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RF Exposure Evaluation Report

Report No.: CQASZ20250400840E-03

Applicant: DREO PTE. LTD.

Address of Applicant: 112 ROBINSON ROAD, #03-01, ROBINSON 112, SINGAPORE 068902

Equipment Under Test (EUT):

EUT Name: Smart Tower Fan

Model No.: DR-HTF007S, DWTF07S

Test Model No.: DR-HTF007S

Brand Name: DREO, DREO HOME

FCC ID: 2A3SY-HTF007

Standards: 47 CFR Part 1.1307

47 CFR Part 1.1310

447498 D04 Interim General RF Exposure Guidance v01

Date of Receipt: 2025-04-16

Date of Test: 2025-04-16 to 2025-04-28

Date of Issue: 2025-05-07

Test Result: PASS*

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

Lewis Zhou
Tested By: _____

(Lewis Zhou)

Timo Lei
Reviewed By: _____

(Timo Lei)

Jack Ai
Approved By: _____

(Jack Ai)



1 Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20250400840E-03	Rev.01	Initial report	2025-05-07

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
3.4 GENERAL DESCRIPTION OF 2.4G WIFI CLASSIC	5
4 MPE EVALUATION.....	6
4.1 RF EXPOSURE COMPLIANCE REQUIREMENT	6
4.1.1 <i>Limits</i>	6
4.1.2 <i>Test Procedure</i>	6
4.1.3 <i>EUT RF Exposure</i>	7

3 General Information

3.1 Client Information

Applicant:	DREO PTE. LTD.
Address of Applicant:	112 ROBINSON ROAD, #03-01, ROBINSON 112, SINGAPORE 068902
Manufacturer:	Shenzhen Hesung Innovation Technology Co., LTD
Address of Manufacturer:	26th Floor, Building A7, Chuangzhiyuncheng, Liuxian Avenue, Nanshan District, Shenzhen
Factory:	QUNYOU (CAMBODIA) ELECTRIC APPLIANCE CO.,LTD.
Address of Factory:	Giga SEZ, St. National Road No. 1, Daeum Pou Village., Kandeing Reay Commune., Svay Teab District., SVAY RIENG PROVINCE

3.2 General Description of EUT

Product Name:	Smart Tower Fan
Model No.:	DR-HTF007S, DWTF07S
Test Model No.:	DR-HTF007S
Trade Mark:	DREO, DREO HOME
Software Version:	1.0.59
Hardware Version:	PAI-051 V1.2 20210824
EUT Power Supply:	Power supply AC120V

3.3 General Description of BLE

Operation Frequency:	2402MHz~2480MHz
Bluetooth Version:	Bluetooth Spec 5.2
Modulation Type:	GFSK
Number of Channel:	40
Transfer Rate:	1Mbps
Sample Type:	<input checked="" type="checkbox"/> Mobile <input type="checkbox"/> Portable
Antenna Type:	FPC antenna
Antenna Gain:	5.6dBi

3.4 General Description of 2.4G WIFI Classic

Operation Frequency:	2412MHz~2462MHz
Type of Modulation:	IEEE for 802.11b: DSSS(CCK,DQPSK,DBPSK) IEEE for 802.11g : OFDM(64QAM, 16QAM, QPSK, BPSK) IEEE for 802.11n(HT20) : OFDM (64QAM, 16QAM, QPSK, BPSK)
Number of Channel:	IEEE 802.11b/g, IEEE 802.11n HT20: 11 Channels
Channel Separation:	5MHz
Transfer Rate:	IEEE for 802.11b: 1Mbps/2Mbps/5.5Mbps/11Mbps IEEE for 802.11g : 6Mbps/9Mbps/12Mbps/18Mbps/24Mbps/36Mbps/48Mbps/54Mbps IEEE for 802.11n(HT20) : 6.5Mbps/13Mbps/19.5Mbps/26Mbps/39Mbps/52Mbps/58.5Mbps/65Mbps
Sample Type:	<input checked="" type="checkbox"/> Mobile <input type="checkbox"/> Portable
Antenna Type:	FPC antenna
Antenna Gain:	5.6dBi

Model DR-HTF007S, DWTF07S: Only the product brand were different

Their electrical circuit design, layout, components used and internal wiring are identical

Note:

The above parameters will directly affect the test results. The information is provided by the applicant.

4 MPE Evaluation

4.1 RF Exposure Compliance Requirement

4.1.1 Limits

The table applies to any RF source (i.e., single fixed, mobile, and portable transmitters) and specifies power and distance criteria for each of the five frequency ranges used for the MPE limits. These criteria apply at separation distances from any part of the radiating structure of at least $\lambda/2\pi$. The thresholds are based on the general population MPE limits with a single perfect reflection, outside of the reactive near-field, and in the main beam of the radiator. For mobile devices that are not exempt per Table B.1 [Table 1 of § 1.1307(b)(1)(i)(C)] at distances from 20 cm to 40 cm and in 0.3 GHz to 6 GHz, evaluation of compliance with the exposure limits in § 1.1310 is necessary if the ERP of the device is greater than ERP_{20cm} in Formula (B.1) [repeated from § 2.1091(c)(1) and § 1.1307(b)(1)(i)(B)].

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

If the ERP is not easily obtained, then the available maximum time-averaged power may be used (i.e., without consideration of ERP only if the physical dimensions of the radiating structure(s) do not exceed the electrical length of $\lambda/4$ or if the antenna gain is less than that of a half-wave Dipole).

SAR-based exemptions are constant at separation distances between 20 cm and 40 cm to avoid discontinuities in the threshold when transitioning between SAR-based and MPE-based exemption criteria at 40 cm, considering the importance of reflections.

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**1) For BLE****Measurement Data**

Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	GFSK mode	
				(dBm)	(mW)
Lowest(2402MHz)	13.83	11.68	12.0±1	13	19.95
Middle(2440MHz)	14.49	12.34	12.5±1	13.5	22.39
Highest(2480MHz)	13.18	11.03	11.5±1	12.5	17.78

The ERP of this product is less than 3060mW

Note: 1) Refer to report No. CQASZ20250400840E-01 for EUT test Max Conducted Peak Output Power value.
2) EUT's module is more than 20cm away from the human body.

2) For 2.4G WIFI Classic
Measurement Data

11B mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Lowest(2412MHz)	17.02	14.87	15.0±1	39.81	5.46
Middle(2437MHz)	17.47	15.32	15.5±1	44.67	5.79
Highest(2462MHz)	15.60	13.45	13.5±1	28.18	4.60
11G mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Lowest(2412MHz)	15.31	13.16	13.5±1	28.18	4.60
Middle(2437MHz)	15.55	13.40	13.5±1	28.18	4.60
Highest(2462MHz)	13.61	11.46	11.5±1	17.78	3.65
11N20 mode					
Test channel	EIRP (dBm)	ERP (dBm)	Tune up tolerance (dBm)	Maximum tune-up Power	
				(dBm)	(mW)
Lowest(2412MHz)	15.63	13.48	13.5±1	28.18	4.60
Middle(2437MHz)	15.88	13.73	14.0±1	31.62	4.87
Highest(2462MHz)	13.89	11.74	12.0±1	19.95	3.87

The ERP of this product is less than 3060mW

Note: 1) Refer to report No. CQASZ20250400840E-02 for EUT test Max Conducted AV Output Power value.
2) EUT's module is more than 20cm away from the human body.

*** END OF REPORT ***