

# SAR Evaluation Report

**Application No.:** SZEM2011011370CR  
**Applicant:** Cosonic Intelligent Technologies Co., Ltd.  
**Address of Applicant:** 5th Floor,1st Building,No.6 South Industry Road Songshan Lake Hi-tech Industrial Development Zone Dongguan China 523808  
**Manufacturer:** Cosonic Intelligent Technologies Co., Ltd.  
**Address of Manufacturer:** 5th Floor,1st Building,No.6 South Industry Road Songshan Lake Hi-tech Industrial Development Zone Dongguan China 523808  
**Factory:** Cosonic Electroacoustic Technology Co., Ltd  
**Address of Factory:** No.151, Shipai Section, Dongyuan Avenue, Shipai Town, Dongguan City, Guangdong Province, P.R. China.

**Equipment Under Test (EUT):**

**EUT Name:** ONN. TRUE WIRELESS ANC  
**Model No.:** 100024715  
**Trade Mark:** onn.  
**FCC ID:** 2ALVK--ONN24715  
**Standards:** 47 CFR Part 1.1307  
47 CFR Part 2.1093  
KDB447498D01 General RF Exposure Guidance v06

**Date of Receipt:** 2020-11-11  
**Date of Test:** 2020-11-11 to 2020-11-16  
**Date of Issue:** 2020-11-16

<b>Test Result :</b>	<b>PASS*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.

Keny Xu  
EMC Laboratory Manager





## 2 Version

Revision Record				
Version	Chapter	Date	Modifier	Remark
01		2020-11-16		Original

<b>Authorized for issue by:</b>			
			
		<hr/>	
		<b>Harry Wu/Project Engineer</b>	
			
		<hr/>	
		<b>Eric Fu/Reviewer</b>	





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## 4 General Information

### 4.1 General Description of EUT

Battery:	Earbuds: Li-Ion Polymer Battery 3.7V 55mAh (Charge by travel case); Travel case with backup battery: Li-Ion Polymer Battery 3.7V 550mAh(Charged by type-C port or Wireless charging)
<b>For BT:</b>	
Operation Frequency:	2402MHz to 2480MHz
Spectrum Spread Technology:	Frequency Hopping Spread Spectrum(FHSS)
Bluetooth Version:	V5.0 Classic
Modulation Type:	GFSK, pi/4DQPSK, 8DPSK
Number of Channels:	79
Channel Spacing:	1MHz
Antenna Type:	FPC Antenna
Antenna Gain:	2dBi
<b>For BLE:</b>	
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V5.0 LE
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	2MHz
Data Rate:	1Mb/s
Antenna Type:	FPC Antenna
Antenna Gain:	2dBi



## 4.2 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services Co., Ltd. Shenzhen Branch

No. 1 Workshop, M-10, Middle section, Science & Technology Park, Shenzhen, Guangdong, China  
518057

Telephone: +86 (0) 755 2601 2053 Fax: +86 (0) 755 2671 0594

No tests were sub-contracted.

## 4.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **A2LA (Certificate No. 3816.01)**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 3816.01.

- **VCCI**

The 3m Fully-anechoic chamber for above 1GHz, 10m Semi-anechoic chamber for below 1GHz, Shielded Room for Mains Port Conducted Interference Measurement and Telecommunication Port Conducted Interference Measurement of SGS-CSTC Standards Technical Services Co., Ltd. have been registered in accordance with the Regulations for Voluntary Control Measures with Registration No.: G-20026, R-14188, C-12383 and T-11153 respectively.

- **FCC –Designation Number: CN1178**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized as an accredited testing laboratory.

Designation Number: CN1178. Test Firm Registration Number: 406779.

- **Innovation, Science and Economic Development Canada**

SGS-CSTC Standards Technical Services Co., Ltd., Shenzhen EMC Laboratory has been recognized by ISED as an accredited testing laboratory.

CAB identifier: CN0006.

IC#: 4620C.

## 4.4 Deviation from Standards

None.

## 4.5 Abnormalities from Standard Conditions

None.

## 4.6 Other Information Requested by the Customer

None.



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## 5 SAR Evaluation

### 5.1 RF Exposure Compliance Requirement

#### 5.1.1 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.

#### 5.1.2 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

#### 5.1.3 EUT RF Exposure

For BT:

For Right Earbud:

The Max. power (including tune-up tolerance) is          6.81 dBm on the lowest channel 2.402 GHz (\*)

6.81 dBm logarithmic terms convert to numeric result is nearly 4.80 mW

According to the formula. calculate the test exclusion thresholds:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}]$

$\text{General RF Exposure} = (4.80 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.402 \text{ GHz}} = 1.49$  (1)

SAR requirement:

$S = 3.0$  (2)

(1) < (2)

So the SAR report is not required.

(\*) Max. power refer to Report No.:SZEM201101137002



For Left Earbud:

The Max. power (including tune-up tolerance) is 7.86 dBm on the highest channel 2.48 GHz (\*)  
 7.86 dBm logarithmic terms convert to numeric result is nearly 6.11 mW

According to the formula. calculate the test exclusion thresholds:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot$

$[\text{vf(GHz)}]$

$$\text{General RF Exposure} = (6.11 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.48 \text{ GHz}} = 1.92 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

(1) < (2)

So the SAR report is not required.

(\*) Max. power refer to Report No.:SZEM201101137002

For BLE:

For Right Earbud:

The Max. power (including tune-up tolerance) is 2.29 dBm on the lowest channel 2.402 GHz (\*)  
 2.29 dBm logarithmic terms convert to numeric result is nearly 1.69 mW

According to the formula. calculate the test exclusion thresholds:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot$

$[\text{vf(GHz)}]$

$$\text{General RF Exposure} = (1.69 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.402 \text{ GHz}} = 0.52 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

(1) < (2)

So the SAR report is not required.

(\*) Max. power refer to Report No.:SZEM201101137003



For Left Earbud:

The Max. power (including tune-up tolerance) is 3.23 dBm on the lowest channel 2.402 GHz (\*)  
3.23 dBm logarithmic terms convert to numeric result is nearly 2.10 mW

According to the formula. calculate the test exclusion thresholds:

$$\left[ \frac{\text{max. power of channel, including tune-up tolerance, mW}}{(\text{min. test separation distance, mm}) \cdot \sqrt{f(\text{GHz})}} \right]$$

$$\text{General RF Exposure} = (2.10 \text{ mW} / 5 \text{ mm}) \times \sqrt{2.402 \text{ GHz}} = 0.65 \quad (1)$$

SAR requirement:

$$S = 3.0 \quad (2)$$

$$(1) < (2)$$

So the SAR report is not required.

(\*) Max. power refer to Report No.:SZEM201101137003

- End of the Report -

