

#### **FCC RF EXPOSURE REPORT**

For

**ZigBee Smart Plug** 

**MODEL NUMBER: 7C-PL-Z-A1** 

FCC ID: 2AB2Q7CPLZA1

REPORT NUMBER: 4788894536-6

**ISSUE DATE: February 19, 2019** 

### Prepared for

### **LEEDARSON LIGHTING CO., LTD.**

Xingtai Industrial Zone, Economic Development Zone, Changtai County, Zhangzhou City, Fujian Province, P.R.China

#### Prepared by

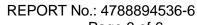
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### 1. ATTESTATION OF TEST RESULTS

**Applicant Information** 

Company Name: LEEDARSON LIGHTING CO., LTD.

Address: Xingtai Industrial Zone, Economic Development Zone, Changtai

County, Zhangzhou City, Fujian Province, P.R.China

**Manufacturer Information** 

Company Name: LEEDARSON LIGHTING CO., LTD.

Address: Xingtai Industrial Zone, Economic Development Zone, Changtai

County, Zhangzhou City, Fujian Province, P.R.China

**EUT Description** 

**EUT Name:** ZigBee Smart Plug

Model: 7C-PL-Z-A1 Series Model: SP 224

Model Difference: All the same except for the model name.

**Brand Name:** LEEDARSON Sample Received Date: January 23, 2019

Date of Tested: January 24 ~ February 14, 2019

APPLICABLE STANDARDS

**STANDARD TEST RESULTS** 

FCC 47CFR§2.1091

Complies

KDB-447498 D01 V06

Tested By: Checked By:

Kebo Zhang

**Engineer Project Associate** 

Sephenous

kelo. Thurs

Shawn Wen

**Laboratory Leader** 

Shemmy les

Approved By:

Stephen Guo

Laboratory Manager



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#### 2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with KDB 447498 D01 General RF Exposure Guidance v06.

## 3. FACILITIES AND ACCREDITATION

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	A2LA (Certificate No.: 4102.01)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	has been assessed and proved to be in compliance with A2LA.
	FCC (FCC Designation No.: CN1187)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	Has been recognized to perform compliance testing on equipment subject
	to the Commission's Delcaration of Conformity (DoC) and Certification
	rules
Accreditation	IC(Company No.: 21320)
Certificate	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
Continioato	has been registered and fully described in a report filed with
	Industry Canada. The Company Number is 21320.
	VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)
	UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch.
	has been assessed and proved to be in compliance with VCCI, the
	Membership No. is 3793.
	Facility Name:
	Chamber D, the VCCI registration No. is G-20019 and R-20004
	Shielding Room B, the VCCI registration No. is C-20012 and T-20011

Note 1: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, Song Shan Lake Hi tech Development Zone, Dongguan, 523808, China

Note 2: The test anechoic chamber in UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch had been calibrated and compared to the open field sites and the test anechoic chamber is shown to be equivalent to or worst case from the open field site.

Note 3: For below 30MHz, lab had performed measurements at test anechoic chamber and comparing to measurements obtained on an open field site. And these measurements below 30MHz had been correlated to measurements performed on an OATS.



4. REQUIREMENT

#### **LIMIT**

Limits for General Population/Uncontrolled Exposure

Limits for General Population/Uncontrolled Exposure									
Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm²)	Averaging Time $ E ^2$ , $ H ^2$ or S (minutes)					
0.3-1.34	614	1.63	(100)*	30					
1.34-30	824/f	2.19/f	(180/f2)*	30					
30-300	27.5	0.073	0.2	30					
300-1500			f/150	30					
1500-100,000			1.0	30					

Note 1: f = frequency in MHz, \* means Plane-wave equivalent power density

Note 2: General population/uncontrolled exposures apply in situations in which the general public may be exposed, or in which persons that are exposed as a consequence of their employment may not be fully aware of the potential for exposure or cannot exercise control over their exposure.

Note 3: The limit value 1.0mW/cm<sup>2</sup> is available for this EUT.

### **MPE CALCULATION METHOD**

 $S = PG/(4\pi R^2)$ 

where: 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

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)



# **CALCULATED RESULTS**

Radio Frequency Radiation Exposure Evaluation

ZigBee (Worst case)									
Operating	Max. Tune up Power	Antenna Gain		Power density	Limit				
Mode	(dBm)	(dBi)	(num)	(mW/ cm <sup>2</sup> )					
ZigBee	15	1.85	1.53	0.0096	1				

Note: the calculated distance is 20cm.

# **END OF REPORT**