




# TEST REPORT

Product Name: SMART WIFI SOCKET

Trademark: 

Model Number: S26  
S27, S28, S29, S55

Prepared For: Shenzhen Sonoff Technologies Co.,Ltd.

Address: 301, 3F, BLDG 52, the Third Industrial Park, Bantian, Longgang Dist, Shenzhen, GD, 518055 China.

Manufacturer: Shenzhen Sonoff Technologies Co.,Ltd.

Address: 301, 3F, BLDG 52, the Third Industrial Park, Bantian, Longgang Dist, Shenzhen, GD, 518055 China.

Prepared By: Shenzhen BCTC Testing Co., Ltd.

Address: BCTC Building & 1-2F, East of B Building, Pengzhou Industrial, Fuyuan 1st Road, Qiaotou Community, Fuyong Street, Bao'an District, Shenzhen, China

Sample Received Date: Apr. 26, 2018

Sample tested Date: Apr. 23, 2018 to May. 09, 2018

Issue Date: May. 12, 2018

Report No.: BCTC-FY180402259-1E

Test Standards: EN 62311:2008

Test Results: PASS

Remark: This is RED Health test report.

Compiled by:

*Bin Mei*

Bin Mei

Reviewed by:

*Rita Xiao*

Rita Xiao

Approved by:

*Carson Zhang*

Carson Zhang/Manager



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*(Note: N/A means not applicable)*



## 1. VERSION

| Report No.          | Issue Date    | Description | Approved |
|---------------------|---------------|-------------|----------|
| BCTC-FY180402259-1E | May. 14, 2018 | Original    | Valid    |
|                     |               |             |          |



## 2. PRODUCT INFORMATION AND TEST SETUP

### 2.1 Product Information

|                       |   |
|-----------------------|---|
| Model(s):             | S26<br>S27, S28, S29, S55                                   |
| Model Description:    | The product is different for model number and outlook color |
| Wi-Fi Specification:  | IEEE 802.11b/g/n  |
| Hardware Version:     | N/A   |
| Software Version:     | N/A   |
| Operation Frequency:  | WIFI: IEEE 802.11b/g/n HT20: 2412-2472MHz                   |
| Max. RF output power: | WIFI(2.4G) : 9.64dBm  |
| Type of Modulation:   | WIFI DSSS, OFDM   |
| Antenna installation: | WIFI: internal permanent antenna                            |
| Antenna Gain:         | WIFI (2.4G) : 1dBi  |
| Ratings:              | AC 100-240V 50/60Hz 16A                                     |



### 3. HEALTH REQUIREMENTS

#### 3.1 Limits

According to Council Recommendation: the criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation.

Reference levels for electric, magnetic and electromagnetic fields (0Hz to 300GHz, unperturbed RMS values)

| Frequency range | E-field strength (V/m) | H-field strength (A/m)  | B-field ( $\mu$ T)    | Equivalent plane wave power density Seq (W/m <sup>2</sup> ) |
|-----------------|------------------------|-------------------------|-----------------------|---|
| 0-1 Hz          | -                      | $3.2 \times 10^4$       | $4 \times 10^4$       | -   |
| 1-8 Hz          | 10000                  | $3.2 \times 10^4 / f^2$ | $4 \times 10^4 / f^2$ | -   |
| 8-25 Hz         | 10000                  | $4000 / f$              | $5000 / f$            | -   |
| 0.025-0.8 kHz   | $250 / f$              | $4 / f$                 | $5 / f$               | -   |
| 0.8-3 kHz       | $250 / f$              | 5                       | 6.25                  | -   |
| 3-150 kHz       | 87                     | 5                       | 6.25                  | -   |
| 0.15-1 MHz      | 87                     | $0.73 / f$              | $0.92 / f$            | -   |
| 1-10 MHz        | $87 / f^{1/2}$         | $0.73 / f$              | $0.92 / f$            | -   |
| 10-400 MHz      | 28                     | 0.073                   | 0.095                 | 2   |
| 400-2000 MHz    | $1.375 f^{1/2}$        | $0.0037 f^{1/2}$        | $0.0046 f^{1/2}$      | $f / 200$   |
| 2-300 GHz       | 61                     | 0.16                    | 0.2                   | 10  |

Note:

1. f as indicated in the frequency range column.
2. For frequencies between 100 kHz and 10 GHz, Seq, E<sup>2</sup>, H<sup>2</sup> and B<sup>2</sup> are to be averaged over any six-minute period.
3. For frequencies exceeding 10 GHz, Seq, E<sup>2</sup>, H<sup>2</sup> and B<sup>2</sup> are to be averaged over any  $68 / f^{1.05}$  minute period (f in GHz).



### 3.2 Exposure Evaluation

From Council Recommendation 1999/519/EC table 2, the maximum power density is 10 W/m<sup>2</sup>.

Power density (S) is calculated by the following formula:

$$S = PG * \text{Duty factor} / 4\pi R^2$$

P = Peak Power Input to antenna (Watts)

G = Antenna Gain (numeric)

R = distance to the center of radiation of antenna (in meter) = 0.20 m

Note:

1)  $P \text{ (Watts)} = (10^{(dBm / 10)}) / 1000$

2)  $G \text{ (Antenna gain in numeric)} = 10^{(Antenna gain in dBi / 10)}$

3) Duty factor = 1.0

4)  $\pi = 3.142$

| Mode         | Antenna Gain (dBi) | Antenna Gain (numeric) | Max. Output Power (dBm) | Max. Output Power (W) | Duty factor | Calculate d RF Exposure (W/m <sup>2</sup> ) | Limit (W/m <sup>2</sup> ) |
|--------------|--------------------|------------------------|-------------------------|-----------------------|-------------|---|---------------------------|
| 802.11b      | 1                  | 1.259                  | 9.64                    | 0.0092                | 1           | 0.0231                                      | 10                        |
| 802.11g      | 1                  | 1.259                  | 9.04                    | 0.0080                | 1           | 0.0201                                      | 10                        |
| 802.11n HT20 | 1                  | 1.259                  | 8.85                    | 0.0077                | 1           | 0.0192                                      | 10                        |

## 4. EUT PHOTOGRAPHS

EUT Photo 1



EUT Photo 2





EUT Photo 3

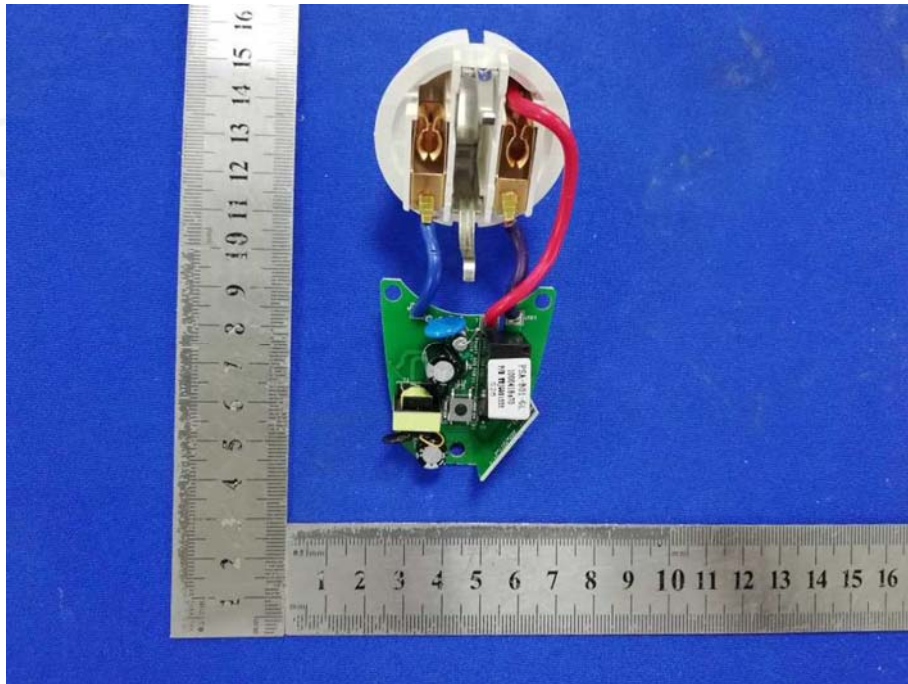


EUT Photo 4

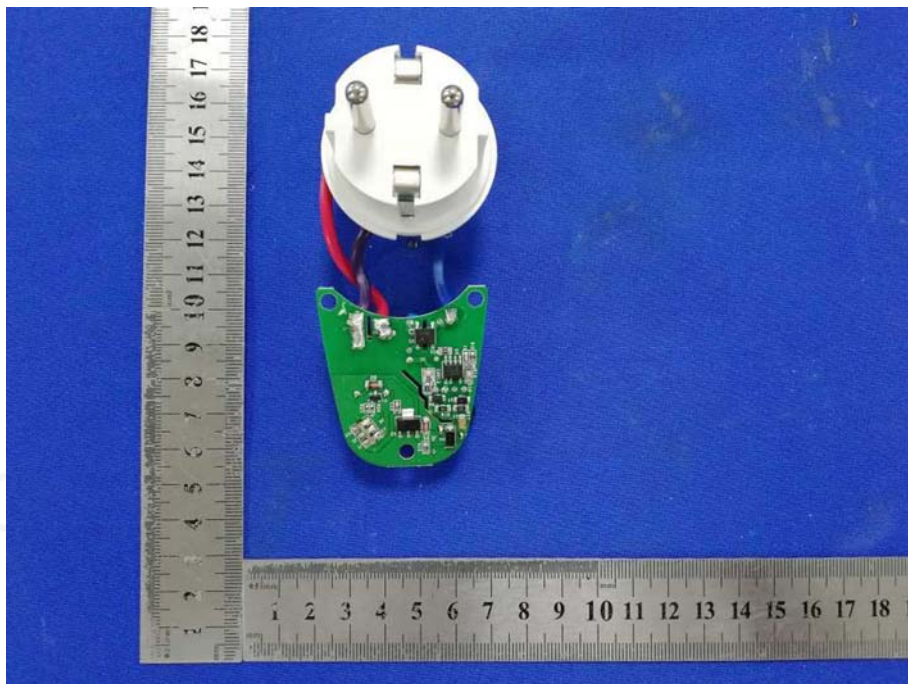




EUT Photo 5



EUT Photo 6



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