



TEST REPORT

Reference No...... : WTF21F03023032W002
FCC ID : 2AZKD-20005
Applicant..... : Guangdong Titan Smart Electrical Appliance Co., Ltd.
Address..... : 3rd Fl. Building No.2, 1 Xinhua Road, Sanjiao Town, Zhongshan, Guangdong, China
Manufacturer : The same as above
Address..... : The same as above
Product Name..... : Aroma Diffuser
Trade Mark..... : Hubble, Aromacare
Model No...... : Hubble Mist, 20005
Standards..... : FCC CFR47 Part 15 Subpart C (Section 15.247): 2019
Date of Receipt sample : 2021-04-02
Date of Test : 2021-04-25
Date of Issue..... : 2021-04-27
Test Result..... : **Pass**

Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

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1 Revision History

Test Report No.	Date of Issue	Description	Status
WTF21F03023032W002	2021-04-27	Original	Valid

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3 General Information

3.1 General Description of E.U.T

Product Name	Aroma Diffuser
Model No.	Hubble Mist, 20005
Model Description	The two models are identical except for brand and model name. The trade mark for Hubble Mist is Hubble, and the trade mark for 20005 is Aromacare. Therefore the full tests were performed on model 20005.
Rated Voltage.....	DC 24V, 650mA
Battery Capacity	---
Power Adapter	GQ12-240065-AU Input: AC 100-240V, 50/60Hz, 0.4A Max; Output: DC 24V, 650mA

3.2 Technical Characteristics of EUT

Bluetooth Version.....	V5.0(BR+EDR mode)
Frequency Range	2402-2480MHz
Max. RF Output Power	1.693dBm (Conducted)
Modulation	GFSK , $\pi/4$ DQPSK
Data Rate	1Mbps, 2Mbps
Quantity of Channels	79
Channel Separation.....	1MHz
Type of Antenna	PCB Printed Antenna
Antenna Gain	-0.58 dBi
Lowest Oscillation.....	24MHz



4 MAXIMUM PERMISSIBLE EXPOSURE (MPE)

4.1 Standard Applicable

According to §1.1307(b)(1) and KDB 447498 D01 General RF Exposure Guidance v06, system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

(a) Limits for Occupational / Controlled Exposure

Frequency range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Times E ² , H ² or S (minutes)
0.3-3.0	614	1.63	(100)*	6
3.0-30	1842/f	4.89/f	(900/f)*	6
30-300	61.4	0.163	1.0	6
300-1500	/	/	F/300	6
1500-100000	/	/	5	6

(b) Limits for General Population / Uncontrolled Exposure

Frequency range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Times E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	F/1500	30
1500-100000	/	/	1	30

Note: f = frequency in MHz; * = Plane-wave equivalents power density



4.2 MPE Calculation Method

$$S = (30 \cdot P \cdot G) / (377 \cdot R^2)$$

S = power density (in appropriate units, e.g., mW/cm²)

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 (in appropriate units, e.g., cm)

4.3 MPE Calculation Result

Prediction distance (mm)	Prediction frequency (MHz)	Antenna Gain (dBi)	Numeric gain	Maximum Tune-up output power (dBm)	Maximum peak output power (mW)	PD (mW/cm ²)	Limit (mW/cm ²)
>200	2402	-0.58	0.87	1.693	1.477	0.0002571	1.0

Result: Pass

=====End of Report=====

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