



## 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. :** CQASZ20190800813E-02  
**Applicant:** Shenzhen Leaderment Technology Co.,Ltd.  
**Address of Applicant:** Floor 20 Building A, GongCun, Shenzhen, China  
**Equipment Under Test (EUT):**  
**EUT Name:** Bluetooth True Wireless Earbuds  
**Model No.:** UBBTE200  
**Brand Name:** Soundison  
**FCC ID:** 2ASUP-UBBTE200  
**Standards:** 47 CFR Part 1.1307  
47 CFR Part 1.1310  
KDB447498D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2019-08-29  
**Date of Test:** 2019-08-29 to 2019-09-11  
**Date of Issue:** 2019-09-11  
**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
CQASZ20190800813E-02	Rev.01	Initial report	2019-09-11

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### 3 General Information

#### 3.1 Client Information

Applicant:	Shenzhen Leaderment Technology Co.,Ltd.
Address of Applicant:	Floor 20 Building A, GongCun, Shenzhen, China
Manufacturer:	Shenzhen Leaderment Technology Co.,Ltd.
Address of Manufacturer:	Floor 20 Building A, GongCun, Shenzhen, China

#### 3.2 General Description of EUT

Product Name:	Bluetooth True Wireless Earbuds
Test Model No.:	UBBTE200
Trade Mark:	Soundison
Hardware Version:	V1.0
Software Version:	V1.0
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:	Ceramic antenna
Antenna Gain:	2.5dBi
Power Supply:	lithium battery:DC3.7V, Charge by DC5.0V

## 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:

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

f(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)	3.000	2.5±1	3.5	2.239
Middle(2441MHz)	3.240	2.5±1	3.5	2.239
Highest(2480MHz)	3.390	2.5±1	3.5	2.239
π/4DQPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	4.710	4.0±1	5.0	3.162
Middle(2441MHz)	4.910	4.0±1	5.0	3.162
Highest(2480MHz)	5.080	4.5±1	5.5	3.548
8DPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	5.180	4.5±1	5.5	3.548
Middle(2441MHz)	5.430	4.5±1	5.5	3.548
Highest(2480MHz)	5.610	5.0±1	6.0	3.981

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)	5.180	4.5±1	5.5	3.548	1.100	3.0
Middle (2441MHz)	5.430	4.5±1	5.5	3.548	1.109	
Highest (2480MHz)	5.610	5.0±1	6.0	3.981	1.254	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20190800811E-01