



FCC RF EXPOSURE REPORT

| | | |
|--------------------------------|---|---|
| Applicant | : | Cerwin-Vega, Inc |
| Address of Applicant | : | 3761 S. Hill Street, Los Angeles, CA 90007 (USA) |
| Manufacturer | : | Cerwin-Vega, Inc |
| Address of Manufacturer | : | 3761 S. Hill Street, Los Angeles, CA 90007 (USA) |
| Equipment under Test | : | 1000 Watt Powered Speaker |
| Model No. | : | CVE-10, CVE-12, CVE-15, CVE-18s |
| Trade Mark | : | N/A |
| FCC ID | : | 2BCMC-GC253367 |
| Test Standard(s) | : | KDB447498 D01 General RF Exposure Guidance v06 |
| Report No. | : | DDT-RE23072822-2E06 |
| Issue Date | : | 2023/10/14 |
| Issue By | : | Dongguan Dongdian Testing Service Co., Ltd. |
| Address of Laboratory | : | Unit 2, Building 1, No. 17, Zongbu 2nd Road, Songshan Lake Park, Dongguan, Guangdong, China, 523808 |

REPORT

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Test Report Declare

| | | |
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Standard Used: KDB447498 D01 General RF Exposure Guidance v06

We Declare:

The equipment described above is assessed by Dongguan Dongdian Testing Service Co., Ltd and in the configuration assessed the equipment complied with the standards specified above. The assessed results are contained in this report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these assess.

After evaluation, our opinion is that the equipment In Accordance with above standard.

| | | | |
|-------------------------|---------------------|----------------------|-------------------------|
| Report No.: | DDT-RE23072822-2E06 | | |
| Date of Receipt: | 2023/08/03 | Date of Test: | 2023/08/03 ~ 2023/08/21 |

Prepared By:

Ella Gong

Ella Gong /Engineer

Approved By:

Damon Hu

Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

Revision History

| Rev. | Revisions | Issue Date | Revised By |
|------|---------------|------------|------------|
| --- | Initial issue | 2023/10/14 | |
| | | | |

1. General Information

1.1. Description of equipment

| | |
|--------------------------|--|
| EUT Name | : 1000 Watt Powered Speaker |
| Model Number | : CVE-10, CVE-12, CVE-15, CVE-18s |
| Difference of models | The CVE-10, CVE-12, CVE-15 models are identical in schematic and structure, only the size is different for the models. |
| | The CVE-10, CVE-12, CVE-15 are full-range speakers, and CVE-18s is subwoofer. |
| | The difference of between CVE-18s and other three models are that there is one less power amplifier circuit and different size. |
| | Therefore the test performed on the model CVE-10, and also the below 1G radiated emission and Power Line Conducted Emissions of the CVE-18s difference test were reported. |
| EUT Function Description | : Please reference user manual of this device |
| Power Supply | : AC 100V-240V, 50/60Hz |
| Radio Specification | : Bluetooth V5.3 |
| Operation Frequency | : 2402 MHz - 2480 MHz |
| Modulation | : GFSK, $\pi/4$ -DQPSK, 8DPSK |
| Data Rate | : 1 Mbps, 2 Mbps, 3 Mbps |
| Antenna | : FPC antenna, maximum PK gain: 4.64 dBi |
| Sample Number | : S23072822-28 for conductive, S23072822-29 for radiation |

Note: EUT is the abbreviation of equipment under test.

1.2. Assess laboratory

Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park, Dongguan City, Guangdong Province, China, 523808.

Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

2. RF Exposure Evaluation

2.1. Requirement

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

(B) Limits for General Population / Uncontrolled Exposure

| Frequency Range (MHz) | Electric Field Strength (E) (V/m) | Magnetic Field Strength (H) (A/m) | Power Density (S) (mW/cm ²) | Averaging Time E ² , H ² or S (minutes) |
|-----------------------|-----------------------------------|-----------------------------------|---|--|
| 0.3-1.34 | 614 | 1.63 | (100)* | 30 |
| 1.34-30 | 824/f | 2.19/f | (180/f)* | 30 |
| 30-300 | 27.5 | 0.073 | 0.2 | 30 |
| 300-1500 | | | F/1500 | 30 |
| 1500-100,000 | | | 1.0 | 30 |

Note: f = frequency in MHz ; *Plane-wave equivalent power density

2.2. Calculation method

$$E(\text{V/m}) = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } S(\text{mW/cm}^2) = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (mW)

G = EUT Antenna numeric gain (numeric)=

d = Separation distance between radiator and human body (m)

The formula can be changed to

We can change the formula to:

$$S = \frac{30 \times P \times G}{377 \times d^2} \quad \text{or, } d = \sqrt{\frac{30 \times P \times G}{377 \times S}}$$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2 m, as well as the gain of the used antenna, the RF power density can be obtained.

2.3. Estimation result

| Mode | Output power (dBm) | tune up power (dBm) | Max Output power (mW) | Antenna Gain (dBi) | Antenna Gain (linear) | MPE Values (mW/cm ²) | MPE Limit (mW/cm ²) |
|------|--------------------|---------------------|-----------------------|--------------------|-----------------------|----------------------------------|---------------------------------|
| BT | 5.99 | 7 | 5.01 | 4.64 | 2.91 | 0.0029 | 1 |

Note: The estimation distance is 20 cm

Conclusion: MPE evaluation required since transmitter power is below FCC threshold

END OF REPORT