



## 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.:** CQASZ20220200217E-03  
**Applicant:** SPRITE Group Limited  
**Address of Applicant:** 4th Floor, A3 Building, Shenliang Group, No.299 Guanping Road, Guanlan Street, Longhua District  
**Equipment Under Test (EUT):**  
**EUT Name:** TWS Bluetooth headset  
**Model No.:** E10, T63, T64  
**Test Model No.:** E10  
**Brand Name:** N/A  
**FCC ID:** 2ADTF-E10  
**Standards:** 47 CFR Part 1.1307  
47 CFR Part 2.1093  
KDB447498D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2022-02-21  
**Date of Test:** 2022-02-21 to 2022-02-28  
**Date of Issue:** 2022-03-03  
**Test Result:** **PASS\***

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

**Tested By:** Lewis Zhou  
( Lewis Zhou )

**Reviewed By:** Rock Huang  
( Rock Huang )

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



## 1 Version

### Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20220200217E-03	Rev.01	Initial report	2022-03-03

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### 3 General Information

#### 3.1 Client Information

Applicant:	SPRITE Group Limited
Address of Applicant:	4th Floor, A3 Building, Shenliang Group, No.299 Guanping Road, Guanlan Street, Longhua District
Manufacturer:	Shenzhen zhikang technology co. , LTD
Address of Manufacturer:	4th Floor, A3 Building, Shenliang Group, No.299 Guanping Road, Guanlan Street, Longhua District
Factory:	Shenzhen zhikang technology co. , LTD
Address of Factory:	4th Floor, A3 Building, Shenliang Group, No.299 Guanping Road, Guanlan Street, Longhua District

#### 3.2 General Description of EUT

Product Name:	TWS Bluetooth headset
Model No.:	E10, T63, T64
Test Model No.:	E10
Trade Mark:	N/A
Software Version:	V1.6.2
Hardware Version:	HZX-ZK-T63J-V1.3
Power Supply:	Charge box:Li-ion battery: DC 3.7V 320mAh, Charge by DC 5V for adapter Earphone:Li-ion battery: DC 3.7V 30mAh, Charge by DC 5V for Charge box

#### 3.3 General Description of BLE

Operation Frequency:	2402MHz~2480MHz
Modulation Type:	GFSK
Transfer Rate:	1Mbps
Number of Channel:	40
Product Type:	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable <input type="checkbox"/> Fix Location
Antenna Type:	Ceramic antenna
Antenna Gain:	4dBi

#### 3.4 General Description of BT

Operation Frequency:	2402MHz~2480MHz
Modulation Type:	GFSK, $\pi/4$ DQPSK
Transfer Rate:	1Mbps/2Mbps
Number of Channel:	79
Product Type:	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable <input type="checkbox"/> Fix Location
Antenna Type:	Ceramic antenna
Antenna Gain:	4dBi

## 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

$f(\text{GHz})$  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

#### 1) For BLE

#### Measurement Data

GFSK mode (1Mbps)				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-8.72	-8.5±1	-7.5	0.178
Middle(2440MHz)	-7.64	-7.5±1	-6.5	0.224
Highest(2480MHz)	-7.41	-7.5±1	-6.5	0.224

Worst case: GFSK mode (1Mbps)						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune- up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	-8.72	-8.5±1	-7.5	0.178	0.055	3.0
Middle (2440MHz)	-7.64	-7.5±1	-6.5	0.224	0.070	
Highest (2480MHz)	-7.41	-7.5±1	-6.5	0.224	0.071	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20220200217E-01  
BT can not simultaneous transmitting at same time.

2) For BT

Measurement Data

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-6.69	-6.5±1	-5.5	0.282
Middle(2441MHz)	-5.62	-5.5±1	-4.5	0.355
Highest(2480MHz)	-5.42	-5.5±1	-4.5	0.355

  

π/4DQPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-6.32	-6.0±1	-5.0	0.316
Middle(2441MHz)	-5.1	-5.0±1	-4.0	0.398
Highest(2480MHz)	-4.96	-5.0±1	-4.0	0.398

Worst case: π/4DQPSK mode						
Channel	Maximum Peak Conducted Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune- up Power		Calculated value	Exclusion threshold
			(dBm)	(mW)		
Lowest (2402MHz)	-6.32	-6.0±1	-5.0	0.316	0.098	3.0
Middle (2441MHz)	-5.1	-5.0±1	-4.0	0.398	0.124	
Highest (2480MHz)	-4.96	-5.0±1	-4.0	0.398	0.125	

Conclusion: the calculated value ≤3.0, SAR is exempted.

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20220200217E-02 BLE can not simultaneous transmitting at same time.

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