

# Shanghai Feixun Communication Co., Ltd.

## Wireless router

Main Model: FIR302E

Serial Model: N/A

July 14, 2014

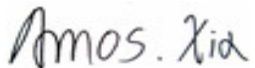
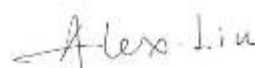

Report No.: 14050049-FCC-H1

(This report supersedes NONE)



Modifications made to the product : None

This Test Report is Issued Under the Authority of:

		
Amos Xia Compliance Engineer	Alex Liu Technical Manager	

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Test result presented in this test report is applicable to the representative sample only.

RF Exposure Evaluation Report

To: FCC 2.1091: 2013

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## Laboratory Introduction

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### Accreditations for Conformity Assessment

Country/Region	Scope
USA	EMC , RF/Wireless , Telecom
Canada	EMC, RF/Wireless , Telecom
Taiwan	EMC, RF, Telecom , Safety
Hong Kong	RF/Wireless ,Telecom
Australia	EMC, RF, Telecom , Safety
Korea	EMI, EMS, RF , Telecom, Safety
Japan	EMI, RF/Wireless, Telecom
Singapore	EMC , RF , Telecom
Europe	EMC, RF, Telecom , Safety

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# 1. EXECUTIVE SUMMARY & EUT INFORMATION

The purpose of this test programme was to demonstrate compliance of the Shanghai Feixun Communication Co., Ltd., Wireless router and model: FIR302E against the current Stipulated Standards. The Wireless router has demonstrated compliance with the FCC 2.1091: 2013.

**EUT Information**

<b>EUT Description</b>	Wireless router
<b>Main Model</b>	FIR302E
<b>Serial Model</b>	N/A
<b>Antenna Gain</b>	WIFI Antenna 1: 5 dBi(Transmitter) WIFI Antenna 2: 5 dBi(Transmitter)
<b>Input Power</b>	Adapter 1: Model: RD1200500-C55-8MG Input: AC 100-240V 250mA Output: DC 12V 0.5A Adapter 2: Model: PSAA06A-120 Input: AC 100-240V 0.2A Output: DC 12V 500mA
<b>Maximum Conducted Peak Power to Antenna</b>	Please refer to Report 14050026-FCC-R1
<b>Classification Per Stipulated Test Standard</b>	FCC 2.1091: 2013

Revision Number	Model	Report Number	Description of Revision	Date of Revision
0	FIR302B	14050026-FCC-H1	Original Report	June 16, 2014
1	FIR302E	14050049-FCC-H1	Amended Report	July 14, 2014

Note: This is the amended report application (14050049-FCC-H1) of the device, the original submission (14050026-FCC-H1) was granted on June 16, 2014. The difference between the original device and the current one was as following the detail information:

**The difference of these two models is different Appearance Size and Antenna Color.**

## 2. TECHNICAL DETAILS

<b>Purpose</b>	<b>Compliance testing of Wireless router with stipulated standard</b>
<b>Applicant / Client</b>	<b>Shanghai Feixun Communication Co., Ltd. No.3666,Sixian Rd.,Songjiang District,Shanghai,P.R.China</b>
<b>Manufacturer</b>	<b>Shanghai Feixun Communication Co., Ltd. No.3666,Sixian Rd.,Songjiang District,Shanghai,P.R.China</b>
<b>Laboratory performing the tests</b>	<b>SIEMIC (Nanjing-China) Laboratories NO.2-1,Longcang Dadao, Yuhua Economic Development Zone, Nanjing, China Tel: +86(25)86730128/86730129 Fax: +86(25)86730127 Email: China@siemic.com.cn</b>
<b>Test report reference number</b>	<b>14050049-FCC-H1</b>
<b>Date EUT received</b>	<b>July 04, 2014</b>
<b>Standard applied</b>	<b>FCC 2.1091: 2013</b>
<b>Dates of test</b>	<b>July 09, 2014</b>
<b>No of Units</b>	<b>#1</b>
<b>Equipment Category</b>	<b>Spread Spectrum System/Device</b>
<b>Trade Name</b>	<b>PHICOMM</b>
<b>RF Operating Frequency (ies)</b>	<b>WIFI: 802.11b/g/n(20M): 2412-2462 MHz 802.11n(40M): 2422-2452 MHz</b>
<b>Number of Channels</b>	<b>802.11b/g /n(20M): 11CH 802.11n(40M): 7CH</b>
<b>Modulation</b>	<b>WIFI: 802.11b/g/n: CCK/OFDM</b>
<b>Port</b>	<b>Power Port, LAN*4 Port, WAN Port</b>
<b>FCC ID</b>	<b>YJYFIR300</b>

## 3. MAXIMUM PERMISSIBLE EXPOSURE (MPE)

### FCC §2.1091 - MAXIMUM PERMISSIBLE EXPOSURE (MPE)

#### Applicable Standard

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission’s guidelines.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

\* = Plane-wave equivalent power density

Test Data

Predication of MPE limit at a given distance

$$S = \frac{PG}{4\pi R^2}$$

Where: S = power density (in appropriate units, e.g. mW/cm<sup>2</sup>)

P = power input to the antenna (in appropriate units, e.g., mW).

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain.

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

Note:

Please refer to the following tables and plots.

Antenna Gain 1=5 dbi

Antenna Gain 2=5 dbi

Array Gain=8 dbi =10\*log((10<sup>5/10</sup>)+(10<sup>5/10</sup>))

**Note: base on different type antenna and their gain, the bellow result is the worst case.**

**Result: Please refer to Report 14050026-FCC-H1.**

(Shanghai Feixun Communication CO.,Ltd.)

To SIEMIC Inc  
775 Montague Expressway Milpitas, CA 95035

## Statement

We, Shanghai Feixun Communication Co., Ltd. apply a class II permissive change certification for the below models.

Product Name: Wireless router

Model number: FIR302E

FCC ID: YJYFIR300

We hereby state that these models are identical in interior structure, electrical circuits and PCB layout; Only the appearance size and Antenna Color is different.

Your assistance on this matter is highly appreciated.

Sincerely,  
Name: Emmy. Xiong  
Title: Certification Engineer  
Signature:

