



# MAXIMUM PERMISSIBLE EXPOSURE EVALUATION REPORT

**Applicant:** Xiamen Milesight IoT Co., Ltd.

**Address:** Building C09, Software Park Phase III, Xiamen 361024, Fujian, China

**Product Name:** Radar Fall Detection Sensor

**FCC ID:** 2AYHY-VS373

**Standard(s):** 47 CFR §1.1310, 47 CFR §2.1091,  
47 CFR §15.247(i), 47 CFR §15.255(g)

**Report Number:** 2402A108617E-RF-00F

**Report Date:** 2025/3/7

The above device has been tested and found compliant with the requirement of the relative standards by Bay Area Compliance Laboratories Corp. (Dongguan).

**Reviewed By:** Pedro Yun

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**Title:** Project Engineer

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## CONTENTS

<b>DOCUMENT REVISION HISTORY .....</b>	<b>3</b>
<b>GENERAL INFORMATION .....</b>	<b>4</b>
<b>GENERAL DESCRIPTION OF EQUIPMENT UNDER TEST .....</b>	<b>4</b>
<b>RF EXPOSURE EVALUATION (MPE).....</b>	<b>5</b>
<b>RF EXPOSURE EVALUATION.....</b>	<b>5</b>
Applicable Standard.....	5
Calculation formula .....	5
Calculated Data:.....	6
<b>EXHIBIT A - EUT PHOTOGRAPHS .....</b>	<b>7</b>

**DOCUMENT REVISION HISTORY**

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2402A108617E-RF-00F	Original Report	2025/3/7

## GENERAL INFORMATION

### General Description Of Equipment under Test

<b>EUT Name:</b>	Radar Fall Detection Sensor
<b>EUT Model:</b>	VS373-915M
<b>Multiple Models:</b>	NF373-915M
<b>Rated Input Voltage:</b>	5Vdc from adapter
<b>EUT Received Date:</b>	2024/12/9
<b>EUT Received Status:</b>	Good

Note:

The multiple models are electrically identical with the test model. The difference is only the enclosure. Please refer to the declaration letter for more detail, which was provided by manufacturer.

## RF EXPOSURE EVALUATION (MPE)

### RF Exposure Evaluation

#### Applicable Standard

According to subpart 15.247(i), 15.255(g) and subpart §1.1310, systems operating under the provisions of this 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.

Limits for Maximum Permissible Exposure (MPE) (§1.1310, §2.1091)

(B) Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm <sup>2</sup> )	Averaging Time (minutes)
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f <sup>2</sup> )	30
30–300	27.5	0.073	0.2	30
300–1500	/	/	f/1500	30
1500–100,000	/	/	1.0	30

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

According to §1.1310 and §2.1091 RF exposure is calculated.

#### Calculation formula

Prediction of power density at the distance of the applicable MPE limit  
 $S = PG/4\pi R^2$  = power density (in appropriate units, e.g. mW/cm<sup>2</sup>);

P = power input to the antenna (in appropriate units, e.g., mW);

G = power gain of the antenna in the direction of interest relative to an isotropic radiator, the power gain factor, is normally numeric gain;

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm);

For simultaneously transmit system, the calculated power density should comply with:

$$\sum_i \frac{S_i}{S_{Limit,i}} \leq 1$$

**Calculated Data:**

Operation Modes	Frequency (MHz)	Antenna Gain <sup>▲</sup>		Conducted output power including Tune-up Tolerance <sup>▲</sup>		Evaluation Distance (cm)	Power Density (mW/cm <sup>2</sup> )	MPE Limit (mW/cm <sup>2</sup> )
		(dBi)	(numeric)	(dBm)	(mW)			
Lora-FHSS	902.3-927.8	-1.98	0.63	11	12.59	20.00	0.002	0.6
Lora-DTS	903-927.5	-1.98	0.63	11	12.59	20.00	0.002	0.6
WiFi 2.4G	2412-2462	-0.56	0.88	23.5	223.87	20.00	0.039	1.0
60G Radar	61010-61490	5	3.16	7.23	5.28	20.00	0.003	1.0

Note:  
For Radar 60G, Radar EIRP is 12.23dBm, Maximum Conducted Power=12.23-5=7.23dBm  
Maximum Conducted Power (dBm)=EIRP(dBm)-Gain(dBi)

Note:

The Conducted output power including Tune-up Tolerance provided by manufacturer.

**For Simultaneous transmission:**

Lora, WiFi and Radar can transmit simultaneously:

$$\sum_i \frac{S_i}{S_{\text{Limit},i}} \leq 1$$

$$= S_{\text{Lora}} / S_{\text{limit-Lora}} + S_{\text{WiFi}} / S_{\text{limit-Wifi}} + S_{\text{Radar 60G}} / S_{\text{limit-Radar 60G}}$$

$$= 0.002/0.6 + 0.039/1.0 + 0.003/1.0$$

$$= 0.045$$

$$< 1.0$$

**Result:** The device meet FCC MPE at 20 cm distance.

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## **EXHIBIT A - EUT PHOTOGRAPHS**

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Please refer to the attachment 2402A108617E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2402A108617E-RF-INP EUT INTERNAL PHOTOGRAPHS.

**\*\*\*\*\* END OF REPORT \*\*\*\*\***