

TEST REPORT

Applicant Name : McWong Lighting (Zhanjiang) Co., Ltd.
Address : No.32 Chuangye Road, Longtou Town, Potou District,
Zhanjiang, Guangdong 524054, China
Report Number: 2504R39298E-RF
FCC ID: 2BOE8-MTMWIFI-1

Test Standard (s)

47 CFR §1.1307& §2.1091

Sample Description

Product Type: Wi-Fi Low Voltage Landscape Transformer
Model No.: MTM0300-15-WIFI-1-SS, MTM0150-15-WIFI-1-SS
Trade Mark: ***Brilliantool***
Date Received: 2025-03-25
Report Date: 2025-05-30

Test Result:	The EUT complied with the standards above.
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Prepared and Checked By:

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EMC Engineer

Approved By:

Bob Liao

Bob Liao
EMC Engineer

Note: This report must not be used by the customer to claim product certification, approval, or endorsement by A2LA, or any agency of the Federal Government. The information marked “#” is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included but no need marked.

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
Rev.00	2504R39298E-RF	Original Report	2025-05-30

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product	Wi-Fi Low Voltage Landscape Transformer
Tested Model	MTM0300-15-WIFI-1-SS
Multiple Model	MTM0150-15-WIFI-1-SS
Model Difference [#]	The differences between the two models: model name, size, power board and only use the maximum power of the lamp load. Please refer to DOS letter for details. The applicant provided "MTM0300-15-WIFI-1-SS" for full testing.
Frequency Range	BLE 1M: 2402-2480MHz 2.4G Wi-Fi: 2412-2462MHz
Antenna Specification [#]	External Antenna: 1.15dBi (It is provided by the applicant.)
Voltage Range [#]	AC 120V, 60Hz
Sample Serial Number	MTM0300-15-WIFI-1-SS: 30SS-1(RF Conducted Test) (Assigned by ATC, Shenzhen)
Sample/EUT Status	Good condition

Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts C and Part 2-Subpart J, Radiofrequency Radiation Exposure of the Federal Communication Commission rules.

The results were performed in order to determine compliance with FCC §2.1091 rules.

Test Facility

The test site used by Shenzhen Accurate Technology Co., Ltd. to collect test data is located on the Floor 1, KuMaKe Building, Dongzhou Community, Guangming Street, Guangming District, Shenzhen, Guangdong, China.

Accredited by American Association for Laboratory Accreditation (A2LA).The Certificate Number is 4297.01.

MAXIMUM PERMISSIBLE EXPOSURE (MPE)

Applicable Standard

According to subpart §2.1091 and subpart §1.1310, 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 level in excess of the Commission's guidelines.

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure				
Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (Minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equivalent power density

Result

Calculated Formulary:

Predication of MPE limit at a given distance

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

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 (appropriate units, e.g., cm)

Mode	Frequency (MHz)	Antenna Gain [#]		Tune Up Conducted Power [#]		Evaluation Distance (cm)	Power Density (mW/cm ²)	MPE Limit (mW/cm ²)
		(dBi)	(numeric)	(dBm)	(mW)			
BLE	2480	1.15	1.30	1.5	1.41	20	0.00037	1.0
2.4G WIFI	2462	1.15	1.30	21.0	125.89	20	0.033	1.0

Note 1: The tune-up conducted power and antenna gain were declared by the applicant.

Note 2: The BLE and WIFI can't transmission simultaneously.

To maintain compliance with the FCC's RF exposure guidelines, place the equipment at least 20cm from nearby persons.

Result: Compliance

EXHIBIT A-EUT PHOTOGRAPHS

Please refer to the Attachment: 2504R39298E-RF EUT EXTERNAL PHOTOGRAPHS and 2504R39298E-RF EUT INTERNAL PHOTOGRAPHS.

***** **END OF REPORT** *****