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Report No.: 1703RSU03502 Report Version: Issue Date: 04-12-2017

RF Exposure Evaluation Declaration

FCC ID: 2AJ3WEBEQPZ14

APPLICANT: Hangzhou Eboylamp Electronics Co.,Ltd.

Application Type: Certification

Product: SMART LED LAMP

EBE-QPZ14 Model No.:

Digital Transmission System (DTS) **FCC Classification:**

FCC Rule Part(s): FCC CFR 47 §2.1091

April 01 ~ 12, 2017 **Test Date:**

Robin Wu (Robin Wu) Reviewed By:

Marlinchen Approved By:

(Marlin Chen)





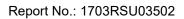
The test results relate only to the samples tested.

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 ANSI C63.10-2013. Test results reported herein relate only to the item(s) tested.

The test report shall not be reproduced except in full without the written approval of MRT Technology (Suzhou) Co., Ltd.

FCC ID: 2AJ3WEBEQPZ14

Page Number: 1 of 6





Revision History

Report No.	Version	Description	Issue Date	Note
1703RSU03502	Rev. 01	Initial report	04-12-2017	Valid



1. PRODUCT INFORMATION

1.1. Equipment Description

Product Name	SMART LED LAMP		
Model No.	EBE-QPZ14		
WLAN Specification			
Frequency Range	802.11b/g/n-HT20: 2412 ~ 2462 MHz		
Maximum Peak Output	802.11b: 8.76dBm		
Power	802.11g: 19.36dBm		
	802.11n-HT20: 19.22dBm		
Type of Modulation	802.11b: DSSS		
	802.11g/n: OFDM		
Antenna Type	PCB Antenna		
Antenna Gain	3.0dBi		

1.2. Antenna Description

Antenna Type	Frequency Band (MHz)	Manufacturer	Max Peak Gain (dBi)
PCB Antenna	2412~2462	Tuya	3.0

FCC ID: 2AJ3WEBEQPZ14 Page Number: 3 of 6



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	Electric Field	Magnetic Field	Power Density	Average Time
(MHz)	Strength (V/m)	Strength (A/m)	(mW/cm ²)	(Minutes)
(A) Limits for Occupational/ Control Exposures				
300-1500		1	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

FCC ID: 2AJ3WEBEQPZ14 Page Number: 4 of 6



Formula as follows:

f= Frequency in MHz

Calculation Formula: $Pd = (Pout*G)/(4*pi*r^2)$

Where

Pd = power density in mW/cm²

Pout = 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

Pd 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.

FCC ID: 2AJ3WEBEQPZ14 Page Number: 5 of 6



2.2. Test Result of RF Exposure Evaluation

Product	SMART LED LAMP	
Test Item	RF Exposure Evaluation	

Antenna Gain: The maximum Gain measured in fully anechoic chamber is 3.0dBi for Wi-Fi band in logarithm scale.

For 802.11b/g/n(HT-20):

Test Mode	Frequency Band	Maximum Average	Power Density at	FCC
	(MHz)	Output Power	r = 20 cm	Limit
		(dBm)	(mW/cm ²)	(mW/cm ²)
802.11b/g/n(HT-20)	2412 ~ 2462	10.98	0.0050	1

CONCULISON:

Therefore, the Max Power Density at r (20 cm) = 0.0050mW/cm² < 1mW/cm². So the EUT complies with the FCC requirement.

_____ The End