



47 CFR PART 15 SUBPART B

TEST REPORT

of

Fixed Wireless Phone on CDMA 800MHz

Model Name: PX320N
Brand Name: Axesstel Inc
Report No.: SH10060012E07
FCC ID: PH7PX320N

prepared for

Axesstel Inc
6815 Flanders Drive, #210, San Diego, CA 92121, USA

prepared by

Shenzhen Electronic Product Quality Testing Center
Morlab Laboratory

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LAB CODE 20081223-00

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1. TEST CERTIFICATION

Equipment under Test: Fixed Wireless Phone on CDMA 800MHz

Brand Name: Axesstel Inc
Model Name: PX320N
FCC ID: PH7PX320N
Applicant: Axesstel Inc
6815 Flanders Drive,#210,San Diego,CA92121,USA
Manufacturer: AsiaTelco Technologies Co.
#289 Bisheng Road,Building-8,3F.Zhangjiang Hi-Tech
Park,Pudong,Shanghai China

Test Standards: 47 CFR Part 15 Subpart B

Test Date(s): July,20, 2010 –Dec, 30, 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: 2011-1-6
Huangyunlong

Reviewed by: Zhang Jun Dated: 2011-1-6
Zhang Jun

Approved by: Wei Bei Dated: 2011-1-6
Wei Bei





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
2	ANSI C63.4-2003	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

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 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 GSM radio is working. The test modes of the EUT are showed as below:

(1) Traffic operating CDMA mode

The EUT configuration of the emission tests is EUT +Adapter

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) Idle operating mode

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

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

(3) Traffic operating CDMA 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).

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

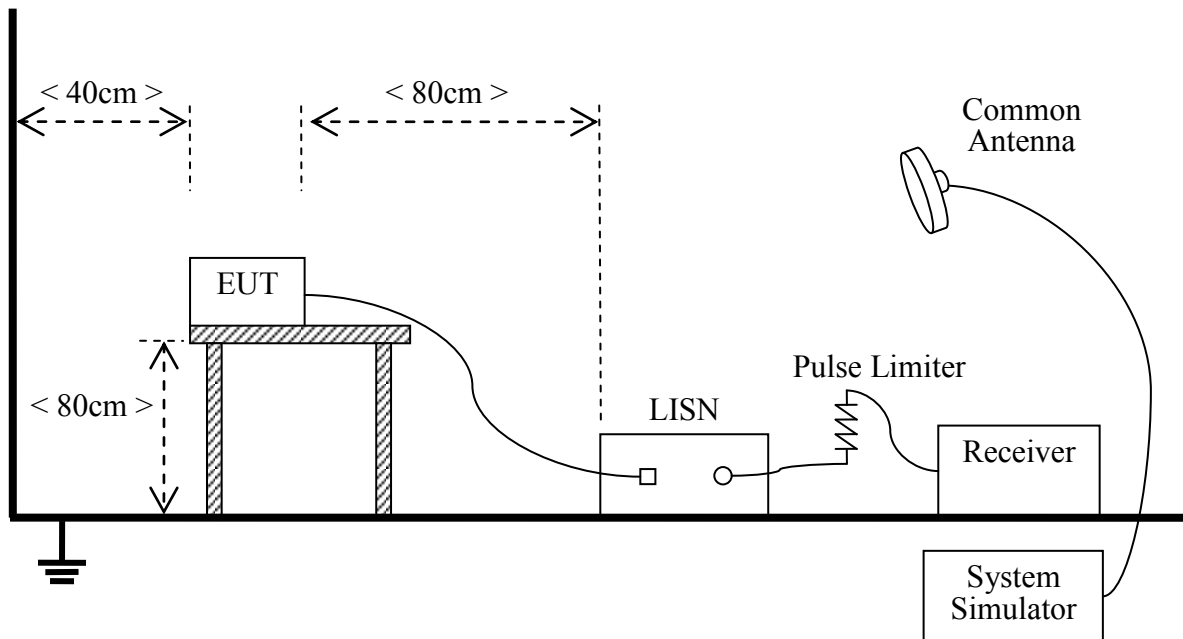
Note: In the Conducted Emission, the worst cases are operated at CDMA 800

Note: In the Radiated Emission, the worst cases are operated at CDMA 800

3.2 Test Setup and Equipments List

3.2.1 Conducted Emission

A. Test Setup:



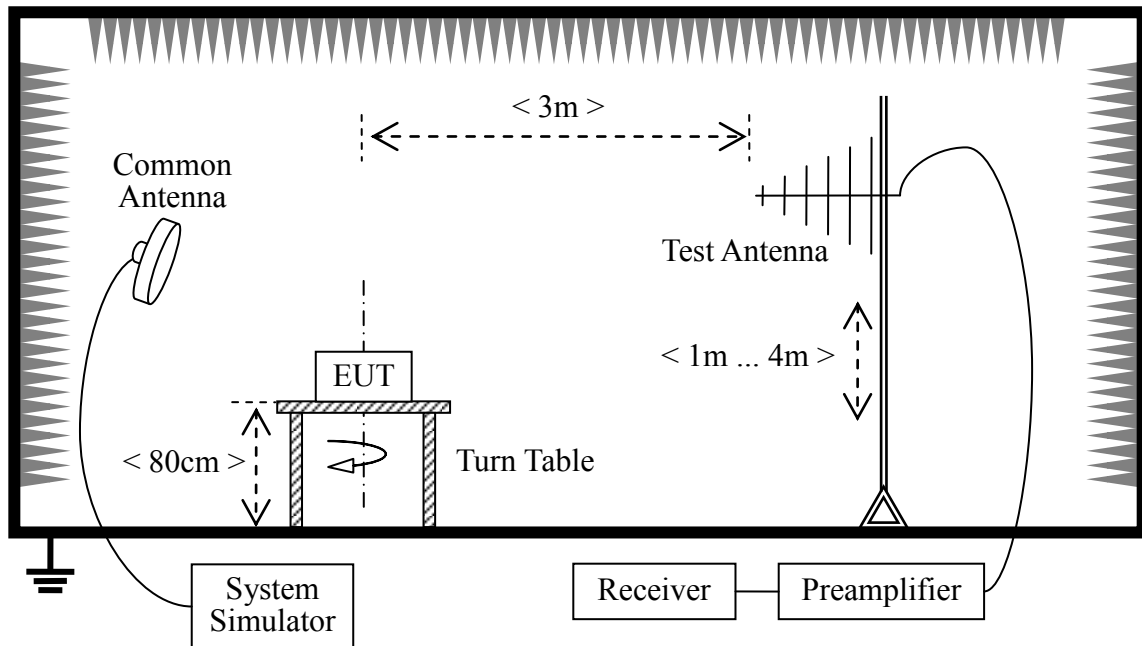
The EUT is placed on a 0.8m high insulating table, which stands on the grounded conducting floor, and keeps 0.4m away from the grounded conducting wall. The EUT is connected to the power mains through a LISN which provides $50\Omega/50\mu\text{H}$ of coupling impedance for the measuring instrument. The 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	2010.9	1year
LISN	Rohde&Schwarz	ENV216	812744	2010.9	1year
System Simulator	Rohde&Schwarz	CMU200	105571	2010.9	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	2010.9	1year
Full-Anechoic Chamber	ETS • LINDGREN	9m*6m*6m	(n.a.)	2010.9	1year
Test Antenna - Bi-Log	Rohde&Schwarz	HL562	100385	2010.9	1year
System Simulator	Rohde&Schwarz	CMU200	105571	2010.9	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:

- The limit subjects to the Class B digital device.
- The lower limit shall apply at the band edges.
- 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 (EUT +Adapter):

Frequency (MHz)	QuasiPeak (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.366412	53.9	1000.000	9.000	N	9.7	4.5	58.4	PASS
0.638794	49.9	1000.000	9.000	N	9.7	6.1	56.0	PASS
0.914906	31.7	1000.000	9.000	N	9.7	24.3	56.0	PASS
1.459669	38.7	1000.000	9.000	N	9.7	17.3	56.0	PASS
1.735781	24.7	1000.000	9.000	N	9.7	31.3	56.0	PASS
2.093981	44.6	1000.000	9.000	N	9.7	11.4	56.0	PASS
0.388800	53.3	1000.000	9.000	L	9.7	4.7	58.0	PASS
0.463425	52.0	1000.000	9.000	L	9.7	4.6	56.6	PASS
0.698494	52.5	1000.000	9.000	L	9.7	3.5	56.0	PASS
0.773119	51.1	1000.000	9.000	L	9.7	4.9	56.0	PASS
2.019356	45.5	1000.000	9.000	L	9.8	10.5	56.0	PASS
2.172338	43.2	1000.000	9.000	L	9.7	12.8	56.0	PASS

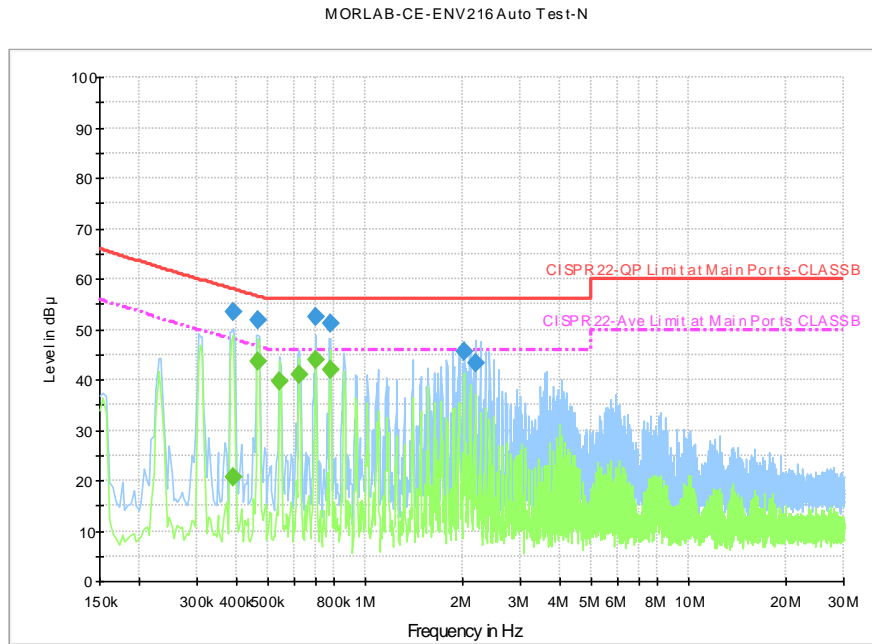
Frequency (MHz)	Average (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.362681	8.9	1000.000	9.000	N	9.7	39.6	48.5	PASS
0.541781	33.9	1000.000	9.000	N	9.7	12.1	46.0	PASS
0.635062	7.1	1000.000	9.000	N	9.7	38.9	46.0	PASS
1.455938	19.7	1000.000	9.000	N	9.7	26.3	46.0	PASS
1.549219	35.5	1000.000	9.000	N	9.7	10.5	46.0	PASS
1.732050	35.3	1000.000	9.000	N	9.7	10.7	46.0	PASS
0.388800	20.8	1000.000	9.000	L	9.7	27.1	47.9	PASS
0.463425	43.5	1000.000	9.000	L	9.7	3.1	46.6	PASS
0.541781	39.7	1000.000	9.000	L	9.7	6.3	46.0	PASS
0.620138	40.9	1000.000	9.000	L	9.7	5.1	46.0	PASS
0.698494	44.0	1000.000	9.000	L	9.7	2.0	46.0	PASS
0.773119	42.1	1000.000	9.000	L	9.7	3.9	46.0	PASS

B. Test Verdict Recorded for Suspicious Points (EUT + USB + PC):

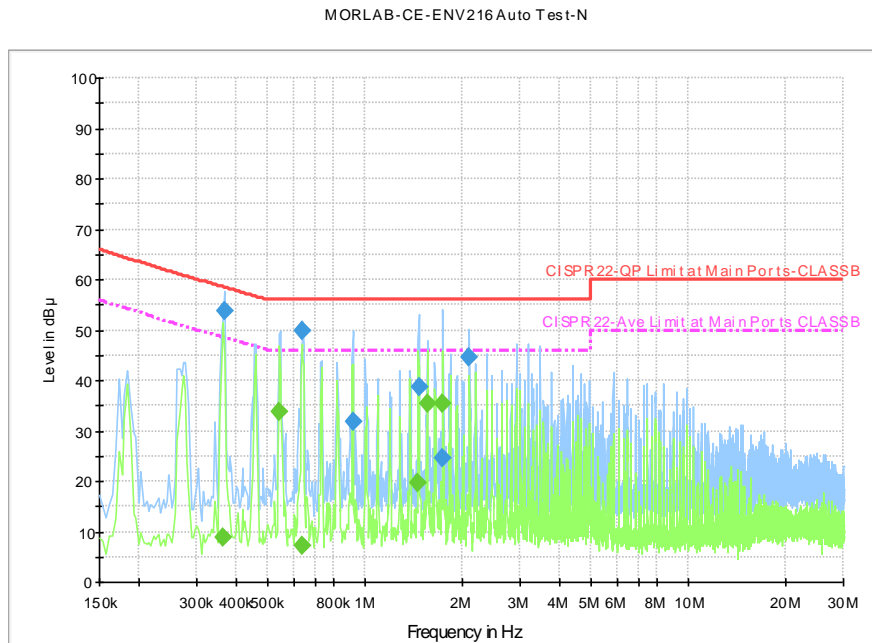
Frequency (MHz)	QuasiPeak (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.426112	40.3	1000.000	9.000	N	9.7	16.9	57.2	PASS
20.265169	39.9	1000.000	9.000	N	10.4	20.1	60.0	PASS
20.309944	39.8	1000.000	9.000	N	10.4	20.2	60.0	PASS
20.462925	39.9	1000.000	9.000	N	10.4	20.1	60.0	PASS
21.388275	40.1	1000.000	9.000	N	10.4	19.9	60.0	PASS
21.862144	39.7	1000.000	9.000	N	10.5	20.3	60.0	PASS
0.213431	44.3	1000.000	9.000	L	9.6	18.6	62.9	PASS
0.329100	40.7	1000.000	9.000	L	9.7	18.6	59.3	PASS
0.422381	41.0	1000.000	9.000	L	9.7	16.3	57.3	PASS
0.433575	41.7	1000.000	9.000	L	9.7	15.4	57.1	PASS
1.769362	35.8	1000.000	9.000	L	9.8	20.2	56.0	PASS
1.802944	36.2	1000.000	9.000	L	9.8	19.8	56.0	PASS

Frequency (MHz)	Average (dBμ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dBμ V)	Comment
0.332831	30.4	1000.000	9.000	N	9.7	18.8	49.2	PASS
20.656950	33.7	1000.000	9.000	N	10.4	16.3	50.0	PASS
20.776350	33.9	1000.000	9.000	N	10.4	16.1	50.0	PASS
21.246488	33.7	1000.000	9.000	N	10.4	16.3	50.0	PASS
21.668119	33.3	1000.000	9.000	N	10.5	16.7	50.0	PASS
22.447950	31.4	1000.000	9.000	N	10.5	18.6	50.0	PASS
0.213431	33.3	1000.000	9.000	L	9.6	19.6	52.9	PASS
0.329100	31.6	1000.000	9.000	L	9.7	19.8	51.4	PASS
0.422381	25.2	1000.000	9.000	L	9.7	23.7	48.9	PASS
0.433575	31.4	1000.000	9.000	L	9.7	15.9	47.3	PASS
1.769362	32.0	1000.000	9.000	L	9.7	14.8	46.8	PASS
1.802944	28.4	1000.000	9.000	L	9.8	17.6	46.0	PASS

C. Test Plot:

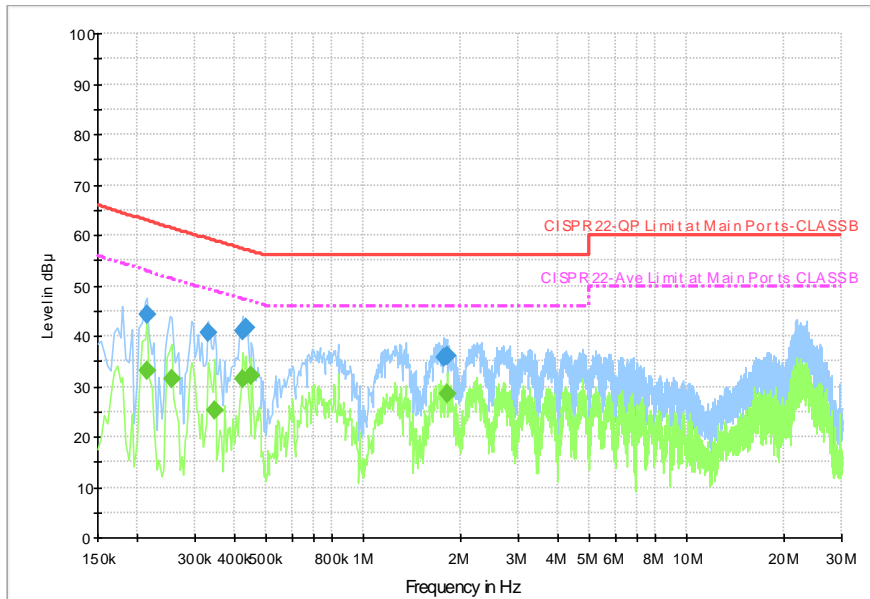


(Plot A1:L Phase)



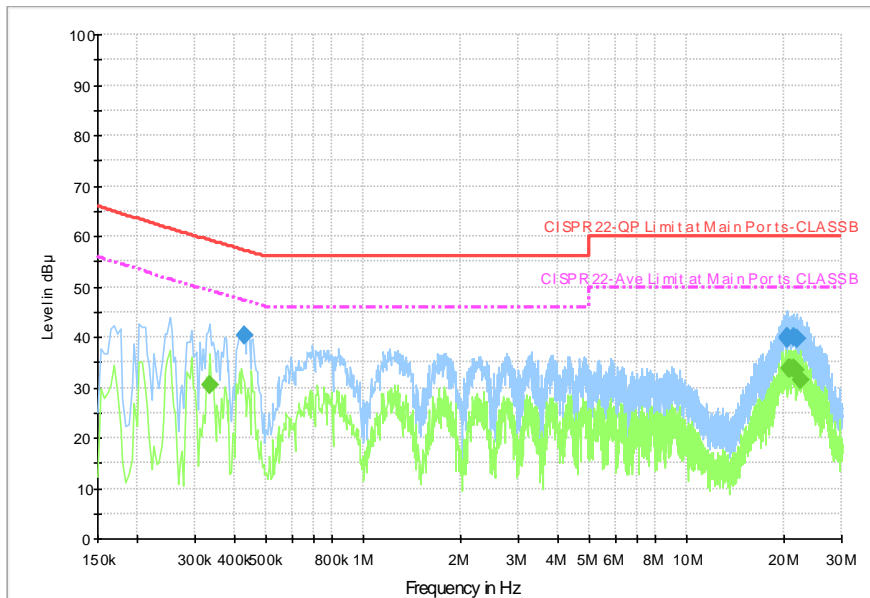
(Plot B1:N Phase)

MORLAB-CE-ENV216 Auto Test-L



(Plot A2:L Phase)

MORLAB-CE-ENV216 Auto Test-N



(Plot B2: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:

- Field Strength ($\text{dB}\mu\text{V/m}$) = $20 \cdot \log[\text{Field Strength } (\mu\text{V/m})]$.
- 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.

CDMA mode

(1) Traffic operating mode

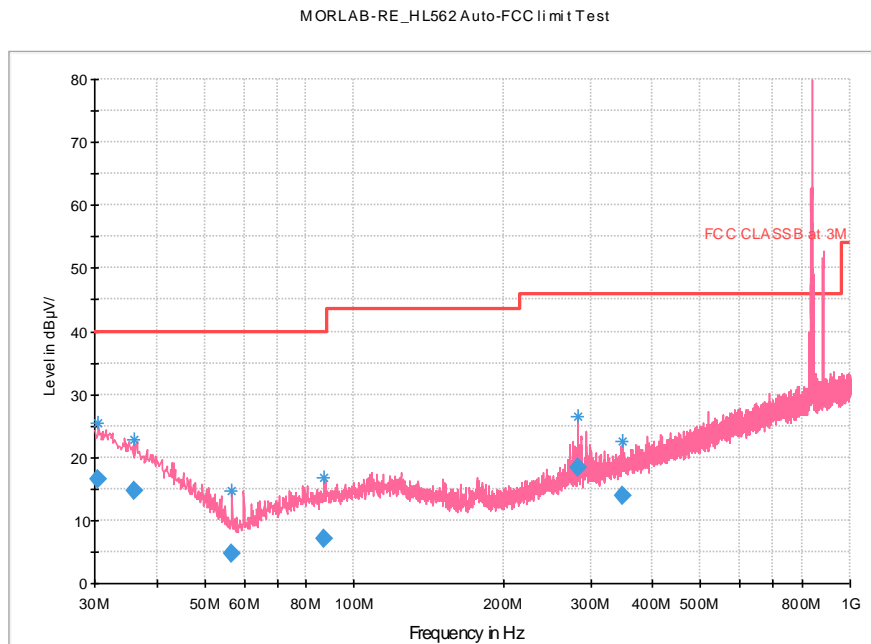
The EUT configuration of the emission tests is EUT + Adapter

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).

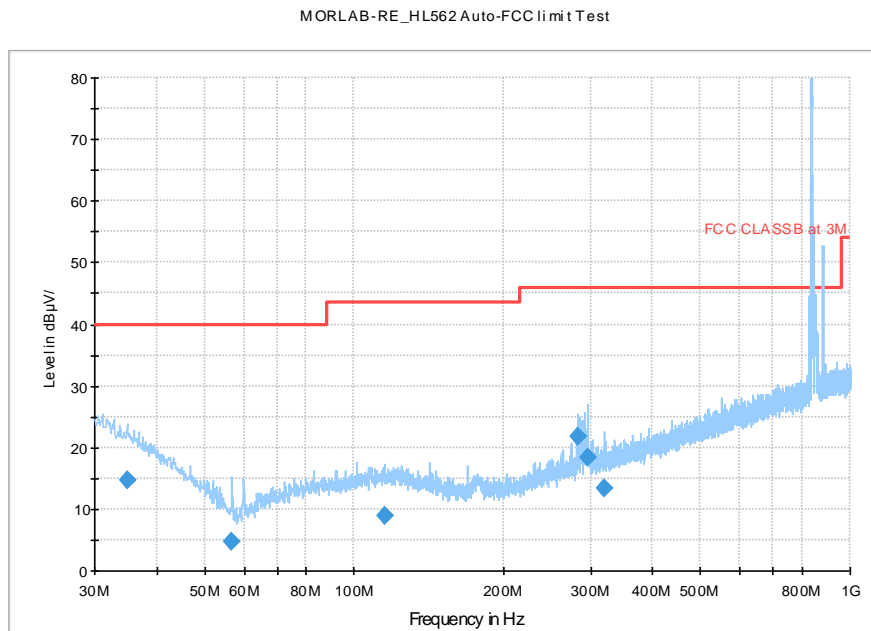
A. Test Verdict Recorded for Suspicious Points:

No.	@Frequency (MHz)	Emission Level (dB μ V/m)		Quasi-Peak Limit (dB μ V/m)	Margin (dB μ V/m)	Result
		QP	Antenna Polarization			
1	30.48500	16.5	V	40.0	23.5	PASS
2	36.06250	14.6	V	40.0	25.4	PASS
3	56.67500	4.7	V	40.0	35.3	PASS
4	87.10875	7.1	V	40.0	32.9	PASS
5	282.44250	18.4	V	46.0	27.6	PASS
6	348.28125	14.0	V	46.0	32.0	PASS
7	34.850000	14.7	H	40.0	25.3	PASS
8	56.675000	4.7	H	40.0	35.3	PASS
9	114.996250	8.9	H	43.5	34.6	PASS
10	281.957500	21.7	H	46.0	24.3	PASS
11	295.901250	18.4	H	46.0	27.6	PASS
12	319.908750	13.5	H	46.0	32.5	PASS

B. Test Plot:



(Plot A: Test Antenna Vertical)



(Plot B: Test Antenna Horizontal)

**** END OF REPORT ****