

Shenzhen Qi Ai Electronics Co., Ltd

Version number:	V1.0
Prepared by:	
Date:	2021/2/1

Product specifications

Product Name: RX500D Receiving
Module

Product Model:
RX500D

Client: _____

Confirmation: _____

Date: _____

1. product description

R X 500D receiving module is a UH F A S K receiving demodulator, supporting A S K demodulation. The receiving module has high sensitivity (-108 d B m), low power performance (<6.5 m A) and high dynamic range (greater than 60 d B). The module adopts high integration chip, built-in front-end low noise amplifier, mixer, filter, frequency synthesizer and other circuits, which can optimize the signal to the greatest extent.

2. product characteristics

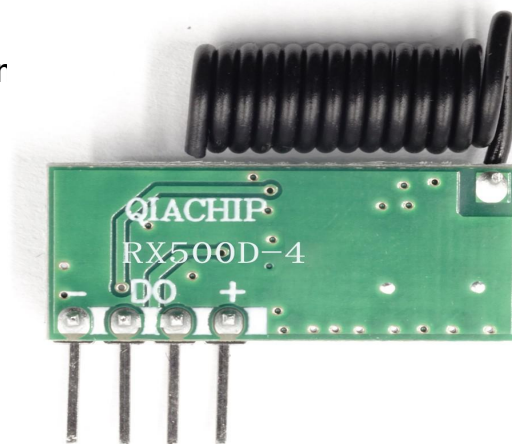
- Support ASK demodulation mode, receive sensitivity up to -108 dBm;
- Frequency of operation :433.92 MH z (RX 500D-4);
- 300 KHz; of receiving bandwidth
- Power supply voltage input range :2.2 V~5.0 V;
- Low power consumption;
- Good selectivity and stray radiation suppression ability, easy to pass CE/FCC international certification;
- Good local oscillator radiation suppression ability, multiple receiving modules can work together (that is, single-off and over-receive) and will not interfere with each other, together use does not affect the receiving distance;
- Maximum communication rate 20 Kbps, recommended communication rate not exceeding 10 Kbps;
- Temperature range : -40°C ~ 85°C can work normally even under harsh ambient temperatures;
- Ultra-small size $23.49\times 10.24\times 1$ (m m)

3. Application Scope

- Wireless power switch, socket
- Remote control curtains, access control, electric vehicles
- Security, surveillance systems
- Hotel Room Control
- Smart Home Product

4. encapsulation and pir

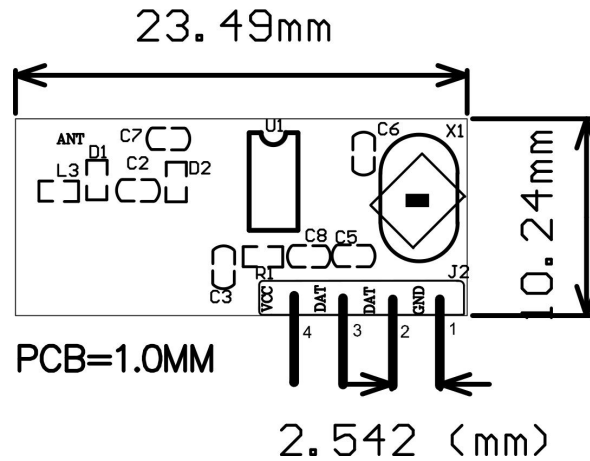
4.1 Pin definition



Serial number	Name of name	Type	Description
1	GND	P	Grounding pins

2	DOUT	DO	Signal output
3			
4	VCC	P	Module power supply foot 2.2 V ⁵ V

4.2 Package size



Note :2.54 mm standard spacing 4 Pin for module pin placement

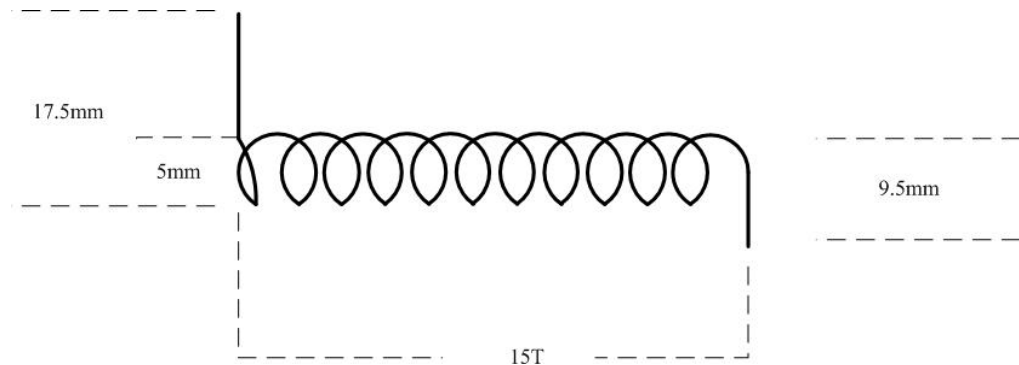
5. antenna

5.1 General application

For general applications, the antenna can be directly market-wide specifications, as follows:

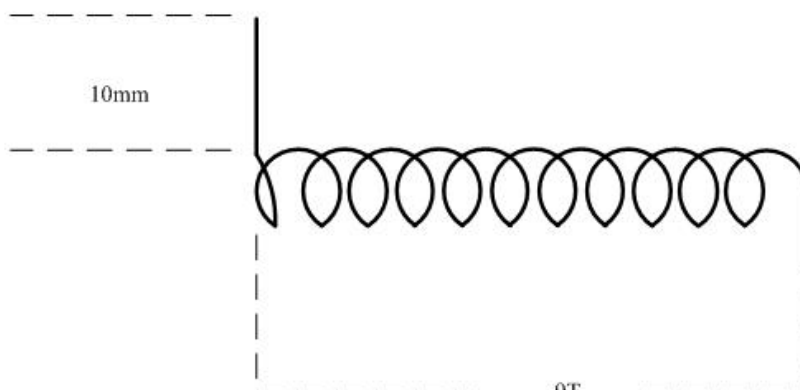
315M antenna

Wire core diameter (including outer skin)1.0 m m , (excluding outer skin)0.5 m m ;
 Welding end wire length 17.5 m m, antenna end wire length 9.5 m m; antenna winding diameter (including outer skin)5 mm;
 The winding turns are 15 turns.



433M antenna

10 mm; length of welded wire
 Antenna wire
 tension total
 length 170 mm;
 The winding turns are 9 turns.

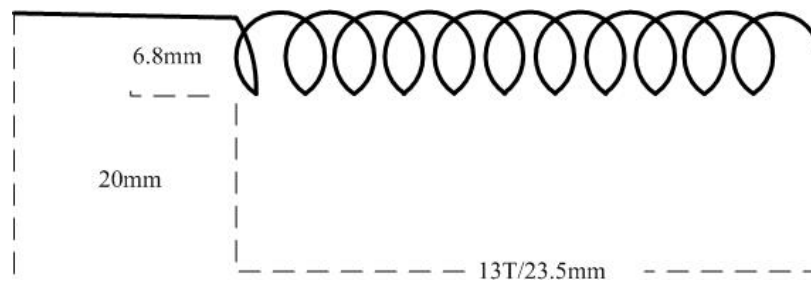


5.2 Special Enhanced Type

If a further communication distance is required, the ordinary applied antenna can not be satisfied, and the enhanced antenna can be used to improve the receiving distance, as follows:

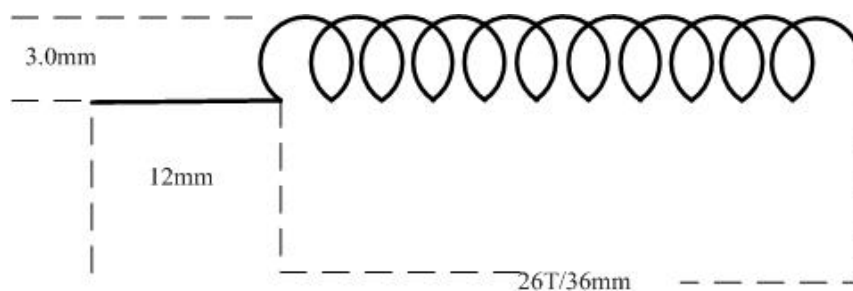
315M antenna

antenna core diameter (including outer skin)1.2 m m , (excluding outer skin)0.5 m m;
Welded wire length 20 mm;
Antenna winding diameter
(excluding outer skin)6.8 mm;
winding turns 13, winding length
23.5 mm.



433M antenna

antenna core diameter (including outer skin)1.0 m m , (excluding outer skin)0.35 m m;
12 mm; length of welded wire
Antenna winding diameter
(excluding outer skin)3.0 mm;
winding turns 26, winding length
36 mm.



6. Notes

- (1) As a CMOS device, the product should pay attention to anti-static during storage, transportation and use.
- (2) The device should be grounded well when used.
- (3) RF device is a voltage sensitive device. If the power supply is unstable or the ripple is large, filter should be added to the input of the power supply to ensure that the supply voltage does not exceed the maximum working voltage of the product.