



47 CFR PART 15 SUBPART B

TEST REPORT

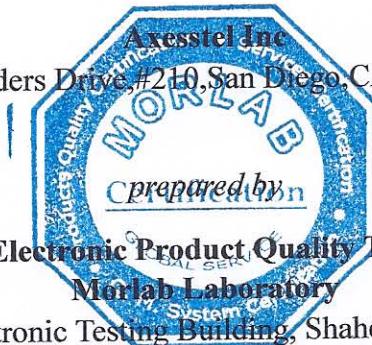
of

Fixed Wireless Phone on CDMA 1900MHz

Model Name: PX330N
Brand Name: Axestel Inc
Report No: SH10060012E08
FCC ID: PH7PX330N

prepared for

6815 Flanders Drive, #210, San Diego, CA92121, USA



Shenzhen Electronic Product Quality Testing Center
Morlab Laboratory

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CTIA Authorized Test Lab
LAB CODE 20081223-00

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TABLE OF CONTENTS

1. TEST CERTIFICATION	3
2. GENERAL INFORMATION	4
2.1 EUT Description	4
2.2 Test Standards and Results	5
2.3 Facilities and Accreditations	6
2.3.1 Facilities	6
2.3.2 Test Environment Conditions.....	6
3. TEST CONDITIONS SETTING	7
3.1 CDMA Test Mode	7
3.2 Test Setup and Equipments List	8
3.2.1 Conducted Emission	8
3.2.2 Radiated Emission.....	9
4. 47 CFR Part 15B Requirements	10
4.1 Conducted Emission	10
4.1.1 Requirement	10
4.1.2 Test Description	10
4.1.3 Test Result.....	10
4.2 Radiated Emission	13
4.2.1 Requirement	13
4.2.2 Test Description	13
4.2.3 Test Result.....	14

1. TEST CERTIFICATION

Equipment under Test: Fixed Wireless Phone on CDMA 1900MHz

Brand Name: Axestel Inc

Model Name: PX330N

FCC ID: PH7PX330N

Applicant: Axestel 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 – July, 29, 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:

2010.8.20

Reviewed by:

Zhang Jun

Dated:

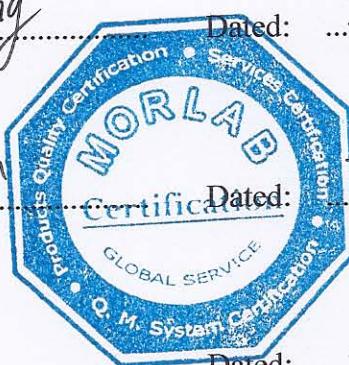
2010.8.20

Approved by:

Wei Bei

Dated:

2010.8.20



2. GENERAL INFORMATION

2.1 EUT Description

EUT Type.....: Fixed Wireless Phone on CDMA 1900MHz
Model Name: PX330N
Serial No.: (n.a., marked #1 by test site)
Hardware Version: P2
Software Version: PX330SE_P2.1C.US_44_6_1T
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
3	ANSI C63.4-2003	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 CDMA 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 1900 mid ARFCN (600) and maximum output power (All up bit).

- (2) Idle operating mode

The EUT configuration of the emission tests is EUT + Adapter

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.

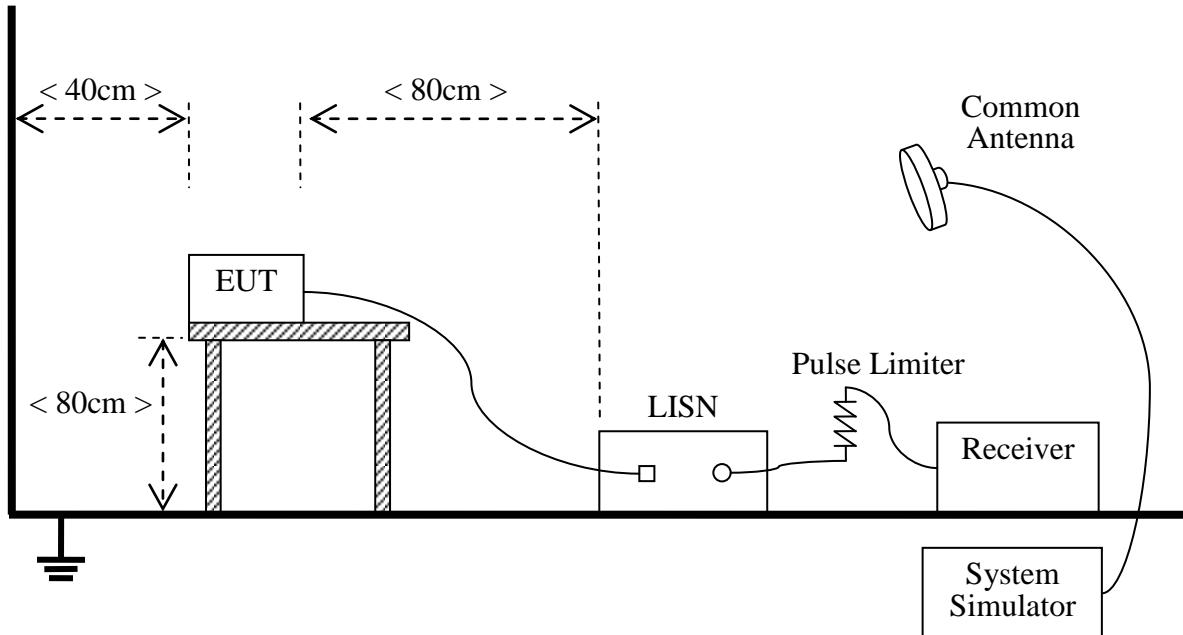
Note: In the Conducted Emission, the worst cases are operated at CDMA 1900

Note: In the Radiated Emission, the worst cases are operated at CDMA 1900

3.2 Test Setup and Equipments List

3.2.1 Conducted Emission

A. Test Setup:



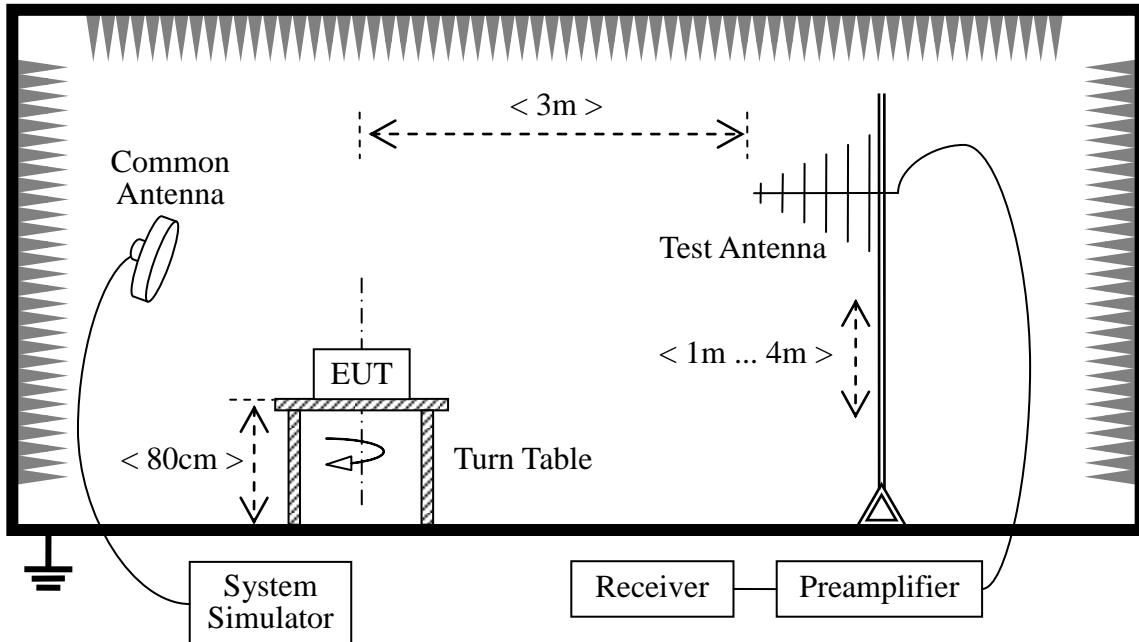
The EUT is placed on a 0.8m high insulating table, which stands on the grounded conducting floor, and keeps 0.4m away from the grounded conducting wall. The EUT is connected to the power mains through a LISN which provides $50\Omega/50\mu\text{H}$ of coupling impedance for the measuring instrument. The 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)	
	Quasi-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.

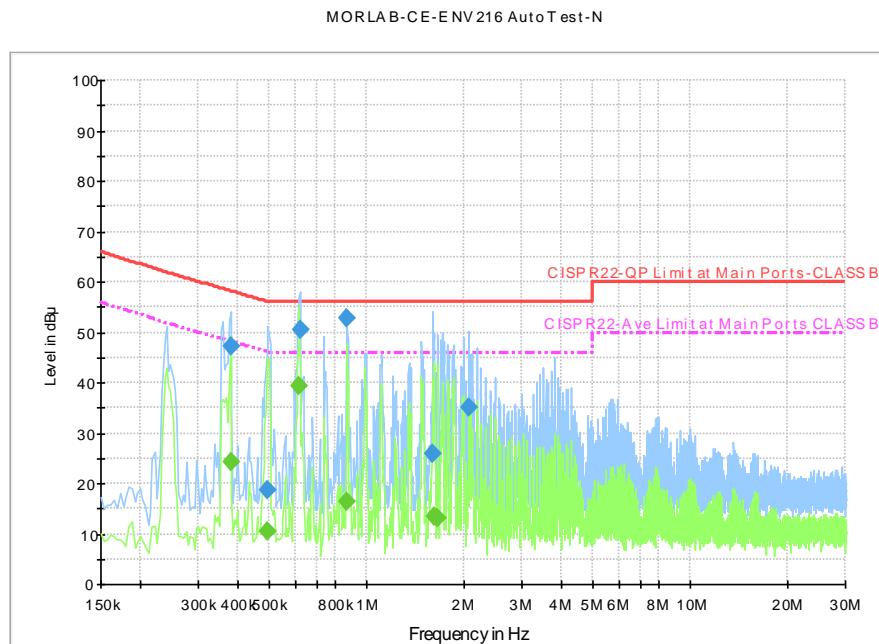
4.1.3 Test Result

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.

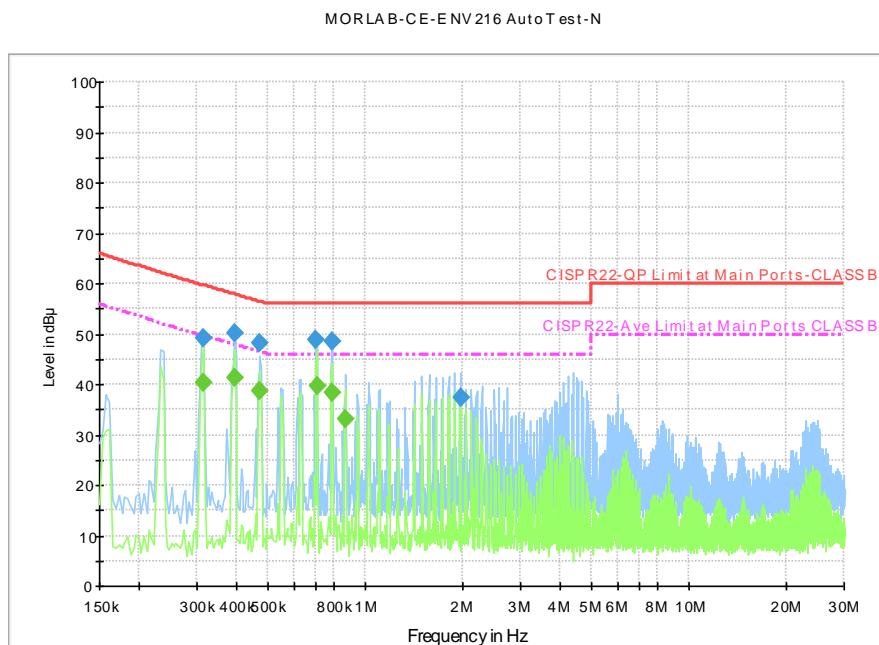
A. Test Verdict Recorded for Suspicious Points:

Frequency (MHz)	QuasiPeak (dB μ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)	Comment
0.314175	49.2	1000.000	9.000	N	9.6	10.5	59.7	PASS
0.392531	50.1	1000.000	9.000	N	9.7	7.8	57.9	PASS
0.470888	48.1	1000.000	9.000	N	9.7	8.4	56.5	PASS
0.702225	48.9	1000.000	9.000	N	9.7	7.1	56.0	PASS
0.784312	48.4	1000.000	9.000	N	9.7	7.6	56.0	PASS
1.959656	37.4	1000.000	9.000	N	9.7	18.6	56.0	PASS
0.377606	47.4	1000.000	9.000	L1	9.7	10.8	58.2	PASS
0.493275	18.6	1000.000	9.000	L1	9.7	37.5	56.1	PASS
0.620138	50.4	1000.000	9.000	L1	9.7	5.6	56.0	PASS
0.866400	52.7	1000.000	9.000	L1	9.7	3.3	56.0	PASS
1.590262	25.7	1000.000	9.000	L1	9.7	30.3	56.0	PASS
2.067862	35.0	1000.000	9.000	L1	9.7	21.0	56.0	PASS

Frequency (MHz)	Average (dB μ V)	Meas. Time (ms)	Band width (kHz)	Line	Corr. (dB)	Margin (dB)	Limit (dB μ V)	Comment
0.314175	40.2	1000.000	9.000	N	9.6	9.4	49.6	PASS
0.392531	41.3	1000.000	9.000	N	9.7	6.6	47.9	PASS
0.470888	38.8	1000.000	9.000	N	9.7	7.7	46.5	PASS
0.705956	39.8	1000.000	9.000	N	9.7	6.2	46.0	PASS
0.784312	38.4	1000.000	9.000	N	9.7	7.6	46.0	PASS
0.862669	33.0	1000.000	9.000	N	9.7	13.0	46.0	PASS
0.377606	24.4	1000.000	9.000	L1	9.7	23.8	48.2	PASS
0.489544	10.6	1000.000	9.000	L1	9.7	35.6	46.2	PASS
0.616406	39.4	1000.000	9.000	L1	9.7	6.6	46.0	PASS
0.862669	16.4	1000.000	9.000	L1	9.7	29.6	46.0	PASS
1.601456	13.4	1000.000	9.000	L1	9.7	32.6	46.0	PASS
1.646231	13.1	1000.000	9.000	L1	9.7	32.9	46.0	PASS

B. 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	dB µV/m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

NOTE:

- Field Strength (dB µV/m) = $20 \log_{10} [\text{Field Strength} (\mu\text{V/m})]$.
- 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

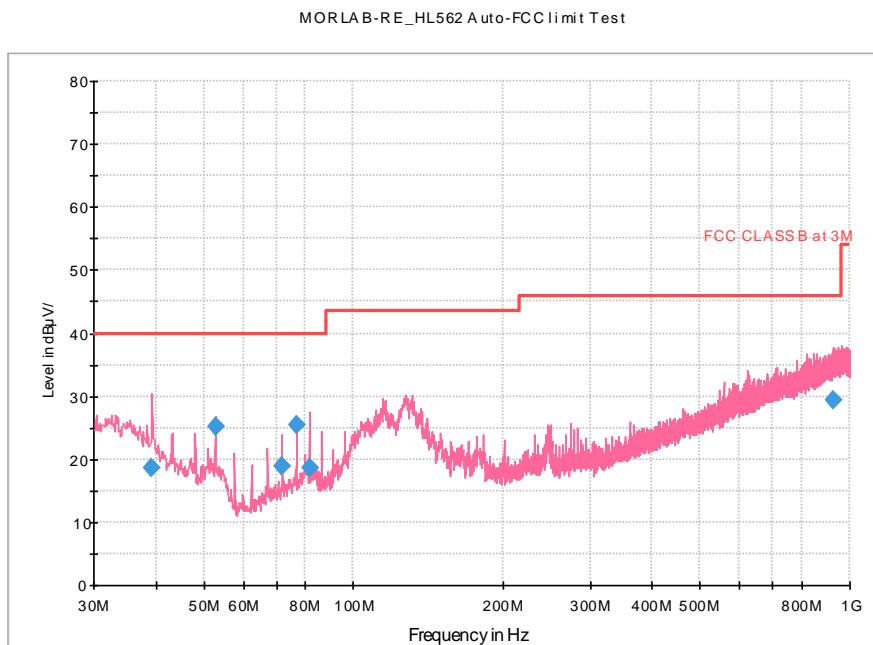
A communication link was established between the EUT and a System Simulator (SS). The EUT operated at CDMA 1900 mid ARFCN (600) and maximum output power (All up bit).

A. Test Verdict Recorded for Suspicious Points:

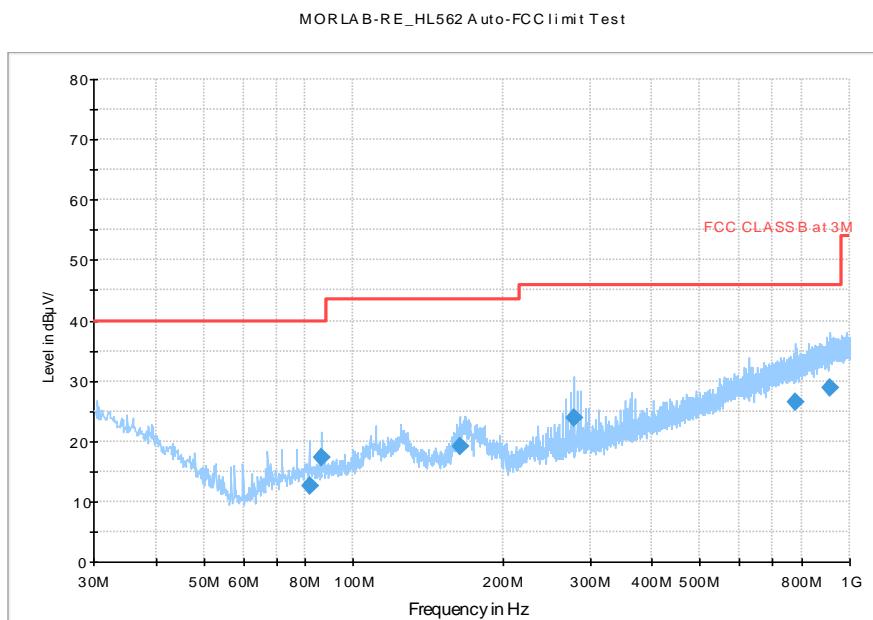
No.	@Frequency (MHz)	Emission Level (dB μ V/m)		Quasi-Peak Limit (dB μ V/m)	Margin (dB μ V/m)	Result
		QP	Antenna Polarization			
1	39.215000	18.6	V	40.0	21.4	PASS
2	52.795000	25.1	V	40.0	14.9	PASS
3	71.952500	18.9	V	40.0	21.1	PASS
4	76.802500	25.4	V	40.0	14.6	PASS
5	81.531250	18.7	V	40.0	21.3	PASS
6	927.007500	29.4	V	46.0	16.6	PASS
7	81.531250	12.5	H	40.0	27.5	PASS
8	86.381250	17.2	H	40.0	22.8	PASS
9	163.617500	19.1	H	43.5	24.4	PASS
10	278.320000	24.0	H	46.0	22.0	PASS
11	779.325000	26.4	H	46.0	19.6	PASS
12	912.336250	28.8	H	46.0	17.2	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.



(Plot A: Test Antenna Vertical)



(Plot B: Test Antenna Horizontal)

** END OF REPORT **