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

**Model: CY27-XXX**

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### Description:

The CY27 is an ASK/FSK compatible super heterodyne wireless receiving module with high performance for ISM frequency band. The module has advantages at high receiving sensitivity, small size and low cost. It solves the problem on space for the small-sized product. From wireless signal input to data output can be done without any electrical circuit. User only use extra simple data decode circuit can achieve wireless products development.



### Order Information:

Model NO.	Frequency	Modulation
CY27-315-ASK	315MHz	ASK
CY27-433-FSK	433.92MHz	FSK
CY27-868-ASK	868.325MHz	ASK
CY27-915-FSK	915MHz	FSK

### Features:

- Frequency: 300 MHz ~ 960 MHz (ASK/FSK);
- High sensitivity -112dBm;
- Supply voltage: 1.8V - 3.6V;  
ASK @ 3.3V: 868.325MHz-5.2mA; 433.92MHz-3.8mA; 315M-3.5mA ;  
FSK @ 3.3V: 868.325MHz-5.7mA; 433.92MHz-4.3mA; 315M-4.0mA ;
- Data Rate: 2.4Kbps (Manchester Code)
- Operating temperature: -20°C ~ 70°C, work normally even in the severe temperature environment;
- Excellent inhibiting ability for local oscillator radiation: multiple receivers receive

signals from one transmitter simultaneously without any mutual interference and influence on range;

### Application

- Car remote control door switch (RKE);
- Remote control door opening machine;
- Wireless security alarm;
- Wireless doorbell;
- Wireless controller;
- Wireless data transmission;

### Pin Description

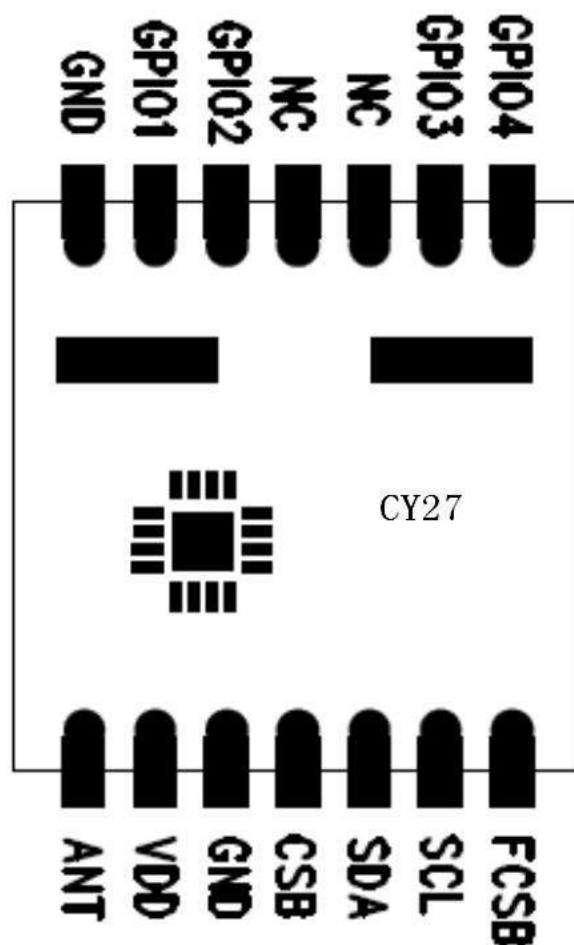


Figure1 CY27 Shape & Pins



Pin Number	Name	I/O	Descriptions
1	ANT	I	RF signal input to the LNA
2	VDD	I	Power supply input, 1.8 V to 3.6 V
3,14	GND	I	Ground
4	CSB	I	4-wire SPI chip select input, active low, internally pulled high
5	SDA	IO	4-wire SPI data input and output
6	SCL	I	4-wire SPI clock input, internally pulled low
7	FCSB	I	4-wire SPI FIFO select input, active low. leave floating when programming the EEPROM, internally pulled high
8	GPO4	O	General purpose output, options are: DOUT (Default), INT1, INT2 and DCLK
9	GPO3	O	General purpose output, options are: CLKO (Default), INT1, INT2 and DOUT
10, 11	NC	--	Not Connected
12	GPO2	O	General purpose output, options are: INT1 (Default), INT2 and DCLK
13	GPO1	O	General purpose output, options are: nRSTO (Default), INT1, INT2 and DOUT

### Electrical Characteristics:

Condition: Ta=25°C Vcc=3.3V Frequency=315MHz Modulation=FSK

Characteristics	Specification			Unit	Note
	Min.	Typ.	Max.		
Frequency Range		315		MHz	
Modulation		FSK			
RF Sensitivity		-112		dBm	50ohm antenna input directly/1K Kbps
Receiving Bandwidth		35		KHz	
Image Rejection		35		dB	
Supply Voltage, VDD	1.8	3.3	3.6	V	
Current	3.5	4.0	4.5	mA	
Decoding output max. voltage		3.3		V	RL=500K
Decoding output min. voltage		0		V	
Operating Temperature	-20		70	°C	



Condition: Ta=25°C Vcc=3.3V Frequency=315MHz Modulation=ASK

Characteristics	Specification			Unit	Note
	Min.	Typ.	Max.		
Frequency Range		315		MHz	
Modulation	ASK				
RF Sensitivity		-112		dBm	50Ohm antenna input directly/1K Kbps
Receiving Bandwidth		160		KHz	
Image Rejection		35		dB	
Supply Voltage, VDD	1.8	3.3	3.6	V	
Current	3.5	4.0	4.5	mA	
Decoding output max. voltage		3.3		V	RL=500K
Decoding output min. voltage		0		V	
Operating Temperature	-20		70	°C	

Condition: Ta=25°C Vcc=3.3V Frequency=433.92MHz Modulation=FSK

Characteristics	Specification			Unit	Note
	Min.	Typ.	Max.		
Frequency Range		433.92		MHz	
Modulation	FSK				
RF Sensitivity		-108		dBm	50Ohm antenna input directly/1K Kbps
Receiving Bandwidth		35		KHz	
Image Rejection		35		dB	
Supply Voltage, VDD	1.8	3.3	3.6	V	
Current	3.8	4.3	4.8	mA	
Decoding output max. voltage		3.3		V	RL=500K
Decoding output min. voltage		0		V	
Operating Temperature	-20		70	°C	

Condition: Ta=25°C Vcc=3.3V Frequency=433.92MHz Modulation=ASK

Characteristics	Specification			Unit	Note
	Min.	Typ.	Max.		



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Frequency Range		433.92		MHz	
Modulation	ASK				
RF Sensitivity		-109		dBm	500hm antenna input directly/1K Kbps
Receiving Bandwidth		160		KHz	
Image Rejection		35		dB	
Supply Voltage, VDD	1.8	3.3	3.6	V	
Current	3.8	4.3	4.8	mA	
Decoding output max. voltage		3.3		V	RL=500K
Decoding output min. voltage		0		V	
Operating Temperature	-20		70	°C	

Condition: Ta=25°C Vcc=3.3V Frequency=868.325MHz FSK

Characteristics	Specification			Unit	Note
	Min.	Typ.	Max.		
Frequency Range		868.325		MHz	
Modulation	FSK				
RF Sensitivity		-108		dBm	500hm antenna input directly/1K Kbps
Receiving Bandwidth		60		KHz	
Supply Voltage, VDD	1.8	3.3	3.6	V	
Current	5.2	5.7	6.2	mA	
Image Rejection		35		dB	
Decoding output max. voltage		3.3		V	RL=500K
Decoding output min. voltage		0		V	
Operating Temperature	-20		70	°C	

Condition: Ta=25°C Vcc=3.3V Frequency=868.325MHz ASK

Characteristics	Specification			Unit	Note
	Min.	Typ.	Max.		
Frequency Range		868.325		MHz	
Modulation	ASK				
RF Sensitivity		-109		dBm	500hm antenna input directly/1K Kbps



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Receiving Bandwidth		160		KHz	
Supply Voltage, VDD	1.8	3.3	3.6	V	
Current	5.2	5.7	6.2	mA	
Image Rejection		35		dB	
Decoding output max. voltage		3.3		V	RL=500K
Decoding output min. voltage		0		V	
Operating Temperature	-20		70	°C	

**Mechanical Size: (Unit: MM)**

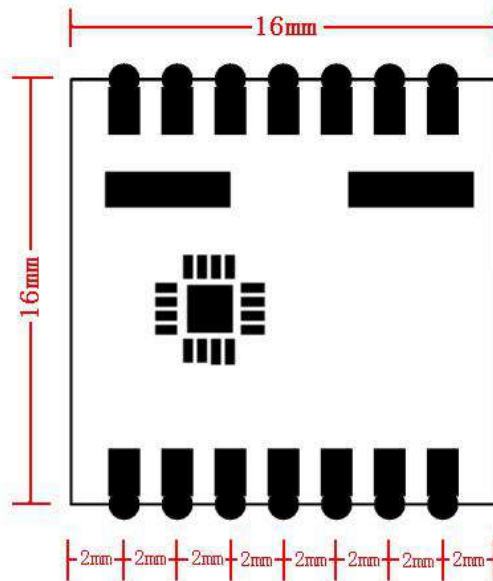


Figure2 CY27 Dimension

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



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