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# RF Exposure Evaluation Report

**Report No.:** CQASZ20211001781E  
**Applicant:** GANZHOU DEHUIDA TECHNOLOGY CO., LTD  
**Address of Applicant:** Dehuida Science and Technology Park, Huoyanshan Road, Anyuan District, Ganzhou City, Jiangxi Province. P.R China.

**Equipment Under Test (EUT)**  
**EUT Name:** LED Speaker  
**All Model No.:** AAGRY100076371, AABLU100076371, AALAV100076371, AAYLW100076371  
**Test Model No.:** AAGRY100076371  
**Brand Name:** onn.  
**FCC ID:** 2AO5X-BM1020  
**Standards:** 47 CFR Part 1.1307  
47 CFR Part 2.1093  
KDB447498D01 General RF Exposure Guidance v06

**Date of Receipt:** 2021-10-19  
**Date of Test:** 2021-10-19 to 2021-10-28  
**Date of Issue:** 2021-11-03  
**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
CQASZ20211001781E	Rev.01	Initial report	2021-11-03

## 2 Contents

	Page
<b>1 VERSION</b> .....	<b>2</b>
<b>2 CONTENTS</b> .....	<b>3</b>
<b>3 GENERAL INFORMATION</b> .....	<b>4</b>
3.1 CLIENT INFORMATION.....	4
3.2 GENERAL DESCRIPTION OF EUT.....	4
3.3 GENERAL DESCRIPTION OF BT.....	4
<b>4 SAR EVALUATION</b> .....	<b>5</b>
4.1 RF EXPOSURE COMPLIANCE REQUIREMENT.....	5
4.1.1 <i>Standard Requirement</i> .....	5
4.1.2 <i>Limits</i> .....	5
4.1.3 <i>EUT RF Exposure</i> .....	6

### 3 General Information

#### 3.1 Client Information

Applicant:	GANZHOU DEHUIDA TECHNOLOGY CO., LTD
Address of Applicant:	Dehuida Science and Technology Park, Huoyanshan Road, Anyuan District, Ganzhou City, Jiangxi Province. P.R China.
Manufacturer:	GANZHOU DEHUIDA TECHNOLOGY CO., LTD
Address of Manufacturer:	Dehuida Science and Technology Park, Huoyanshan Road, Anyuan District, Ganzhou City, Jiangxi Province. P.R China.
Factory:	GANZHOU DEHUIDA TECHNOLOGY CO., LTD
Address of Factory:	Dehuida Science and Technology Park, Huoyanshan Road, Anyuan District, Ganzhou City, Jiangxi Province. P.R China.

#### 3.2 General Description of EUT

Product Name:	LED Speaker
Model No.:	AAGRY100076371, AABLU100076371, AALAV100076371, AAYLW100076371
Test Model No	AAGRY100076371
Trade Mark:	onn.
EUT Supports Radios application:	Bluetooth mode 2402-2480MHz
Hardware Version:	V5.3
Software Version:	D4A3
Sample Type:	<input type="checkbox"/> Mobile <input checked="" type="checkbox"/> Portable <input type="checkbox"/> Fix Location
EUT Power Supply:	lithium battery:DC3.7V 1500mAh, Charge by DC5.0V

#### 3.3 General Description of BT

Operation Frequency:	2402MHz~2480MHz	
Bluetooth Version:	V5.0	
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)	
Modulation Type:	GFSK, $\pi/4$ DQPSK	
Number of Channel:	79	
Transfer Rate:	1Mbps/2Mbps	
Hopping Channel Type:	Adaptive Frequency Hopping systems	
Test Software of EUT:	FCC Assist 1.0.0.2	
Antenna Type:	PCB antenna	
Antenna Gain:	BT	-0.58 dBi

## 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 BT

#### Measurement Data

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	0.730	0.5±1	1.5	1.413
Middle(2441MHz)	1.680	1.5±1	2.5	1.778
Highest(2480MHz)	2.060	2.0±1	3.0	1.995
π/4DQPSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	1.290	1.0±1	2.0	1.585
Middle(2441MHz)	2.230	2.0±1	3.0	1.995
Highest(2480MHz)	2.530	2.5±1	3.5	2.239

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)	1.290	1.0±1	2.0	1.585	0.491	3.0
Middle (2441MHz)	2.230	2.0±1	3.0	1.995	0.623	
Highest (2480MHz)	2.530	2.5±1	3.5	2.239	0.705	
Conclusion: the calculated value ≤3.0, SAR is exempted.						

Remark: The Max Conducted Peak Output Power data refer to report Report No.: CQASZ20211001781E-01