



RF Exposure Evaluation Report

Application No.: DNT2604141488R02820-04606
Applicant: Shenzhen YuanRui Information Technology Co.,Ltd
Address of Applicant: Room 201,A Bldg,NO.1QianWan 1st Road ShenZhen Hong Kong
Cooperation Zone Shenzhen China
EUT Description: Smart Ice Maker
Model No.: HZB-12/H-W
Additional Model(s): /
FCC ID: 2BCBU-HZB-12
Power supply AC 120V/60Hz
Trade Mark: Crownful
47 CFR Part 2.1091
Standards: FCC KDB 447498 D01 v06
Date of Receipt: 2026/04/14
Date of Test: 2026/04/15 to 2026/05/07
Date of Issue: 2026/05/14
Test Result: PASS

Prepared By: Calk. Lin (Testing Engineer)

Reviewed By: Wayne. Lin (Project Engineer)

Approved By: Heise Shen (Manager)



Note: If there is any objection to the results in this report, please submit a written inquiry to the company within 15 days from the date of receiving the report. The test report is effective only with both signature and specialized stamp, and is issued by the company in accordance with the requirements of the "Conditions of Issuance of Test Reports" printed in the attached page. Unless otherwise stated, the results presented in this report only apply to the samples tested this time. Partial reproduction of this report is not allowed unless approved by the company in writing.

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Report Revise Record

Report Version	Revise Time	Issued Date	Valid Version	Notes
V1.0	/	May 14, 2026	Valid	Original Report



Contents

1 GENERAL INFORMATION4

1.1 TEST LOCATION4

1.2 GENERAL DESCRIPTION OF EUT4

1.3 TEST FACILITY5

2 RF EXPOSURE EVALUATION6

2.1 RF EXPOSURE COMPLIANCE REQUIREMENT6

2.1.1 *Limits*6

2.1.2 *Test Procedure*7

2.1.3 *EUT RF Exposure Evaluation*7



1 General Information

1.1 Test Location

Company:	Guangdong DN Testing Co., Ltd
Address:	No. 1, West Fourth Street, South Xinfu Road, Wusha Liwu, Chang 'an Town, Dongguan City, Guangdong P.R.China
Test engineer:	Gali Lin

1.2 General Description of EUT

Manufacturer:	Shenzhen Faray InfoTech Co.,Ltd
Address of Manufacturer:	Room 401, Block A, Xichuang Technology Building, No. 7025, Liuxian Avenue, Xili Community, Xili Street, Nanshan District, Shenzhen China
Factory:	Ningbo Hicon Industry Technology Co.,Ltd.
Address of Factory:	No.55, 4th Binhai Road, Qianwan New Area, Ningbo, Zhejiang, P.R.China, 315324
EUT Description:	Smart Ice Maker
Model No.:	HZB-12/H-W
Additional Model(s):	/
Power Supply:	AC 120V/60Hz
Trade Mark:	Crownful
Hardware Version:	V1.0
Software Version:	V1.0
Chip Type:	ESP32-C3
Serial number	PR2604141488R02820
Sample Type:	☐ Portable Device, ☐ Module, ☒ Mobile Device
Antenna Type:	☐ External, ☒ Integrated
Antenna Ports:	☒ Ant 1, ☐ Ant 2, ☐ Ant 3
Antenna Gain:	☒ Provided by applicant 4.16dBi
Note: *Since the above data and/or information is provided by the client relevant results or conclusions of this report are only made for these data and/or information, DNT is not responsible for the authenticity, integrity and results of the data and information and/or the validity of the conclusion.	



1.3 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

Lab A:

• **FCC, USA**

Designation Number: CN1348

• **A2LA (Certificate No. 7050.01)**

GUANGDONG DN TESTING CO., LTD. is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 7050.01.

• **Innovation, Science and Economic Development Canada**

GUANGDONG DN TESTING CO., LTD. EMC Laboratory has been recognized by ISED as an accredited testing laboratory. CAB identifier is CN0149.

IC#: 30755.



2 RF Exposure Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 Limits

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
*=Plane-wave equivalent power density
RF exposure compliance will need to be determined with respect to 1.1307(c) and (d) of the FCC rules. The emissions should be within the limits at 300kHz in Table 1 of 1.1310(use the 300kHz limits for 150kHz:614V/m,1.63A/m).

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.



2.1.2 Test Procedure

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

2.1.3 EUT RF Exposure Evaluation

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 2.0 / 2.0 in linear scale.

Output Power Into Antenna & RF Exposure Evaluation Distance:

This confirmed that the device comply with MPE limit.

Test Mode	Antenna	Freq(MHz)	Power [dBm]
11B	Ant1	2412	12.73
		2437	14.55
		2462	16.39
11G	Ant1	2412	15.67
		2437	17.52
		2462	18.84
11N20SISO	Ant1	2412	15.72
		2437	17.15
		2462	18.44
11N40SISO	Ant1	2422	19.09
		2437	19.21
		2452	19.42

The Worst Mode	Antenna	output power (dBm)	Target power (dBm)	MAX Target power (dBm)	Antenna gain		Power Density (S) (mW /cm²)	Limited of Power Density (S) (mW /cm²)	Test Result	Distance (cm)
					(dBi)	(Linear)				
2.4G Band										
11N40 SISO	Ant1	19.42	19±1	20	4.16	2.606	0.05185	1	Complies	20

The End Report