



EN62311 TEST REPORT

Product: Sonoff Wifi Switch

Trade Name: SONOFF™

Model Name: Sonoff TH16

Serial Model: Sonoff TH10 , Sonoff Pow , Sonoff Dual.

Report No.: BCTC-FY160902498-1E

Prepared for

ITEAD Intelligent Systems Co., Ltd
RM 401 BLK 4 WANGTANG INDUSTRIAL ZONE, XILI, NANSHAN DIST
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Prepared by

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TEST RESULT CERTIFICATION

Applicant's name: ITEAD Intelligent Systems Co., Ltd
Address: RM 401 BLK 4 WANGTANG INDUSTRIAL ZONE, XILI, NANSHAN DIST SHENZHEN, GUANGDONG, 518000 CHINA (PRC)

Manufacture's Name: ITEAD Intelligent Systems Co., Ltd
Address: RM 401 BLK 4 WANGTANG INDUSTRIAL ZONE, XILI, NANSHAN DIST SHENZHEN, GUANGDONG, 518000 CHINA (PRC)

Product description

Product name.....: Sonoff Wifi Switch

Trademark:

Model and/or type reference ...: Sonoff TH16

Serial Model: Sonoff TH10 , Sonoff Pow , Sonoff Dual.

Standards.....: EN 62311:2008

This device described above has been tested by BCTC, and the test results show that the equipment under test (EUT) is in compliance with the 2014/53/EU RED Directive Art.3.1(a) requirements. And it is applicable only to the tested sample identified in the report.

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Date of Test..... :

Date (s) of performance of tests : Sep. 27 - Oct. 11, 2016

Date of Issue : Oct. 11, 2016

Test Result : Pass

Prepared by(Engineer): Eric Yang
Reviewer(Supervisor): Jade Yang
Approved(Manager): Carson Zhang



This test report is based on a single evaluation of one sample of above mentioned products. It is not permitted to be duplicated in extracts without written approval of Shenzhen BCTC Technology Co., Ltd.



1 General Information

1.1 General Description of E.U.T.

Product Name:	Sonoff Wifi Switch
Model No.:	Sonoff TH16 Sonoff TH10 , Sonoff Pow , Sonoff Dual.
Operation Frequency:	WIFI:2412MHz~2472MHz (802.11b/802.11g/802.11n(H20))
Channel numbers:	WIFI: 13 for 802.11b/802.11g/802.11n(H20) ,
Channel separation:	WIFI : 5MHz
Modulation technology:	WIFI: Direct Sequence Spread Spectrum (DSSS) for 802.11b Orthogonal Frequency Division Multiplexing(OFDM) for 802.11g/n
Data rate:	802.11b: 1Mbps, 2Mbps, 5.5Mbps, 11Mbps 802.11g: 6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps,54Mbps 802.11n: Up to 75Mbps
Antenna Type:	PCB Antenna
Antenna gain:	0dBi (declare by Applicant)
Power supply:	90-250VAC~ 50/60Hz

1.2 Maximum Permissible Exposure

1, Applicable Standard

EN 62311 Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz–300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current.

2, Limit

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

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μT)	Equivalent plane wave power density S_{eq} (W/m ²)
0-1 Hz	—	$3,2 \times 10^4$	4×10^4	—
1-8 Hz	10 000	$3,2 \times 10^4 f^2$	$4 \times 10^4 f^2$	—
8-25 Hz	10 000	$4 000/f$	$5 000/f$	—
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	$87 f^{0,2}$	$0,73/f$	$0,92/f$	—
10-400 MHz	28	0,073	0,092	2
400-2 000 MHz	$1,375 f^{0,2}$	$0,0037 f^{0,2}$	$0,0046 f^{0,2}$	$f/200$
2-300 GHz	61	0,16	0,20	10

Notes:

1. f as indicated in the frequency range column.



3, Test Method

$$E \text{ (V/m)} = (30 * P * G)^{0.5} / d$$

E = Electric Field (V/m)

P = Peak RF output Power (W)

G = EUT Antenna numeric gain (numeric)

d = Separation distance between radiator and human body (m)

From the peak EUT RF output power, the minimum mobile separation distance, d=0.2m, as well as the gain of the used antenna, the RF power density can be obtained.

4 Calculated Result and Limit

802.11b/g/n					
Max output power (dBm)	Max output Power (W)	Antenna gain (dBi)	Electric Field (V/m)	Limit of Electric Field(V/m)	Result
15.12	0.032509	0	4.94	61	Pass

END