
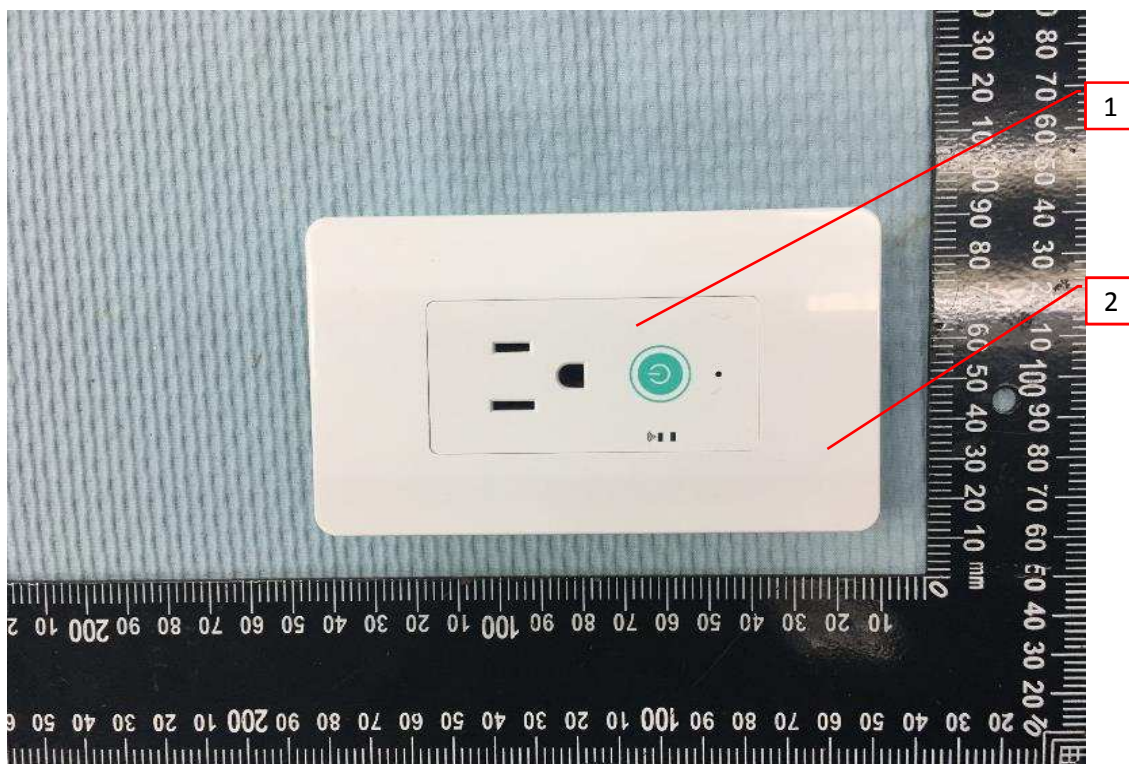


1.0 Reference and Address			
Report Number	190430012GZU-001	Original Issued: 22-Jul-2019	Revised: None
Standard(s)	Attachment Plugs And Receptacles [UL 498:2017 Ed.16 +R:14Dec2018] General Use Receptacles, Attachment Plugs, And Similar Wiring Devices (R2015) [CSA C22.2#42:2010 Ed.7+U1;U2;U3]		
Applicant	Shenzhen Sonoff Technologies Co., Ltd.	Manufacturer	<b>Shenzhen Yindao Micro-electronics Co.,Ltd</b>
Address	Room 1001, 10F, Building 8, Lianhua Industrial Park, Longyuan Road, Longhua District, Shenzhen, Guangdong	Address	7F, Block 5, Jingsheng Industrial Park, Huawang Road, Dalang Street, Longhua District, Shenzhen, Guangdong 518109
Country	China	Country	China
Contact	Annie Li; Jerry Shi	Contact	Jie Zhou; Dihua Wu
Phone	86-13392865705; 86-13380305412	Phone	86-13923732756; 86-18002501871
FAX	--	FAX	--
Email	annie.li@itead.cc; jerry.shi@itead.cc	Email	yindao.2007@163.com;

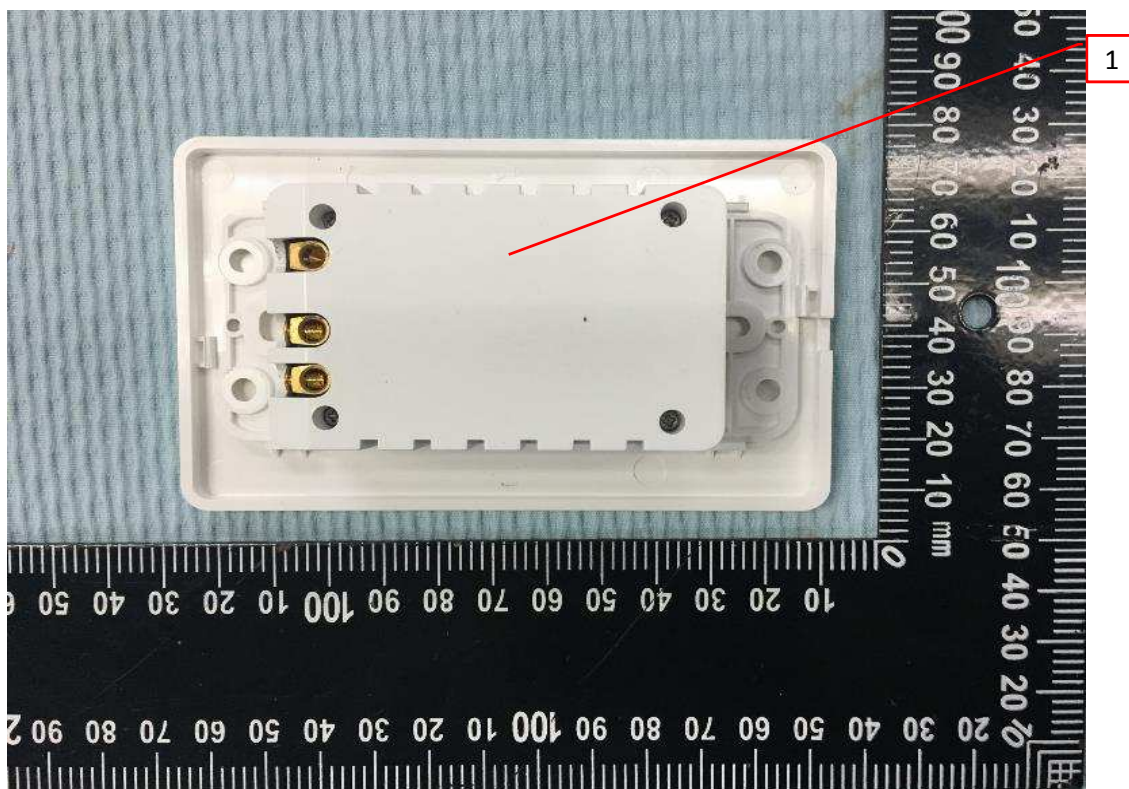
2.0 Product Description	
Product	Wi-Fi Smart Wall Socket
Brand name	 (Sonoff)
Description	<p>The products covered by this report is flush-type receptacle. The product employ one 5-15R outlet and provided with cover plate.</p> <p>This device works with app "eWelink". It can be turned the power live wire ON/OFF wirelessly by "eWelink" app which connects to the mobile or PC devices. It can work as a signal repeater. The devices also can be easily turned ON/OFF by simply pressing the sensor switch button on the product.</p>
Models	IW100TPB
Model Similarity	NA
Ratings	Input : AC 120V, 60Hz Output: 15A, Max. 1800W
Other Ratings	NA

### 3.0 Product Photographs

**Photo 1** - Front view of model IW100TPB



**Photo 2** - Back view of model IW100TPB



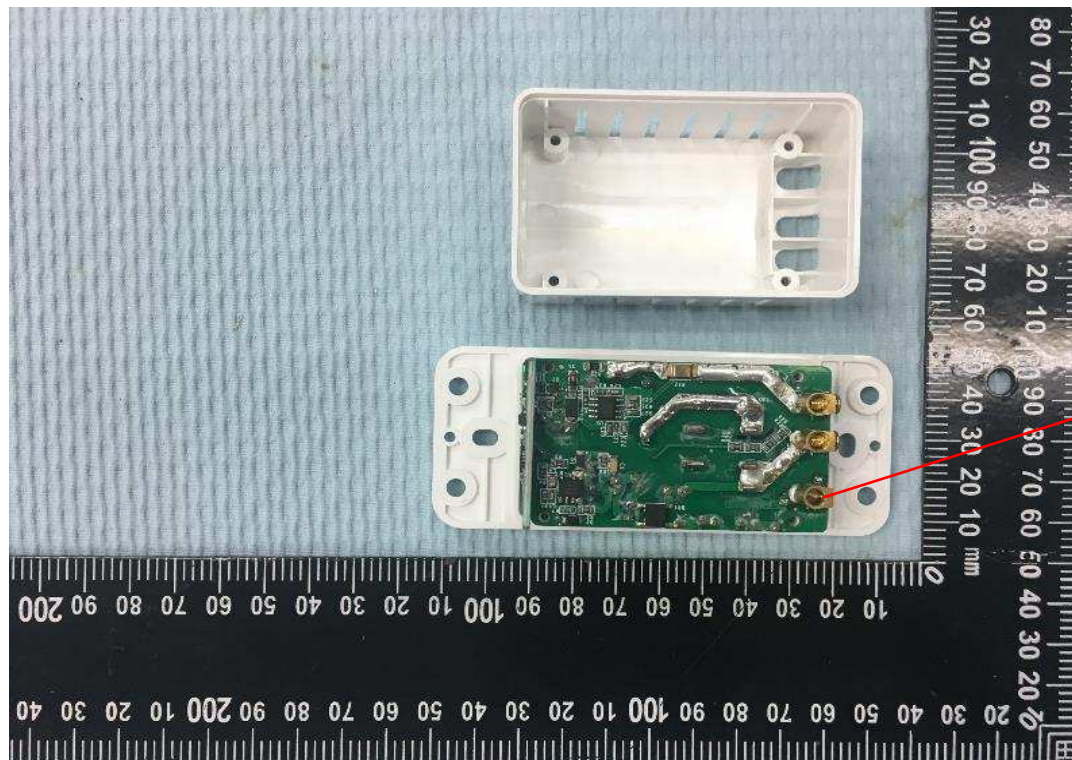


### 3.0 Product Photographs

**Photo 3** - Outsied view of model IW100TPB



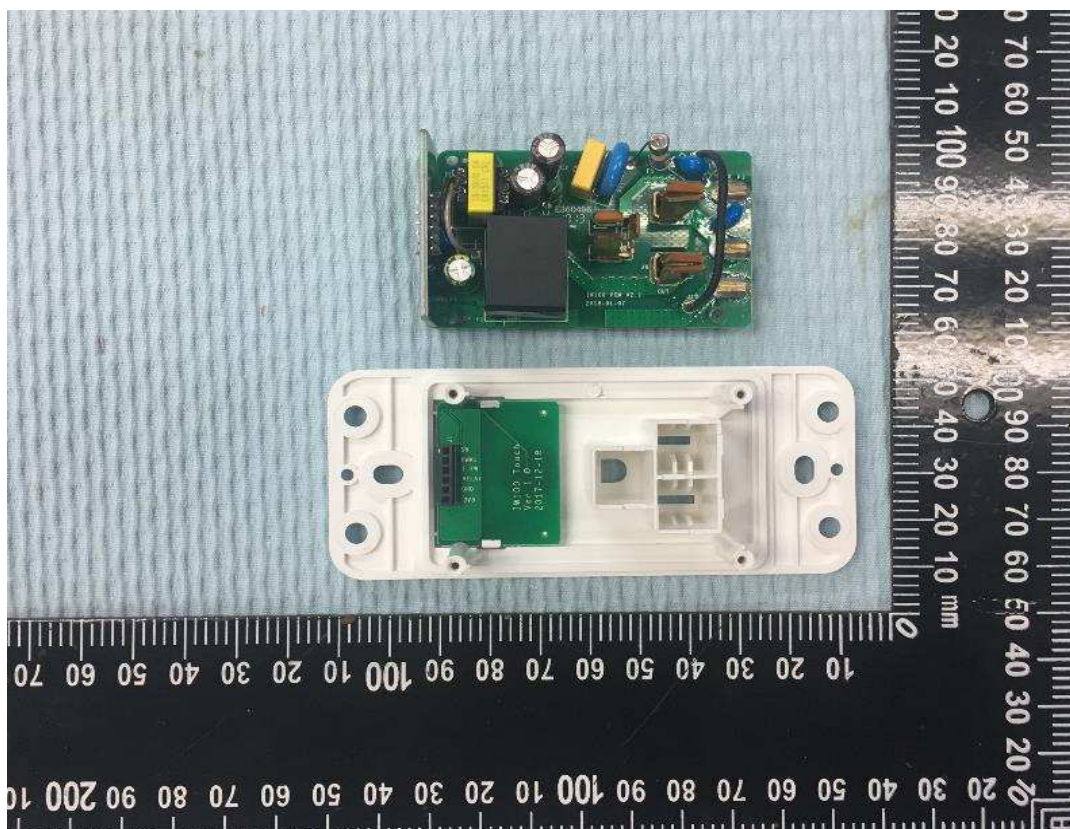
**Photo 4** - Internal view of model IW100TPB



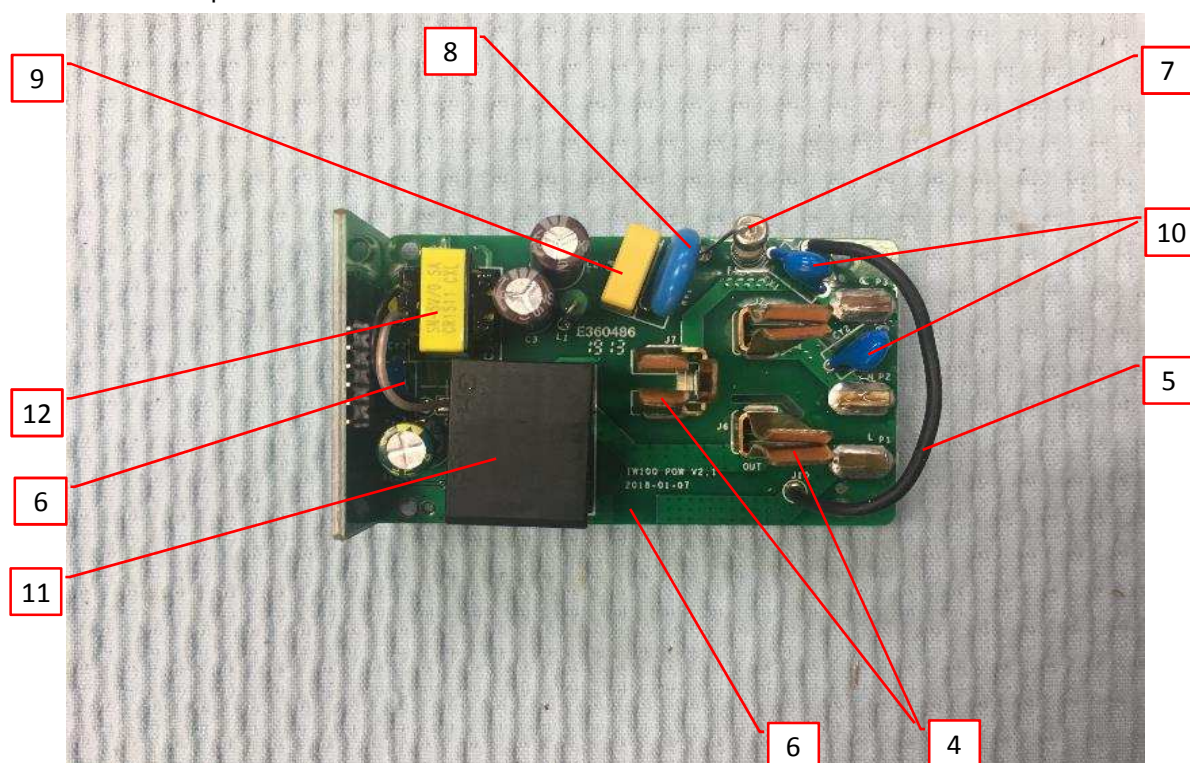


### 3.0 Product Photographs

**Photo 5** - Internal view of model IW100TPB

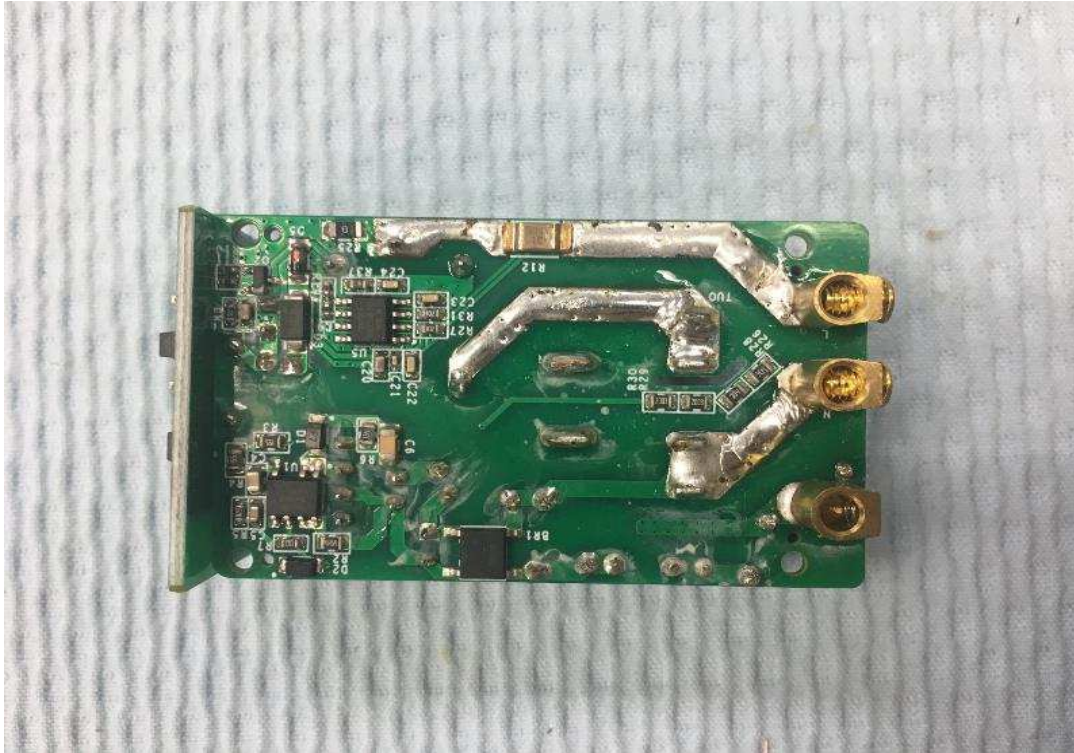


**Photo 6** - Internal component of model IW100TPB



### 3.0 Product Photographs

**Photo 7** - Internal component of model IW100TPB



4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
1,2	1	Enclosure	SABIC INNOVATIVE PLASTICS US L L C	940(f1)	PC, minimum thickness 1.5 mm, V-0, 120°C, HWI 3, HAI 3, CTI 2. Refer to Illustration2, 3 of Section 7.0 for details.	UR
1	2	Cover plate	SABIC INNOVATIVE PLASTICS US L L C	940(f1)	PC, minimum thickness 2.0 mm, V-0, 120°C, HWI 3, HAI 3, CTI 2. Refer to Illustration 4 of Section 7.0 for details.	UR
4	3	Terminal	Various	Various	Copper & Brass, rested on PCB, refer to Illustration 7 of Section 7.0 for details.	NR
6	4	Socket contact	Ningbo Shengfa Copper Co., Ltd	C3064	Phosphor copper. CU>58%. Refer to Illustration 5, 6 of Section 7.0 for details.	NR
6	5	Internal wire	Various	Various	Min. 22AWG, 80°C, 300V, VW-1	cURus, cETLus recognised
6	6	PCB	JIANGXI ZHONG XIN HUA ELECTRONICS INDUSTRY CO LTD	ZXH-2	V-0, 130°C	UR
			Various	Various	Minimum V-0, 130°C	UR
6	7	Fuse	XC Electronics (shenzhen) Corp.,Ltd	4T	1A, 250V	cURus
6	8	Varistor (MOV)	Hongzhi Enterprises Ltd.	HEL10D471K	300VAC, 125°C In=3kA	cURus
			Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	10D471K	300VAC, 125°C In=3kA	cURus
6	9	X-capacitor	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	MPX	Max. 0.047 uF, 275 Vac,110°C , X2 type	cURus
			Various	Various	Max. 0.047 uF, 275 Vac,110°C , X2 type	cURus
6	10	Y-capacitor	Shantou High-New Technology Dev. Zone Songtian Enterprise Co., Ltd.	CD221K	Y1, 0.22nF, 250V, 125°C	cURus
			Various	Various	Y1, 0.22nF, 250V, 125°C	cURus

4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
6	11	Relay	SHENZHEN GOLDEN ELECTRICAL APPLIANCES CO.,LTD	GH-1A-5L	15A, 125V, 85°C, GP LOAD	cURus
			Zhejiang Fanhar Electronics Co., Ltd.	W11-1A2STLE-H	15A, 125V, 85°C, GP LOAD	cURus
6	12	Transformer	Shenzhen Xinchuanglong Electronics Co., Ltd. Grid	XCL-EE10-5V0.5A-CR1511-2.7MH	Class A. Refer to Illustration 10 of Section 7.0.	NR
			DONGGUAN RUNZHI ELECTRONIC TECHNOLOGY CO. LTD.	EE10-2.7mH	Class A. Refer to Illustration 11 of Section 7.0.	NR
6	12a	Magnet Wire (Not shown)	SHANTOU SHENGANG ELECTRICAL INDUSTRIAL CO LTD	xUEW/155	155°C(for XCL-EE10-5V0.5A-CR1511-2.7MH)	UR
				QA-x/155		
			DONG GUAN YIDA INDUSTRIAL CO LTD	XUEW/130	130 (for EE10-2.7mH)	UR
6	12b	Triple Insulation Wire (Not shown)	SHENZHEN DARUN SCIENCE AND TECHNOLOGY CO LTD	DRTIW-B	130°C (for XCL-EE10-5V0.5A-CR1511-2.7MH)	UR
			Shanghai Hengyi Special Cable Co., Ltd.	HY-F	130°C (for EE10-2.7mH)	UR
6	12c	Bobbin (Not shown)	CHANGSHU SOUTH-EAST PLASTIC CO LTD	PF2A5-151J	V-0, 150°C (for XCL-EE10-5V0.5A-CR1511-2.7MH)	cURus
			CHANG CHUN PLASTICS CO LTD	T375J	V-0, 150°C (for EE10-2.7mH)	cURus
6	12d	Teflon tube (Not shown)	FLUO TECH INDUSTRIES CO LTD	TFT	300V, 200°C (for XCL-EE10-5V0.5A-CR1511-2.7MH)	UR
			DONGGUAN CITY CHANGJIE METALS & PLASTIC PRODUCTS CO LTD	CJ-TT-T	300V, 200°C (for EE10-2.7mH)	UR



4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
6	12e	Insulation tape (Not shown)	SUZHOU MAILADUONA ELECTRIC MATERIAL CO LTD	JY312#	130°C (for XCL-EE10-5V0.5A-CR1511-2.7MH)	UR
			JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ	130°C (for EE10-2.7mH)	UR
6	12f	Varnish(Not shown)	ZHUHAI CHANGXIAN NEW MATERIALS TECHNOLOGY CO LTD	E962	130°C (for XCL-EE10-5V0.5A-CR1511-2.7MH)	UR
			QUALIPOLY CHEMICAL CORP	1032BIH	130°C (for EE10-2.7mH)	UR
NOTES: 1) Not all item numbers are indicated (called out) in the photos, as their location is obvious. 2) "Various" means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity" can be used. 3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates Unlisted and only visual examination is necessary. "See 5.0" indicates Unlisted components or assemblies to be evaluated perio						

## **5.0 Critical Unlisted CEC Components**

No Unlisted CEC components are used in this report.

## 6.0 Critical Features

Recognized Component - A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability.

Listed Component - A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings.

Unlisted Component - A part that has not been previously evaluated to the appropriate designated component standard. It may also be a Listed or Recognized component that is being used outside of its evaluated Listing or component recognition.

Critical Features/Components - An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product's conformance to applicable requirements of the product standard.

Construction Details - For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements also apply.

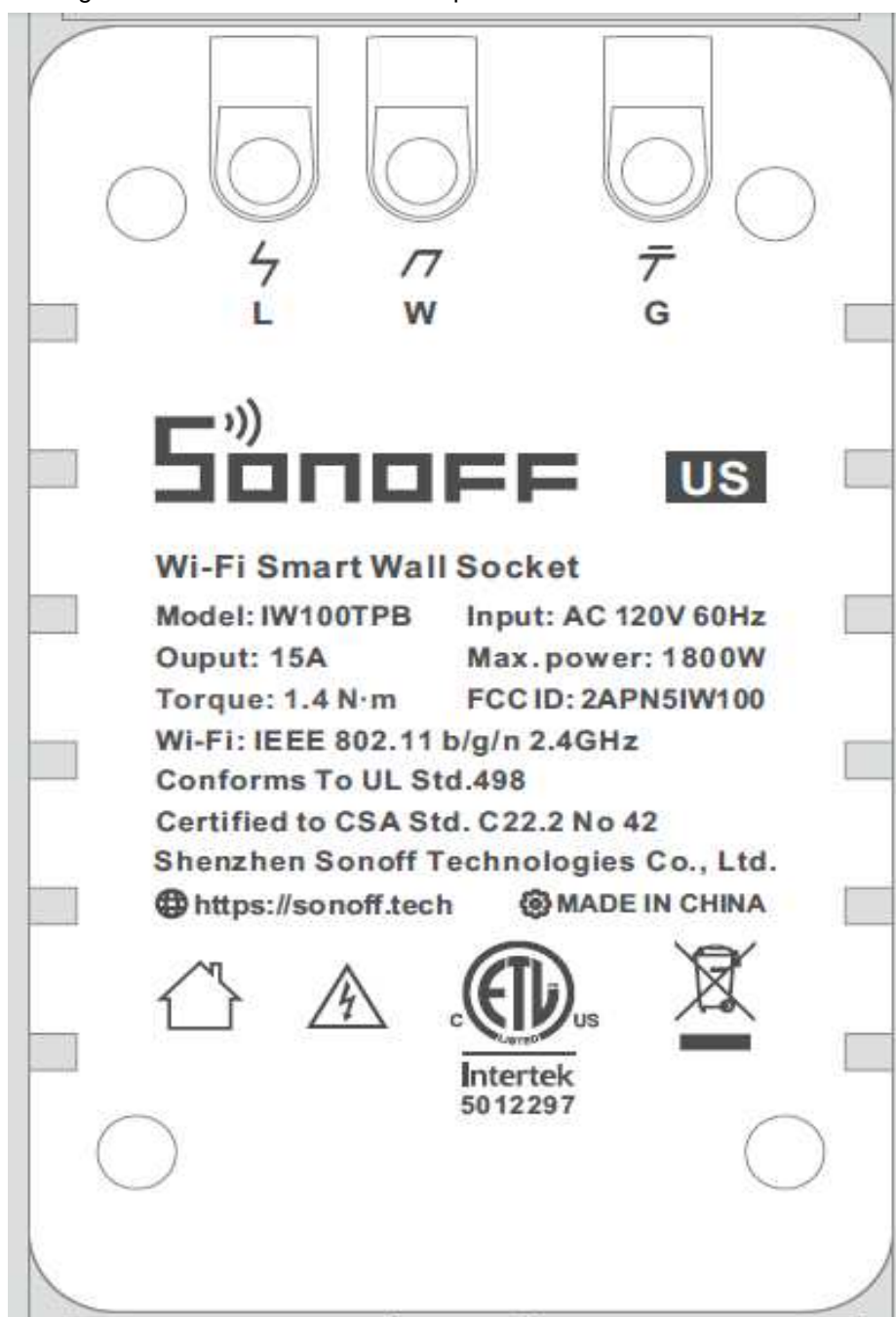
1. Spacing - In primary circuits, 3/64 inch (1.2 mm) minimum spacing are maintained through air and over surfaces of between uninsulated live parts of opposite polarity, an uninsulated live part and a dead-metal part that is likely to be grounded or exposed to contact by persons when the device is installed as intended. A receptacle with integral power supply with one or more Class 2 output low-voltage connectors shall maintain a minimum of a 1/4 inch (6.35 mm) separation of branch circuit wiring and Class 2 connections after installation. A receptacle with integral power supply with one or more Class 2 output low-voltage connectors shall provide adequate spacings clearance of 3/64 inch (1.2 mm) between each terminal and the metal of a standard outlet box of the minimum size in which it is intended to be installed.
2. Mechanical Assembly - Components such as switches, fuseholders, connectors, wiring terminals and display lamps are mounted and prevented from shifting or rotating by the use of lockwashers, starwashers, or other mounting format that prevents turning of the component.
3. Corrosion Protection - All ferrous metal parts are protected against corrosion by painting, plating or the equivalent.
4. Accessibility of Live Parts - All uninsulated live parts in primary circuitry are housed within a non-metallic enclosure constructed with no openings other than those specifically described in Sections 4.
5. Grounding - All exposed dead-metal parts and all dead-metal parts within the enclosure that are exposed are connected to the grounding lead of the power supply cord.
6. Polarized Connection - This product is provided with a polarized power supply connection. All single pole switches and fuses are connected only to the ungrounded supply circuit conductor.
7. Internal Wiring - Internal wiring is routed away from sharp or moving parts. Internal wiring leads terminating in soldered connections are made mechanically secure prior to soldering. Recognized Component separable (quick disconnect) connectors of the positive detent type, closed loop connectors, or other types specifically described in the text of this report are also acceptable as internal wiring terminals. At points where internal wiring passes through metal walls or partitions, the wiring insulation is protected against abrasion or damage by plastic bushings or grommets.
8. Schematics - Refer to Sec. 7.0 Illustration 2 - 11 for schematics requiring verification during Field Representative Inspection Audits.
9. Markings - The product is marked by a permanent method such as molding into polymeric enclosure or printing, painting onto polymeric enclosure as follows:  
Refer to Section 7.0 Illustrations 1 for details.
10. Installation, Operating and Safety Instructions - Instructions for installation and use of this product are provided by the manufacturer.



## 7.0 Illustrations

### Illustration 1 - Marking.

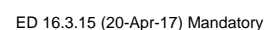
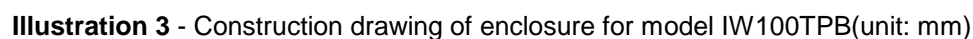
The following marking are shown on the enclosure of product.



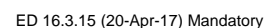
Remark:

- a) The ETL logo shall not be less than 8 mm in diameter, and the "US" and "C" shall not be less than 2 mm in height.
- b) The "Intertek" shall not be less than 3 mm in height,
- c) The Control Number "5012297" shall not be less than 2 mm in height.
- d) The "CONFORMS TO UL STD. 498" "CERTIFIED TO CSA STD. C22.2 NO. 42" shall not be less than 1.5 mm in height.

**Illustration 2 - Construction drawing of base for model IW100TPB(unit: mm)**



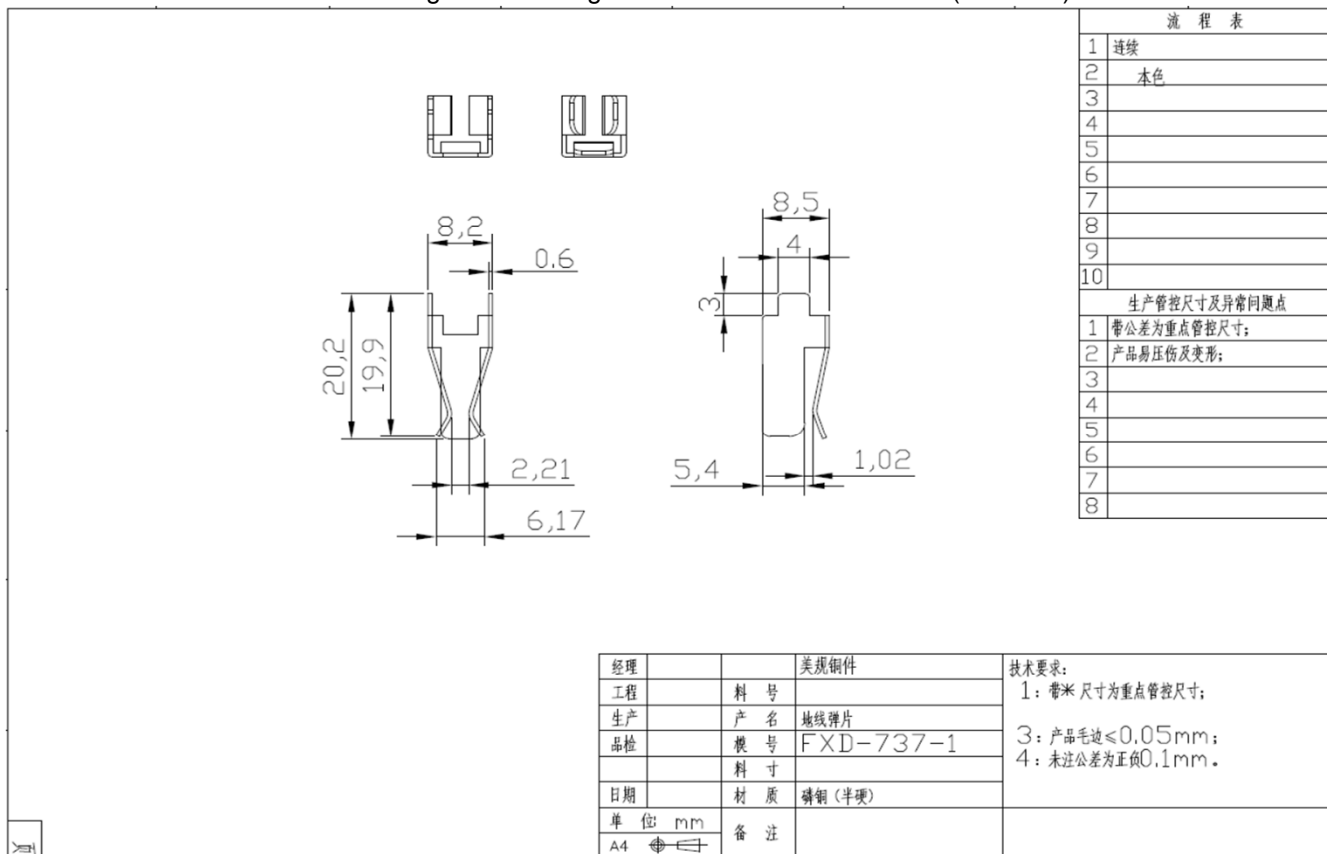
**Illustration 4** - Construction drawing of cover plate for model KX-XP-US-005(unit: mm)



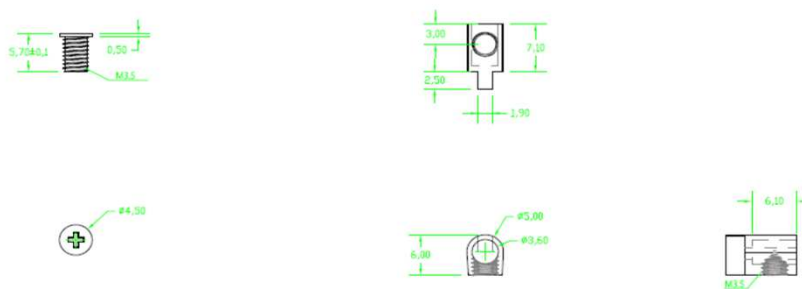


## 7.0 Illustrations

**Illustration 6** - Construction drawing of Grounding contact for model IW100TPB(unit: mm)



**Illustration 7** - Construction drawing of terminal for model IW100TPB(unit: mm)



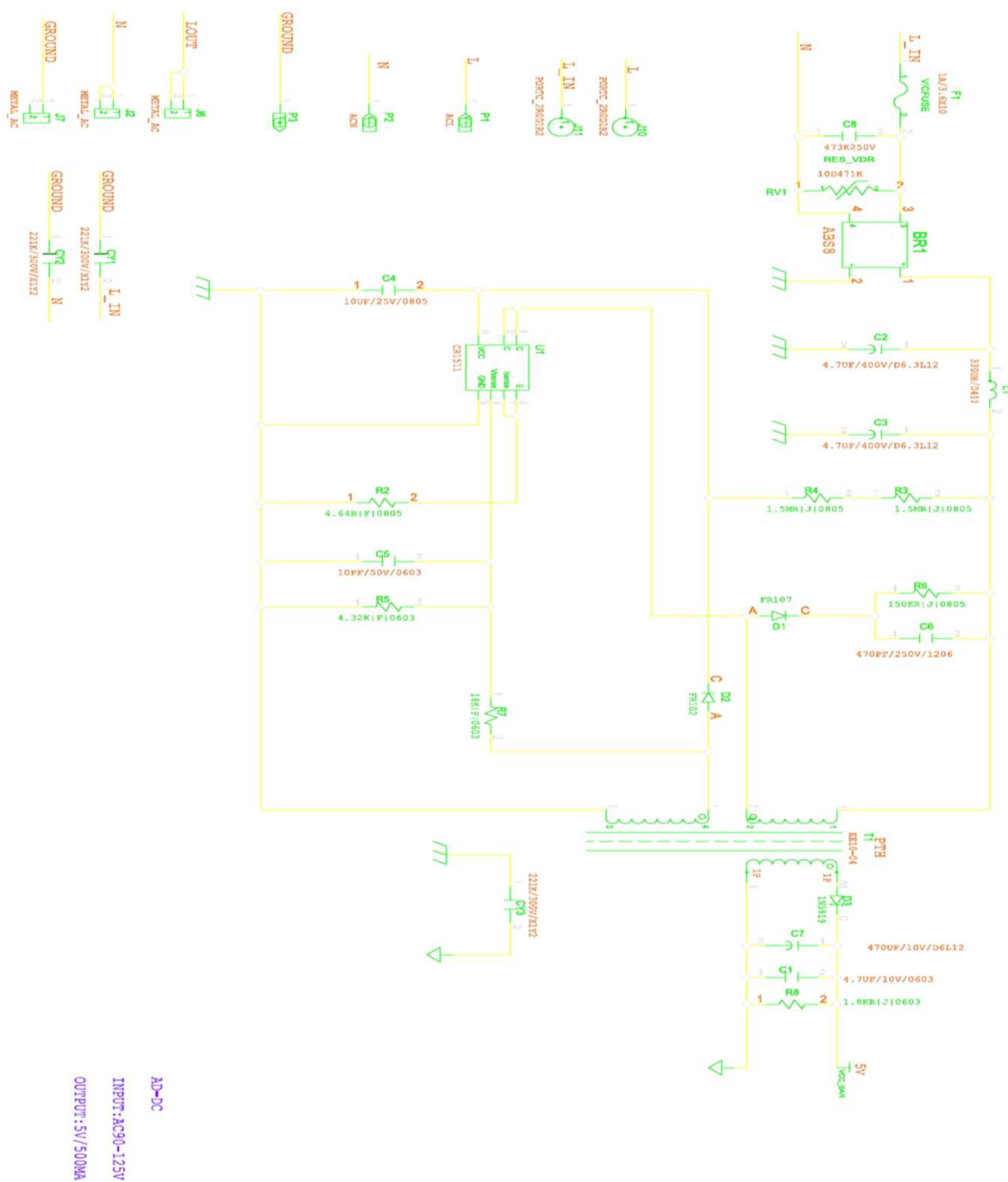
### 备注

- 1、材料：黄铜
- 2、未注公差±0.05

Replace content			Designer		CUSTOMER CODE/CUSTOMED PART NUMBER	Unit	Projection	Scale	Size
	Date	Functionary	Checked		<b>Sonoff</b>		OTHER TOLERANCE: Designation / Name 螺丝和铜柱		
			Approved					DRAWING NO	Revi Sert of

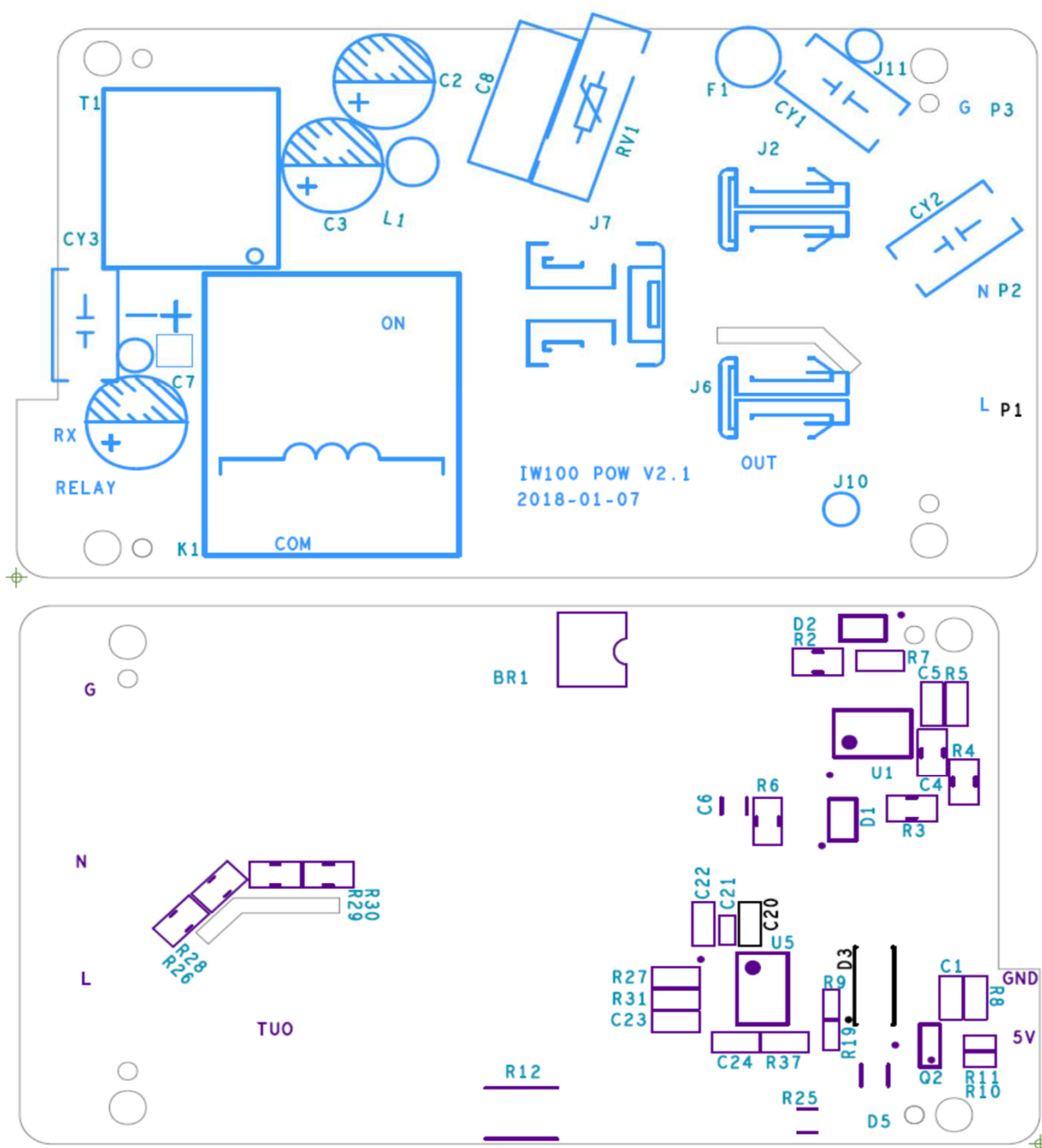
## 7.0 Illustrations

**Illustration 8 -** Circuit diagram of model IW100TPB



## 7.0 Illustrations

**Illustration 9** - Main circuit PCB LAYOUT of model IW100TPB

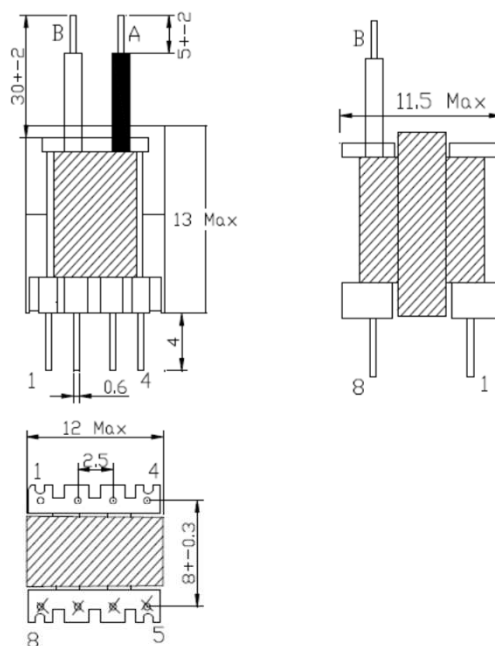




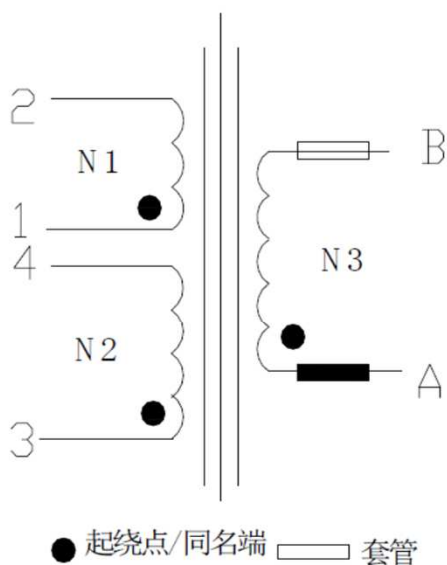
## 7.0 Illustrations

**Illustration 10** - Specification of transformer XCL-EE10-5V0.5A-CR1511-2.7MH.

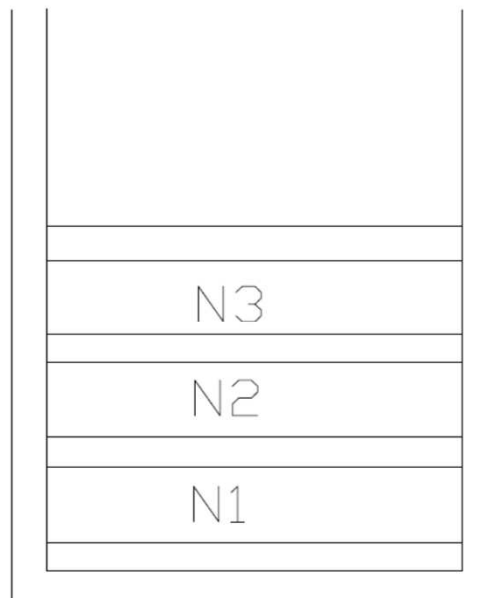
一. 外观图DIMENSION: (mm)



二. 电气原理图SCHEMATIC:



三. 线包结构图WINDING CONSTRUCTION:



## 四. 线圈绕制表 WINDING

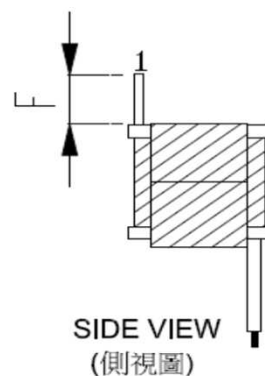
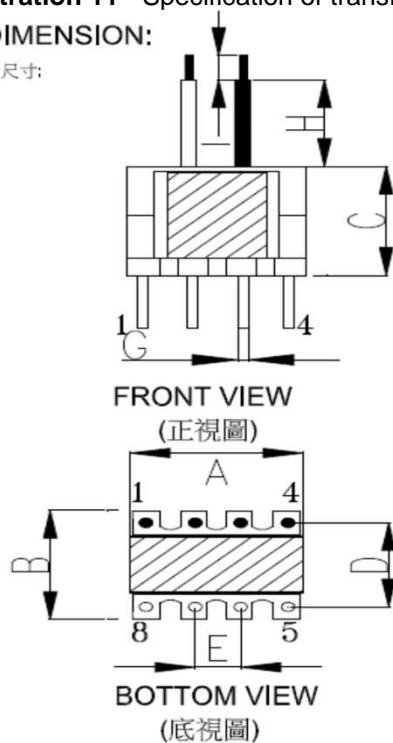
序号 NO	绕线方式	脚位/PIN		槽位/SLOT		线径股数 WTRE SHARES	圈数 TURNS	套管/CASING		绝缘胶带 INSULATING TAPE	绕制方法WINDING METHOD
		入	出	入	出			入	出		
N1	顺时针绕	1	2			2UEW $\Phi 0.13\text{mm} \times 1\text{P}$	178TS			7mm/2TS	密绕 不交叉
N2	顺时针绕	3	4			2UEW $\Phi 0.13\text{mm} \times 1\text{P}$	18TS			7mm/2TS	居中 密绕 不交叉
N3	逆时针绕	B	A			TEX-E $\Phi 0.35\text{mm} \times 1\text{P}$	12TS	白23L	黑23L	7mm/2TS	密绕 不交叉

## 7.0 Illustrations

**Illustration 11** - Specification of transformer EE10-2.7mH.

### 1.DIMENSION:

尺寸:



标签示意图

EE10-A XCL

### 2.WINDING ORDER:

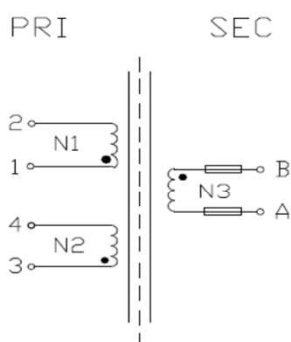
卷繞順序:

WINDING 繞組	始端		終端		WIRE 銅線線徑 2UEW	WDG. TURNS 卷繞圈數	檔牆膠帶規格		鐵氟龍套管		線頭線尾膠帶 (mm)		TAPES 膠帶	REMARK 備註
	PIN	位置	PIN	位置					S	F	規格用量 (0.025*7mm)	(0.025*7.0mm)		
N1	1		2		0.13mm*1P	178Ts							2Ts	密繞四層
N2	3		4		0.15mm*2P	18Ts							2Ts	居中密繞
N3	B		A		TEX-E0.35mm*1P	12Ts			#23L	#23L			2Ts	密繞

### 3.SCHEMATIC:

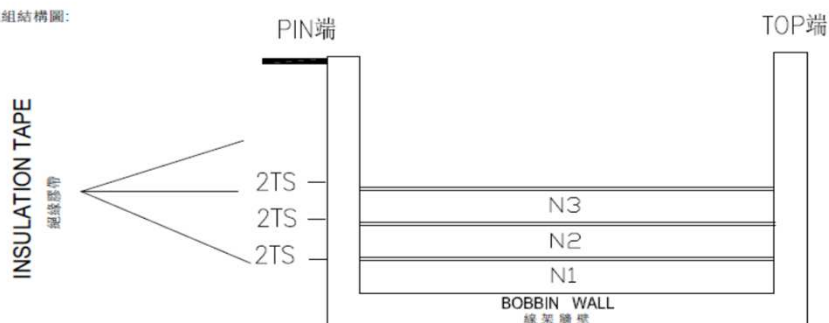
線路圖:

● START  
□ TUBE



### 4.WINDING CONSTRUCTION:

繞組結構圖:



8.0 Test Summary					
Evaluation Period	06-May-2019~29-Jun-2019			Project No.	190430012GZU
Sample Rec. Date	4-May-2019	Condition	Prototype	Sample ID.	S190430012-001~015
Test Location	Zenith Compliances Service (Guangdong) Co Ltd. 12/F, Libeiling House, 18 Beili RD, Libeiling village, Dalang Town, Dongguan City, 523773 China				
Test Procedure	Testing Lab				
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.					
The following tests were performed:					
Test Description			UL 498:2017 Ed.16 +R:14Dec2018 Clause	CSA C22.2#42:2010 Ed.7+U1;U2;U3 Clause	--
Configuration Check			7	5	--
Dielectric Withstand Test			65	8.21	--
Mold Stress Relief Test			63	--	--
Dielectric Withstand Test(repeated)			65	8.21	--
Insulation Resistnce Test			67	8.5	
Retention of Plugs Test			111	8.7	--
Overload Test			112	8.8	--
Temperature Test			113	8.9	--
Retention of Plugs Test (Repeated)			114	8.10	--
Resistance to Arcing Test			115	8.17	--
Temperature Test (Terminal)			118	--	--
Fault Current Test			122	--	--
Terminal Strength Test			123	--	--
Assembly Security Test			124	8.20	--
Grounding Contact Test			125	8.16.1	--
Pressure-Wire Terminals (General)			126	--	--
Strength of Insulating Base Test			128	--	--
Terminal screw tightening torque			--	8.23	--

Test Description	UL 60730-1:2016 Ed.5 Clause	CSA E60730-1:2015 Ed.5 Clause	
Inaccessibility of live parts	8.1.9	8.1.9	--
Low resistance between earth connections	9.3.1	9.3.1	--
Protection against humid conditions	12.2	12.2	--
Measurements of leakage current	12.3	12.3	--
Insulation resistance and dielectric strength	13	13	--
Heating	14	14	--
Environmental stress	16.2	16.2	--
Impact resistance	18.2	18.2	--
Tumbling	18.6	18.6	--
Threaded parts and connections	19	19	--
Creepage distance, clearances and distance through solid insulation	20	20	--
Abnormal operation	H.27	H.27	--

8.0 Test Summary				
Evaluation Period	06-May-2019~29-Jun-2019		Project No.	190430012GZU
Sample Rec. Date	4-May-2019	Condition	Prototype	Sample ID. S190430012-001~012
Test Location	Intertek Testing Services Shenzhen Limited Guangzhou Branch Block E, No. 7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City			
Test Procedure	Testing Lab			

Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.

The following tests were performed:



Test Description	UL 514D Issued: 2013/06/28 Clause	--	--
Dielectric Voltage-Withstand	7.4	--	--
Flame penetration for cover plates	7.5	--	--
Flammability	7.6	--	--
Aging	7.7	--	--
Mechanical Strength	7.8	--	--
Mold Stress Relief	7.9	--	--
Deformation Resistance	7.10	--	--

Evaluation Period	06-May-2019~29-Jun-2019		Project No.	190430036GZU
Sample Rec. Date	4-May-2019	Condition	Prototype	Sample ID. S190430036-001
Test Location	Intertek Testing Services Shenzhen Limited Guangzhou Branch Block E, No. 7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City			
Test Procedure	Testing Lab			

Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.

The following tests were performed:

Test Description	UL 60730-1:2016 Ed.5 Clause	CSA E60730-1:2015 Ed.5 Clause	--
Conducted Emission	H.23.1.2	H.23.1.2	--
Radiated Emission	H.23.1.2	H.23.1.2	--
Surge Immunity	H.26.8	H.26.8	--
Electrical Fast Transient/Burst Immunity	H.26.9	H.26.9	--

8.1 Signatures			
A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.			
Completed by:	Steven Liang	Reviewed by:	Sunny Tang
Title:	Project Engineer	Title:	Reviewer
Signature:		Signature:	



## 9.0 Correlation Page For Multiple Listings

The following products, which are identical to those identified in this report except for model number and Listee name, are authorized to bear the ETL label under provisions of the Intertek Multiple Listing Program.

BASIC LISTEE	Shenzhen Sonoff Technologies Co., Ltd.
Address	Room 1001, 10F, Building 8, Lianhua Industrial Park, Longyuan Road, Longhua District, Shenzhen, Guangdong
Country	China
Product	Wi-Fi Smart Wall Socket

MULTIPLE LISTEE 1	None
Address	
Country	
Brand Name	

ASSOCIATED MANUFACTURER	
Address	
Country	

MULTIPLE LISTEE 1 MODELS	BASIC LISTEE MODELS

MULTIPLE LISTEE 2	None
Address	
Country	
Brand Name	

ASSOCIATED MANUFACTURER	
Address	
Country	

MULTIPLE LISTEE 2 MODELS	BASIC LISTEE MODELS

MULTIPLE LISTEE 3	None
Address	
Country	
Brand Name	

ASSOCIATED MANUFACTURER	
Address	
Country	

MULTIPLE LISTEE 3 MODELS	BASIC LISTEE MODELS

## 10.0 General Information

The Applicant and Manufacturer have agreed to produce, test and label ETL Listed products in accordance with the requirements of this Report. The Manufacturer has also agreed to notify Intertek and to request authorization prior to using alternate parts, components or materials.

### COMPONENTS

Components used shall be those itemized in this Intertek report covering the product, including any amendments and/or revisions.

### LISTING MARK

The ETL Listing mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the mark is subject to the control of Intertek.

The mark must include the following four items:

- 1) applicable country identifiers "US" and/or "C" or "US", "C" and "EU"
- 2) the word "Listed" or "Classified" or "Recognized Component" (whichever is appropriate)
- 3) a control number issue by Intertek
- 4) a product descriptor that identifies the standards used for certification. Example:

**For US standards**, the words, "Conforms to" shall appear with the standard number along with the word, "Standard" or "Std." Example: "Conforms to ANSI/UL Std. XX."

**For Canadian standards**, the words "Certified to CAN/CSA Standard CXX No. XX." shall be used, or abbreviated, "Cert. to CAN/CSA Std. CXX No. XX."

Can be used together when both standards are used.

**Note: A facsimile must be submitted to Intertek, Attn: Follow-up Services for approval prior to use.**

The facsimile need not have a control number. A control number will be issued **after signed Certification Agreements** have been received by the Follow-up Services office, approval of the facsimile of your proposed Listing Mark, satisfactory completion of the Listing Report, and scheduling of a factory assessment in your facility.

### MANUFACTURING AND PRODUCTION TESTS

Manufacturing and Production Tests shall be performed as required in this Report.

### FOLLOW-UP SERVICE

Periodic unannounced audits of the manufacturing facility (and any locations authorized to apply the mark) shall be scheduled by Intertek. An audit report shall be issued after each visit. Special attention will be given to the following:

1. Conformance of the manufactured product to the descriptions in this Report.
2. Conformance of the use of the ETL mark with the requirements of this Report and the Certification Agreement.
3. Manufacturing changes.
4. Performance of specified Manufacturing and Production Tests.

In the event that the Intertek representative identifies non-conformance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the ETL Mark from non-conforming product.
3. Contact the issuing product safety evaluation center for instructions.

### 10.1 Evaluation of Unlisted Components

Because Unlisted Components are uncontrolled, and they do not fall under a third party follow up program, Intertek may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process. The Unlisted Components in Section 5.0 require testing and/or evaluation as indicated.

**Note to Intertek Follow Up Inspector: The Component Evaluation Center, CEC, will notify you in writing when these components must be selected and sent to the CEC for re-evaluation**

Ship the samples to:  
Intertek Testing Services Shenzhen Limited Guangzhou Branch  
ETL Component Evaluation Center  
Block E, No. 7-2 Guang Dong Software Science Park, Caipin Road, Guangzhou Science City

CETDD Guangzhou, China.

Attn: Ms. Joey Kuang

Sample Disposition: Due to the destructive nature of the testing, all samples will be discarded at the conclusion of testing unless, the manufacturer specifically requests the return of the samples. The request for return must accompany the initial component shipment.

## 11.0 Manufacturing and Production Tests

The manufacturer agrees to conduct the following Manufacturing and Production Tests as specified:

### Required Tests

Dielectric Voltage Withstand Test  
Grounding Continuity Test

## 11.1 Dielectric Voltage Withstand Test

### Method

One hundred percent of production of the products covered by this Report shall be subjected to a routine production line dielectric withstand test.

The test shall be conducted on products, which are fully assembled. Prior to applying the test potential, all switches, contactors, relays, etc., should be closed so that all primary circuits are energized by the test potential. If all primary circuits cannot be tested at one time, then separate applications of the test potential shall be made.

The test voltage specified below shall be applied between primary circuits and accessible dead-metal parts. The test voltage may be gradually increased to the specified value but must be maintained at the specified value for one second or one minute as required.

### Test Equipment

The test equipment shall incorporate a transformer with an essentially sinusoidal output, a means to indicate the applied test potential, and an audible and/or visual indicator of dielectric breakdown.

The test equipment shall incorporate a voltmeter in the output circuit to indicate directly the applied test potential if the rated output of the test equipment is less than 500VA.

If the rated output of the test equipment is 500VA or more, the applied test potential may be indicated by either:

- 1 - a voltmeter in the primary circuit;
- 2 - a selector switch marked to indicate the test potential; or
- 3 - a marking in a readily visible location to indicate the test potential for test equipment having a single test potential output.

In cases 2 and 3, the test equipment shall include a lamp or other visual means to indicate that the test potential is present at the test equipment output. All test equipment shall be maintained in current calibration.

### **Products Requiring Dielectric Voltage Withstand Test:**

<u>Product</u>	<u>Test Voltage</u>	<u>Test Time</u>
All products covered by this Report.	1000V AC	60 s
	or	
	1200V AC	1 s

## 11.2 Grounding Continuity Test

### Method

Each product shall be tested, as a routine production-line test, to determine grounding continuity between the grounding terminal and the accessible, dead-metal parts of the product that become energized. The grounding contact of each receptacle are included in this test.

### Test Equipment

Compliance with above is determined by any appropriate device, such as an ohmmeter or a battery and buzzer combination, applied between the point of connection of the grounding means and the metal parts in question.

### **Products Requiring Grounding Continuity Test:**

All products covered by this Report.

The following changes are in compliance with the declaration of Section 8.1:

ED 16.3.15 (20-Apr-17) Mandatory