

Version number:	V2.5
Compilation :	
Confirmation:	

PRODUCT SPECIFICATION

Product Name: 433wireless receiving module

Product Model: WL101series

Client: _____

1、Product description

WL101 Receiving module

is UHF ASK Receiving Demodulator Machine, supporting ASK and OOK Modulation Mode。This Receiver Module has high sensitivity (-110dBm)、low power consumption performance, also has high dynamic range (greater than 60dB)。The module equips high degree integrated chips, built-in low noise amplifier(LNA), mixer, filter, frequency synthesizer and so on, can optimize the signal to the greatest extent

According to different application requirements, and according to the working voltage and operating frequency, WL101 series receiving module have the several products:

Serial number	Identification of product	Working voltage	Working frequency
1			
2			
3			
4			
3			
4	WL101-341	3.0V~5V	433MHz

2、Product Feature

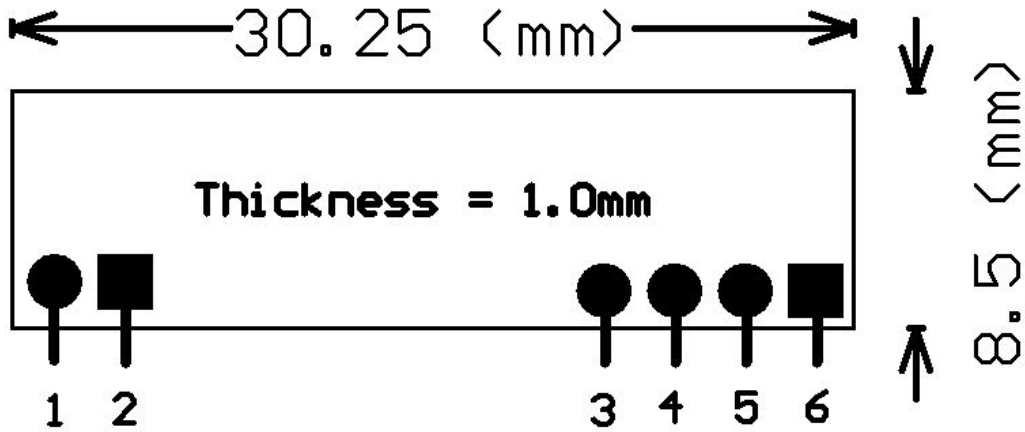
- Supporting ASK/OOK Modulation Mode, its receive sensitivity can reach -110dBm;
- Working frequency: 433.92 MHz, Bandwidth about: ±150KHz;
- Power supply voltage input range: 3.0V- 5V
- Low power supply consumption;
- Have a good selectivity and have the inhibiting ability to the stray radiation, so that it will easily pass the CE/FCC international certification;
- A good inhibiting ability to the stray radiation, can allow the multiple receiving modules working together but will not disturb each other (Single Output Multiple Input), and when it is using together also will not affect receive distance.
- Various transmission rate, general modules is 2KHz, maximum can reach 10KHz;
- Temperature range : -40-85°C, can work normally even under the harsh environment temperature;
- Super small-size:30.25×8.5×1 (mm³) (Can be customized according to customer's requirements) ;

3、Application range

- Wireless power switch、socket
- Remote control for window curtain、entrance guard、electric car
- Security and protection system、monitoring system
- Hotel rooms control
- Intelligent household products

4、The arrangement of the encapsulation and pin

- Insert pin module - WL101-XX1series



PinNo.	Symbol	Name	Introductions
1.	ANT	Antenna pin	RF signal output, can directly connected to the antenna.
2.	GND	Power ground Pin	The GND, power ground, can connect the antenna's shell shield.
3.	VIN	Voltage input Pin	Different module can input different direct voltage, when using 5V power source, it should have the filtering capacitor in the periphery.
4.	DO	Data output pin	When the module receives the carrier wave of the corresponding frequency, the Pin Output should output high level.
5.	DO	Data output pin	When the module has not received the carrier wave of the corresponding frequency, the Pin Output should output the inconstant square wave.
6.	GND	Power ground Pin	The ground wire connects power supply.

5、electric features:

Item	Requirement	Min	Type	Max	Unit	
Working voltage						
Working current						
	433series	VDD=5V	4.5	5.0	5.5	mA
		VDD=3.0V	5.5	6.0	6.5	mA

Quiescent current	Normal modules have not sleep-mode			1	uA
Operating temperature		-40	25	85	°C
RF Electrical characteristics					
RF frequency range	433series		433.72	433.92	434.12 MHz
Receiving sensitivity	1KHz Modulating Signal		-105	-100	dBm
Receiving bandwidth		-150	--	150	KHz

6、Antenna size

➤ General application mode

For general application mode, the antenna can directly adopt the general specifications from the market;

The specific information as follows:

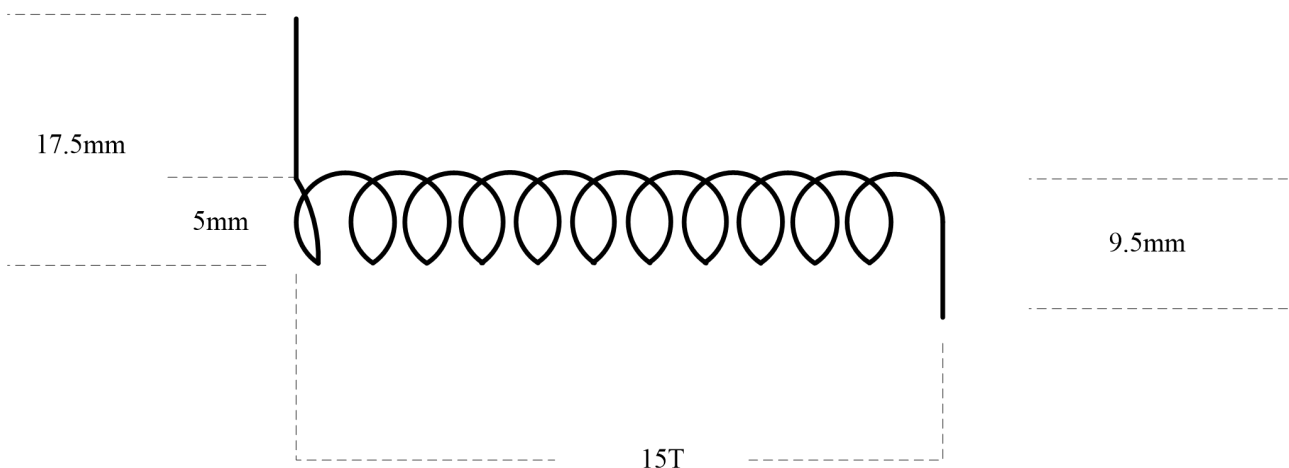
The antenna's core of conductor diameter(including the Antenna skin): 1.0mm, (except the Antenna skin) : 0.5mm;

The wire length of weld end: 17.5mm, the wire length of antenna terminal: 9.5mm;

The diameter of antenna winding (including the Antenna skin):5mm;

The turn number of winding: 15 turns

The diagrammatic drawing:



➤ The special enhancement mode

The general application mode cannot satisfy if you need farther communication distance, so the special enhancement mode can receive farther communication distance, and the specific information as follows:

315M Antenna

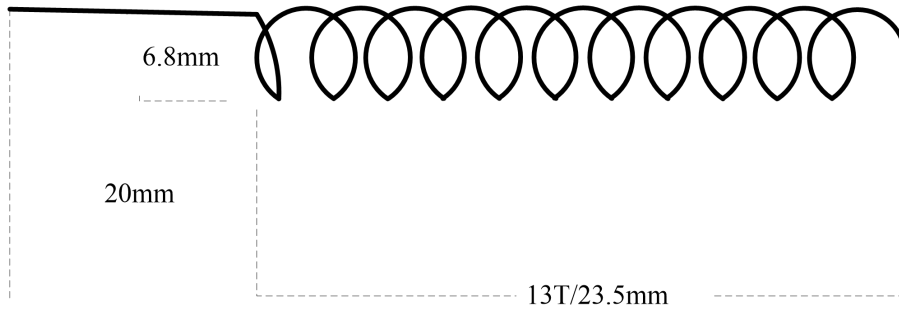
The antenna's core of conductor diameter(including the Antenna skin): 1.2mm, (except the Antenna skin) : 0.5mm;

The wire length of weld end: 20mm

The diameter of antenna winding (except the Antenna skin):6.8mm;

The turn number of winding: 13 turns, the length of the winding: 23.5mm

The diagrammatic drawing:



433M Antenna

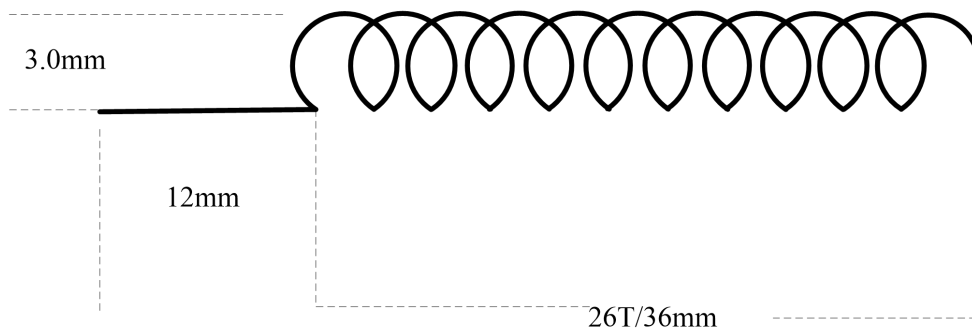
The antenna's core of conductor diameter (including the Antenna skin): 1.0mm; (except the Antenna skin): 0.35mm

The wire length of weld end: 12mm

The diameter of antenna winding (except the Antenna skin):3.0mm;

The turn number of winding: 26 turns; The length of the winding: 36mm

The diagrammatic drawing:



7、Notes

- (1) These products are belong to CMOS device, must **pay attention** the static electricity when it is reserving, transporting or using.
- (2) When the devices are using, must **make sure** it are connected well to the ground wire.