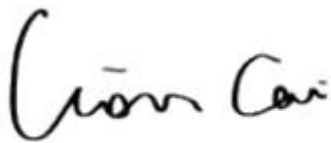


# TEST REPORT

**Application No.:** BTEK240913006AE  
**Applicant:** Shenzhen Core Image Co., Ltd.  
**Address of Applicant:** Building 2nd Floor, No. 1 Huafeng Hi-tech Park, Yangwu Konggang, Dongfang community, Songgang Street, Bao'an District, Shenzhen.  
**Manufacturer:** Shenzhen Core Image Co., Ltd.  
**Address of Manufacturer:** Building 2nd Floor, No. 1 Huafeng Hi-tech Park, Yangwu Konggang, Dongfang community, Songgang Street, Bao'an District, Shenzhen.  
**Equipment Under Test (EUT):**  
**EUT Name:** Smart Plug  
**Test Model.:** SPU027  
**Adding Model(s):** SPU027A, SPU027B, ET77  
**Trade Mark:** /  
**FCC ID:** 2APQK-SPU027  
**Standard(s) :** 47 CFR Part 2 Subpart J Section 2.1091  
447498 D01 General RF Exposure Guidance v06  
**Date of Receipt:** 2024-09-14  
**Date of Test:** 2024-09-18 to 2024-09-24  
**Date of Issue:** 2024-09-25

<b>Test Result:</b>	<b>Pass*</b>
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\* In the configuration tested, the EUT complied with the standards specified above.



Lion Cai/ Approved & Authorized  
EMC Laboratory Manager



Revision Record				
Version	Chapter	Date	Modifier	Remark
V0		2024-09-25		Original

Authorized for issue by:			
		<div>Zora . Huang</div> <div>Zora Huang/Project Engineer</div>	
		<div>June Li</div> <div>June Li/Reviewer</div>	

## Remarks:

The results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.



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### 3 General Information

#### 3.1 Details of E.U.T.

Power supply:	AC120V 15A 1800W 60Hz
<b>2.4G-Wi-Fi</b>	
Support Standards:	802.11b, 802.11g, 802.11n-HT20,802.11n-HT40
Frequency Range:	2412-2462MHz for 802.11b/g/HT20 2422-2452MHz for 802.11b/g/HT40
Type of Modulation:	802.11b: DSSS; 802.11g/n: OFDM
Quantity of Channels	11 for 802.11b/g/n(HT20) 9 for 802.11b/g/n(HT40)
Channel Separation:	5MHz
Type of Antenna:	PCB Antenna
Sample No.:	BTEK240913006AE-01
<b>BLE</b>	
Frequency Range:	2402MHz to 2480MHz
Bluetooth Version:	V5.2 BLE
Modulation Type:	GFSK
Number of Channels:	40
Antenna Type:	PCB Antenna
Antenna Gain:	-0.14dBi
Sample No.:	BTEK240913006AE-01
Remark: The information in this section is provided by the applicant or manufacturer, BANTEK is not liable to the accuracy, suitability, reliability or/and integrity of the information.	

Model No.:SPU027,SPU027A,SPU027B,ET77

Only the model SPU027 was tested. According to the declaration from the applicant, the electrical circuit design, layout, components used, internal wiring and functions of other models are identical for the above models, with only difference on Model No.

#### 3.2 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
/	/	/	/

#### 3.3 Test Location

All tests were performed at:

Shenzhen BANTEK Testing Co., Ltd.,

A5&A6, Building B1&B2, No.45 Gangtuo Road, Bogang Community, Shajing Street, Bao'an District, Shenzhen, Guangdong, China 518103

Tel:0755-2334 4200 Fax: 0755-2334 4200

FCC Registration Number: 264293

Designation Number: CN1356

No tests were sub-contracted.

#### 3.4 Deviation from Standards

None

#### 3.5 Abnormalities from Standard Conditions

None





## 4 Test Requirement

According to §1.1307(b)(1) and KDB 447498 D01 General RF Exposure Guidance v06, system operating under the provisions of this section shall be operating in a manner that the public is not exposed to radio frequency energy level in excess limit for maximum permissible exposure.

### 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

f = frequency in MHz

Friis transmission formula:  $Pd = (Pout \cdot G) / (4 \cdot \pi \cdot r^2)$

Where

**Pd** = power density in mW/cm<sup>2</sup>, **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, 1 mW/cm<sup>2</sup>. 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.

## 4.1 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	2.4G-Wi-Fi	16.38	16.5	0.0158	1	Pass

Frequency (MHz)	Type	Conducted Power (dBm)	Maximum Tune-up (dBm)	Power Density (mW/cm <sup>2</sup> )	Limit (mW/cm <sup>2</sup> )	Result
2480	BLE	8.29	8.5	0.0025	1	Pass

Note: 1. The exposure evaluation safety distance is 20cm.

2. Only show the worst case in the test report.

- End of the Report -

