

## HEALTH TEST REPORT

For

Free Flow TWS earbuds in case

Test Model:

Prepared for :  
Address :

Prepared by : Shenzhen LCS Compliance Testing Laboratory Ltd.  
Address : 101, 201 Building A and 301 Building C, Juji Industrial Park,  
Yabianxueziwei, Shajing Street, Baoan District, Shenzhen,  
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Date of receipt of test sample : January 13, 2020  
Number of tested samples : 1  
Serial number : Prototype  
Date of Test : January 13, 2020 ~ January 15, 2020  
Date of Report : January 17, 2020



# HEALTH TEST REPORT

## EN 50663: 2017

Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)

Report Reference No. .... : LCS200102089AEC

Date of Issue ..... : January 17, 2020

Testing Laboratory Name ..... : Shenzhen LCS Compliance Testing Laboratory Ltd.

Address ..... : 101, 201 Building A and 301 Building C, Juji Industrial Park,  
Yabianxueziwei, Shajing Street, Baoan District, Shenzhen,  
Guangdong, China

Testing Location/ Procedure ..... : Full application of Harmonised standards ☒  
Partial application of Harmonised standards ☐  
Other standard testing method ☐

Applicant's Name ..... :

Address ..... :

### Test Specification

Standard ..... : EN 50663: 2017

Test Report Form No. .... : LCSEMC-1.0

TRF Originator ..... : Shenzhen LCS Compliance Testing Laboratory Ltd.

Master TRF ..... : Dated 2011-03

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Test Item Description ..... : Free Flow TWS earbuds in case

Trade Mark ..... : N/A

Model/ Type reference ..... :

Ratings ..... : Input: 5V  
Headset: DC 3.7V by Li-ion Battery(35mAh)  
Charging case: DC 3.7V by Li-ion Battery(500mAh)

Result ..... : Positive

Compiled by:

Vera Deng

Vera Deng / File administrators

Supervised by:

Jin Wang

Jin Wang/ Technique principal

Approved by:



Gavin Liang/ Manager

**HEALTH --TEST REPORT****Test Report No. : LCS200102089AEC**January 17, 2020  
Date of issue

Type / Model..... : XO-9852-1

EUT..... : Free Flow TWS earbuds in case

**Applicant..... :**

Address..... :

Telephone..... :

Fax..... :

**Manufacturer..... :**

Address..... :

Telephone..... :

Fax..... :

**Factory..... :**

Address..... :

Telephone..... :

Fax..... :

**Test Result****Positive**

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

## Revision History

Revision	Issue Date	Revisions	Revised By
00	January 17, 2020	Initial Issue	Gavin Liang

## 1. GENERAL INFORMATION

### 1.1. Product Description for Equipment Under Test (EUT)

EUT	:	Free Flow TWS earbuds in case
Test Model	:	
		Input: 5V
Power Supply	:	Headset: DC 3.7V by Li-ion Battery(35mAh) Charging case: DC 3.7V by Li-ion Battery(500mAh)
Hardware Version	:	V11
Software Version	:	V10
Bluetooth		
Frequency Range	:	2.402-2.480GHz
Channel Number	:	79 channels for Bluetooth V5.0(BDR/EDR)
Channel Spacing	:	1/2/3MHz for Bluetooth V5.0(BDR/EDR)
Modulation Type	:	GFSK, $\pi$ /4-DQPSK for Bluetooth V5.0(BDR/EDR)
Bluetooth Version	:	V5.0
Antenna Description	:	Internal Antenna, -0.58 dBi (Max.)

### 1.2. Objective

According to its specifications, the EUT must comply with the requirements of the following standards:  
EN 50663: 2017 –Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)

### 1.3. Test Methodology

All measurements contained in this report were conducted with EN 50663: 2017.

### 1.4. Facilities

All measurement facilities used to collect the measurement data are located at 101, 201 Building A and 301 Building C, Juji Industrial Park, Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, Guangdong, China.

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22.

### 1.5. Host System Configuration List and Details

Manufacturer	Description	Model	Serial Number	Certificate
--	Charger	--	--	CE

### 1.6. External I/O Cable

I/O Port Description	Quantity	Cable
Charging Port	1	N/A

## 1.7. Equipment

Radiated emissions are measured with one or more of the following types of linearly polarized antennas: tuned dipole, bi-conical, log periodic, bi-log, and/or ridged waveguide, horn. Spectrum analyzers with pre-selectors and quasi-peak detectors are used to perform radiated measurements. Conducted emissions are measured with Line Impedance Stabilization Networks and EMI Test Receivers.

Calibrated wideband preamplifiers, coaxial cables, and coaxial attenuators are also used for making measurements.

All receiving equipment conforms to CISPR Publication 16-1, "Radio Interference Measuring Apparatus and Measurement Methods."

## 1.8. Laboratory Accreditations And Listings

### Site Description

EMC Lab. : FCC Registration Number. is 254912.  
 Industry Canada Registration Number. is 9642A-1.  
 ESMD Registration Number. is ARCB0108.  
 UL Registration Number. is 100571-492.  
 TUV SUD Registration Number. is SCN1081.  
 TUV RH Registration Number. is UA 50296516-001.  
 NVLAP Registration Code is 600167-0.

Name of Firm : Shenzhen LCS Compliance Testing Laboratory Ltd.

Site Location : 101, 201 Building A and 301 Building C, Juji Industrial Park,  
 Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, Guangdong,  
 China

## 1.9. Measurement Uncertainty

Test Item		Uncertainty
Radio Frequency	:	$0.9 \times 10^{-4}$
Total RF Power, Conducted	:	1.0 dB
RF Power Density, Conducted	:	1.8 dB
Spurious Emissions, Conducted	:	1.8 dB
All Emissions, Radiated	:	3.1 dB
Temperature	:	0.5 °C
Humidity	:	1 %
DC And Low Frequency Voltages	:	1 %

## 2. HUMAN EXPOSURE TO THE ELECTROMAGNETIC FIELDS

### 2.1 Test Methodology

#### 2.1.1. General description of applied standards

According to its specifications, the EUT must comply with the requirements of the following 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)

#### 2.1.2. Description of test modes

The EUT has been tested under its typical operating condition. Pre-defined engineering program for regulatory testing used to control the EUT for staying in continuous transmitting and receiving mode is programmed.

### 2.2 Test limit

If the average power emitted by apparatus operating in the frequency range 10 MHz – 300GHz is less than or equal to 20 mW and the transmitting peak power is less than 20 W then the apparatus is deemed to comply with the basic restrictions without testing.

### 2.3 Test Results

Since Max. output power for Bluetooth is 1.37mW (1.36dBm) According to radio test report LCS200102089AEB) less than 20mW specified in EN 62479. This unit will not generate the harmful EM emission above the reference level as specified in EC Council Recommendation (1999/519/EC).

The unit complies with the EN 62479 for RF exposure requirement.

No non-compliance noted.

-----THE END OF TEST REPORT-----