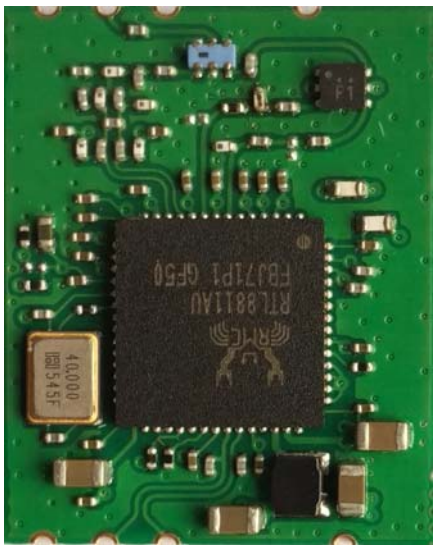
CHANGHONG 长虹

WIFI-2-R811USA2

IEEE 802.11a/ b/g/n/ac 1T1R USB2.0 Wi-Fi Module

特性 Features：



- **接收制式 Reserving System**
  IEEE Std. 802.11a
  IEEE Std. 802.11b
  IEEE Std. 802.11g
  IEEE Std. 802.11n
  IEEE Std. 802.11ac
- **双波段 Dual Band**
  2.4G&5.8G
- **结构大小 Size**
  18.20mmx 14.80mm

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ADD：Changhong 909 Factory,35,East Mianxing Road,High-tech Park,Mianyang,Sichuan,China

公司：四川长虹电子部品有限公司

Factory： Sichuan Changhong Electronic Component Co., LTD

批准 Approved	审核 Checked	拟制 Designed	产品 Product	WIFI 模组 WIFI MODULE
			型号 Model	WIFI-2-R811USA2
			日期 Date	2016-03-21

更改记录 Record of Modification

序号 No	更改日期 Date of modification	主要更改内容 Main content of modification	更改原因 Reason of modification	更改通知编号 Serial number of modification	确认 Confirm
1	20160124		首版		覃达开
2	20160321	1、增加包装； 2、增加回流曲线 3、增加产品图片	完善规格书		覃达开

1. Introduction

WIFI-2-R811USA2 is based on realtek RTL8811AU, is a WLAN 11ac module, which fully supports the features and functional compliance of IEEE 802.11 a/b/g/n/ac standards. This documentation describes the engineering requirements specification.

1.1 RF module Overview

The general HW architecture for the module is shown in Figure 1. This WLAN Module design is based on Realtek RTL8811AU. It is a highly integrated single-chip SISO(Single In Single Out) Wireless LAN (WLAN) USB2.0 network interface controller complying with the 802.11ac specification. It combines a MAC, a 1T1R capable baseband, and RF in a single chip. The RTL8811AU provides a complete solution for a high throughput performance wireless client.

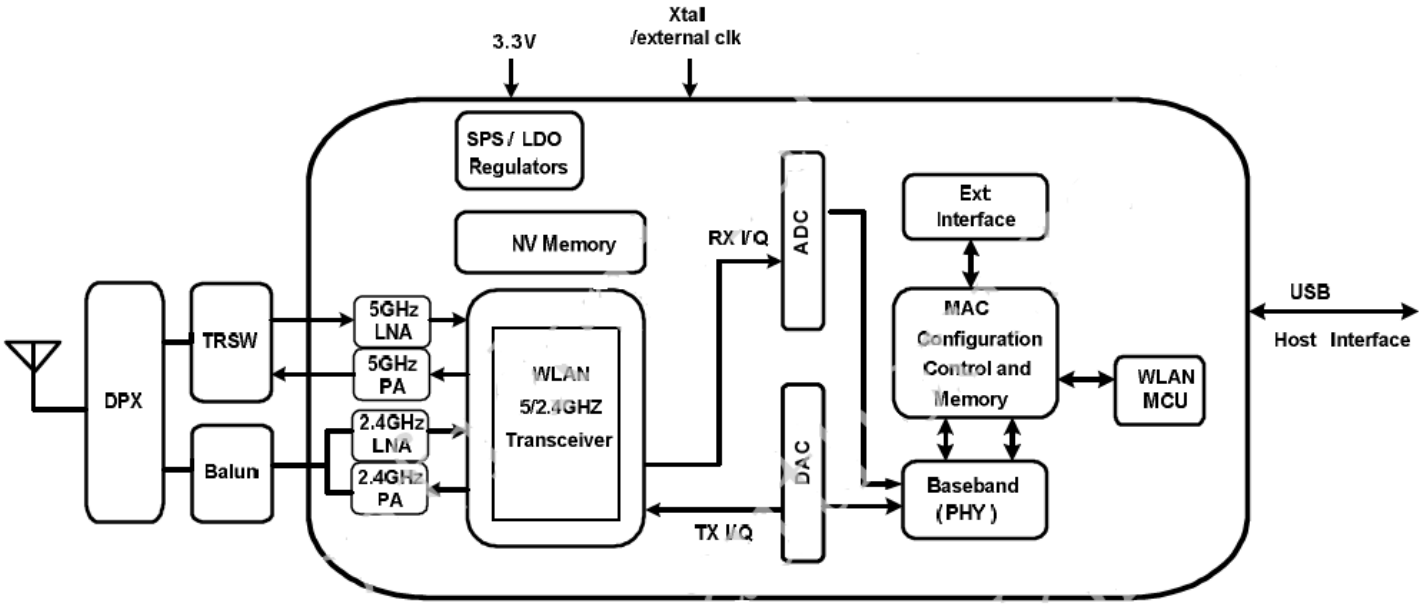


Figure 1 Module Block Diagram

1.2 Specification reference

This specification is based on additional references listed below.

_ IEEE Std. 802.11a
_ IEEE Std. 802.11b
_ IEEE Std. 802.11g
_ IEEE Std. 802.11n
_ IEEE Std. 802.11ac

1.3 System Functions

Table1: General Specification as below:

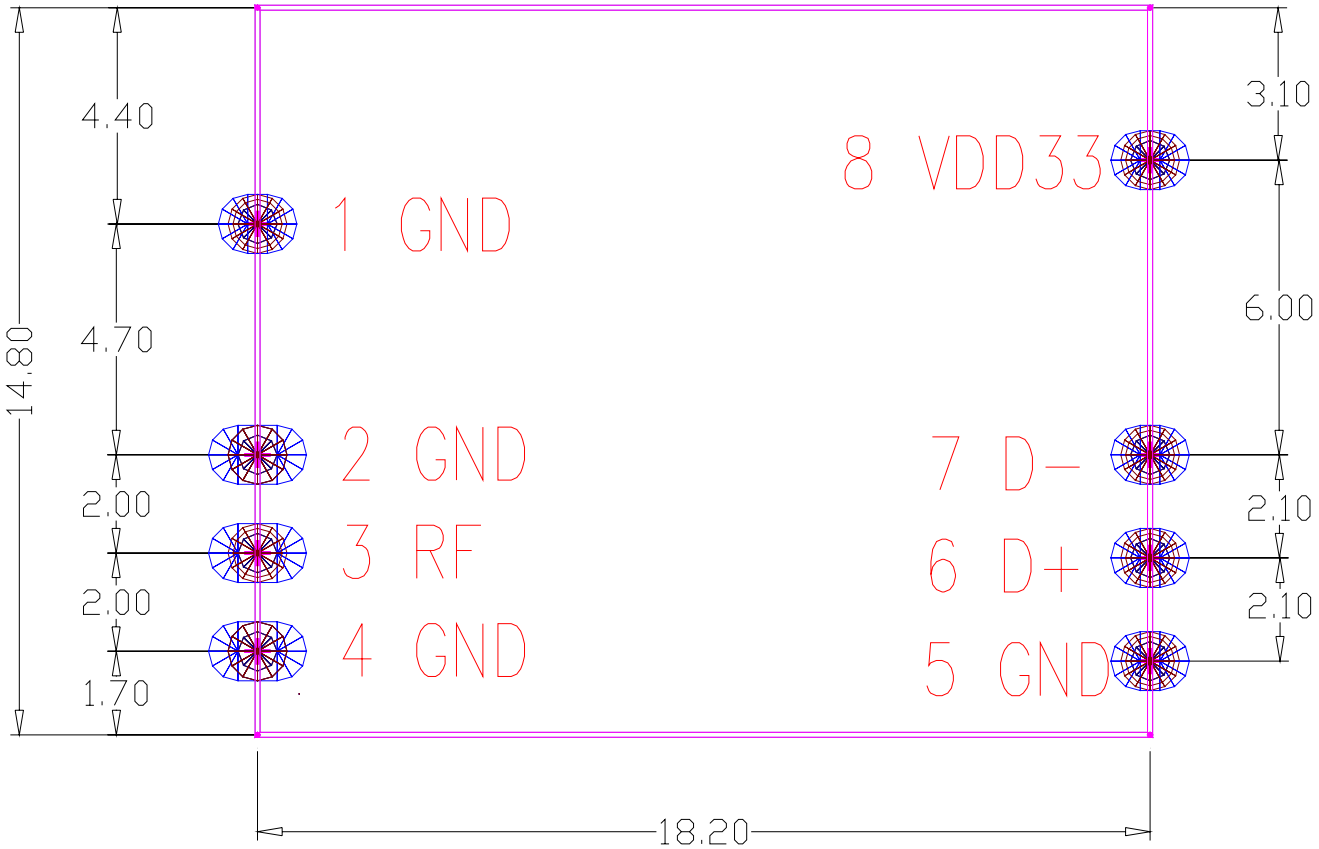
Main Chipset	Realtek RTL8811AU-VS
Operating Frequency	2.412~2.462GHz & 5.180 -5.240 GH z& 5.745 -5.825 GHz
Wi-Fi Standard	802.11a/b/g/n/ac (1x1)
Modulation	WIFI: 11b: DBPSK, DQPSK and CCK and DSSS 11a/g: BPSK, QPSK, 16QAM, 64QAM and OFDM 11n: BPSK, QPSK, 16QAM, 64QAM and OFDM 11ac: BPSK, QPSK, 16QAM, 64QAM, 256QAM and OFDM

Data rates	up to 433.5Mbps
Host Interface	USB 2.0
PCB Stack	4-layers design
Dimension	Typical，18.20mm(L)*14.80mm(W)
Operation Temperature	0℃ to +60℃
Storage Temperature	-25℃ to +85℃
Operation Voltage	3.3V +/-10%

2. Mechanical Specification

2.1 Mechanical Outline Drawing

Typical Dimension (L x W): 18.20mmx 14.80mm



Pin definition

PIN	Type
1	GND
2	GND
3	RF
4	GND
5	GND
6	D+
7	D-
8	VDD33

3. FCC Statement

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions: 1) this device may not cause harmful interference, and 2) this device must accept any interference received, including interference that may cause undesired operation.
Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
--Reorient or relocate the receiving antenna.
--Increase the separation between the equipment and receiver.
--Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
--Consult the dealer or an experienced radio/TV technician for help.
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Radiation Exposure Statement

The modular can be installed or integrated in mobile or fix devices only. This modular cannot be installed in any portable device, for example, USB dongle like transmitters is forbidden. This modular complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This modular must be installed and operated with a minimum distance of 20 cm between the radiator and user body.

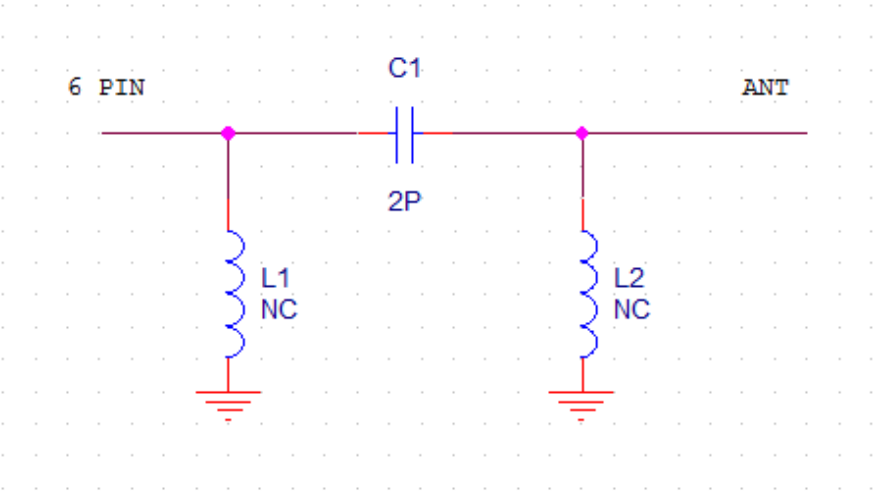
If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following: "Contains Transmitter Module FCC ID: 2AC49-R811USA2.

When the module is installed inside another device, the user manual of this device must contain below warning statements; 1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference. (2) This device must accept any interference received, including interference that may cause undesired operation. 2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. The devices must be installed and used in strict accordance with the manufacturer's instructions as described in the user documentation that comes with the product.

Any company of the host device which install this modular with limit modular approval should perform the test of radiated emission and spurious emission according to FCC part 15C and 15E : 15.247 , 15.209 and 15.407 requirement, Only if the test result comply with FCC part 15C and 15E: 15.247 ， 15.209 ， 15.407 requirement，then the host can be sold legally.

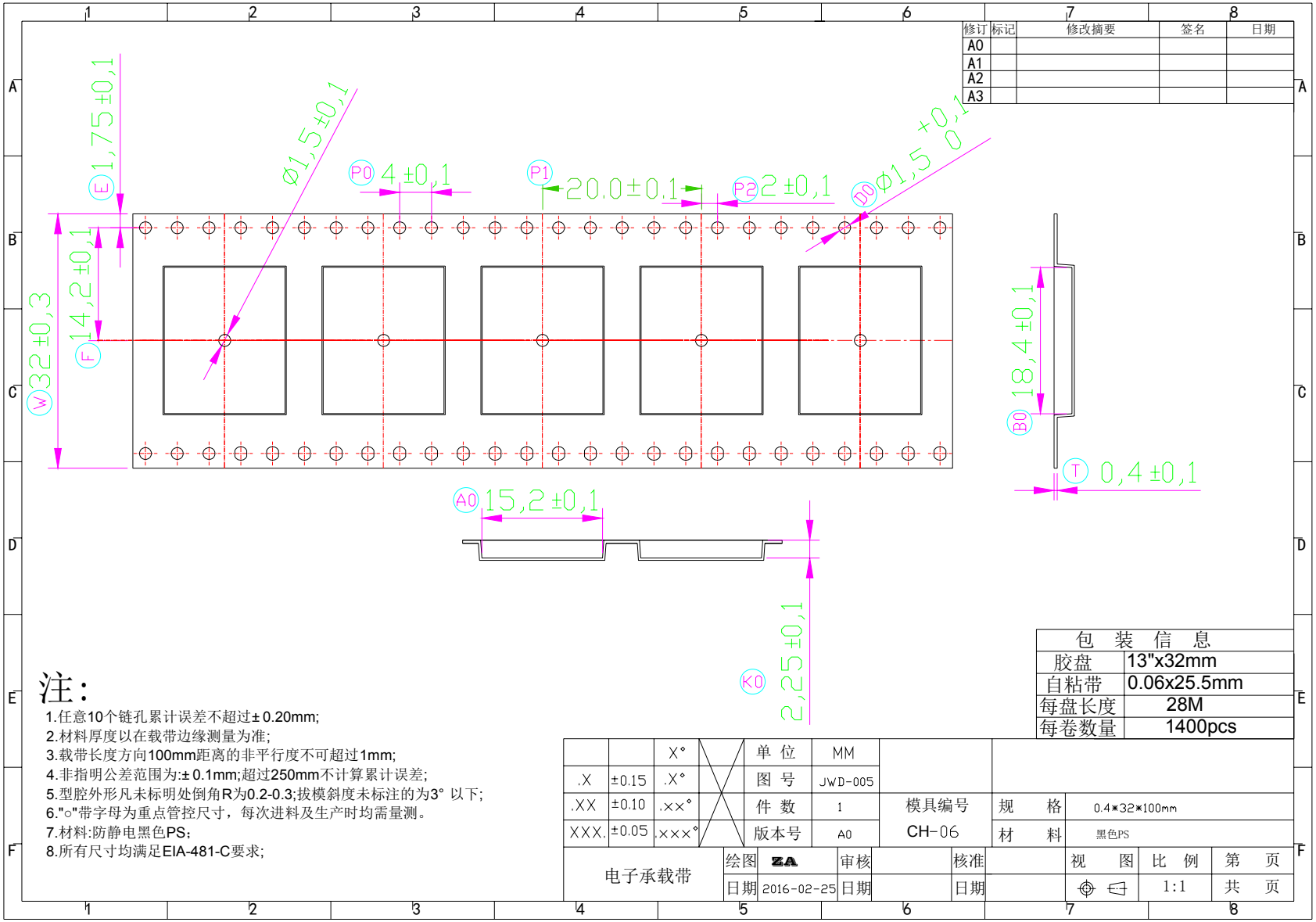
4 Antenna matching

The 3th Pin connect to antenna, please refer to design demand

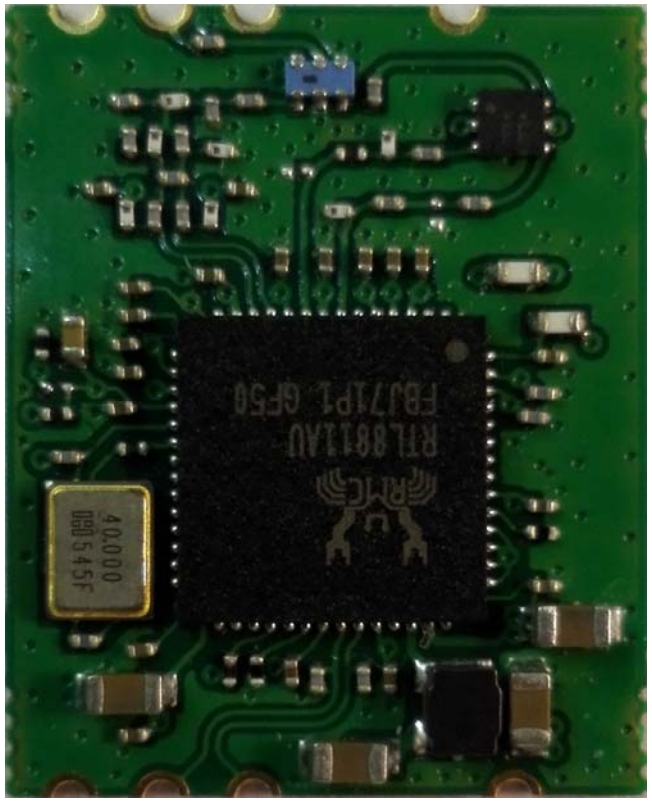


a). 模块和天线要求远离干扰源，模块地和天线地要求为一个整体。
b). PIN6为WIFI模组的RF接口，与天线之间布线要求共面阻抗为50Ω，建议使用弧线和直线，长度尽可能短。
c). L1, L2, C1组成π型匹配网络并靠近天线接口设计，具体根据天线推荐及排版设计的实测效果进行调整。

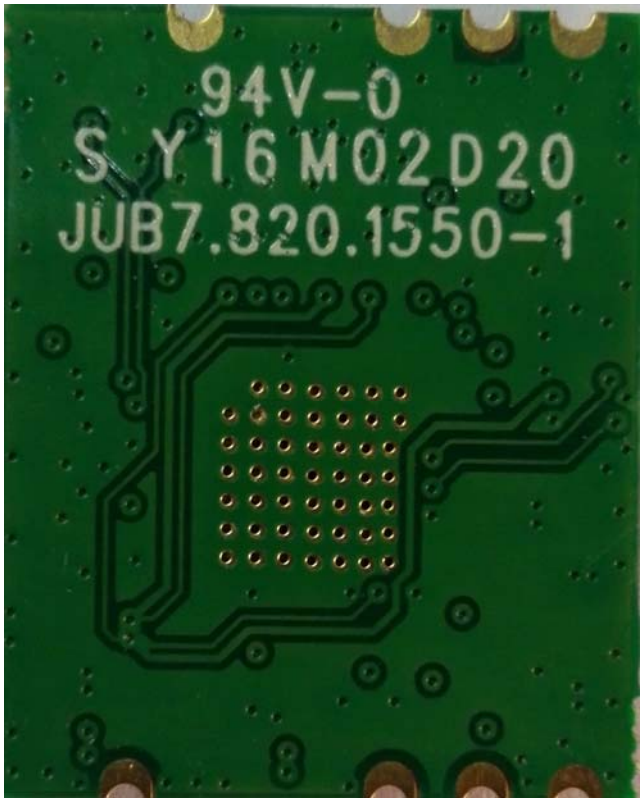
5. Package Information



6、Product Picture



TOP VIEW



BOTTOM VIEW

备注：图片仅供参考，背面字符中供应商标示、批次号等信息会稍有不同。