

RF Exposure Evaluation Report

Product : Waterdrop Water Detector
Trade mark : Waterdrop
Model/Type reference : WD-WHMD-1
Serial Number : S/N
Report Number : EED32P81980402
FCC ID : 2BD3GWD-WHMD-1
Date of Issue : Dec. 26, 2023
Test Standards : 47 CFR Part 1.1307
47 CFR Part 1.1310
KDB 447498 D04 Interim General RF
Exposure Guidance v01
Test result : PASS

Prepared for:

Qingdao Ecopure Filter Co., Ltd.
No. 13, Yishengbai Road Environmental Protection Industry Zone Jimo,
Qingdao 266201, China

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China
TEL: +86-755-3368 3668
FAX: +86-755-3368 3385

Compiled by:

mark.chen.

Mark Chen

Reviewed by:

Frazer. Li

Frazer Li

Approved by:

Aaron Ma

Aaron Ma

Date:

Dec. 26, 2023



Check No.: 7527061223

2 Contents

	Page
1 COVER PAGE	1
2 CONTENTS	2
3 GENERAL INFORMATION	3
3.1 CLIENT INFORMATION	3
3.2 GENERAL DESCRIPTION OF EUT	3
3.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD	3
3.4 TEST LOCATION	4
3.5 DEVIATION FROM STANDARDS	4
3.6 ABNORMALITIES FROM STANDARD CONDITIONS	4
3.7 OTHER INFORMATION REQUESTED BY THE CUSTOMER	4
4 SAR EVALUATION	5
4.1 RF EXPOSURE COMPLIANCE REQUIREMENT	5
4.1.1 Limits	5
4.1.2 Test Procedure	5
4.1.3 EUT RF Exposure Evaluation	6

3 General Information

3.1 Client Information

Applicant:	Qingdao Ecopure Filter Co., Ltd.
Address of Applicant:	No. 13, Yishengbai Road Environmental Protection Industry Zone Jimo, Qingdao 266201, China
Manufacturer:	Qingdao Ecopure Filter Co., Ltd.
Address of Manufacturer:	No. 13, Yishengbai Road Environmental Protection Industry Zone Jimo, Qingdao 266201, China
Factory	Qingdao Ecopure Filter Co., Ltd.
Address of Factory:	No. 13, Yishengbai Road Environmental Protection Industry Zone Jimo, Qingdao 266201, China

3.2 General Description of EUT

Product Name:	Waterdrop Water Detector
Model No.(EUT):	WD-WHMD-1
Trade Mark:	Waterdrop

3.3 Product Specification subjective to this standard

Operation Frequency:	915MHz
Number of Channel:	1
Modulation type:	OOK
Antenna Type:	PCB Antenna
Test Software of EUT:	RF Test
Test Power Grade:	Default
Power Supply:	DC 3V
Test Voltage:	DC 3V
Sample Received Date:	Dec. 06, 2023
Sample tested Date:	Dec. 06, 2023 to Dec. 18, 2023
Remark:	Company Name and Address shown on Report, the sample(s) and sample Information was/ were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.

3.4 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

3.5 Deviation from Standards

None.

3.6 Abnormalities from Standard Conditions

None.

3.7 Other Information Requested by the Customer

None.

4 SAR Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

The SAR-based exemption formula of § 1.1307(b)(3)(i)(B), repeated here as Formula (B.2), applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power or effective radiated power (ERP), whichever is greater, of less than or equal to the threshold P_{th} (mW).

This method shall only be used at separation distances from 0.5 cm to 40 cm and at frequencies from 0.3 GHz to 6 GHz (inclusive). P_{th} is given by Formula

$$P_{th} \text{ (mW)} = \begin{cases} ERP_{20 \text{ cm}} (d/20 \text{ cm})^x & d \leq 20 \text{ cm} \\ ERP_{20 \text{ cm}} & 20 \text{ cm} < d \leq 40 \text{ cm} \end{cases}$$

where

$$x = -\log_{10} \left(\frac{60}{ERP_{20 \text{ cm}} \sqrt{f}} \right)$$

and f is in GHz, d is the separation distance (cm), and $ERP_{20 \text{ cm}}$ is per Formula (B.1).

$$P_{th} \text{ (mW)} = ERP_{20 \text{ cm}} \text{ (mW)} = \begin{cases} 2040f & 0.3 \text{ GHz} \leq f < 1.5 \text{ GHz} \\ 3060 & 1.5 \text{ GHz} \leq f \leq 6 \text{ GHz} \end{cases} \quad (\text{B.1})$$

The 1 mW Blanket Exemption of § 1.1307(b)(3)(i)(A) applies for single fixed, mobile, and portable RF sources with available maximum time-averaged power of no more than 1 mW, regardless of separation distance.

4.1.2 Test Procedure

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

4.1.3 EUT RF Exposure Evaluation

For 900MHz:

Frequency (MHz)	Field strength of the fundamental signal (dBuV/m@3m)	ERP (dBm)	ERP (mW)	Limit (mW)	Result
915	91.72	-5.66	0.2716	≤1866.6	PASS

Note:

- ①EIRP=conducted power+antenna gain;
 - ②ERP=EIRP-2.15;
 - ③EIRP(dBm) = Field strength of the fundamental signal(dBuV/m@3m) – 95.23;
 - ④ERP(mW) = $10^{(ERP \text{ (dBm)}/10)}$;
 - ⑤The estimation distance is 20cm;
 - ⑥The test data please refer to the report of EED32P81980401.
- Only the worst case data was recorded in the report.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CTI, this report can't be reproduced except in full.

*** End of Report ***