MAXIMUM PERMISSIBLE EXPOSURE
EVALUATION REPORT

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

Address: **Building C09, Software Park Phase III, Xiamen 361024, Fujian, China**
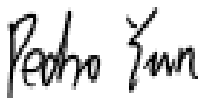
Product Name: **Radar Fall Detection Sensor**

FCC ID: **2AYHY-VS373**

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

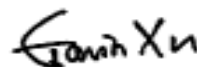**Report Number:** **2402A108617E-RF-00F**

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

Title: **Project Engineer**

Approved By: Gavin Xu

Title: **RF Supervisor**

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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

EUT Name:	Radar Fall Detection Sensor
EUT Model:	VS373-915M
Multiple Models:	NF373-915M
Rated Input Voltage:	5Vdc from adapter
EUT Received Date:	2024/12/9
EUT Received Status:	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^2)	Averaging Time (minutes)
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f²)	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^2);
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▲		Conducted output power including Tune-up Tolerance▲		Evaluation Distance (cm)	Power Density (mW/cm²)	MPE Limit (mW/cm²)
		(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:

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

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

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

$=0.045$

<1.0

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

EXHIBIT A - EUT PHOTOGRAPHS

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

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