



SHENZHEN HUAXIA TESTING TECHNOLOGY CO., LTD

102A, 102B, Building 2, Shanghengleng New Industrial Zone, Shanghengleng Community, Dalang Street, Longhua District, Shenzhen, Guangdong, People's Republic of China, 518000

Telephone: +86-755-26648640
Fax: +86-755-26648637
Website: www.cqa-cert.com

Report Template Version: V06
Report Template Revision Date: 2026-01-30

RF Exposure Evaluation Report

Report No.: CQASZ20260501115E-02
Applicant: Shenzhen Inkbird Technology Co., Ltd
Address of Applicant: Room 1803, Guowei Building, NO.68 Guowei Road, Xianhu Community, Liantang, Luohu District, Shenzhen, China
Equipment Under Test (EUT):
Product: Sous Vide
Model No.: ISV-301-BW
Test Model No.: ISV-301-BW
Brand Name: INKBIRD
FCC ID: 2AYZD-301BW
Standards: 47 CFR Part 1.1307
47 CFR Part 1.1310
KDB447498 D01 General RF Exposure Guidance v06
Date of Receipt: 2026-06-23
Date of Test: 2026-06-23 to 2026-07-13
Date of Issue: 2026-8-7
Test Result: **PASS***

*In the configuration tested, the EUT complied with the standards specified above

Tested By: Lewis Zhou
(Lewis Zhou)

Reviewed By: Timo Lei
(Timo Lei)

Approved By: Jack Ai
(Jack Ai)



1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20260501115E-02	Rev.01	Initial report	2026-8-7

2 Contents

	Page
1 VERSION	2
2 CONTENTS	3
.....	3
3 GENERAL INFORMATION	4
3.1 CLIENT INFORMATION	4
3.2 GENERAL DESCRIPTION OF EUT	4
3.3 GENERAL DESCRIPTION OF BLE	4
4 RF EXPOSURE EVALUATION	5
4.1 RF EXPOSURE COMPLIANCE REQUIREMENT	5
4.1.1 <i>Limits</i>	5
4.1.2 <i>Test Procedure</i>	5
4.2 1.1.3 EUT RF EXPOSURE EVALUATION	6

3 General Information

3.1 Client Information

Applicant:	Shenzhen Inkbird Technology Co., Ltd
Address of Applicant:	Room 1803, Guowei Building, NO.68 Guowei Road, Xianhu Community, Liantang, Luohu District, Shenzhen, China
Manufacturer:	Shenzhen Inkbird Technology Co., Ltd
Address of Manufacturer:	Room 1803, Guowei Building, NO.68 Guowei Road, Xianhu Community, Liantang, Luohu District, Shenzhen, China
Factory:	Shenzhen Inkbird Technology Co., Ltd
Address of Factory:	5th and 6th Floor, Building 138, No. 71, Yiqing Road, Xianhu Community, Liantang Street, Luohu District, Shenzhen, Guangdong, China

3.2 General Description of EUT

Product Name:	Sous Vide
Model No.:	ISV-301-BW
Test Model No.:	ISV-301-BW
Trade Mark:	INKBIRD
Software Version:	REV2.1
Hardware Version:	REV 1.0
EUT Power Supply:	AC 120V 60Hz

3.3 General Description of BLE

Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	Bluetooth Spec 5.0
Modulation Type:	GFSK
Number of Channel:	40
Transfer Rate:	1Mbps, 2Mbps
Sample Type:	☒ Mobile ☐ Portable
Antenna Type:	PCB antenna
Antenna Gain:	1.0dBi

4 RF Exposure Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

According to FCC Part1.1310: 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 part1.1307(b)

TABLE 1—LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f ²)	6
30–300	61.4	0.163	1.0	6
300–1500			f/300	6
1500–100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
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

Friis Formula

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

Where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

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

P_d is the limit of MPE, 1 mW/cm². If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

4.1.2 Test Procedure

Software provided by client enabled the EUT to transmit and receive data at lowest, middle and highest channel individually.

4.2 1.1.3 EUT RF Exposure Evaluation

1) For BLE

Antenna Gain: 1dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.26 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

Measurement Data

GFSK mode				
Test channel	Peak Output Power (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
			(dBm)	(mW)
Lowest(2402MHz)	-0.07	0 ± 1	1	1.259
Middle(2440MHz)	1.95	2 ± 1	3	1.995
Highest(2480MHz)	1.32	1.5 ± 1	2.5	1.778

The worst case:

Maximum tune-up Power (mW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
1.995	1	0.0005777356	1.0	PASS

Note: 1) Refer to report No. CQASZ20260501115E-01 for EUT test Max Conducted Peak Output Power value.

$$2) P_d = (P_{out} * G) / (4 * \pi * R^2) = (1.995 * 1.46) / (4 * 3.1416 * 20^2) = 0.0005777356$$

2) For contain ID 2.4G WIFI

Antenna Gain: 0.88dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.22 in linear scale

Output Power Into Antenna & RF Exposure Evaluation Distance:

802.11G mode			
Test channel	AV Output Power (dBm)	Maximum tune-up Power	
		(dBm)	(mW)
Maximum Average Power(2412Mhz)	20.88	20.88	122.46

The worst case:

Maximum tune-up Power (mW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
122.46	0.88	0.024	1.0	PASS

Note: 1) Refer to report for EUT test Max Conducted AV Output Power value.

2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (122.46 * 1.22) / (4 * 3.1416 * 20^2) = 0.024$

3) For contain ID 5.2G WIFI

Antenna Gain: -0.34dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 0.92 in linear scale

Output Power Into Antenna & RF Exposure Evaluation Distance:

802.11A mode			
Test channel	AV Output Power (dBm)	Maximum tune-up Power	
		(dBm)	(mW)
Maximum Average Power(5180Mhz)	17.66	17.66	58.34

The worst case:

Maximum tune-up Power (mW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
58.34	-0.34	0.012	1.0	PASS

Note: 1) Refer to report for EUT test Max Conducted AV Output Power value.

2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (58.34 * 0.92) / (4 * 3.1416 * 20^2) = 0.012$

4) For contain ID 5.3G WIFI

Antenna Gain: 0.12dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.03 in linear scale

Output Power Into Antenna & RF Exposure Evaluation Distance:

802.11A mode			
Test channel	AV Output Power (dBm)	Maximum tune-up Power	
		(dBm)	(mW)
Maximum Average Power(5260Mhz)	18.12	18.12	64.86

The worst case:

Maximum tune-up Power (mW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
64.86	0.12	0.013	1.0	PASS

Note: 1) Refer to report for EUT test Max Conducted AV Output Power value.

2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (64.86 * 1.03) / (4 * 3.1416 * 20^2) = 0.013$

5) For contain ID 5.5G WIFI

Antenna Gain: 1.53dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.42 in linear scale

Output Power Into Antenna & RF Exposure Evaluation Distance:

802.11A mode			
Test channel	AV Output Power (dBm)	Maximum tune-up Power	
		(dBm)	(mW)
Maximum Average Power(5500Mhz)	19.53	19.53	89.74

The worst case:

Maximum tune-up Power (mW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
89.74	1.53	0.018	1.0	PASS

Note: 1) Refer to report for EUT test Max Conducted AV Output Power value.

2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (89.74 * 1.42) / (4 * 3.1416 * 20^2) = 0.018$

6) For contain ID 5.8G WIFI

Antenna Gain: 1.07dBi

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 1.28 in linear scale

Output Power Into Antenna & RF Exposure Evaluation Distance:

802.11A mode			
Test channel	AV Output Power (dBm)	Maximum tune-up Power	
		(dBm)	(mW)
Maximum Average Power(5745Mhz)	19.07	19.07	80.72

The worst case:

Maximum tune-up Power (mW)	Antenna Gain (dBi)	Power Density at R = 20 cm (mW/cm ²)	Limit	Result
80.72	1.07	0.016	1.0	PASS

Note: 1) Refer to report for EUT test Max Conducted AV Output Power value.

2) $P_d = (P_{out} * G) / (4 * \pi * R^2) = (80.72 * 1.28) / (4 * 3.1416 * 20^2) = 0.016$

Simultaneous transmission:

MPE ratios(BLE)+MPE ratios(contain ID 2.4G WiFi)+MPE ratios(contain ID 5.2G WiFi)

+MPE ratios(contain ID 5.3G WiFi)+MPE ratios(contain ID 5.5G WiFi)+MPE ratios(contain ID 5.8G WiFi)

$= 0.0005777356/1 + 0.024/1 + 0.012/1 + 0.013/1 + 0.018/1 + 0.016/1$

$= 0.083577736 \leq 1$

*** END OF REPORT ***