

Maximum Permissible Exposure Report

FCC ID: UFOOPN3002I

Report No. : BTL-FCCP-2-2106T027
Equipment : Bluetooth Barcode Scanner
Model Name : OPN-3002i
Brand Name : OPTICON
Applicant : OPTOELECTRONICS Co., Ltd.
Address : 4-12-17, Tsukagoshi, Warabi-shi, Saitama Pref., 335-0002 Japan
Manufacturer : OPTOELECTRONICS Co., Ltd.
Address : 4-12-17, Tsukagoshi, Warabi-shi, Saitama Pref., 335-0002 Japan

Standard(s) : FCC CFR Title 47, Part 2 (2.1091)
FCC Guidelines for Human Exposure IEEE C95.1

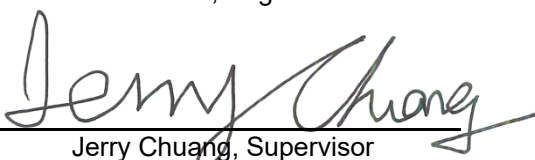
Date of Receipt : 2021/6/29
Date of Test : 2021/6/29 ~ 2022/4/27
Issued Date : 2022/6/17

The above equipment has been tested and found in compliance with the requirement of the above standards by BTL Inc.

Prepared by


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Approved by


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Declaration

BTL represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with standards traceable to international standard(s) and/or national standard(s).

BTL's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. **BTL** shall have no liability for any declarations, inferences or generalizations drawn by the client or others from **BTL** issued reports.

This report is the confidential property of the client. As a mutual protection to the clients, the public and ourselves, the test report shall not be reproduced, except in full, without our written approval.

BTL's laboratory quality assurance procedures are in compliance with the **ISO/IEC 17025** requirements, and accredited by the conformity assessment authorities listed in this test report.

BTL is not responsible for the sampling stage, so the results only apply to the sample as received.

The information, data and test plan are provided by manufacturer which may affect the validity of results, so it is manufacturer's responsibility to ensure that the apparatus meets the essential requirements of applied standards and in all the possible configurations as representative of its intended use.

Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

Please note that the measurement uncertainty is provided for informational purpose only and are not use in determining the Pass/Fail results.

REVISION HISTORY

Report No.	Version	Description	Issued Date	Note
BTL-FCCP-2-2106T027	R00	Original Report.	2022/6/17	Valid

MPE CALCULATION METHOD:

Calculation Method of RF Safety Distance:

$$S = \frac{PG}{4\pi^2} = \frac{EIRP}{4\pi^2}$$

where:

S = power density

P = power input to the antenna

G = power gain of the antenna in the direction of interest relative to an isotropic radiator

R = distance to the center of radiation of the antenna

Table for Filed Antenna:

Ant.	Brand	Model Name	Antenna Type	Connector	Gain (dBi)
1	OPTOELECTRONICS CO., LTD.	2.4G PCB Antenna	PCB Layout	N/A	-0.86

Maximum RF OUTPUT POWER:

Mode	Maximum Output Power (dBm)
BT	0.34

TEST RESULTS

Band	Antenna Gain (dBi)	Antenna Gain (numeric)	Max. Output Power (dBm)	Max. Output Power (mW)	Power Density (S) (mW/cm ²)	Limit of Power Density (S) (mW/cm ²)	Result
BT	-0.86	0.8204	0.34	1.0814	0.000177	1	Pass

Note:

1. The calculated distance is 20 cm.

End of Test Report