



## Shenzhen Huaxia Testing Technology Co., Ltd

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

Telephone: +86-755-26648640  
Fax: +86-755-26648637  
Website: [www.cqa-cert.com](http://www.cqa-cert.com)

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# RF Exposure Evaluation Report

**Report No. :** CQASZ20190900958E-02  
**Applicant:** ZAGG Inc.  
**Address of Applicant:** 910 West Legacy Center Way, Suite 500 Midvale, Utah 84047, USA  
**Equipment Under Test (EUT):**  
**EUT Name:** IFROGZ Airtime Sport  
**Model No.:** IFIEASTWS43  
**Brand Name:** IFROGZ  
**FCC ID:** QTG-IFASTWSS  
**Standards:** 47 CFR Part 1.1307  
 47 CFR Part 1.1310  
 KDB447498D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2019-09-23  
**Date of Test:** 2019-09-27 to 2019-10-14  
**Date of Issue:** 2019-10-14  
**Test Result :** **PASS\***

**\*In the configuration tested, the EUT complied with the standards specified above**

**Tested By:** \_\_\_\_\_  
*Tom Chen*  
**(Tom Chen)**

**Reviewed By:** \_\_\_\_\_  
*Sheek Luo*  
**(Sheek Luo)**

**Approved By:** \_\_\_\_\_  
*Jack Ai*  
**( Jack Ai)**



## 1 Version

### Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20190900958E-02	Rev.01	Initial report	2019-10-14

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### 3 General Information

#### 3.1 Client Information

Applicant:	ZAGG Inc.
Address of Applicant:	910 West Legacy Center Way, Suite 500 Midvale, Utah 84047, USA
Manufacturer:	ZAGG Inc.
Address of Manufacturer:	910 West Legacy Center Way, Suite 500 Midvale, Utah 84047, USA

#### 3.2 General Description of EUT

Product Name:	IFROGZ Airtime Sport
Model No.:	IFIEASTWS43
Trade Mark:	IFROGZ
Hardware Version:	V11
Software Version:	V4
Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	V5.0
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)
Modulation Type:	GFSK, $\pi/4$ DQPSK, 8DPSK
Transfer Rate:	1Mbps/2Mbps/3Mbps
Number of Channel:	79
Hopping Channel Type:	Adaptive Frequency Hopping systems
Product Type:	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable <input type="checkbox"/> Fix Location
Test Software of EUT:	Bluetooth RF Test Tool (manufacturer declare )
Antenna Type:	Integral antenna
Antenna Gain:	2dBi
Power Supply:	Case:600mAh,3.7v,2.22Wh Earbud:45mAh,3.7v,0.1665Wh Charging Case Input: DC 5V1A
USB cable:	22cm(Unshielded)

#### Battery information:

Object / part No.	Factory	Model	Technical data
Battery 1	Shenzhen Yite New Energy CO., Ltd.	551012	45mAh,3.7v,0.1665Wh
Battery 2	Shenzhen Yite New Energy CO., Ltd.	951643	600mAh,3.7v,2.22Wh

## 4 SAR Evaluation

### 4.1 RF Exposure Compliance Requirement

#### 4.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06

##### 4.3.1. Standalone SAR test exclusion considerations

Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

#### 4.1.2 Limits

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where

$f(\text{GHz})$  is the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation<sup>17</sup>

The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is  $\leq 50$  mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test exclusion

### 4.1.3 EUT RF Exposure

#### Measurement Data

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-2.670	-2±1	-1	0.794
Middle(2441MHz)	-2.540	-2±1	-1	0.794
Highest(2480MHz)	-4.090	-3.5±1	-2.5	0.562
π/4DQPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-0.470	0±1	1	1.259
Middle(2441MHz)	-0.340	0±1	1	1.259
Highest(2480MHz)	-2.020	-1.5±1	-0.5	0.891
8DPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-0.030	0±1	1	1.259
Middle(2441MHz)	0.180	0±1	1	1.259
Highest(2480MHz)	-1.410	-1.5±1	-0.5	0.891

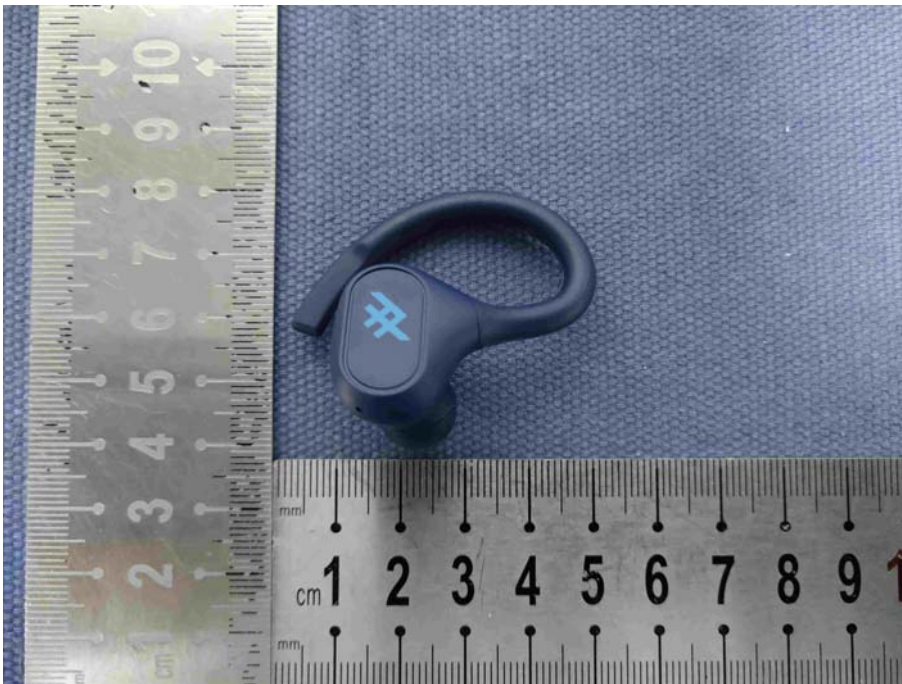
Worst case: 8DPSK						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	-0.030	0±1	1	1.259	0.39	3.0
Middle (2441MHz)	0.180	0±1	1	1.259	0.39	
Highest (2480MHz)	-1.410	-1.5±1	-0.5	0.891	0.28	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20190900958E-01

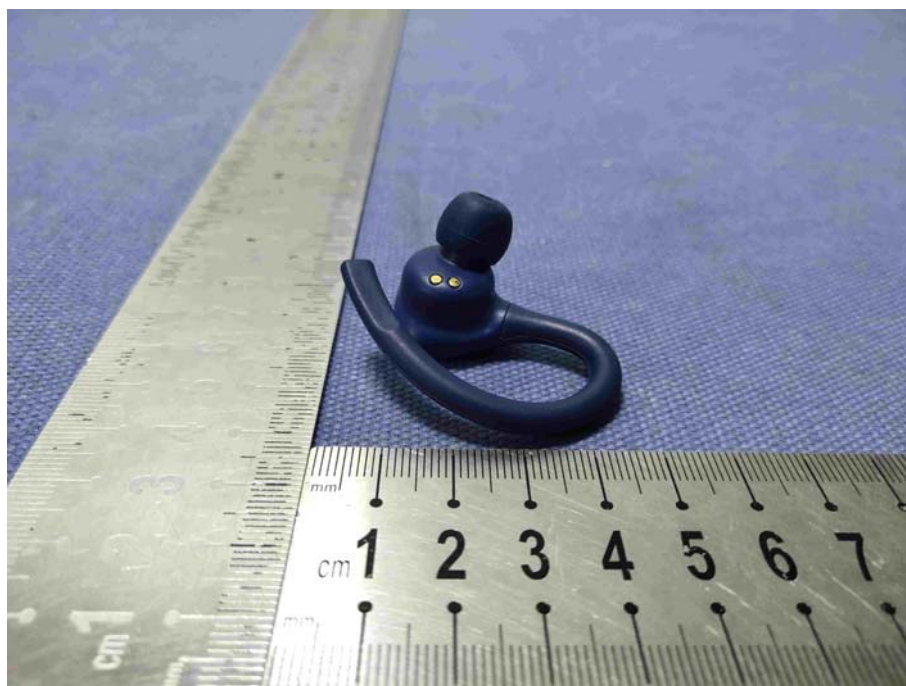
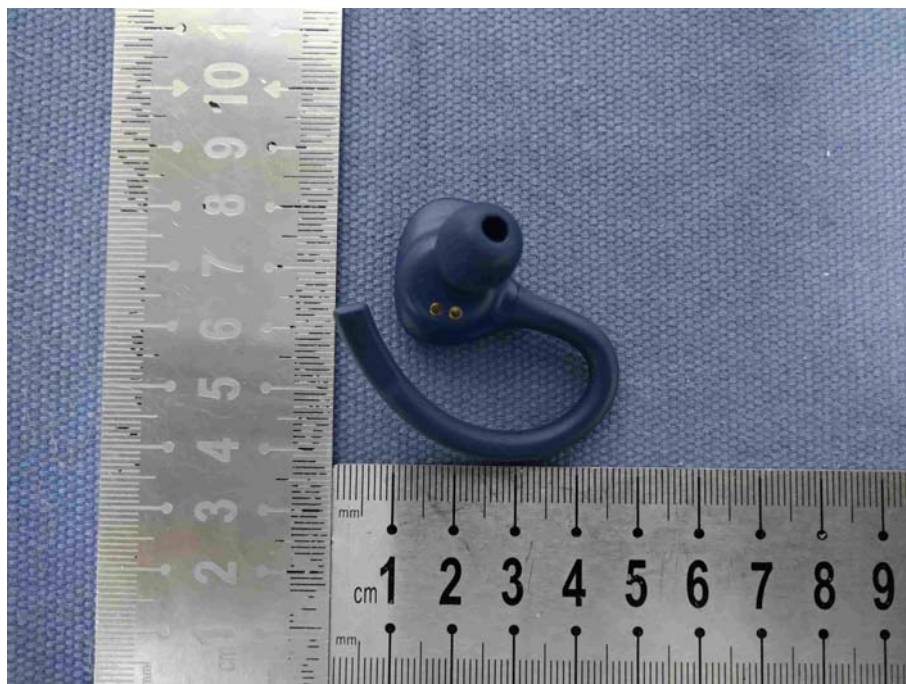
## 5 Photographs - EUT Constructional Details

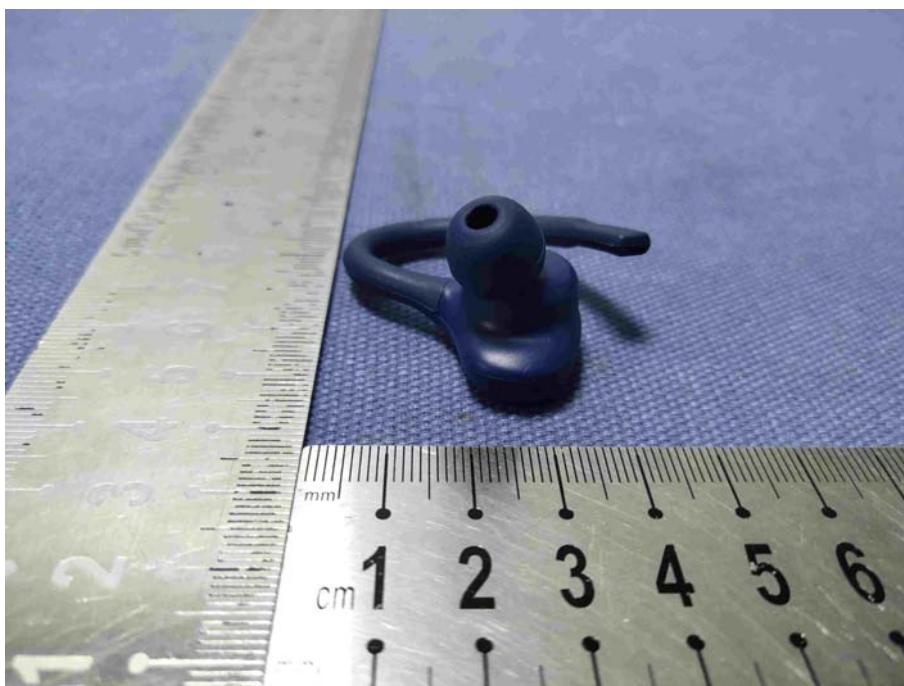
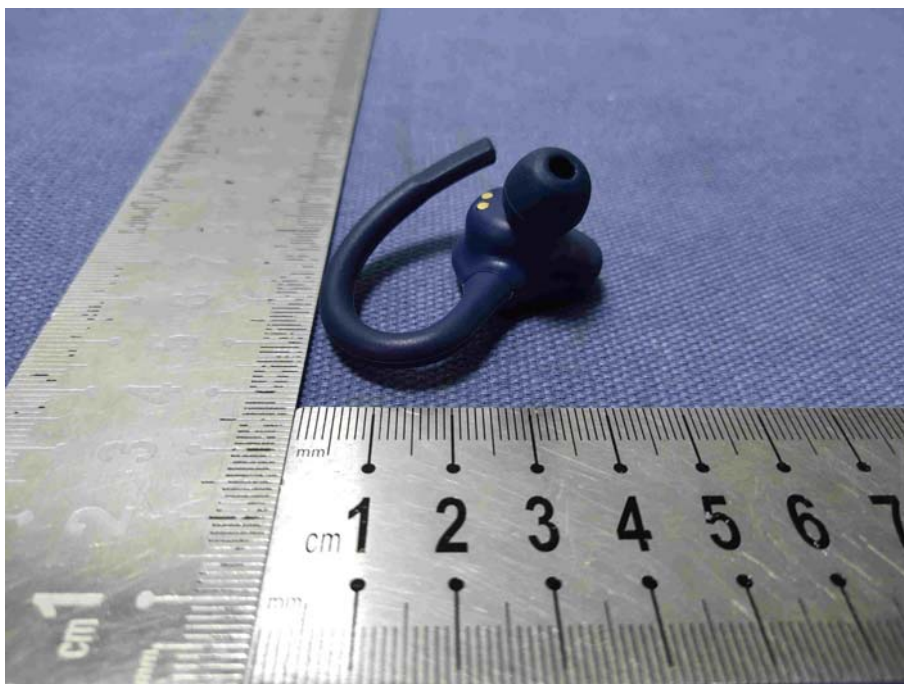


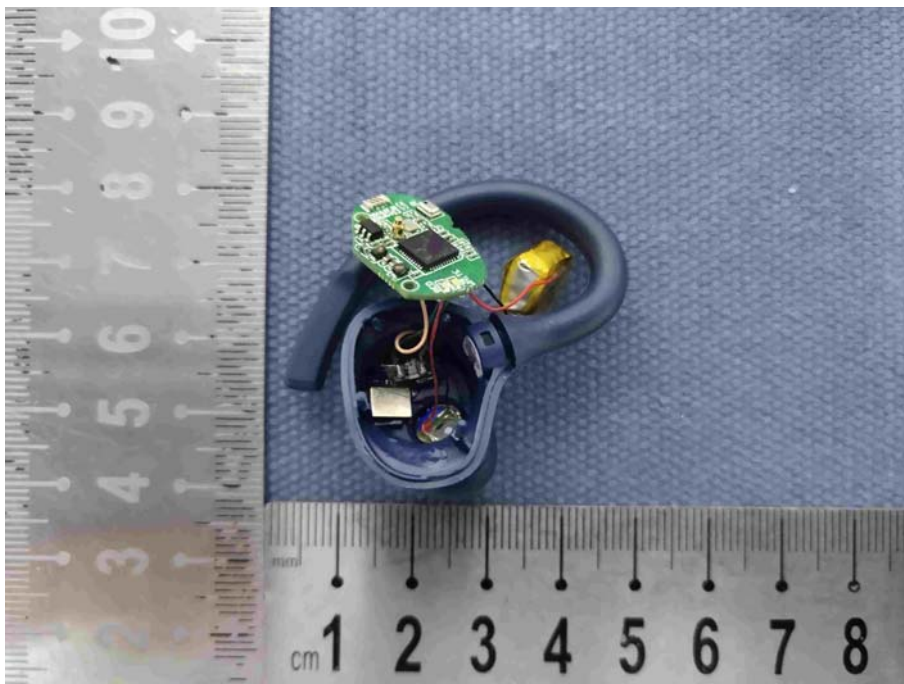
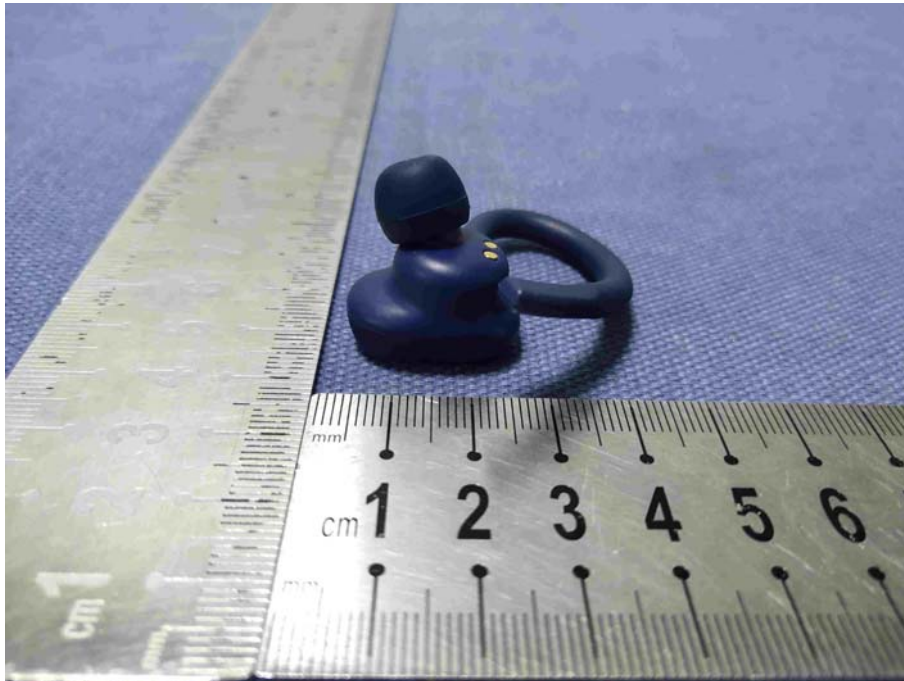




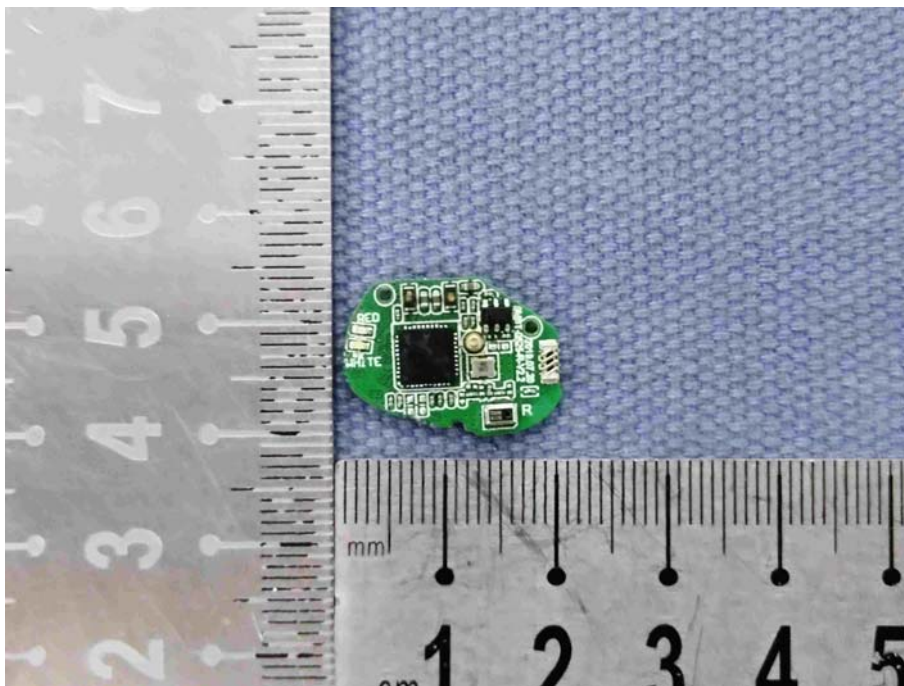
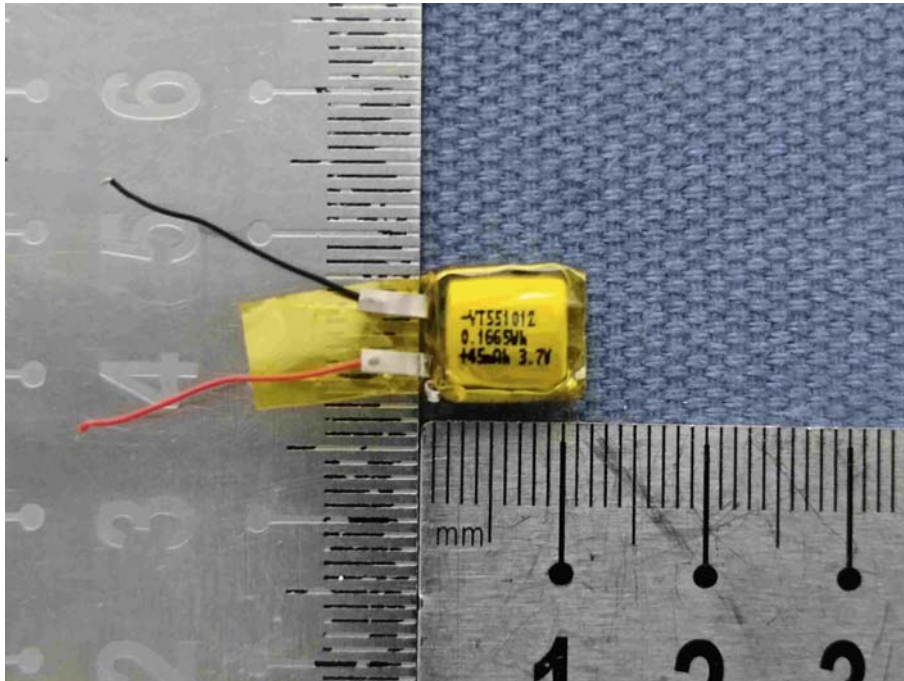


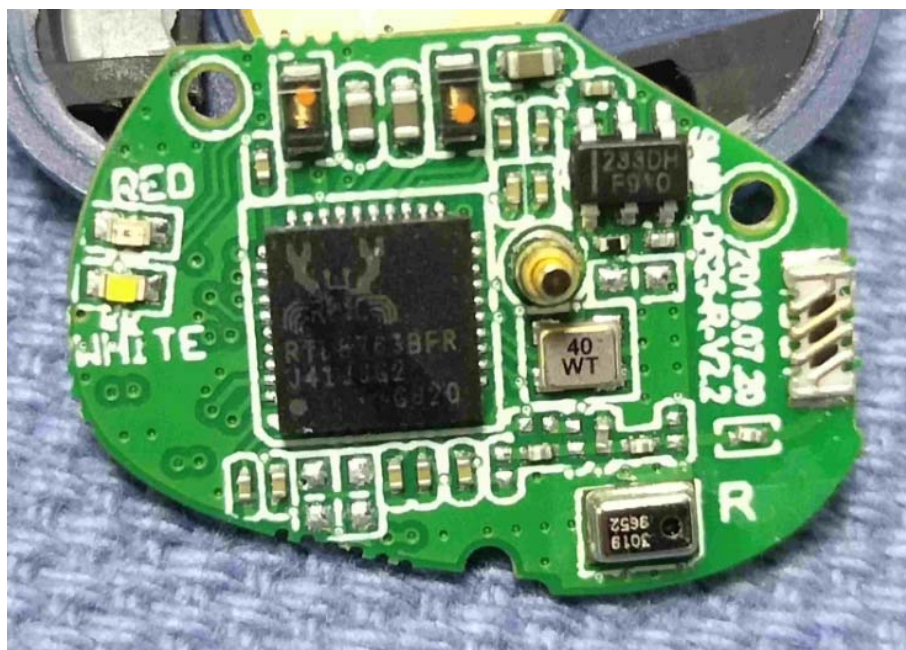
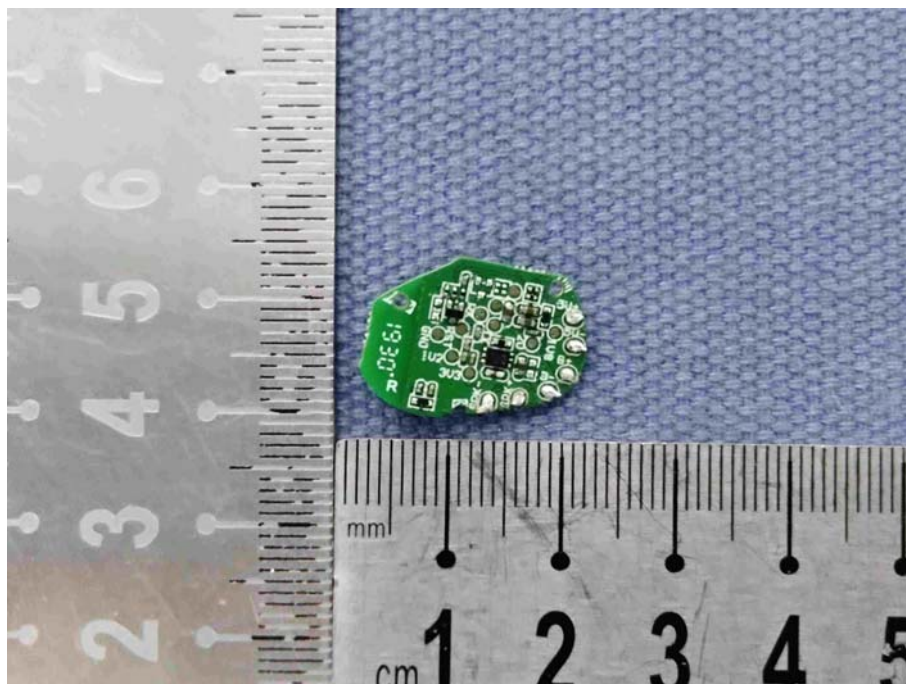












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