

Shanghai Feixun Communication Co., Ltd.

Wireless router

Main Model: FIR302E

Serial Model: N/A

July 14, 2014

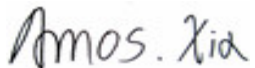
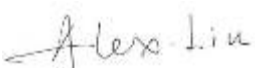
Report No.: 14050049-FCC-H1

(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	

This test report may be reproduced in full only.
Test result presented in this test report is applicable to the representative sample only.

RF Exposure Evaluation Report

To: FCC 2.1091: 2013

SIEMIC, INC.
Accessing global markets



Laboratory Introduction

SIEMIC, headquartered in the heart of Silicon Valley, with superior facilities in US and Asia, is one of the leading independent testing and certification facilities providing customers with one-stop shop services for Compliance Testing and Global Certifications.



In addition to [testing](#) and [certification](#), SIEMIC provides initial design reviews and [compliance management](#) through out a project. Our extensive experience with [China](#), [Asia Pacific](#), [North America](#), [European](#), and [international](#) compliance requirements, assures the fastest, most cost effective way to attain regulatory compliance for the [global markets](#).

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

This page has been left blank intentionally.

CONTENTS

1. EXECUTIVE SUMMARY & EUT INFORMATION.....5

2. TECHNICAL DETAILS6

3. MAXIMUM PERMISSIBLE EXPOSURE (MPE)7

FCC §2.1091 - MAXIMUM PERMISSIBLE EXPOSURE (MPE).....7

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

EUT Description	Wireless router
Main Model	FIR302E
Serial Model	N/A
Antenna Gain	WIFI Antenna 1: 5 dBi(Transmitter) WIFI Antenna 2: 5 dBi(Transmitter)
Input Power	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
Maximum Conducted Peak Power to Antenna	Please refer to Report 14050026-FCC-R1
Classification Per Stipulated Test Standard	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

Purpose	Compliance testing of Wireless router with stipulated standard
Applicant / Client	Shanghai Feixun Communication Co., Ltd. No.3666,Sixian Rd.,Songjiang District,Shanghai,P.R.China
Manufacturer	Shanghai Feixun Communication Co., Ltd. No.3666,Sixian Rd.,Songjiang District,Shanghai,P.R.China
Laboratory performing the tests	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
Test report reference number	14050049-FCC-H1
Date EUT received	July 04, 2014
Standard applied	FCC 2.1091: 2013
Dates of test	July 09, 2014
No of Units	#1
Equipment Category	Spread Spectrum System/Device
Trade Name	PHICOMM
RF Operating Frequency (ies)	WIFI: 802.11b/g/n(20M): 2412-2462 MHz 802.11n(40M): 2422-2452 MHz
Number of Channels	802.11b/g /n(20M): 11CH 802.11n(40M): 7CH
Modulation	WIFI: 802.11b/g/n: CCK/OFDM
Port	Power Port, LAN*4 Port, WAN Port
FCC ID	YJYFIR300

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 ²)	Averaging Time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	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/cm²)

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 = $10 \cdot \log((10^{(5/10)} + (10^{(5/10)})))$

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:

