



# RF Exposure Report


## For

**Applicant Name:** Shenzhen JBT Smart Lighting Co., LTD  
**Address:** No.7 Building, No.1 Furong Road, Furong Industrial Park, Shajing Town, Baoan District, Shenzhen City China  
**EUT Name:** Smart Outdoor Wifi Plug  
**Brand Name:** N/A  
**Model Number:** MI-OW104-101  
**Series Model Number:** Refer to section 2

## Issued By

**Company Name:** BTF Testing Lab (Shenzhen) Co., Ltd.  
**Address:** F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China

**Report Number:** BTF230628R00902  
**Test Standards:** 47 CFR Part 2 Subpart J Section 2.1091  
**FCC ID:** 2AKG3-OW104  
**Test Conclusion:** Pass  
**Test Date:** 2023-06-21 to 2023-06-30  
**Date of Issue:** 2023-07-11

**Prepared By:**   
Elma. Yang / Project Engineer  
**Date:** 2023-07-11

**Approved By:**   
Ryan CJ / EMC Manager  
**Date:** 2023-07-11

*Note: All the test results in this report only related to the testing samples. Which can be duplicated completely for the legal use with approval of applicant; it shall not be reproduced except in full without the written approval of BTF Testing Lab (Shenzhen) Co., Ltd., All the objections should be raised within thirty days from the date of issue. To validate the report, you can contact us.*

Revision History		
Version	Issue Date	Revisions Content
R_V0	Jul. 11 <sup>th</sup> 2023	Original
Note:	Once the revision has been made, then previous versions reports are invalid.	

## Table of Contents

1.	Introduction.....	4
1.1	Identification of Testing Laboratory .....	4
1.2	Identification of the Responsible Testing Location.....	4
1.3	Laboratory Condition .....	4
1.4	Announcement.....	4
2.	Product Information.....	5
2.1	Application Information .....	5
2.2	Manufacturer Information.....	5
2.3	Factory Information .....	5
2.4	General Description of Equipment under Test (EUT).....	5
2.5	Technical Information.....	5
3.	Test Requirement.....	7
1.1	Assessment Result .....	7

## 1. Introduction

### 1.1 Identification of Testing Laboratory

Company Name:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130

### 1.2 Identification of the Responsible Testing Location

Test Location:	BTF Testing Lab (Shenzhen) Co., Ltd.
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Description:	All measurement facilities used to collect the measurement data are located at F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
FCC Registration Number:	518915
Designation Number:	CN1330

### 1.3 Laboratory Condition

Ambient Temperature:	20°C to 25°C
Ambient Relative Humidity:	45% to 55%
Ambient Pressure:	100 kPa to 102 kPa

### 1.4 Announcement

- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by BTF and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.

## 2. Product Information

### 2.1 Application Information

Company Name:	Shenzhen JBT Smart Lighting Co., LTD
Address:	No.7 Building, No.1 Furong Road, Furong Industrial Park,Shajing Town, Baoan District, Shenzhen City China

### 2.2 Manufacturer Information

Company Name:	Shenzhen JBT Smart Lighting Co., LTD
Address:	No.7 Building, No.1 Furong Road, Furong Industrial Park,Shajing Town, Baoan District, Shenzhen City China

### 2.3 Factory Information

Company Name:	/
Address:	/

### 2.4 General Description of Equipment under Test (EUT)

EUT Name	Smart Outdoor Wifi Plug
Under Test Model Name	MI-OW104-101
Series Model Name	MI-OW104-101P, MI-OW104-101, MIC-OW104-101, MIC-OW104-101P, MI-OW204-101, MI-OW204-101P, MIC-OW204-101, MIC-OW204-101P, GN-OW104-101, GN-OW104-101P, GNC-OW104-101, GNC-OW104-101P, GN-OW204-101, GN-OW204-101P, GNC-OW204-101, GNC-OW204-101P, JBT-SMT-WFCZ-2301-1, JBT-SMT-WFCZ-2301-2
Description of Model name differentiation	Since according to the declaration from the applicant, the electrical circuit design, layout, components used, internal wiring and functions were identical for the above models, with only different on colour.
Hardware Version	V1.0
Software and Firmware Version	V1.0
Sample No.:	BTFSN230628E011-1/1

### 2.5 Technical Information

Power Supply:	AC 120V, 50/60Hz, 15A
Power Adaptor:	/
For Wi-Fi:	
Operation Frequency:	802.11b/g/n(HT20): 2412MHz to 2462MHz;

Number of Channels:	802.11b/g/n(HT20): 11 Channels;
Modulation Type:	802.11b: DSSS(CCK, DQPSK, DBPSK); 802.11g: OFDM(BPSK, QPSK, 16QAM, 64QAM); 802.11n(HT20): OFDM (BPSK, QPSK, 16QAM, 64QAM)
Antenna Type:	PCB ANT
Antenna Gain#:	2.21dBi
For BT-BLE:	
Operation Frequency:	2402MHz to 2480MHz
Number of Channels:	40
Modulation Type:	GFSK
Data Rate:	1Mbps
Antenna Type:	PCB ANT
Antenna Gain#:	2.21dBi

### 3. Test Requirement

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 <sup>2</sup> )	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3–3.0	614	1.63	*(100)	6
3.0–30	1842/f	4.89/f	*(900/f <sup>2</sup> )	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				
0.3–1.34	614	1.63	*(100)	30
1.34–30	824/f	2.19/f	*(180/f <sup>2</sup> )	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

#### EVALUATION METHOD

Transmission formula:  $P_d = (P_{out} * G) / (4 * \pi * r^2)$

Where

$P_d$  = power density in mW/cm<sup>2</sup>,  $P_{out}$  = output power to antenna in mW,  $G$  = gain of antenna in linear scale;

$\pi$  = 3.1416,  $R$  = distance between observation point and center of the radiator in cm

#### 1.1 Assessment Result

☒ Passed ☐ Not Applicable

Frequency (MHz)	Type	Conducted Power (dBm)	Maximum Tune-up (dBm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
2462	802.11g	15.05	16.00	0.0141	1.0000	Pass
2440	BLE	1.95	3.00	0.0007	1.0000	Pass

Note: The exposure evaluation safety distance is 20cm.



Test Report Number: BTF230628R00902



BTF Testing Lab (Shenzhen) Co., Ltd.

F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street,  
Bao'an District, Shenzhen, China

[www.btf-lab.com](http://www.btf-lab.com)

**--END OF REPORT--**