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**Type: ASK/OOK Super-Heterodyne Receiver Module**

**Model: CY45-V3.0-XXX**

## 1. DESCRIPTION:

The CY45-V3.0 is a super heterodyne wireless receiving module. This module adopts the RF wireless data transmission receiving chip of French brand, which is a high performance of the receiving module of ISM frequency band. It has higher receiver sensitivity, compact small size, and low price. CY45-V3.0 makes some low-end products can get rid of the limitation of using super-regenerative because of price reason. This module also improves the stability and reliability of low-end wireless products, improve the image of the product quality and enhance the product competitiveness. Any circuit that can be done without additional wireless signal input to the data signal output. Users only need to plus simple data decoding circuit, can easily achieve the development of wireless products.



## 2. FEATURES:

- High sensitivity: -115dBm;
- Frequency: 315M/433.92MHz (custom frequency is available);
- Low operation voltage: VCC= 1.8-5.5 V;
- Low Current: 5V@315MHz, 5.3mA; [5V@433.92MHz](#) 5.3mA;
- Continuous data transmission rate reaches 2.4k(Manchester code);
- Operating Temperature: -20°C ~ +70°C, can work normally even in the harsh environment temperature;
- Small Size of PCB: 23×7.5×5 MM;
- Good selectivity and stray radiation inhibition ability, it's easy to go through the international standard such as CE/FCC;
- The good radiation suppression ability, can work together with multiple receiving modules without interfering with each other.

### 3. APPLICATION:

- Remote gate controls
- Remote keyless entry
- Car alarm systems
- Wireless security systems
- Automation systems
- Remote control systems

### 4. PIN DEFINITION:

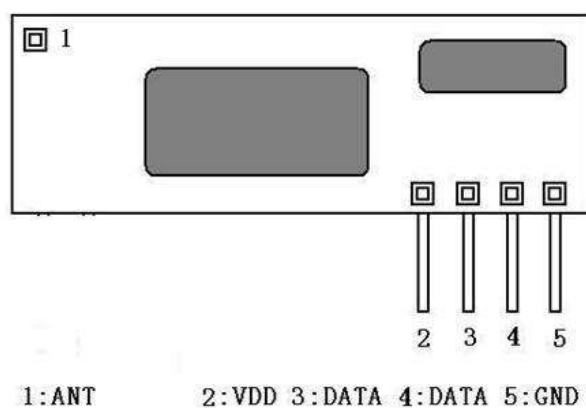


Figure1 CY45-V3.0 Shape & Pins

Pin Name	Pin Definition
ANT	Antenna In
VDD	Positive Power Supply
DATA	Data output
DATA	Data output
GND	Ground

**Note1:** ANT pin is a 50 ohm antenna input. The length is about:  
 23cm for 315MHz  
 17cm for 433.92MHz

## 5. ELECTRICAL CHARACTERISTICS

Condition: Ta=25°C VDD =5.0V Frequency=315MHz

Parameter	Specification			Unit	Condition
	Min	Typ.	Max		
Frequency range	314.90	315	315.10	MHz	
Modulation	ASK				
Receiver Sensitivity		-115		dBm	50Ohm Antenna direct input/1K Kbps
Receiver Bandwidth		200		KHz	
Working Current	4.5	5.3	6.0	mA	
Working Voltage	1.8	5.0	5.5	V	
Highest Output Voltage when Decoding	1.8		5	V	RL=500K
Lowest Output Voltage when Decoding			0.5	V	
Working Temperature	-20		+70	°C	

Condition: Ta=25°C VDD =5.0V Frequency=433.92MHz

Parameter	Specification			Unit	Condition
	Min	Typ.	Max		
Frequency range	433.82	433.92	434.02	MHz	
Modulation	ASK				
Receiver Sensitivity		-115		dBm	50Ohm Antenna direct input/1K Kbps
Receiver Bandwidth		200		KHz	
Working Current	4.5	5.3	6.0	mA	
Working Voltage	1.8	5.0	5.5	V	
Highest Output Voltage when Decoding	1.8		5	V	RL=500K
Lowest Output Voltage when Decoding			0.5	V	
Working Temperature	-20		+70	°C	

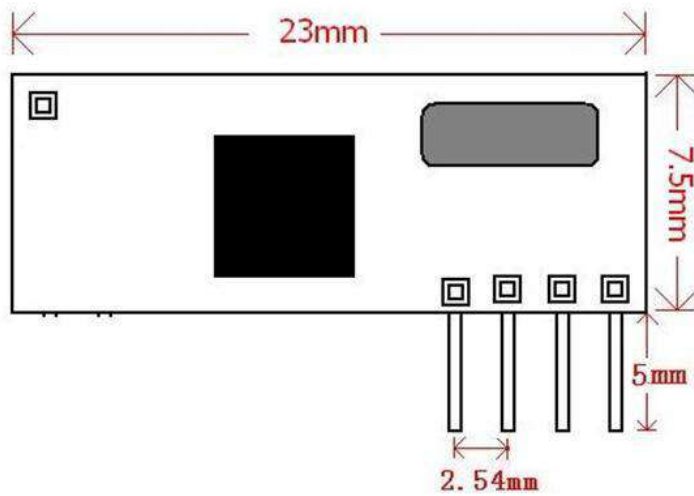
**6. MECHANICAL SIZE: (UNIT: mm)**

Figure2 CY45-V3.0 Dimension

**7. ORDER INFORMATION:****CY45-V3.0-315M**

CY— Company name

45-V3.0 --- Part number

315M --- Frequency 315 MHz

**8. PRE-CAUTION:**

The driven current of CY45-V3.0 data output pin is weak, so if direct the single chip microcomputer, please don't add any pull up or pull down resistors on the MCU' I/O port. The MCU internal pull-up and pull down resistors need to be in disabled state too.

PCB dimension has tolerance of 3%.

