

**IEEE C95.1 2005
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

Baby Monitoring device

Model: RYBBY01

Trade Name: raybaby

Issued to

**RIOT SOLUTIONS, INC
2711 Centerville Road, Suite 400, Wilmington,
New Castle County, Delaware 19808, USA**

Issued by

**Compliance Certification Services Inc.
Wugu Laboratory
No.11, Wugong 6th Rd., Wugu Dist.,
New Taipei City 24891, Taiwan. (R.O.C.)
Issued Date: June 25, 2018**

Unless otherwise stated the results shown in this test report refer only to the sample(s) tested and such sample(s) are retained for 90 days only.
除非另有說明，此報告結果僅對測試之樣品負責，同時此樣品僅保留90天。本報告未經本公司書面許可，不可部分複製。

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FCC ID: 2AP3Y-RBY31012018
Report No.: T180420W02-MF

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Rev. 01

Revision History

Rev.	Issue Date	Revisions	Effect Page	Revised By
00	June 25, 2018	Initial Issue	ALL	Allison Chen
01	July 23, 2018	1. Added evaluation of UWB.	P.5, P.7, P.8	Allison Chen



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1. TEST RESULT CERTIFICATION

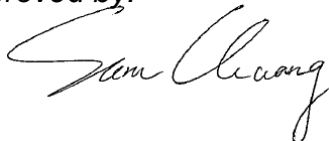
We hereby certify that:

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.

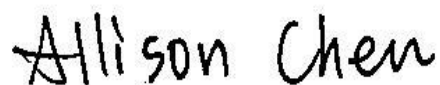
APPLICABLE STANDARDS	
STANDARD	TEST RESULT
IEEE C95.1 2005 KDB 447498 D03 47 C.F.R. Part 1, Subpart I, Section 1.1310 47 C.F.R. Part 2, Subpart J, Section 2.1091	No non-compliance noted

Approved by:



Sam Chuang
 Manager
 Compliance Certification Services Inc.

Reporter:



Allison Chen
 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

EUT	Baby Monitoring device													
Model	RYBBY01													
Trade Name	raybaby													
Frequency band (Operating)	<input checked="" type="checkbox"/> 802.11b/g/n HT20: 2412MHz ~ 2462MHz <input checked="" type="checkbox"/> UWB: 6500MHz ~ 8000MHz <input type="checkbox"/> Others													
Device category	<input type="checkbox"/> Portable (<20cm separation) <input checked="" type="checkbox"/> Mobile (>20cm separation) <input type="checkbox"/> Others													
Exposure classification	<input type="checkbox"/> Occupational/Controlled exposure (S = 5mW/cm ²) <input checked="" type="checkbox"/> General Population/Uncontrolled exposure (S=1mW/cm ²)													
Antenna Specification	WIFI 2.4G UWB Type: PCB Antenna	1.00 dBi (Numeric gain: 1.26) 5.97 dBi (Numeric gain: 3.95)												
Max tune up Power	<table border="1"> <tr> <td>IEEE 802.11b mode</td> <td>16.00dBm</td> <td>(39.811mW)</td> </tr> <tr> <td>IEEE 802.11g mode</td> <td>14.00dBm</td> <td>(25.119mW)</td> </tr> <tr> <td>802.11n HT20 mode</td> <td>14.00dBm</td> <td>(25.119mW)</td> </tr> <tr> <td>UWB</td> <td>-30.97dBm</td> <td>(0.0008mW)</td> </tr> </table>		IEEE 802.11b mode	16.00dBm	(39.811mW)	IEEE 802.11g mode	14.00dBm	(25.119mW)	802.11n HT20 mode	14.00dBm	(25.119mW)	UWB	-30.97dBm	(0.0008mW)
IEEE 802.11b mode	16.00dBm	(39.811mW)												
IEEE 802.11g mode	14.00dBm	(25.119mW)												
802.11n HT20 mode	14.00dBm	(25.119mW)												
UWB	-30.97dBm	(0.0008mW)												
Evaluation applied	<input checked="" type="checkbox"/> MPE Evaluation* <input type="checkbox"/> SAR Evaluation <input type="checkbox"/> N/A													

4. TEST RESULTS

No non-compliance noted.

Calculation

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

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:

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

$$d (cm) = d(m) / 100$$

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 / cm²

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 / cm²

IEEE 802.11b mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
11	2462	39.811	1.26	20	0.0100	1.000

IEEE 802.11g mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
6	2437	25.119	1.26	20	0.0063	1.000

IEEE 802.11n HT20 mode:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
1	2412	25.119	1.26	20	0.0063	1.000

UWB:

Ch.	Frq.(MHz)	P (mW)	Gain (num.)	D (cm)	Power density in mW / cm ²	Limit (mW/cm ²)
1	7250	0.001	3.95	20	0.000001	1.000

Simultaneously MPE

Simultaneously MPE = MPE1/Limit1 + MPE2/Limit2

WiFi + UWB

Simultaneously MPE = (0.0100 mW/cm² /1) + (0.000001 mW/cm² /1) = 0.010001