

CE EMF Report

Test Standard(s): EN 62479:2010

Applicant:

Product Name: Activity Tracker

Model: WB102

Report No.: ZKS161100228E-3

Tested Date: 2016-11-29 to 2016-12-04

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Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by Shenzhen ZRLK Testing Technology Co., Ltd.

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1. General Information

1.1 Product Information

Applicant and Manufacturer	
Applicant:	
Address of Applicant:	
Manufacturer:	
Address of Manufacturer:	

General Description of EUT	
Product Name:	Activity Tracker
Model No.:	WB102
Trade Name:	
Adding Model(s):	--
Rated Voltage:	DC 3.7V, Battery
Radio Technology:	Bluetooth V4.0 BLE
Antenna Type:	Integral Antenna
Antenna Gain:	0 dBi
Note 1: The test data is gathered from a production sample, provided by the manufacturer.	

1.2 Compliance Standards

Compliance Standards	
EN 62479	Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz)
The objective of the manufacturer or applicant is to demonstrate compliance with the above standards.	
Maintenance of compliance is the responsibility of the manufacturer or applicant. Any modification of the product, which result is lowering the emission, should be checked to ensure compliance has been maintained.	

2. RF Exposure

2.1 Standard and Limit

According to EN 62479:2010, Assessment of the compliance of low power electronic and electrical equipment with the basic restrictions related to human exposure to electromagnetic fields (10 MHz to 300 GHz).

Low-power exclusion level $P_{\max}$ based on considerations of SAR

When SAR is the basic restriction, a conservative minimum value for $P_{\max}$ can be derived, equal to the localized SAR limit ($SAR_{\max}$) multiplied by the averaging mass (m):

$$P_{\max} = SAR_{\max} m \quad (A.1)$$

Example values of $P_{\max}$ according to Equation (A.1) are provided in Table A.1 for cases described by the ICNIRP guidelines [1], IEEE Std C95.1-1999 [2] and IEEE Std C95.1-2005 [3] where SAR limits are defined. Other exposure guidelines or standards may be applicable depending on national regulations.

Table A.1 – Example values of SAR-based $P_{\max}$ for some cases described by ICNIRP, IEEE Std C95.1-1999 and IEEE Std C95.1-2005

Guideline / Standard	SAR limit, $SAR_{\max}$ W/kg	Averaging mass, m g	$P_{\max}$ mW	Exposure tier ^a	Region of body ^a
ICNIRP [1]	2	10	20	General public	Head and trunk
	4	10	40	General public	Limbs
	10	10	100	Occupational	Head and trunk
	20	10	200	Occupational	Limbs
IEEE Std C95.1-1999 [2]	1,6	1	1,6	Uncontrolled environment	Head, trunk, arms, legs
	4	10	40	Uncontrolled environment	Hands, wrists, feet and ankles
	8	1	8	Controlled environment	Head, trunk, arms, legs
	20	10	200	Controlled environment	Hands, wrists, feet and ankles
IEEE Std C95.1-2005 [3]	2	10	20	Action level	Body except extremities and pinnae
	4	10	40	Action level	Extremities and pinnae
	10	10	100	Controlled environment	Body except extremities and pinnae
	20	10	200	Controlled environment	Extremities and pinnae

^a Consult the appropriate standard for more information and definitions of terms.

2.2 Evaluation Methods

Based on the above standard limit, the basic restriction at frequency between 10MHz to 300GHz is on localized SAR in the head. Any device with output power below 20mW cannot produce an exposure exceeding this restriction under the most pessimistic exposure conditions.

The basic restriction is 2W/Kg for general public device, so any unit which supplies less than 20mW from it's antenna port, averaged over 6 minutes, will meet the basic restriction.

2.3 Evaluation Results

Maximum Average Output Power				
Frequency	ERP/EIRP	ERP/EIRP	Limit	Result
	dBm	mW	mW	Pass/Fail
Bluetooth_BLE				
2402MHz	-5.85	0.26	20	Pass
2440MHz	-6.40	0.23	20	Pass
2480MHz	-6.15	0.24	20	Pass

Since average output power at worse case is: 0.26 mW which cannot exceed the exempt condition, 20mW specified in EN 62479. It is deemed to full fit the requirement of RF exposure basic restriction specified in EC Council Recommendation (1999/519/EC).

Annex A. EUT Photos

EUT View 1

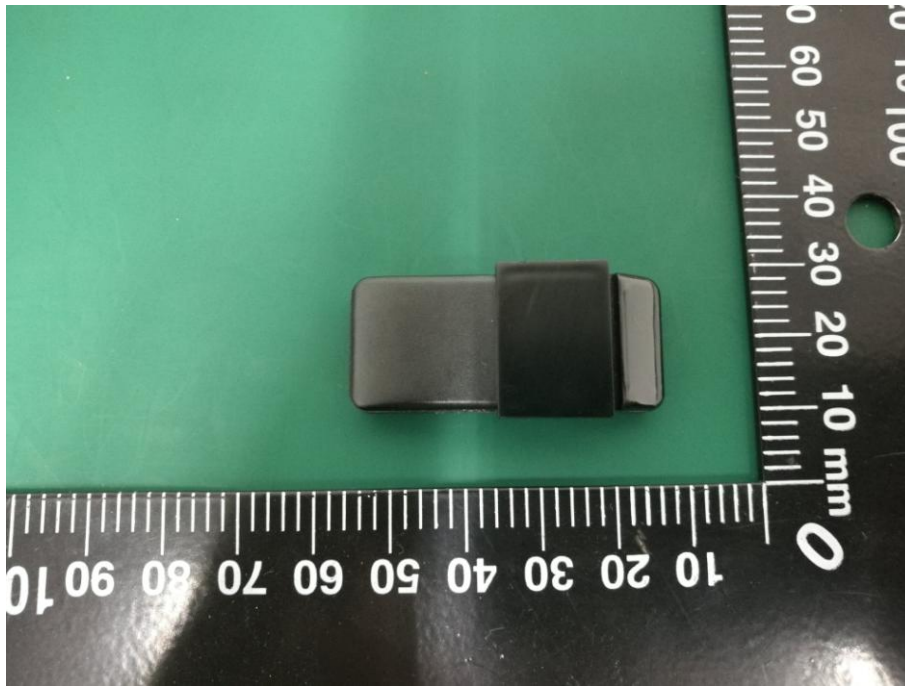


EUT View 2



EUT View 3**EUT View 4**

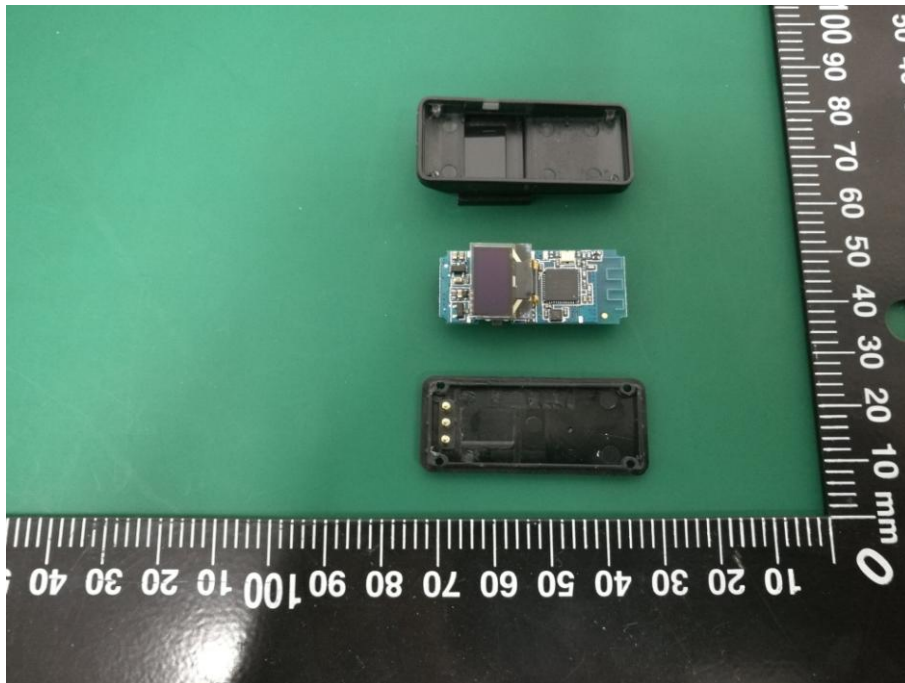
EUT View 5



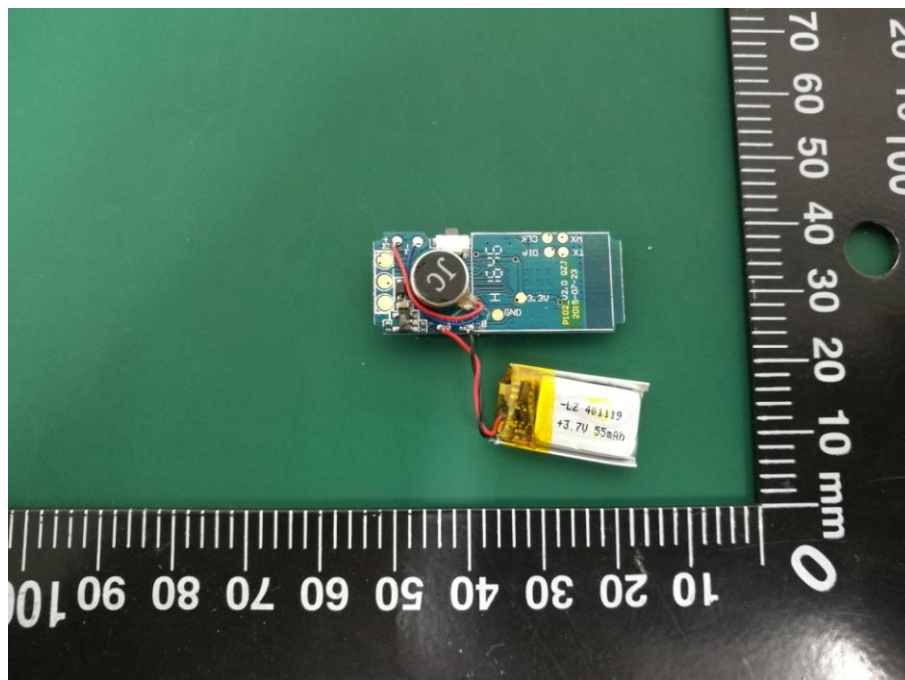
EUT View 6



EUT View 7



EUT View 8



Annex B. Label and Information

CE Mark Sample



CE Mark Specifications

Text is Black in color and is justified. Labels are printed in indelible ink on permanent adhesive backing or silk-screened onto the EUT or shall be affixed at a conspicuous location on the EUT. The 'CE' marking must be affixed to the EUT or to its data plate. Where this is not possible or not warranted on account of the nature of the apparatus, it must be affixed to the packaging, if any, and to the accompanying documents. The 'CE' marking must have a height of at least 5 mm. If the 'CE' marking is reduced or enlarged the proportions given in the above graduated drawing must be respected.

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