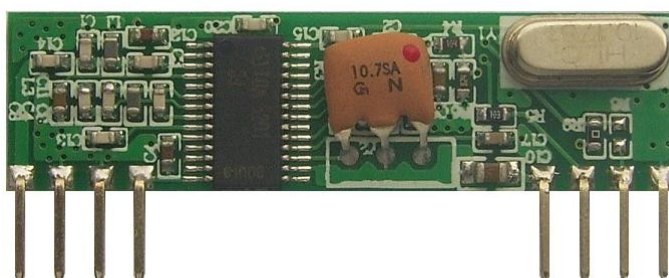


### ASK Superheterodyne RF Receiver Module

RCT01IRXB02 superheterodyne radio receiver module is a superior performance receiver module for ISM band. With the adoption of Infineon's industrial RF wireless data receiver chip, RCT01IRXB02 has the high receiver sensitivity and strong anti-interference ability.

It can do wireless signal input to the data signal output without any external circuit. Its superior performance makes a lot of before market car manufactures adopt this module as the preferred choice for RKE



receiver module. Users only need to decode the data plus a simple circuit and then any wireless products development can be easily achieved.

#### Features:

- (1) Receiver sensitivity to -110dBm;
- (2) Frequency: 315 MHz; 433 MHz; (specific frequency can be customized according to customer)
- (3) Voltage input range:  $5V \pm 10\%$ ;
- (4) Low power consumption, 4.6mA
- (5) Power supply mode can be done to the lowest as 100nA;
- (6) Fully integrated VCO and PLL synthesizer ;
- (7) Good selectivity and suppression of stray radiation, it's easy to pass various states' certification;
- (8) Good local oscillator radiation suppression. It can work with multiple receiver modules (ie single overcharged) and they don't interfere with each other. Using them together will not affect the receiver distance.
- (9) Temperature range: -40-85 °C (industrial grade) even if the temperature is in harsh



---

environments, it can still work normally.

**Applications:**

- (1) Car alarm RKE system;
- (2) Tire pressure monitoring system - TPMS;
- (3) Data communications systems;
- (4) Remote control system;
- (5) Smart home system;
- (6) Remote door opener;
- (7) Wireless security alarm;
- (8) Remote control curtains;
- (9) Wireless industrial controller;
- (10) Wireless data transmission;

**Product Pin Description**

Pin	Name	Function Explanation
1	ANT	Antenna Input
2	GND	Power Ground
3	GND	Power Ground
4	VDD	Positive Power Supply
5	VDD	Power Ground
6	DATA	Data Output
7	SHUT	Enable Power Saving Mode
8	GND	Power Ground

**Electrical parameters:**

---



Under the testing conditions as follows:

5V power supply- temperature is 25 °C – frequency of 315MHz

Parameters	Symbol	Status	Reference Value			Unit
			Minimum	Standard	Maximum	
Working Frequency	Fc		314.90	315.00	315.10	MHz
Modulation			ASK			
Receiver Sensity		50 ohm antenna input directly /1K Kbps		-110		dBm
Receiving Bandwidth				200		KHz
Receie on-time	Ton				9	ms
Working Voltage			4.50	5.0	5.75	V
Working Current	IRC				4.6	mA
Image Rejection		336.4MHz		20		dB
Decoding output maximum voltage		RL=500K	3.50	3.75	5	V
Decoding output minimum voltage					0.5	V
Working Temperature			-40		+85	°C

Under the testing conditions as follows:

5V power supply- temperature is 25 °C – frequency of 433.92MHz

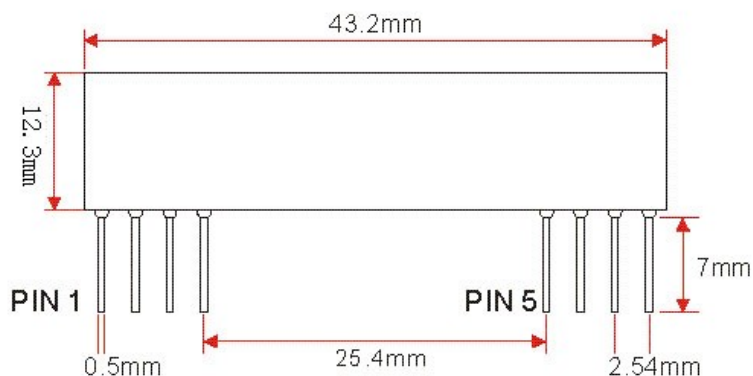
Parameters	Sym	Status	Reference Value	Unit
------------	-----	--------	-----------------	------



## RCT01IRXB02

	bol		Minimum	Standard	Maximum	
Working Frequency	Fc		433.82	433.92	434.02	MHz
Modulation			ASK			
Receiver Sensitivity		50 ohm antenna input directly / 1K Kbps		-111		dBm
Receiving Bandwidth				200		KHz
Receiving on-time	Ton				9	ms
Working Voltage			4.50	5.0	5.75	V
Working Current	IRC				4.6	mA
Image Rejection		412.52MHz		20		dB
Decoding output maximum voltage		RL=500K	3.50	3.75	5	V
Decoding output minimum voltage					0.5	V
Working Temperature			-40		+85	°C

## Module Outline Dimension Drawing:





---

**Module Name explanation: RCT01IRXB02-315M**

RX.- Represents the meaning of receiving

B.- Represents of the version number of the module

2. – Represents the Chips used in the module

315M.- Represents the frequency is 315MHz module

**Please Note:**

RCT01IRXB02 module data output pin of the drive current is weak, if it used to direct-drive the single chip, the I/O port of the single chip can't connect with pull-up or pull-down resistor . The pull-up and pull-down resistors inside the single chip must be set on disable mode too.