



Type: ASK/OOK Super-Heterodyne Receiver Module

Model: CY28-XXX

Description:

CY28 is an ASK/OOK receiver super-heterodyne module, which is designed specifically for universal remote control and wireless security receiver operating at 315/433.92MHz under FCC Part 15 regulation or pass ETSI certification. The CY28 is based on a single-conversion, super-heterodyne receiver architecture and incorporates an entire Phase-Locked Loop (PLL) for precise local oscillator generation. It can be used in OOK/ HCS/ PWM modulation signal and demodulate to digital signal.

CY28 is a high performance module at a competitive cost and easily to design for your product. The CY28 module can be also a RoHS compliance product.



Order Information:

| Model NO. | Frequency |
|-----------|------------|
| CY28-315 | 315 MHz |
| CY28-433 | 433.92 MHz |

Features:

- Frequency: 315M/433.92MHz (custom frequency is available);
- Low cost ASK/OOK radio superhet receiver;
- Up to -110dBm high sensitivity;
- Continuous data rate: 2.4K;
- Low power consumption: 5.0mA @ 315MHz, 4.8mA; 5.0V @ 433.92MHz, 6.8mA.
- Supply voltage: 3.6~5.5V;
- Good selectivity and stray radiation inhibition ability, it's easy to go through the CE/FCC international certification approval.
- Good capable of suppressing the vibration radiation, can work with multiple receiving module (such as one transmitter with multiple receivers) and they do



not interfere with each other and there is no affection over the receiving distance.

- Operation temperature: -20°C ~70°C;

Application

- Smart home system
- Remote controls
- Remote fan and light control
- Garage door and gate openers
- Alarm and security system
- RKE

Pin Description

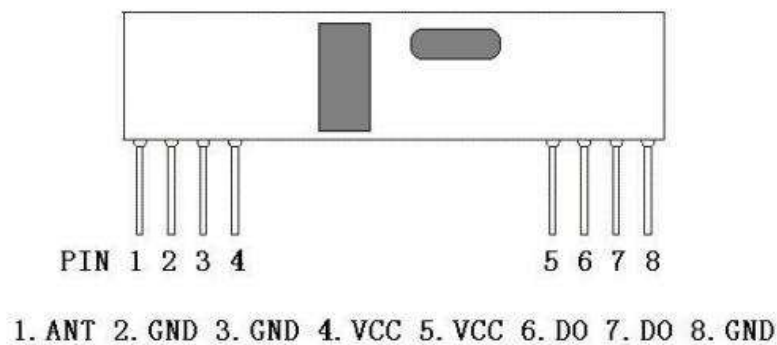


Figure1 CY28 Shape & Pins

Pin-out as showed in figure 1 above

| Pin Name | Pin Definition |
|-------------|--|
| ANT | RF signal input pin, connect antenna outside(Note1) |
| GND | Connect to negative power supply |
| GND | Connect to negative power supply |
| VDD | Connect to positive power supply |
| VDD | Connect to positive power supply |
| DATA | Data output pin, connect to MCU or decoder's input pin |
| DATA | Data output pin, connect to MCU or decoder's input pin |
| GND | Connect to negative power supply |



Note 1: ANT pin is a 50 ohm antenna input. The length is about:
23cm for 315MHz
17cm for 433.92MHz

Electrical Characteristics:

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

| Parameter | Specification | | | Unit | Condition |
|------------------------------|---------------|------|-------|------|--------------------------------------|
| | Min. | Typ. | Max. | | |
| Frequency Range | 314.9 | 315 | 315.1 | MHz | |
| Modulation | ASK | | | | |
| Receiver Sensitivity | | -110 | | dBm | 50 ohm antenna direct input /1K Kbps |
| Data Rate | | 2.4 | | Kbps | |
| Supply Voltage, VDD | 3.6 | 5.0 | 5.5 | V | DC |
| Current | 4.6 | 4.8 | 5.0 | mA | |
| Receiving Bandwidth | | 200 | | kHz | |
| Receiving Start Time | | | 5 | ms | |
| Decoding Output Max. Voltage | 3.5 | | 5.0 | V | RL=500K |
| Decoding Output Min. Voltage | | | 0.5 | V | |
| Operating Temperature | -20 | | 70 | °C | |

Condition: Ta=25°C Vcc=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 | | -110 | | dBm | 50 ohm antenna direct input /1K Kbps |
| Data Rate | | 2.4 | | Kbps | |
| Supply Voltage, VDD | 3.6 | 5.0 | 5.5 | V | DC |
| Current | 6.5 | 6.8 | 7.0 | mA | |
| Receiving Bandwidth | | 200 | | kHz | |
| Receiving Start Time | | | 5 | ms | |



CY28

| | | | | | |
|------------------------------|-----|--|-----|----|---------|
| Decoding Output Max. Voltage | 3.5 | | 5.0 | V | RL=500K |
| Decoding Output Min. Voltage | | | 0.5 | V | |
| Operating Temperature | -20 | | 70 | °C | |

Mechanical Size: (Unit: MM)

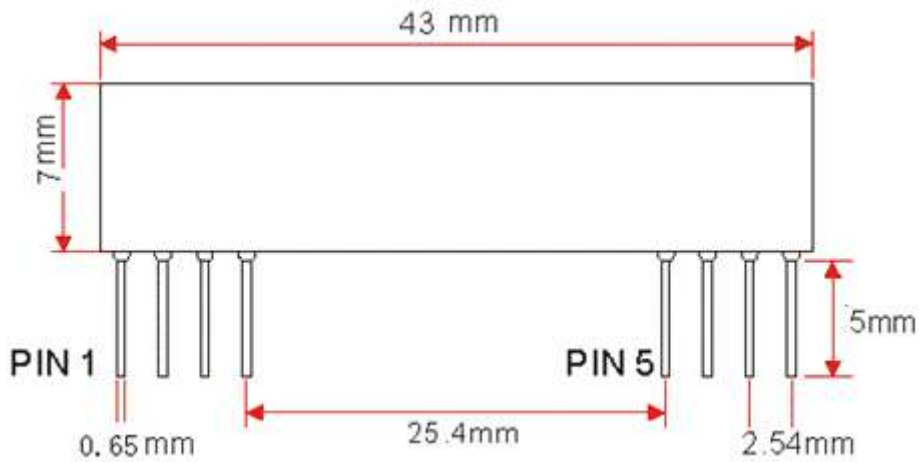


Figure2 CY28 Dimension

For more information and assistance, please contact us as follows:

CY WIRELESS TECHNOLOGY LIMITED

Add: 1407, Block C, Tairan Building, 8th Tairan Road, Futian District,

Shenzhen, Guangdong Province, China

Website: www.rficy.com

Email: info@rficy.com