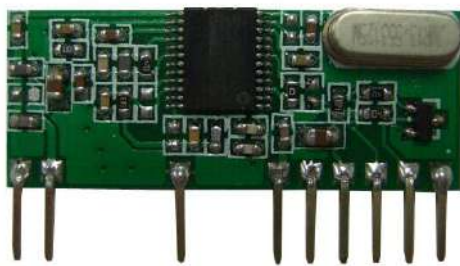


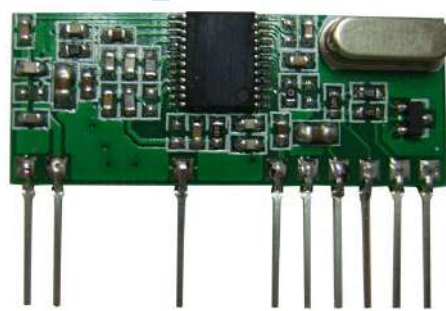
**Type: ASK/OOK/FSK Super-Heterodyne Receiver**  
**Model: CY80-XXX**

## 1. DESCRIPTION:

The CY80 is a ASK/OOK/FSK compatible superhet receiver, Which is designed with high sensitivity, long distance, easy use for designing, it can be able to fulfill most demands of European market.



Hard Pin



Soft Pin

## 2. FEATURES:

- ASK /OOK/FSK modulator;
- Working Frequency: 315M/433.92MHz;
- Max sensitivity: -116dBm (ASK) , -115dBm(FSK);
- Supply voltage: VCC= 2.7 to 5.5 V;
- IF band: 250KHz;
- Low power consumption:  $I_{cc}=6mA$ (FM,  $V_{cc}=5.0V$ @433.92MHz);
- Wide operating temperature:  $-40\sim+85^{\circ}C$  ;
- Excellent selectivity and noise rejection;
- Easy for design and wireless applications;
- Analog RSSI Output.

## 3. APPLICATION:

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

#### 4. PIN DEFINITION:

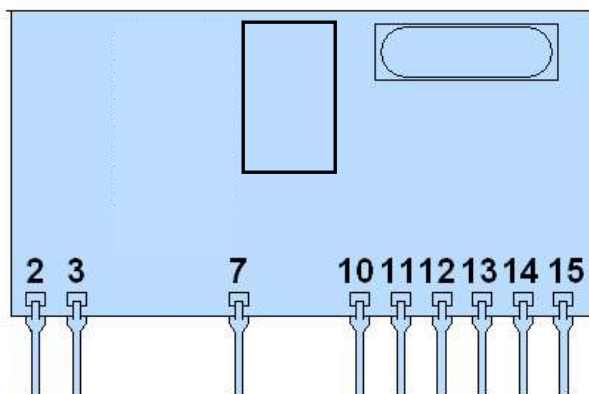


Figure 1 CY80 Shape & Pins

<b>Pin 2-7-11</b>	<b>Ground</b>	GND
<b>Pin 3</b>	<b>Antenna</b>	Antenna input, impedance 50 ohm.
<b>Pin 10-12-15</b>	<b>+Vs</b>	Positive Voltage supply.
<b>Pin 13</b>	<b>RSSI Out – Test point</b>	RSSI output proportional to the amplitude of the input signal.
<b>Pin 14</b>	<b>Data output</b>	Data output from the receiver.

**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 Vcc=5.0V Frequency=315MHz

Characteristics		Min	Typ	Max	Unit	Note
F <sub>c</sub>	Carrier Frequency	310	314.98	316	MHz	IF = 220kHz
V <sub>cc</sub>	Supply Voltage	2.7	5.0	5.5	V	5.0v at default
I <sub>s</sub>	Supply current	4.6	6.0	6.2	mA	FSK
		4.7	6.0	6.2		ASK
Modulation Mode		ASK/FSK				
	RF sensitivity		-116		dBm	600bps(Manchester), dev=±40kHz



F <sub>dev</sub>	Frequency Deviation		±80kHz			
B <sub>w</sub>	-3dB Bandwidth		250		KHz	
	Datarate		2.4	9.6	kbps	
T <sub>on</sub>	Turn on time from sleep			3	ms	
V <sub>IL</sub>	“L”level input/output level	0		0.2	mA	
V <sub>IH</sub>	“H”level input/output level	2.0		5.5	V	
	Output leak current (H level)		0	2	μA	
V <sub>DATAL</sub>	Output voltage (L level)			0.4	V	I <sub>DATAL</sub> = 200μA
DR	Wave shaping output duty ratio	45	50	55	%	V <sub>IN</sub> (MIX) = 60dBmVEMFF or single tone
I <sub>RR</sub>	Image Suppression Ratio		35		dB	
T <sub>op</sub>	Opertaing Temperature Range	-40		+85	°C	

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

Characteristics		Min	Typ	Max	Unit	Note
F <sub>c</sub>	Carrier Frequency	430	433.92	435	MHz	IF = 220kHz
V <sub>cc</sub>	Supply Voltage	2.7	5.0	5.5	V	5.0v at default
I <sub>s</sub>	Supply current	4.6	6.0	6.2	mA	ASK
		4.7	6.0	6.2		FSK
Modulation Mode		ASK/FSK				
	RF sensitivitty		-116		dBm	600bps(Manchester), dev= ±40kHz
F <sub>dev</sub>	Frequency Deviation		±80kHz			
B <sub>w</sub>	-3dB Bandwidth		250		KHz	
	Datarate		2.4	9.6	kbps	At default
T <sub>on</sub>	Turn on time from sleep			3	ms	
V <sub>IL</sub>	“L”level input/output level	0		0.2	mA	
V <sub>IH</sub>	“H”level input/output level	2.0		5.5	V	
	Output leak current (H level)		0	2	μA	
V <sub>DATAL</sub>	Output voltage (L level)			0.4	V	I <sub>DATAL</sub> = 200μA
DR	Wave shaping output duty ratio	45	50	55	%	V <sub>IN</sub> (MIX) = 60dBmVEMFF or single tone
I <sub>RR</sub>	Image Suppression Ratio		35		dB	
T <sub>op</sub>	Opertaing Temperature Range	-40		+85	°C	

6. MECHANICAL SIZE: (UNIT: mm)

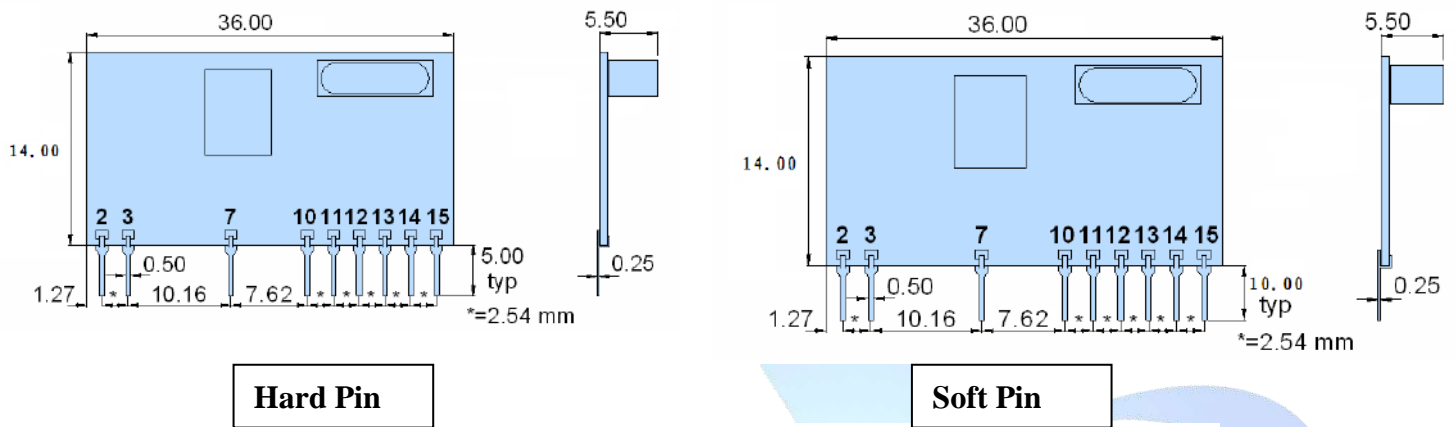
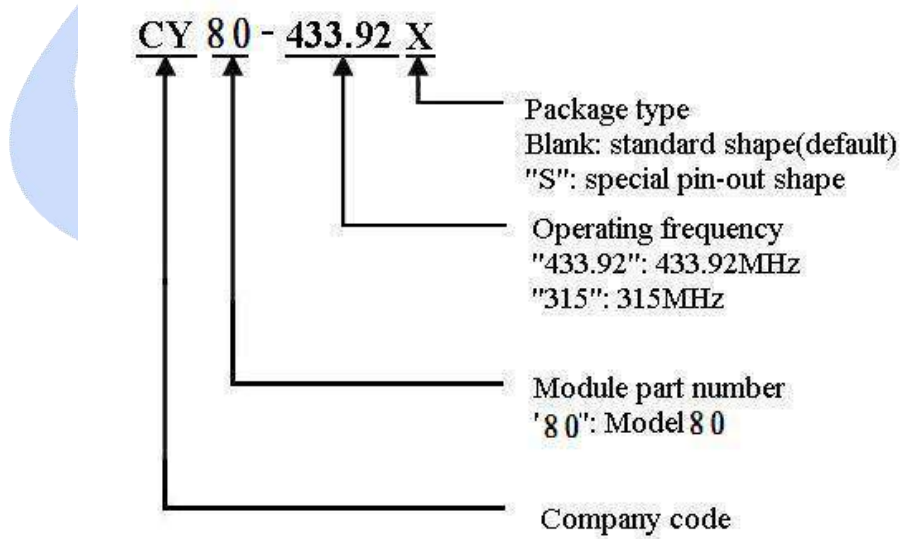


Figure 2 CY80 Dimension

7. ORDER INFORMATION:





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

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