# FCC TEST REPORT

# FCC ID:2BAZQ-BBL2023

| | | |
|---|---|---|
| Product | : | Safety Lighting Systems |
| Model Name | : | BBL_BrightBird , EarlyBird |
| Brand | : | BASIN BOAT LIGHTING |
| Report No. | : | PTC23032806201E-FC03 |

**Prepared for**

Basin Boat Lighting, LLC

425 BLACKWATER RIVER DRIVE LAFAYETTE Louisiana, 70508, United States

**Prepared by**

Precise Testing & Certification Co., Ltd.

Building 1, No. 6, Tongxin Road, Dongcheng Street, Dongguan, Guangdong, China

## TEST RESULT CERTIFICATION

| | | |
|---|---|---|
| Applicant's name | : | Basin Boat Lighting, LLC |
| Address | : | 425 BLACKWATER RIVER DRIVE LAFAYETTE Louisiana, 70508, United States |
| Manufacture's name | : | Basin Boat Lighting, LLC |
| Address | : | 425 BLACKWATER RIVER DRIVE LAFAYETTE Louisiana, 70508, United States |
| Product name | : | Safety Lighting Systems |
| Model name | : | BBL_BrightBird , EarlyBird |
| Test procedure | : | KDB 447498 D01 General RF Exposure Guidance v06 |
| Test Date | : | Apr. 07, 2023 to Apr. 22, 2023 |
| Date of Issue | : | May. 22, 2023 |
| Test Result | : | PASS |

This device described above has been tested by PTC, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

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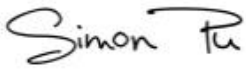
Test Engineer:



Simon Pu / Engineer

Technical Manager:

Ronnie Liu / Manager

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# 2 Test Summary

| Test Items | Test Requirement | Result |
|---|---|---|
| Maximum Permissible Exposure (Exposure of Humans to RF Fields) | 1.1307(b)(1) | PASS |
| Remark: | | |
| N/A: Not Applicable | | |

# 3 General Information

## 3.1 General Description of E.U.T.

| | | |
|---|---|---|
| Product Name | : | Safety Lighting Systems |
| Model Name | : | BBL_BrightBird |
| Additional model | : | EarlyBird |
| Specification | : | BT 5.0 BR+BLE |
| Operation Frequency | : | 2402-2480MHz |
| Number of Channel | : | 79 channels for BR<br>40 channels for BLE |
| Type of Modulation | : | GFSK For DSS |
| Antenna installation | : | PCB antenna |
| Antenna Gain | : | 2.85 dBi |
| Rated Power Supply | : | Input:  DC 12V |
| Test Power Supply | : | DC 12V |
| Hardware Version | : | N/A |
| Software Version | : | N/A |
| Model difference | : | The models in the series differ only by main LED size (60W and 120W) and components, The tested model contains all components. |

# 4 RF Exposure

Test Requirement : FCC Part 1.1307(b)(1)

Evaluation Method : FCC Part 2.1091

## 4.1 Requirements

Systems operating under the provisions of this section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy levels in excess limit for maximum permissible exposure. In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as a mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device.

## 4.2 The procedures / limit

(A) Limits for Occupational / Controlled Exposure

| Frequency Range | Electric Field | Magnetic Field | Power Density (S) | Averaging Time |
|---|---|---|---|---|
| 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 |
| 1500-100,000 | | | 5 | 6 |

(B) Limits for General Population / Uncontrolled Exposure

| Frequency Range | Electric Field | Magnetic Field | Power Density (S) | Averaging Time |
|---|---|---|---|---|
| 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 |
| 1500-100,000 | | | 1.0 | 30 |

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

## 4.3 MPE Calculation Method

E (V/m) = $\frac{\sqrt{30 \times P \times G}}{d}$ Power Density: Pd (W/m²) = $\frac{E^2}{377}$

E = Electric field (V/m)

P = Peak RF output power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

The formula can be changed to

Pd = $\frac{30 \times P \times G}{377 \times d^2}$

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained

## 4.4 Test Result

| Item | Antenna Gain (numeric) | Max. Peak Output Power (dBm) | Tune up tolerance (dBm) | Max Tune Up Power (mW) | Power Density (mW/cm2) | Limit of Power Density (mW/cm2) | Result |
|---|---|---|---|---|---|---|---|
| BR | 1.93 | -7.81 | -7.81±1 | 0.208449 | 0.000041 | 1 | Pass |
| BLE | 1.93 | -5.52 | -5.52±1 | 0.353183 | 0.000070 | 1 | Pass |

******THE END REPORT******