

Type: ASK/OOK Super-Heterodyne Receiver Module

Model: CY61-XXX

1. DESCRIPTION:

CY61 is an ASK/OOK receiver super-heterodyne module is designed specifically for remote-control and wireless security receiver operating at 315/433.92MHz in ISM frequency band. It has high receiving sensitivity and low price. Any circuit that can be done without additional wireless signal input to the data signal output. Users only need to add simple data decoding circuit and it can easily achieve the development of wireless products.



2. FEATURES:

- Receiving Sensitivity: -110dBm
- Frequency: 315M/433.92MHz (customized frequency is available)
- Low cost ASK radio super-heterodyne receiver
- Low Power consumption, 5.0V@315Mhz, 4.8mA. 5.0V@433.92Mhz, 6.8mA. The continuously data transmission data rate can reach 2.4K, when it's in energy saving mode, the consumption can be as low as 50nA.
- 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 (It can custom to -40°C ~ 85°C upon requests)
- Supply voltage: 3.6~5.5V
- Compatible with most (ASK/OOK) transmitters
- Size: 30*7.7*5mm

3. APPLICATION:

- Automotive (RKE)
- Garage Door, Barrier, Roller shutter and gate openers
- Smart home system
- Wireless Door Bell
- Remote controls
- Wireless Controller
- Alarm and security system
- Wireless data transmission

4. PIN DEFINITION:

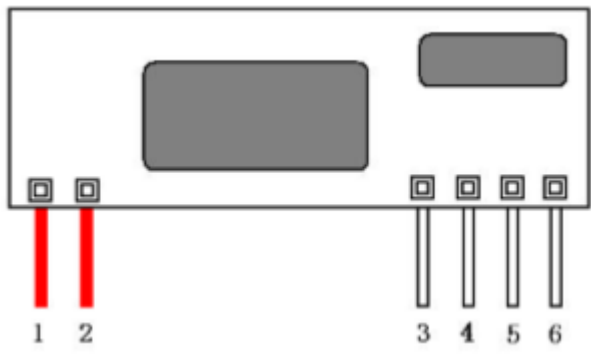


Figure1 CY61 Shape & Pins

Please note: CY61 is come with standard 4 PINs (without the red colored pins). Please notify us if you would like 6 PINs.

| Pin | Name | Pin Definition |
|-----|------|-----------------------------------------------------|
| 1 | ANT | RF signal input pin |
| 2 | GND | Connect to negative power supply |
| 3 | VDD | Connect to positive power supply |
| 4 | SHUT | Data output or Energy Saving Mode (Optional) |
| 5 | DATA | Data output pin |
| 6 | GND | Connect to negative power supply |

Note: 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 Vcc=5.0V Frequency=315MHz

| Parameter | Specification | | | Unit | Condition |
|-----------------------------------------|---------------|------|--------|------|---------------------------------------|
| | Min | Typ. | Max | | |
| Frequency range | 314.90 | 315 | 315.10 | MHz | |
| Modulation | ASK | | | | |
| Receiver sensitivity | | -110 | | dBm | 50Ohm Antenna direct input/1K Kbps |
| Receiver Bandwidth | | 200 | | KHz | |
| Receiver On time | | | 5 | ms | |
| Working Voltage | 3.6 | 5.0 | 5.5 | V | |
| Working Current | 4.6 | 4.8 | 5.0 | mA | |
| Highest Output Voltage when Decoding | 3.5 | | 5 | V | RL=500K |
| Lowest Output Voltage when Decoding | | | 0.5 | V | |
| Working Temperature | -20/-40 | | 70/85 | °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 | 50Ohm Antenna direct input/1K Kbps |
| Receiver Bandwidth | | 200 | | KHz | |
| Receiver On time | | | 5 | ms | |
| Working Voltage | 3.6 | 5.0 | 5.5 | V | |
| Working Current | 6.5 | 6.8 | 7.0 | mA | |
| Highest Output Voltage when Decoding | 3.5 | | 5 | V | RL=500K |
| Lowest Output Voltage when Decoding | | | 0.5 | V | |
| Working Temperature | -20/-40 | | 70/85 | °C | |

6. MECHANICAL SIZE: (UNIT: mm)

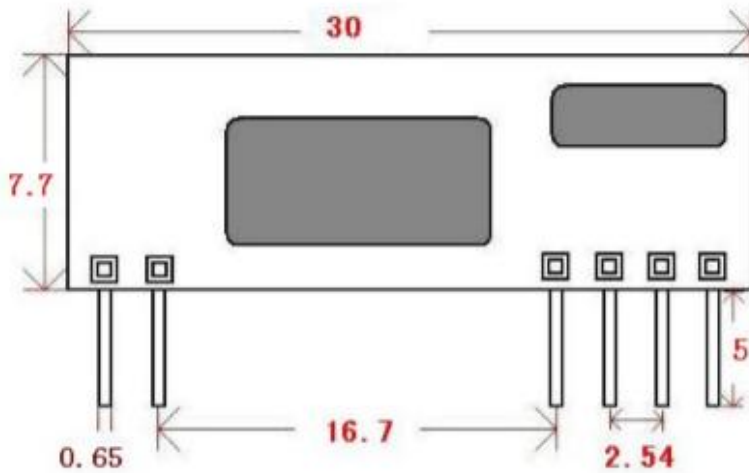


Figure2 CY61 Dimension

7. PRE-CAUTION:

The driven current of CY61 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%.

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

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