Vertical	40	PASS
5	73.16500	20.9	19.1	Vertical	40	PASS
6	79.95500	22.0	18.0	Vertical	40	PASS
4	32.30375	17.5	22.5	Horizontal	40	PASS
5	38.60875	14.0	26.0	Horizontal	40	PASS
6	59.94875	8.0	32.0	Horizontal	40	PASS
7	79.59125	16.1	23.9	Horizontal	40	PASS
8	105.17500	14.0	29.5	Horizontal	43.5	PASS
9	127.00000	17.1	26.4	Horizontal	43.5	PASS

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.

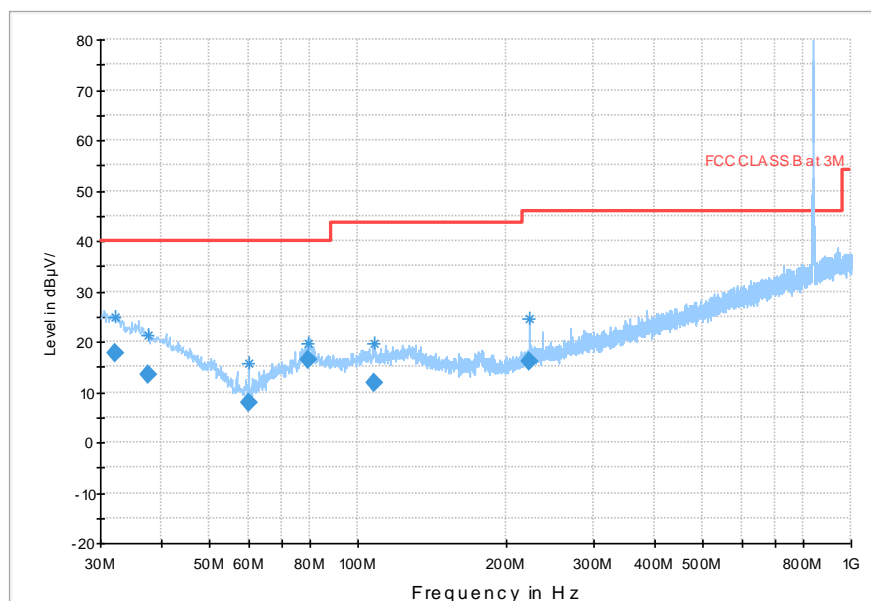
1. The EUT with base

Copy (2) of MORLAB-RE_HL562 AutoTest



(Plot A: Test Antenna Vertical)

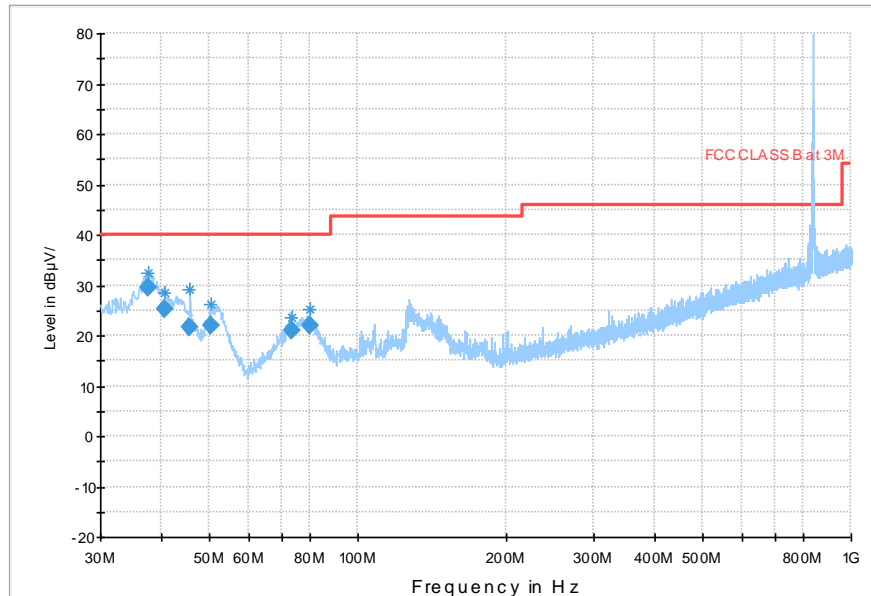
Copy (2) of MORLAB-RE_HL562 AutoTest



(Plot B: Test Antenna Horizontal)

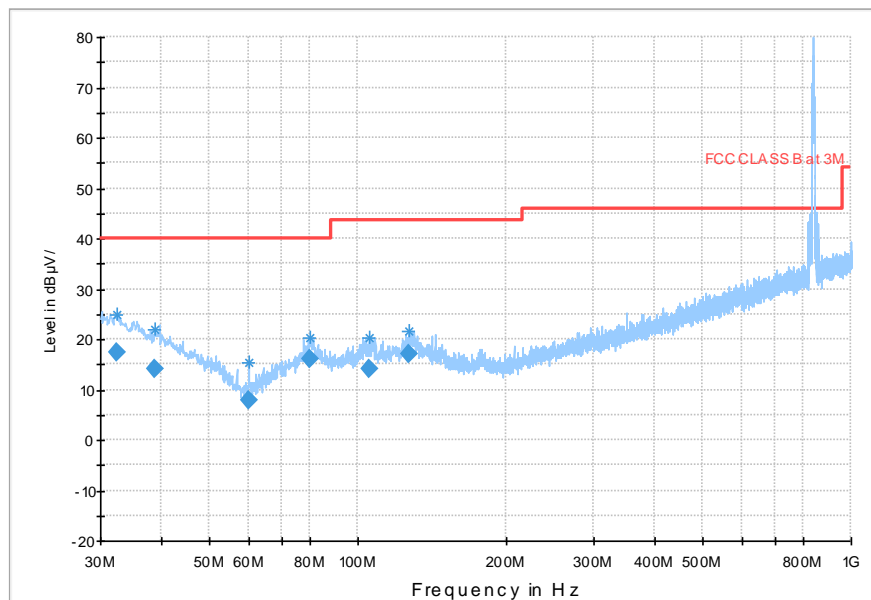
2. The EUT with base

Copy (2) of MORLAB-RE_HL562 AutoTest



(Plot A: Test Antenna Vertical)

Copy (2) of MORLAB-RE_HL562 AutoTest



(Plot B: Test Antenna Horizontal)

**** END OF REPORT ****