

47 CFR PART 15B

TEST REPORT

Of

EVDO Rev.A Data card

Trade Name: Haier
Brand Name: Haier
Model Name: HC-CE300
Report No.: SZ10010041E01
FCC ID.: SG71001HC-CE300

prepared for

Qingdao Haier Telecom Co.Ltd.

No.1, HaierRoad, Hi-tech Zone, Qingdao, 266101, P.R.China

prepared by

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Bluetooth®

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
2.3.3	Measurement Uncertainty	6
3.	TEST CONDITIONS SETTING.....	7
3.1	Test Mode	7
3.2	Test Setup and Equipments List	8
3.2.1	Radiated Emission	8
4.	47 CFR PART 15B REQUIREMENTS	9
4.1	Radiated Emission.....	9
4.1.1	Requirement	9
4.1.2	Test Description.....	9
4.1.3	Test Result	9

Change History		
Issue	Date	Reason for change
1.0	February 04, 2010	First edition

1. TEST CERTIFICATION

Equipment under Test: EVDO Rev.A Data card

Trade Name: Haier

Brand Name: Haier

Model Name: HC-CE300

FCC ID: SG71001HC-CE300

Applicant: Qingdao Haier Telecom Co.Ltd.

No.1, HaierRoad, Hi-tech Zone, Qingdao, 266101, P.R.China

Manufacturer: Haier

No.1, HaierRoad, Hi-tech Zone, Qingdao, 266101, P.R.China

Emission Designator 300KGXW

Test Standards: 47 CFR Part 15 Subpart B

Test Date(s): January 21, 2010 - February 03, 2010

Test Result: PASS

* We Hereby Certify That:

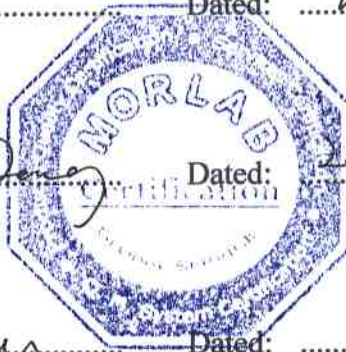
The equipment under test was tested by Shenzhen Electronic Product Quality Testing Center Morlab Laboratory. The test data, data evaluation, test procedures and equipment configurations shown in this report were made in accordance with the requirement of related FCC rules.

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: Mo Huina Dated: 2010.2.4
Mo Huina

Reviewed by: Deng Jiankun Dated: 2010.2.4
Deng Jiankun

Approved by: Shu Luan Dated: 2010.2.4
Shu Luan



2. GENERAL INFORMATION

2.1 EUT Description

EUT Type EVDO Rev.A Data card
Model Name..... HC-CE300
Serial No. (n.a, marked #1 by test site)
Hardware Version..... SP
Software Version VME110UM01
Power Supply USB-Power

Note 1: The EUT is a EVDO Rev.A Data card; it supports EVDO 800/1900. EVDO 800/1900 is tested in this report.

Note 2: The EUT is equipped with a T-Flash card slot, and can be used as a mass storage.

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
1	15.107	Conducted Emission	PASS
2	15.109	Radiated Emission	PASS

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

2.3.3 Measurement Uncertainty

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

Uncertainty of Conducted Emission:	$\pm 1.8\text{dB}$
Uncertainty of Radiated Emission:	$\pm 3.1\text{dB}$

3. TEST CONDITIONS SETTING

3.1 Test Mode

1. CDMA Test Mode

- (1) The first test mode (CDMA800)

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

During the measurement of Traffic operating mode, a communication link was established between the EUT and a System Simulator (SS). The EUT operated at CDMA800MHz mid channel 384 and power control set at [All Up Bit].

- (2) The second test mode (CDMA1900)

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

During the measurement of Traffic operating mode, a communication link was established between the EUT and a System Simulator (SS). The EUT operated at CDMA1900MHz mid channel 600 and power control set at [All Up Bit].

- (3) The third test mode (CDMA800-EVDO)

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

During the measurement of Traffic operating mode, a communication link was established between the EUT and a System Simulator (SS). The EUT operated at CDMA800MHz mid channel 384 and power control set at [All Up Bit].

- (4) The fourth test mode (CDMA1900-EVDO)

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

During the measurement of Traffic operating mode, a communication link was established between the EUT and a System Simulator (SS). The EUT operated at CDMA1900MHz mid channel 600 and power control set at [All Up Bit].

- (5) The fifth test mode (idle)

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

During the test, The EUT was synchronized with SS, but no communication was established.

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)

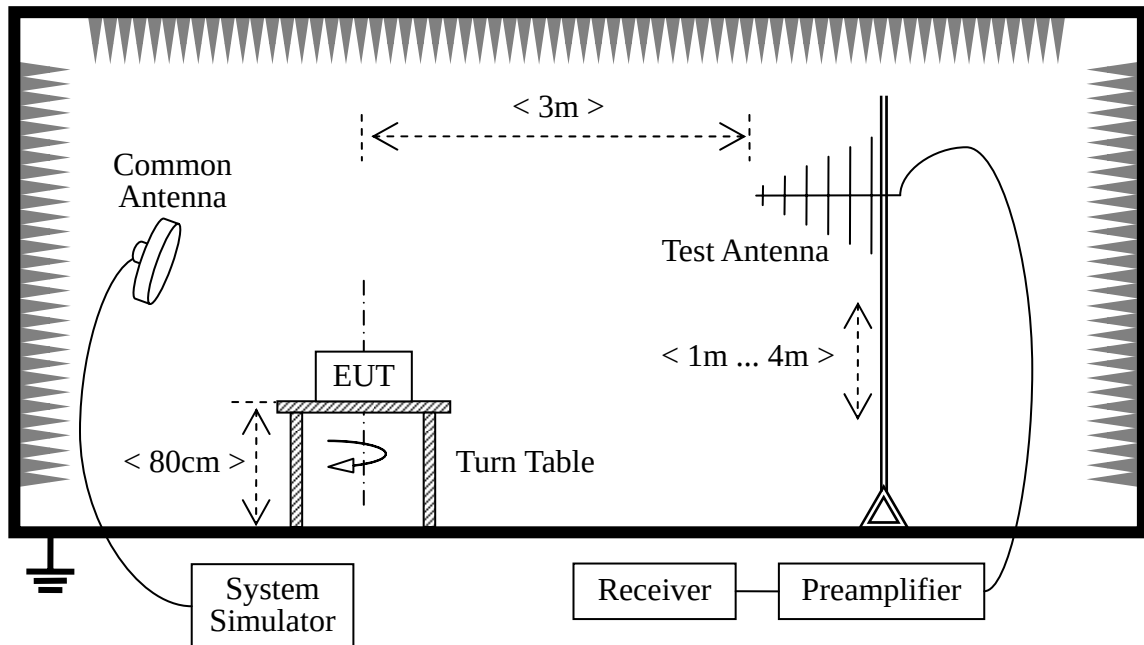
The EUT configuration of the emission tests is TransFlash Card + EUT + PC.

In this test mode, the EUT with a TransFlash Card embedded is connected with a PC. During the measurement, the data is transmitting between the PC and the TransFlash Card of the EUT.

3.2 Test Setup and Equipments List

3.2.1 Radiated Emission

A. 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).

B. Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Receiver	Agilent	E7405A	US44210471	2009.09	1year
Semi-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2009.09	2year
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2009.09	1year
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2009.09	1year
System Simulator	Agilent	E5515C	GB43130131	2009.09	1year
Personal Computer	IBM	IBM_T20	(n.a.)	(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 Radiated Emission

4.1.1 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.

4.1.2 Test Description

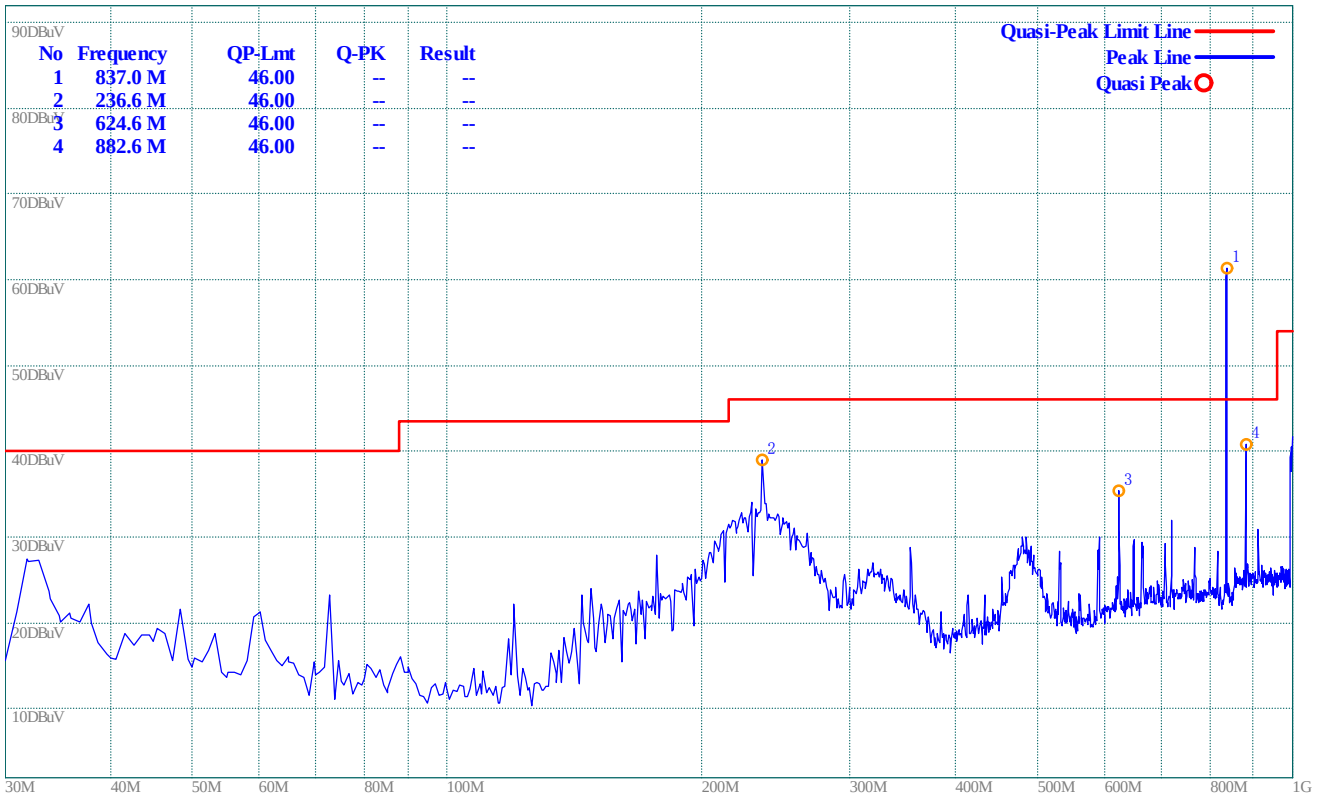
See section 3.2.1 of this report.

4.1.3 Test Result

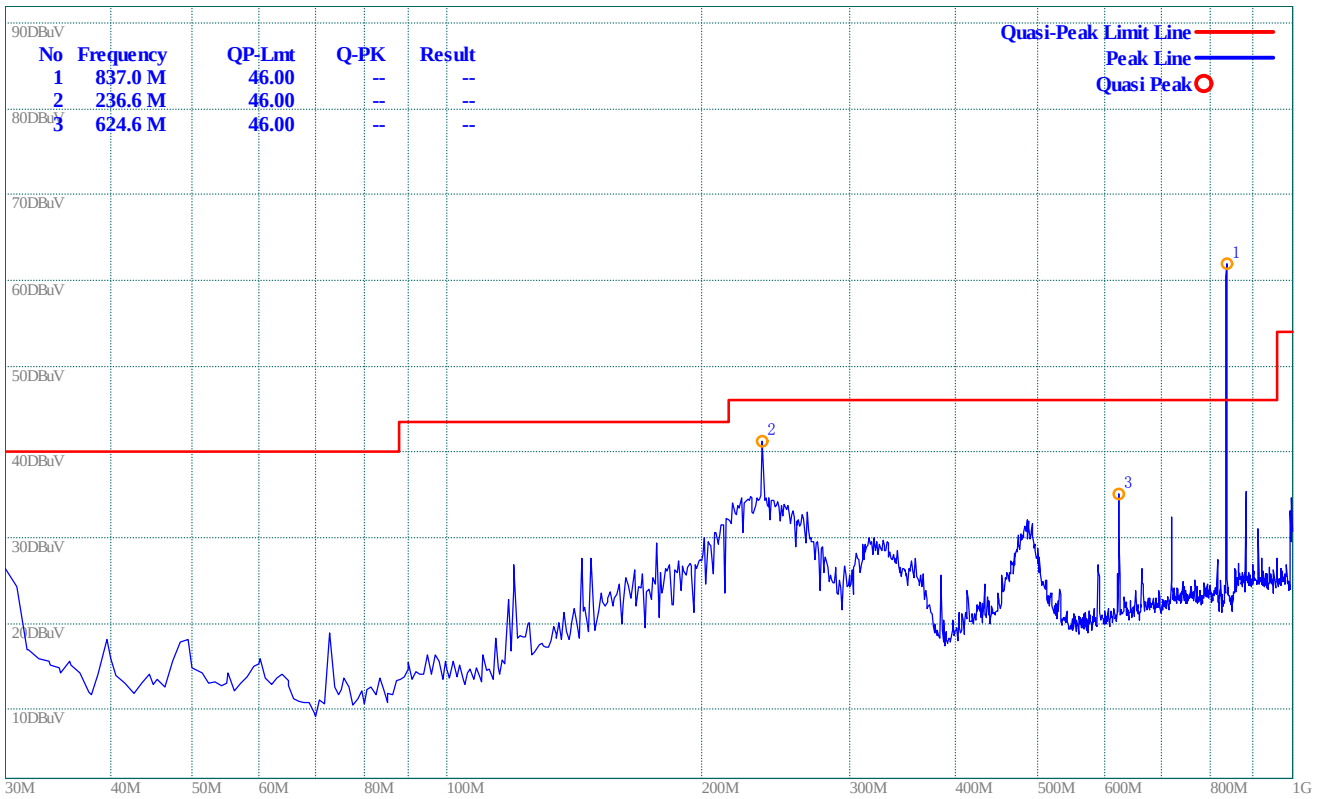
The maximum radiated emission is searched using PK, QP and AV detectors; the emission levels more than the limits, and that have narrow margins from the limits will be re-measured with AV and QP detectors. Both the vertical and the horizontal polarizations of the Test Antenna are considered to perform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

4.1.3.1 CDMA Test Mode

A. Test Plots And Suspicious Points:



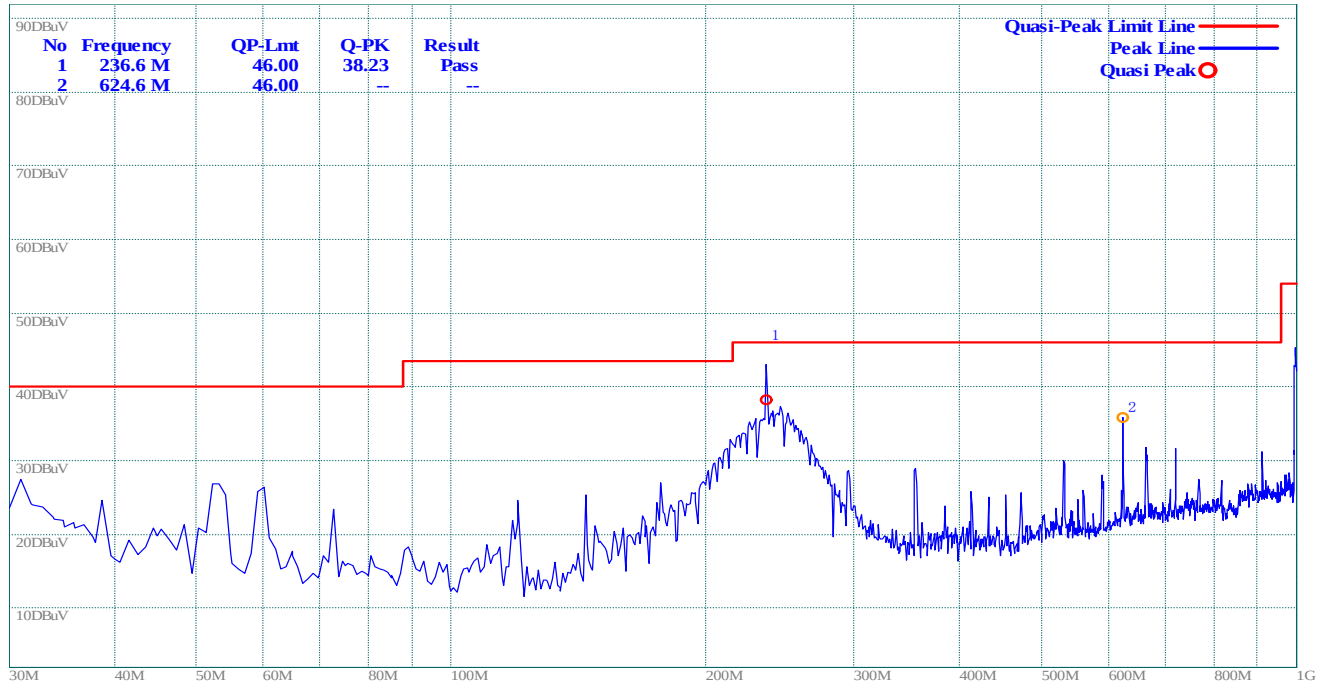
(Plot A: Test Antenna Vertical)



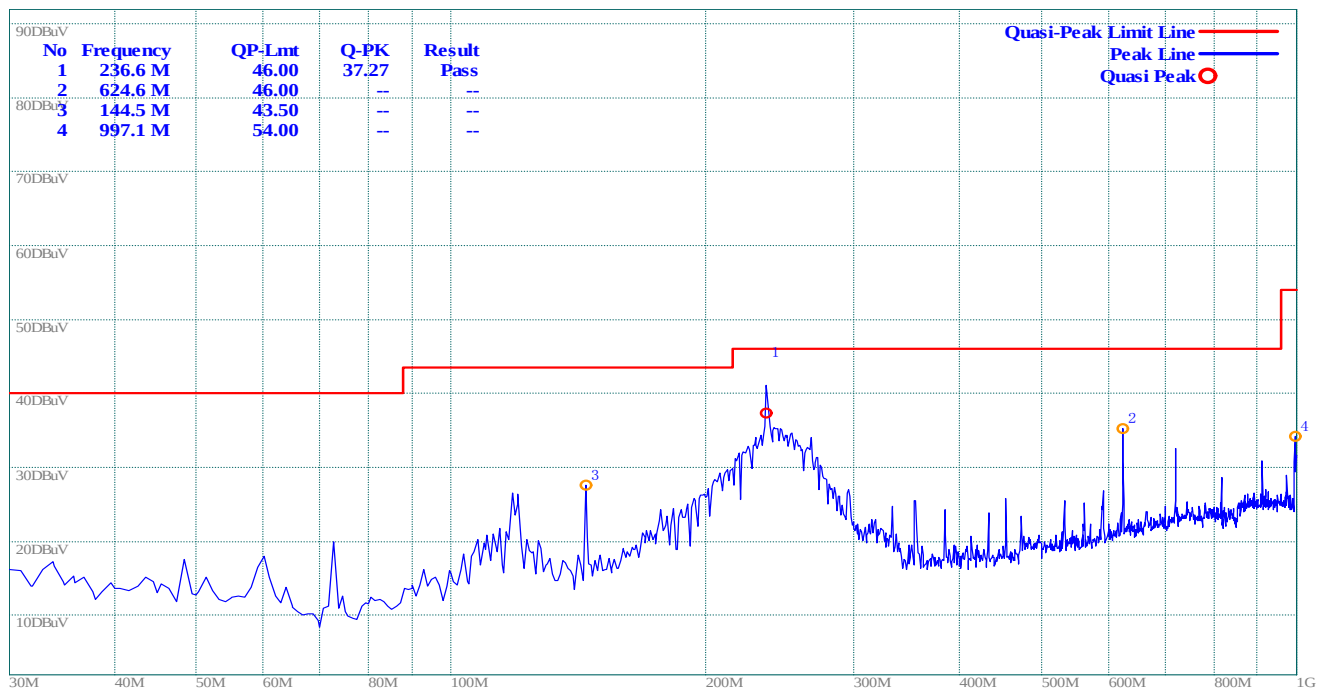
(Plot B: Test Antenna Horizontal)

4.1.3.2 USB Test Mode

A. Test Plots And Suspicious Points:



(Plot A: Test Antenna Vertical)



(Plot B: Test Antenna Horizontal)

**** END OF REPORT ****