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RF Exposure Evaluation Declaration

Report No.: S20220422226603

Issue Date: 06-01-2022

Applicant: HONBIKE INC
Address: 16192 Coastal Highway, city of Lewes, County of
Sussex, state of Delaware 19958, United States
FCC ID: 2A39V-HF01
Application Type: Certification
Product: E-BIKE
Model No.: HF01
FCC Classification: Digital Transmission System (DTS)
FCC Rule Part(s): Part 15 Subpart C (15.247)
Test Procedure(s): ANSI C63.10-2013, KDB 558074 D01v05r02
Test Date: May 01~ May 12, 2022

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Senior Test Engineer
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(Zeming Zhang)
Engineer Manager



The test results relate only to the samples tested.

This equipment has been shown to be capable of compliance with the applicable technical standards as indicated in the measurement report and was tested in accordance with the measurement procedures specified in KDB 558074 D01. Test results reported herein relate only to the item(s) tested.

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The test report must not be used by the client to claim product certifications, approval, or endorsement by NVLAP, NIST or any agency of U.S. Government.

Revision History

Report No.	Version	Description	Issue Date
S20220422226603	Rev. 01	/	06-01-2022

1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name:	E-BIKE
Model Name:	HF01
Additional Model:	/
Ratings :	Bike Adapter: Input:100-240V~,50/60Hz,2A Output:DC 42V,1.7A Bike:DC 36V,12A,250W Wireless module:DC 3.3V
Bluetooth Version:	5.0

1.2. Product Specification Subjective to this Report

Bluetooth Frequency	2402~2480MHz
Bluetooth Version	5.0
Type of modulation	GFSK
Data Rate	1Mbps&2Mbps
Antenna Type:	PCB Antenna
Antenna Gain:	0dBi

2. RF Exposure Evaluation

2.1. Limits

According to FCC 1.1310: 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 1.1307(b)

LIMITS FOR MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500	--	--	f/300	6
1500-100,000	--	--	5	6
(B) Limits for General Population/ Uncontrolled Exposures				
300-1500	--	--	f/1500	6
1500-100,000	--	--	1	30

f= Frequency in MHz

Calculation Formula: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2)$

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, 1mW/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.

2.2. Test Result of RF Exposure Evaluation

Product	E-BIKE
Test Item	RF Exposure Evaluation

Test Mode	Frequency Band (MHz)	Maximum PK Output Power (dBm)	Power Density at R = 20 cm (mW/cm ²)	Limit (mW/cm ²)
BLE	2402 ~ 2480	4.40	0.00055	1
Note: $P_d = (P_{out} \cdot G) / (4 \cdot \pi \cdot r^2) = (10^{(4.26+0)/10}) / (4 \cdot 3.1416 \cdot 20^2) = 0.00055 \text{ mW/cm}^2$				

CONCULISON:

The Max Power Density at R (20 cm) = 0.00055mW/cm² < 1mW/cm².

So the EUT complies with the requirement.

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