

**IEEE C95.1  
KDB 447498 D03  
47 C.F.R. Part 1, Subpart I, Section 1.1310  
47 C.F.R. Part 2, Subpart J, Section 2.1091**

## **RF EXPOSURE REPORT**

**For**

**Furbo**

**Model: furbo1**

**Trade Name: Furbo**

*Issued to*

**Tomofun Co., Ltd.  
4F., No.495, Guangfu S. Rd., Xinyi Dist., Taipei City 11074, Taiwan (R.O.C.)**

*Issued by*

**Compliance Certification Services Inc.  
No.11, Wugong 6th Rd., Wugu Dist.,  
New Taipei City 24891, Taiwan. (R.O.C.)  
<http://www.ccsrf.com>  
[service@ccsrf.com](mailto:service@ccsrf.com)  
Issued Date: January 04, 2016**



---

### Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	2015/1/4	Initial Issue	ALL	Kelly Cheng

**TABLE OF CONTENTS**

1. TEST RESULT CERTIFICATION ..... 4

2. LIMIT ..... 5

3. EUT SPECIFICATION ..... 5

4. TEST RESULTS ..... 6

5. MAXIMUM PERMISSIBLE EXPOSURE ..... 7

# 1. TEST RESULT CERTIFICATION

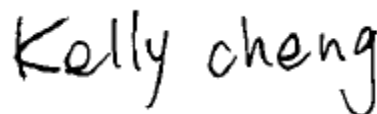
**We hereby certify that:**

The above equipment was tested by Compliance Certification Services Inc. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.10: 2013 and the energy emitted by the sample EUT tested as described in this report is in compliance with the requirements of FCC Rules Part 15.207, 15.209, 15.247.

The test results of this report relate only to the tested sample EUT identified in this report.

APPLICABLE STANDARDS	
STANDARD	TEST RESULT
IEEE C95.1 KDB 447498 D03 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091	No non-compliance noted

*Approved by:**Test by:*




---

Miller Lee  
 Manager  
 Compliance Certification Services Inc.

---

Kelly Cheng  
 Report coordinator  
 Compliance Certification Services Inc.

## 2. LIMIT

According to §15.247(i), 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 levels in excess of the Commission's guidelines. See § 1.1307(b)(1) of this chapter.

## 3. EUT SPECIFICATION

<b>EUT</b>	Furbo
<b>Model</b>	furbo1
<b>Frequency band (Operating)</b>	<input checked="" type="checkbox"/> Bluetooth 4.0: 2402 ~ 2480 MHz 802.11b/g/n HT20: 2.412GHz ~ 2.462GHz <input type="checkbox"/> Others
<b>Device category</b>	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others
<b>Exposure classification</b>	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm <sup>2</sup> ) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm <sup>2</sup> )
<b>Antenna Specification</b>	2.4GHz: Antenna Gain : -8.29 dBi (Numeric gain 0.15)
<b>Maximum Average output power</b>	Bluetooth Mode : 3.70 dBm (2.344 mW) IEEE 802.11b Mode: 20.36 dBm (108.643 mW) IEEE 802.11g Mode: 20.28 dBm (106.660 mW) IEEE 802.11n HT 20 Mode: 16.59 dBm (45.604 mW)
<b>Maximum Tune up Power</b>	Bluetooth Mode : 5.50 dBm (3.548 mW) IEEE 802.11b Mode: 22.00 dBm (158.489 mW) IEEE 802.11g Mode: 22.00 dBm (158.489 mW) IEEE 802.11n HT 20 Mode: 18.50 dBm (70.795 mW)
<b>Evaluation applied</b>	<input checked="" type="checkbox"/> MPE Evaluation* <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A

## 4. TEST RESULTS

No non-compliance noted.

### Calculation

$$\text{Given } E = \frac{\sqrt{30 \times P \times G}}{d} \quad \& \quad S = \frac{E^2}{377}$$

Where  $E$  = Field strength in Volts / meter

$P$  = Power in Watts

$G$  = Numeric antenna gain

$d$  = Distance in meters

$S$  = Power density in milliwatts / square centimeter

Combining equations and re-arranging the terms to express the distance as a function of the remaining variables yields:

$$S = \frac{30 \times P \times G}{377d^2}$$

Changing to units of mW and cm, using:

$$P \text{ (mW)} = P \text{ (W)} / 1000 \text{ and}$$

$$d \text{ (cm)} = d \text{ (m)} / 100$$

Yields

$$S = \frac{30 \times (P/1000) \times G}{377 \times (d/100)^2} = 0.0796 \times \frac{P \times G}{d^2} \quad \text{Equation 1}$$

Where  $d$  = Distance in cm

$P$  = Power in mW

$G$  = Numeric antenna gain

$S$  = Power density in mW / cm<sup>2</sup>

## 5. MAXIMUM PERMISSIBLE EXPOSURE

Substituting the MPE safe distance using  $d = 20$  cm into Equation 1:

$$S = 0.000199 \times P \times G$$

Where  $P =$  Power in mW

$G =$  Numeric antenna gain

$S =$  Power density in mW / cm<sup>2</sup>

### Bluetooth mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
79	2480	3.548	0.15	20	0.0001	1

### IEEE 802.11b mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
6	2437	158.489	0.15	20	0.0047	1

### IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
6	2437	158.489	0.15	20	0.0047	1

### IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm <sup>2</sup>	Limit (mW/cm2)
6	2437	70.795	0.15	20	0.0021	1