

# TEST REPORT

Product Name : Carbon Monoxide Alarm

Model Number : ZA258A

FCC ID : 2A95R-ZA258A

Prepared for : NINGBO EVERSAFE ELECTRONICS CO.,LTD  
Address : NO. 1 Jiangjia, Dali Village, Shenzhen Town, Ninghai  
County, Ningbo City, Zhejiang Province 315614 P.R. China

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Report Number : EDG2212050091E00302R

Date(s) of Tests : December 05, 2022 to January 06, 2023

Date of Issue : February 28, 2023

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## Test Report Description

Applicant : NINGBO EVERSAFE ELECTRONICS CO.,LTD  
Address : NO. 1 Jiangjia, Dali Village, Shenzhen Town, Ninghai County, Ningbo City, Zhejiang Province 315614 P.R. China  
Manufacturer : NINGBO EVERSAFE ELECTRONICS CO.,LTD  
Address : NO. 1 Jiangjia, Dali Village, Shenzhen Town, Ninghai County, Ningbo City, Zhejiang Province 315614 P.R. China  
EUT : Carbon Monoxide Alarm  
Model Name : ZA258A  
Trademark : N/A

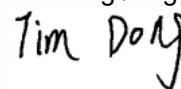
The device described above is tested by EMTEK (DONGGUAN) CO., LTD. to determine the maximum emission levels emanating from the device and the severe levels of the device can endure and its performance criterion. This report shows the EUT to be technically compliant with the FCC 1.1310 and KDB 447498 D01 General RF Exposure Guidance v07 requirements. The test results are contained in this report and EMTEK (DONGGUAN) CO., LTD. is assumed full responsibility for the accuracy and completeness of these tests.

This report applies to above tested sample only and shall not be reproduced in part without written approval of EMTEK (DONGGUAN) CO., LTD.

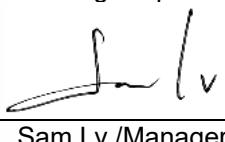
Date of Test : December 05, 2022 to January 06, 2023



Prepared by : Warren deng /Engineer



Reviewer : Tim Dong /Supervisor

  
Sam Lv /Manager

Approved & Authorized Signer : Sam Lv /Manager



## Modified Information

Version	Report No.	Revision Date	Summary
/	EDG2212050091E00302R	/	See Note



## 1. Facilities And Accreditations

### 1.1. Test Facility

All measurement facilities used to collect the measurement data are located at

-1&2F., Building 2, Zone A, Zhongda Marine Biotechnology Research and Development Base, No. 9, Xincheng Avenue, Songshanhu High-technology Industrial Development Zone, Dongguan, Guangdong, China

The sites are constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 32.

### 1.2. LABORATORY ACCREDITATIONS AND LISTINGS

#### Site Description

EMC Lab. : Accredited by CNAS, 2020.08.27  
The certificate is valid until 2024.07.05  
The Laboratory has been assessed and proved to be in compliance with CNAS/CL01:2018  
The Certificate Registration Number is L3150

#### Accredited by FCC

Designation Number: CN1300  
Test Firm Registration Number: 945551

#### Accredited by A2LA, April 05, 2021

The Certificate Registration Number is 4321.02

#### Accredited by Industry Canada

The Certificate Registration Number is CN0113

#### Name of Firm

: EMTEK (DONGGUAN) CO., LTD.

#### Site Location

: -1&2F., Building 2, Zone A, Zhongda Marine Biotechnology Research and Development Base, No. 9, Xincheng Avenue, Songshanhu High-technology Industrial Development Zone, Dongguan, Guangdong, China

## 2. General Product Information

Product:	Carbon Monoxide Alarm
Model Number:	ZA258A
Sample Number:	1#
Power Supply:	DC 3V for Battery
Test Voltage:	DC 3V
Modulation:	FSK
Frequency Range:	915.3 MHz
Max Transmit Power:	82.99 dBuV/m
Antenna:	Spring Antenna
Antenna Gain:	1.0 dBi
Temperature Range:	0°C ~ 40°C
Date of Receiver:	December 05, 2022

*Note: for more details, please refer to the User's manual of the EUT.*

### 3. Limit

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b)

Limits for Maximum Permissible Exposure (MPE)

Frequency Range(MHz)	Electric Field Strength(V/m)	Magnetic Field Strength(A/m)	Power Density(mW/cm <sup>2</sup> )	Average Time
<b>(A) Limits for Occupational/Control Exposures</b>				
300-1500	--	--	F/300	6
1500-100000	--	--	5	6
<b>(B) Limits for General Population/Uncontrol Exposures</b>				
300-1500	--	--	F/1500	6
1500-100000	--	--	1	30

Friis transmission formula:  $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot R^2)$

Where

$P_d$ = Power density in mW/cm<sup>2</sup>

$P_{out}$ =output power to antenna in mW

$G$ = Numeric gain of the antenna relative to isotropic antenna

$\pi=3.1416$

$R$ = distance between observation point and center of the radiator in cm

$P_d$  the limit of MPE, 1mW/cm<sup>2</sup>,If we know the maximum gain of the nd total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

## 4. Test Results

EUT Operating Frequency Emission Limit

$$\text{Limit} = F/1500 = 915.3/1500 = 0.61$$

$$\text{EIRP} = E + 20\log(d) - 104.7 = 82.99 + 9.54 - 104.7 = -12.17 \text{ dBm}$$

modulation	Channel Freq. (MHz)	Measured power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Antenna Gain Numeric	Evaluation result (mW/cm <sup>2</sup> )	Power density Limits (mW/cm <sup>2</sup> )
GFSK	915.3	-12.17	-12 to -11	-11	1.26	0.00002	0.61

According to KDB 447498 D01 General RF Exposure Guidance v07 and FCC 1.1310, if the Power density Limits less than or equal to 0.61 mW/cm<sup>2</sup>, then the apparatus is deemed to comply with the basic restrictions without testing.

Therefore, the EUT is deemed to fulfill the requirement without additional test.

\*\*\* End of Report \*\*\*

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