5. RF EXPOSURE EVALUATION

5.1 Maximum Permissible Exposure (MPE)

5.1.1 Applicable Standard

According to 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.

5.1.2 Limits

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/f^2)	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.

5.1.3 Measurement

Product Name:	Microwave Oven	Model:	TR923X7ZE-SS0D00
Serial Number:	284A-1	Test Date:	2023/7/14
Test Site:	966-1	Test Mode:	Operation
Tester:	Tao Zhu	Test Result:	Pass

Environmental Conditions:					
Temperature: (℃)	26.1	Relative Humidity: (%)	51	ATM Pressure: (kPa)	100.2

Test Equipment List and Details:

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
ETS	Microwave Survery Meter	1501	123654	2023/3/17	2024/3/16

**** Statement of Traceability:*** *China Certification ICT Co., Ltd (Dongguan) attests that all calibrations have been performed, traceable to National Primary Standards and International System of Units (SI).*

Radiation leakage was measured in the as-received condition with the oven door closed using a microwave leakage meter.

A 275 mL water load was placed in the center of the oven and the oven was operated at maximum output power.

☒ There was no microwave leakage exceeding a power level of 0.1mW/cm^2 observed at any point 5 cm or more from the external surface of the oven.

A maximum of 1.0 mW/cm^2 is allowed in accordance with the applicable Federal Standards. Hence, microwave leakage in the as-received condition with the oven door closed was below the maximum allowed.

For BT/Wi-Fi Function:

Calculation formula:

$$S = \frac{PG}{4\pi R^2}$$

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);

Operation Modes	Frequency (MHz)	Antenna Gain		Conducted output power including Tune-up Tolerance		Evaluation Distance	Power Density	MPE Limit
		(dBi)	(numeric)	(dBm)	(mW)	(cm)	(mW/cm^2)	(mW/cm^2)
BLE	2402-2480	2.00	1.58	6.7	4.68	20	0.0015	1
Wi-Fi	2412-2462	2.00	1.58	17.2	52.48	20	0.0165	1

Note:
1. The device contains a certified Module, FCC ID: 2ADQOMWB-SWB01.
2.The BLE/Wi-Fi Conducted output power comes from module report.
3. The BLE/Wi-Fi and Microwave can transmit simultaneously
4. Simultaneous transmitting was considerate to be compliant to the limit, since low power density for BLE/Wi-Fi and Microwave Functions.

Result: The device meets FCC MPE at **20 cm** distance

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