

EN 62311:2008
ASSESSMENT REPORT

For

High-Flying Electronics Technology Co., Ltd.

Room 1002, Building 1, No.3000, Longdong Avenue, Pudong New Area, Shanghai, China

Tested Model: HF2211

Report Type: Original Report	Product Type: WIFI Serial Device Server
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Report Date: <u>2017-07-17</u>	
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GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Applicant	High-Flying Electronics Technology Co., Ltd.
Tested Model	HF2211
Product Type	WIFI Serial Device Server
Dimension	95 mm(L) × 65 mm(W) × 25 mm(H)
Power Supply	DC 5-36V

**All measurement and test data in this report was gathered from production sample serial number: 20170630003.
(Assigned by the BACL. The EUT supplied by the applicant was received on 2017-06-30)*

Objective

This report is prepared on behalf of High-Flying Electronics Technology Co., Ltd. in accordance with EN 62311:2008, Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz–300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current.

The objective is to determine the compliance of EUT with EN 62311:2008.

Related Submittal(s)/Grant(s)

No related submittal(s).

Test Methodology

All measurements contained in this report were conducted with EN 62311:2008.

Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road, Kunshan, Jiangsu province, China.

Test site at Bay Area Compliance Laboratories Corp. (Kunshan) has been fully described in reports submitted to the Federal Communication Commission (FCC). The details of these reports have been found to be in compliance with the requirements of Section 2.948 of the FCC Rules on November 06, 2014. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2009.

The Federal Communications Commission has the reports on file and is listed under FCC Registration No.: 815570. The test site has been approved by the FCC for public use and is listed in the FCC Public Access Link (PAL) database.

FINAL

Technical Requirements Specification in EN 62311

General Description of Applied Standards

EN 62311 Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz–300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current.

RF Exposure Evaluation

Limit:

According to EN 62311, the criteria listed in the below table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified table 2 of Council Recommendation 1999/519/EC.

Reference levels for electric, magnetic and electromagnetic fields
(0 Hz to 300 GHz, unperturbed rms values)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μ T)	Equivalent plane wave power density S_{eq} (W/m ²)
0-1 Hz	—	$3,2 \times 10^4$	4×10^4	—
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	—
8-25 Hz	10 000	$4\,000/f$	$5\,000/f$	—
0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	—
0,8-3 kHz	$250/f$	5	6,25	—
3-150 kHz	87	5	6,25	—
0,15-1 MHz	87	$0,73/f$	$0,92/f$	—
1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	—
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{1/2}$	$0,0037 f^{1/2}$	$0,0046 f^{1/2}$	$f/200$
2-300 GHz	61	0,16	0,20	10

Notes:

1. f as indicated in the frequency range column.

Test method

The antenna of the product, under normal use condition is at least 20cm away from the body of the user. Warning statement of the user for keeping 20cm separation distance and the prohibition of operating to a person has been printed on the user manual. So, this product under normal use is located on electromagnetic far field between the human body.

Far Field Calculation Formula

$$E = \frac{\sqrt{30PG(\theta, \phi)}}{r}$$

G = antenna gain relative to an isotropic antenna
 θ, ϕ = elevation and azimuth angles to point of investigation
 r = distance from observation point to the antenna

Test Data

Environmental Conditions

Temperature:	24.1 °C
Relative Humidity:	50 %
ATM Pressure:	101.0 kPa

The testing was performed by Ada Yu on 2017-07-06.

Function	Frequency Range (MHz)	Maximum Output Power (dBm)	Maximum Output Power (W)	E-Field Strength (V/m)	E-Field Limit (V/m)	Result
Wi-Fi	2412-2472	17.61	57.68	9.30	61	Pass

Note: Antenna Gain (numeric): 3.0dBi (2.0) for Wi-Fi.

The distance from observation point to the antenna is 20cm.

EXHIBIT B - EUT PHOTOGRAPHS

EUT – Front View



EUT – Rear View



EUT – Top View



EUT – Bottom View



EUT – Left View



EUT – Right View



EUT – Cover off View-1



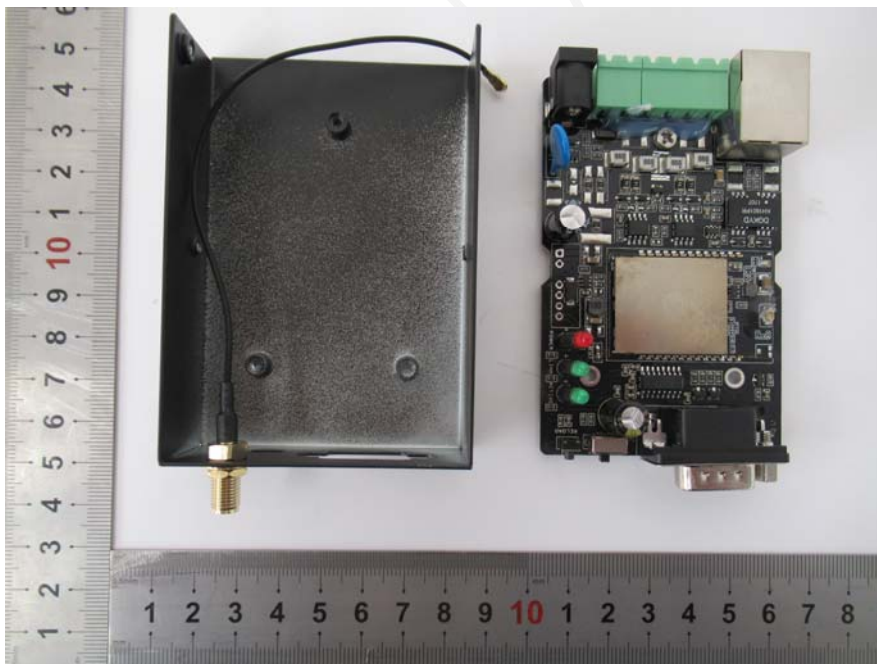
EUT – Cover off View-2



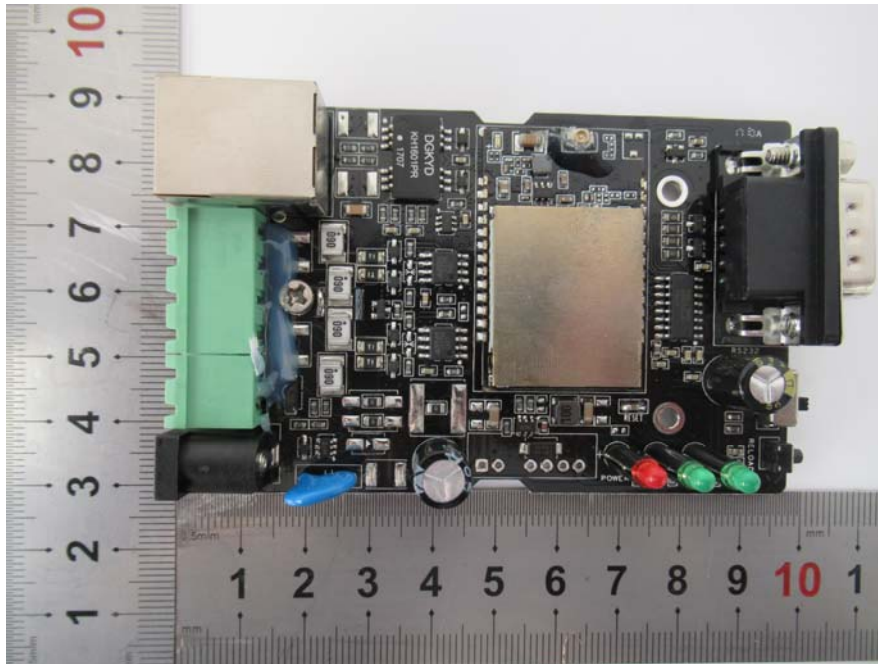
EUT – Cover off View-3



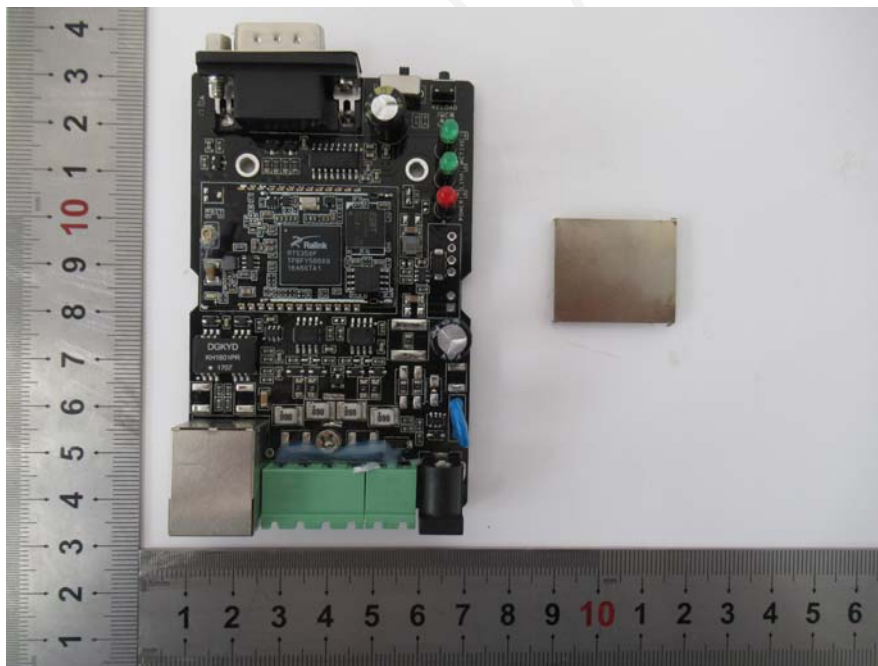
EUT – Cover off View-4



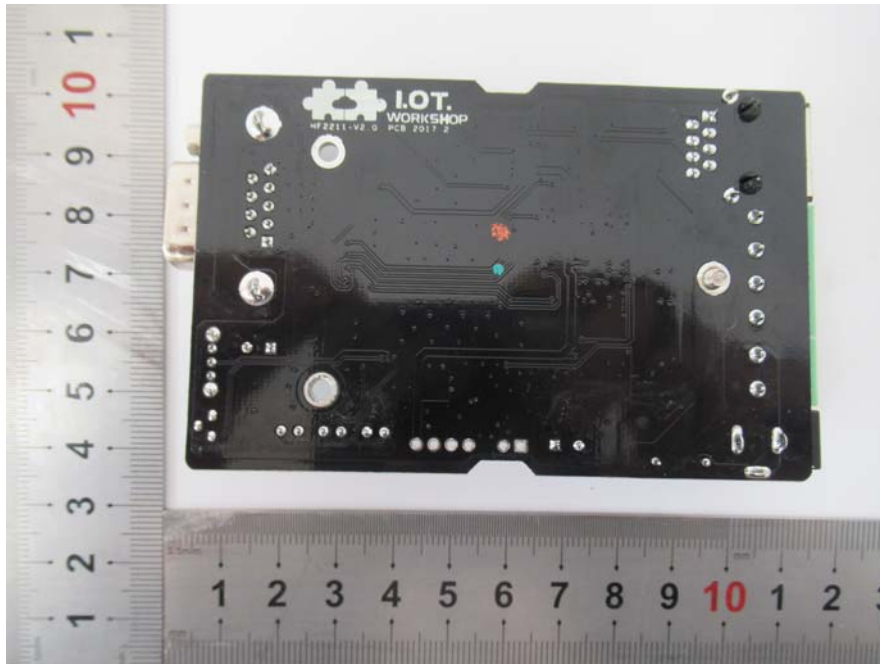
EUT – PCB Top View



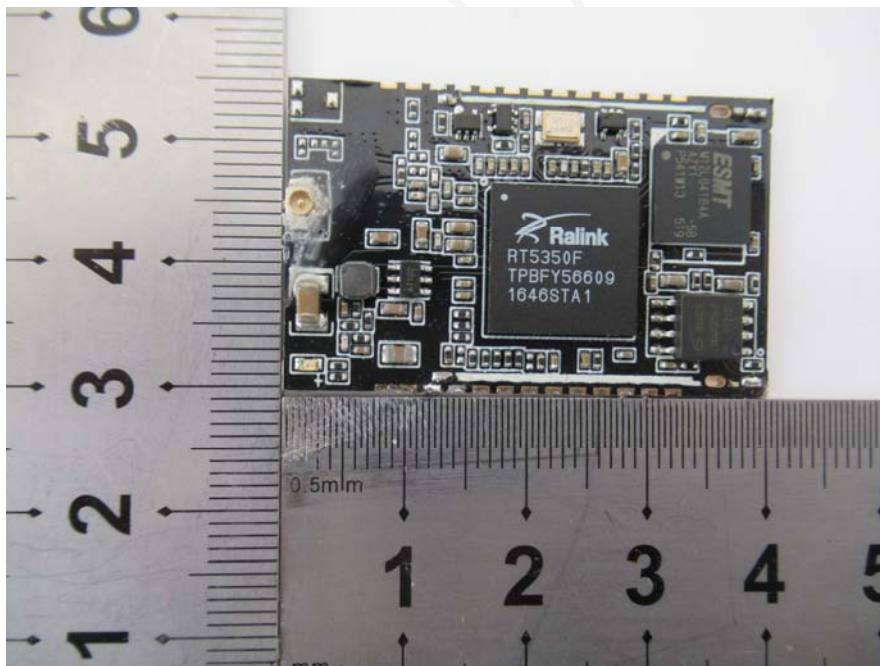
EUT – PCB Top Shielding off View



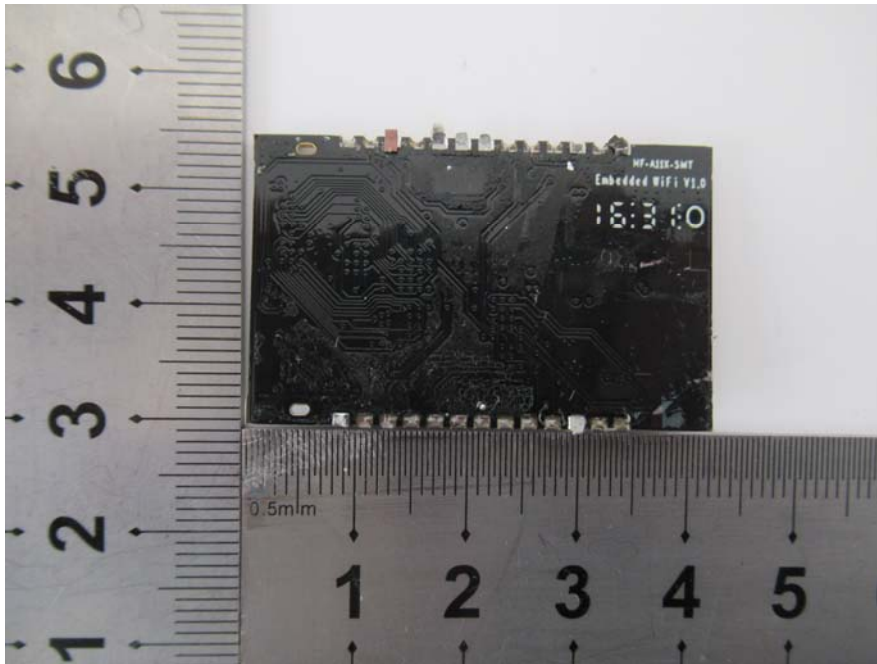
EUT – PCB Bottom View



EUT – Wi-Fi Module Top View



EUT – Wi-Fi Module Bottom View



****** END OF REPORT ******