

# FCC RF EXPOSURE REPORT

**FCC ID: 2AVMZ-X1**

Test Report No.....: RF241223011-04-002

Product(s) Name.....: Portable Wireless Speaker

Model(s).....: X1 Speaker, X1-ANC (With Adjustable Noise Control ), S-236D

Trade Mark.....: N/A

Applicant.....: Dongguan Shunlang Electronics Co., Ltd

Address.....: Floor 5, Building 2, Shenxiang Industrial Park, Dabandi Cuntou  
Community, Humen town, Dongguan city, China


Receipt Date.....: 2024.12.27

Test Date.....: 2024.12.28~2025.01.02

Issued Date.....: 2025.01.02

Standards.....: CFR47 FCC Part 1: Section 1.1310;  
CFR47 FCC Part 2: Section 2.1093;  
FCC KDB Publication 447498 D04 v01;  
FCC KDB Publication 865664 D02 v01r02

Testing Laboratory.....: Shenzhen Haiyun Standard Technical Co., Ltd.

Prepared By:	Checked By:	Approved By:	
Jason Huang	Black Ding	Tim Zhang	
<i>Jason Huang</i>	<i>Black Ding</i>	<i>Tim Zhang</i>	

## History of this test report

Original Report Issue Date: 2024.01.02

- ☒ No additional attachment
- ☐ Additional attachments were issued following record

Attachment No.	Issue Date	Description

## 1.. MPE CALCULATION METHOD

### Limit

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases} \quad (\text{B.2})$$

where

$$x = -\log_{10} \left( \frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and  $f$  is in GHz,  $d$  is the separation distance (cm), and  $ERP_{20 \text{ cm}}$  is per Formula (B.1).  
The example values shown in Table B.2 are for illustration only.

Table B.2—Example Power Thresholds (mW)

Frequency (MHz)	Distance (mm)									
	5	10	15	20	25	30	35	40	45	50
300	39	65	88	110	129	148	166	184	201	217
450	22	44	67	89	112	135	158	180	203	226
835	9	25	44	66	90	116	145	175	207	240
1900	3	12	26	44	66	92	122	157	195	236
2450	3	10	22	38	59	83	111	143	179	219
3600	2	8	18	32	49	71	96	125	158	195
5800	1	6	14	25	40	58	80	106	136	169

### Calculation Method

$$ERP/EIRP = P_T + G_T - L_C$$

ERP/EIRP is the equivalent (or effective) radiated power [in same units as  $P_T$ , typically dBW, dBm, or power spectral density (psd)], relative to either a dipole antenna (ERP) or an isotropic antenna (EIRP).

$P_T$  is the transmitter output power, in dBW, dBm, or psd (power over a specified reference bandwidth).

$G_T$  is the gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP).

$L_C$  is the signal attenuation in the connecting cable between the transmitter and the antenna, in dB.

### Table for Filed Antenna

For BT

Antenna gain	Antenna Type
1.9dBi	PCB antenna

## 2.. TEST RESULTS

Worst case as below

Mode	Output power to antenna (dBm)	Ant gain (dBi)	EIRP (dBm)	ERP (dBm)	ERP(mw)	Distance (cm)	Pth (mW)
BDR+EDR	2.03	1.9	4.93	2.78	1.9	0.5	2.79

Note:

1.  $ERP = EIRP - 2.15 \text{ dB}$
2.  $1.9\text{mW} < 2.79\text{mW}$

### ➤ Conclusion

The SAR evaluation is not required

## Statement

1. The report is invalid without the official seal or special seal of Shenzhen Haiyun Standard Technology Co., Ltd. (hereinafter referred to as the unit).
2. The report is invalid without the signature of the approver.
3. The report is invalid if altered arbitrarily.
4. The report shall not be partially copied without the written approval of the unit.
5. The reported test results are only valid for the tested samples.
6. If there is any objection to the test report, it shall be submitted to the test unit within 15 days from the date of receiving the report, and the overdue shall not be accepted.

## Shenzhen Haiyun Standard Technology Co., Ltd.

Address: Room 110, 111, 112, 113, 115, 116, Block B, Jinyuan Business Building, No. 302, Xixiang Avenue, Labor Community, Xixiang Street, Baoan District, Shenzhen, China

Tel: 0755-26024411

Email: service@hy-lab.cn

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