NVLAP LAB CODE 600341-0

MAXIMUM PERMISSIBLE EXPOSURE EVALUATION REPORT

Applicant:	**AKUVOX (XIAMEN) NETWORKS CO., LTD.**
Address:	**10/F, No.56 Guanri Road, Software Park II , Xiamen 361009, China**
Product Name:	**Door Phone**
FCC ID:	**2AHCR-X910SV1**
Standard(s):	**47 CFR §1.1310, 47 CFR §2.1091, 47 CFR §15.247(i)**
Report Number:	**2502S52160E-RF-00E**
Report Date:	**2025/5/29**

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

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
1.0	2502S52160E-RF-00E	Original Report	2025/5/29

1. GENERAL INFORMATION

1.1 General Description Of Equipment under Test

EUT Name:	Door Phone
EUT Model:	X910S
Rated Input Voltage:	12~24Vdc from Adapter or 48Vdc from POE
EUT Received Date:	2025/4/11
EUT Received Status:	Good

2.RF EXPOSURE EVALUATION (MPE)

2.1. RF Exposure Evaluation

2.1.1 Applicable Standard

According to subpart 15.247(i), 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.

2.1.2 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:

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

2.1.3 Calculated Data:

Operation Modes	Frequency (MHz)	Antenna Gain▲		Conducted output power including Tune-up Tolerance▲		Evaluation Distance (cm)	Power Density (mW/cm^2)	MPE Limit (mW/cm^2)
		(dBi)	(numeric)	(dBm)	(mW)			
BLE	2402-2480	-1.4	0.72	2.0	1.58	20.00	0.0002	1.0
24G Radar	24000.03-24229.28	2.3744	1.73	-2.4344	0.57	20.00	0.0002	1.0
NFC	13.56	/	/	-41.33	0.0001	20.00	<<0.0001	0.98
For 24G Radar: Fundamental field strength is 95.14dBμV/m @ 3m = -0.06 dBm(0.99mW) EIRP. Conducted power=-0.06-2.3744dBm=-2.4344dBm. For NFC: Fundamental field strength is 53.87dBμV/m @ 3m = -41.33 dBm(0.0001mW) EIRP. EIRP(dBm)=Field Strength of Fundamental(dBμV/m)-95.2 (dB). Conducted power(dBm)= EIRP(dBm)-Antenna Gain(dBi).								

Note:

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

For Simultaneous transmission:

BLE/24G Radar/NFC can transmit simultaneously:

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

$= S_{24G\ Radar} / S_{limit\text{-}24G\ Radar} + S_{BLE} / S_{limit\text{-}BLE} + S_{NFC} / S_{limit\text{-}NFC}$

=0.0002/1.0+0.0002/1.0+0.0001/0.98

=0.0005

＜1.0

Result: The device meet FCC MPE at 20 cm distance

EXHIBIT A - EUT PHOTOGRAPHS

Please refer to the attachment 2502S52160E-RF-EXP EUT EXTERNAL PHOTOGRAPHS and 2502S52160E-RF-INP EUT INTERNAL PHOTOGRAPHS.

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