

HK NATER TECH LIMITED

RL-UM02BS模块承认书

客户名称

Customer: \_\_\_\_\_

样品名称

Description: RL-UM02BS 模块

客户料号

Customer P/N: \_\_\_\_\_

日期

Date: \_\_\_\_\_

客户栏 Customer		
核准Approve	审核Auditing	承认Admit

供应商栏 Provider		
核准Approve	审核Auditing	承认Admit

客户名称:

公司地址:

电话:

传真:

联系人:

E-mail:

供方名称: HK NATER TECH LIMITED

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尊敬的客户: 请收到我公司样品承认书三日内传首页, 谢谢!

# **RL-UM02BS**

## **Product Specifications**

**WLAN 11b/g/n USB module (1T1R)**

**Version: 1.2**

# Overview

UM02BS is a WLAN 11n USB module, which fully supports the features and

Functional compliance of IEEE 802.11n,e and i standards. It supports up to

150Mbps high-speed wireless network connections.

It is designed to provide excellent performance with low power Consumption and enhance the advantages of robust system and cost-effective.

It is targeted at competitive superior performance, better power Management applications.

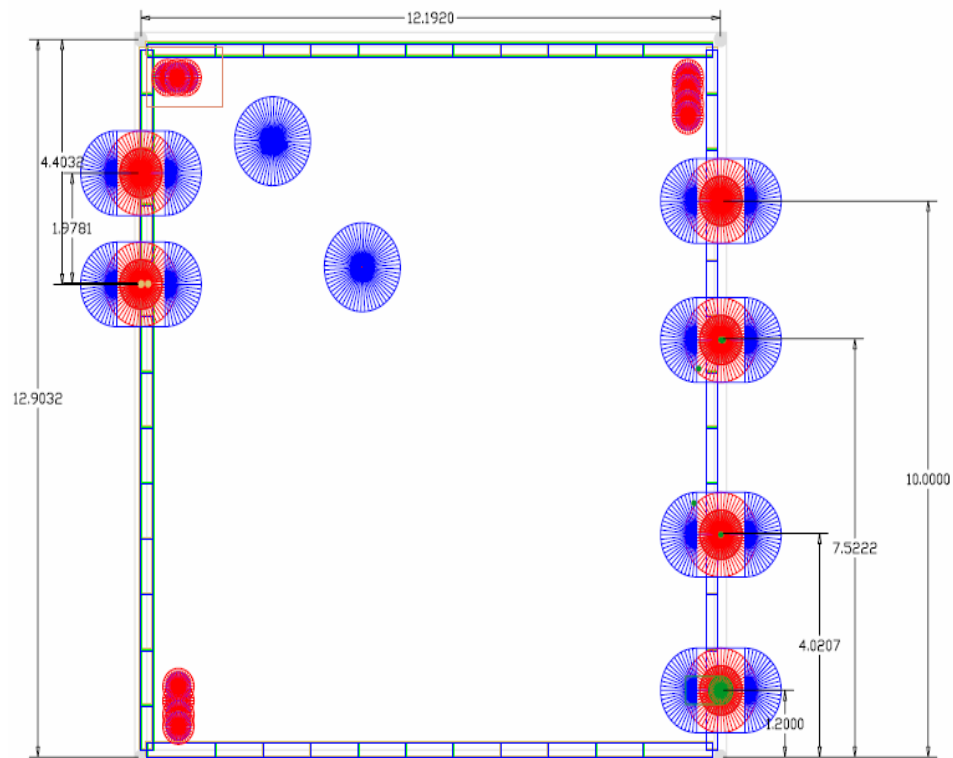
# Features

- \* Operates in 2.4 GHz frequency bands
- \* 1x1 MIMO technology improves effective throughput and range existing 802.11 b/g products
- \* Data rates: up to 150Mbps
- \* 802.11e-compatible bursting and I standards
- \* BPSK, QPSK, 16 QAM, 64 QAM modulation schemes
- \* WEP, TKIP, and AES, WPA, WPA2 hardware encryption schemes

# General Specification

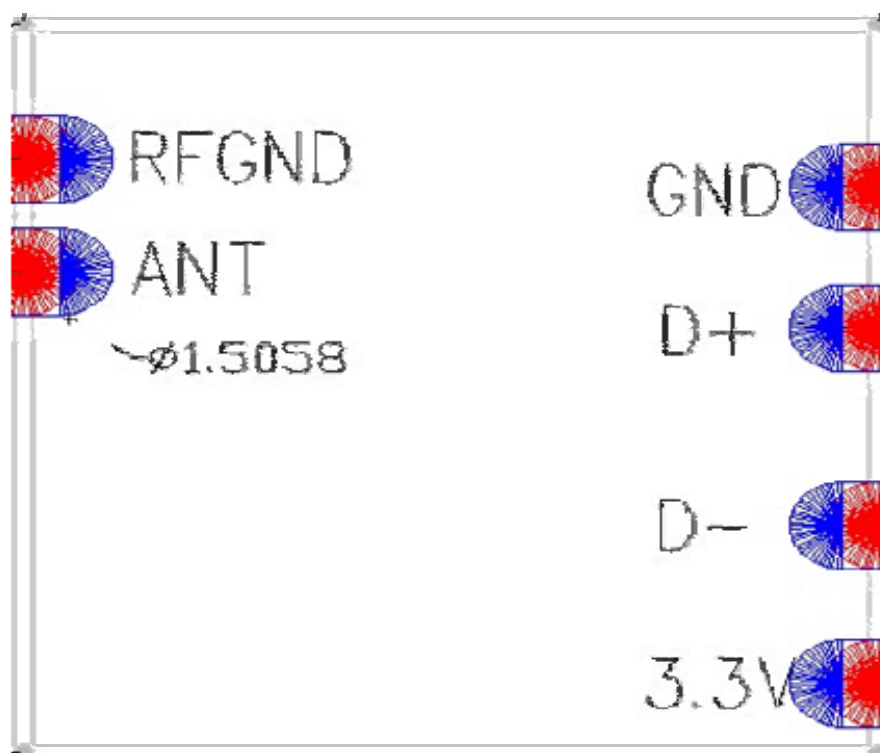
Model	RL-UM02BS
Product Name	WLAN 11n USB module
Major Chipset	Realtek RTL8188CUS
Standard	802.11b/g/n, 802.3, 802.3u
Data Transfer Rate	1,2,5.5,6,11,12,18,22,24,30,36,48,54,60,90,120 and maximum of 150Mbps
Modulation Method	BPSK/ QPSK/ 16-QAM/ 64-QAM
Frequency Band	2.4 ~ 2.4835 GHz ISM Band
Spread Spectrum	IEEE 802.11b: DSSS (Direct Sequence Spread Spectrum) IEEE 802.11g/n:OFDM (Orthogonal Frequency Division Multiplexing)
RF Output Power	< 13dBm@11n,< 18dBm@11b,< 14dBm@11g
Operation Mode	Ad hoc, Infrastructure
Receiver Sensitivity	11Mbps -86dBm@8%,54Mbps -73dBm@10%,130Mbps -66dBm@10%
Operation Range	Up to 180 meters in open space
LED	
OS Support	Windows 2000,XP32-64,Vista 32/64,Win7 32/64,Linux,Mac, Android, WIN CE
Security	WEP, TKIP, AES, WPA, WPA2
Interface	USB 2.0
Power Consumption	DC3.3V Maximum power dissipation in 140MA
Operating Temperature	0 - 50° C ambient temperature
Storage Temperature	-10 ~ 70°C ambient temperature
Humidity	5 to 90 % maximum (non-condensing)
Dimension	12. 9 x 12.2 x 1.8mm (LxWxH)

## Dimensions:

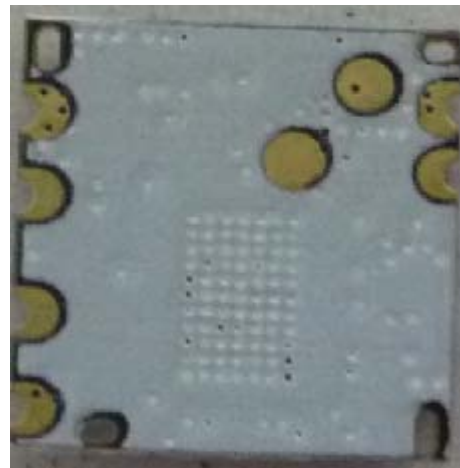
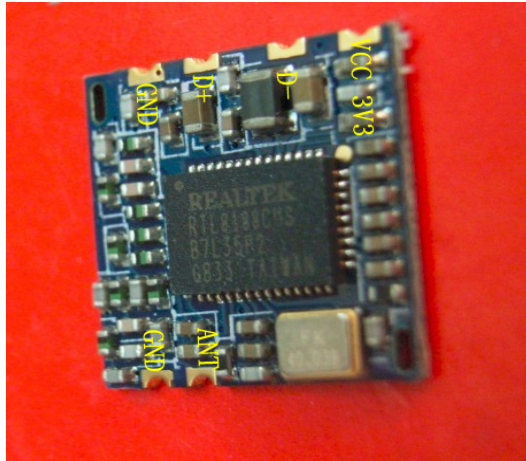


The PCB tolerances within + / -0.2 or so

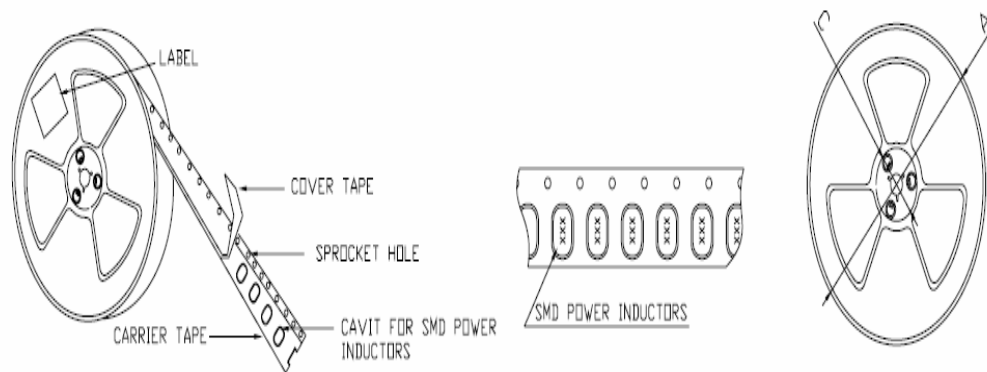
## PIN Definition



## Physical map



## Packaging Appearance Figure



## External antenna reference design

此部分需要做50R的单线阻抗

layout走线请走弧型线或直线

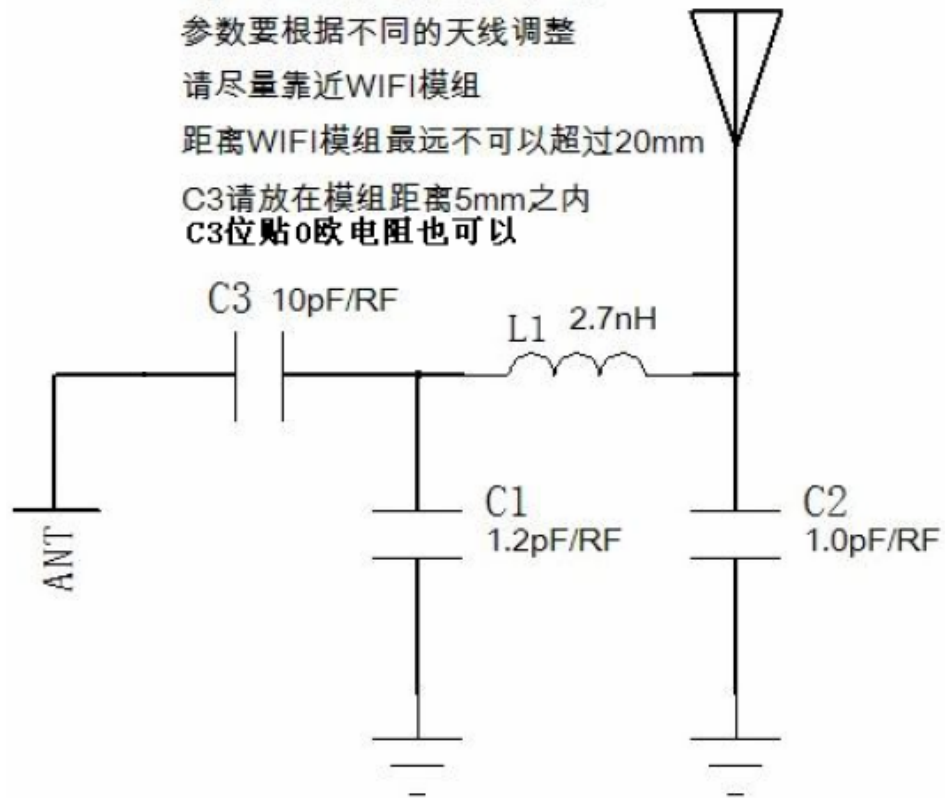
参数要根据不同的天线调整

请尽量靠近WIFI模组

距离WIFI模组最远不可以超过20mm

C3请放在模组距离5mm之内

C3位贴0欧电阻也可以



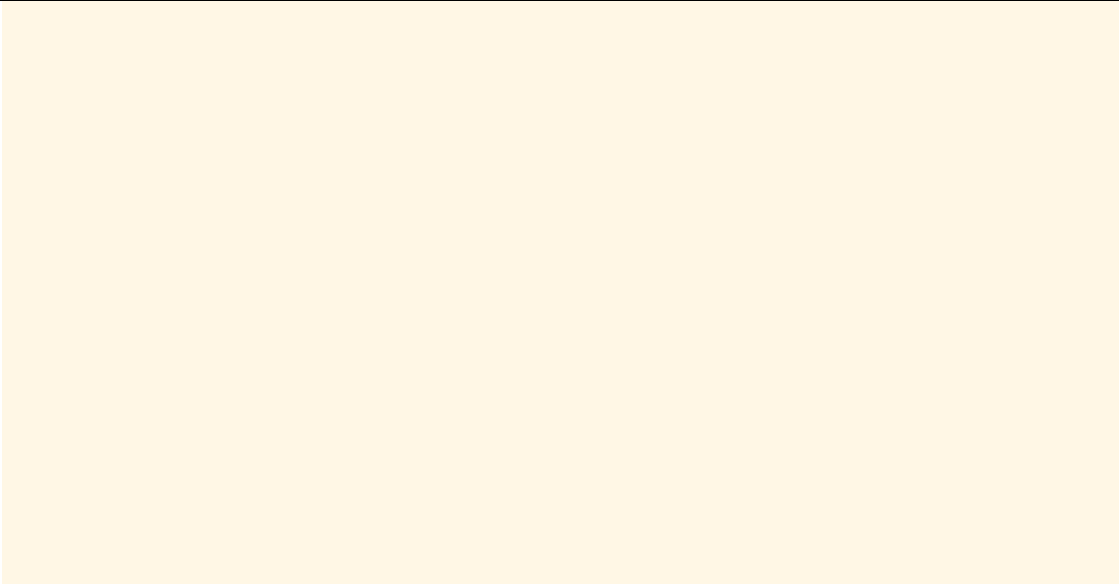
## DC Characteristics

Symbol	Parameter	Minimum	Typical	Maximum	Units
VD33A, VD33D	3.3V I/O Supply Voltage	3.1	3.3	3.5	V
VD15A, VD15D	1.5V Supply Voltage	1.4	1.5	1.6	V
IDD33	3.3V Rating Current	-	-	400	mA



# Power Consumption

Parameters	Sym	Conditions	Min	Typ	Max	Unit
3.3V Supply Voltage	Vc33		3.1	3.3	3.5	V
1.5V Supply Voltage	Vc15		1.4	1.5	1.6	V
Receiving Tests the biggest receive						
3.3V Current Consumption	Icc33rx	H40MCS7		113		MA
3.3V Current Consumption	Icc33rx	OFDM 54M		108		MA
Transmission Biggest transmission test						
3.3V Current Consumption	Icc33tx	H40 MCS7		138		MA
3.3V Current Consumption	Icc33tx	OFDM 54M		172		MA
The depth waits for an opportunity	Icc33tx/rx			2		MA
Deep sleep	Ic33tx/rx			2		MA



## USB interface electrical characteristics

