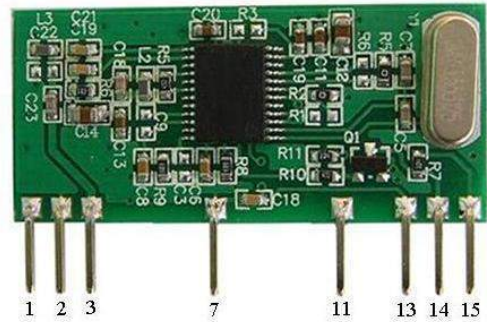


Type: ASK/OOK/FSK Super-Heterodyne Receiver
Model: CY78-XXX

1. DESCRIPTION:

The CY78 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.



2. FEATURES:

- ASK /OOK/FSK modulator;
- Working Frequency: 315M/433.92MHz;
- Max sensitivity: -116dBm (ASK) , -115dBm(FSK);
- Supply voltage: VCC= 3.6 to 5.5 V;
- IF band: 220KHz;
- Low power consumption: Icc=6mA(FM,Vcc=5.0V@433.92MHz);
- Wide operating temperature:-40~+85°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:

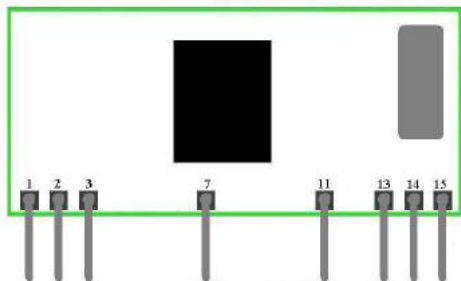


Figure1 CY78 Shape & Pins

Pin 1	N.C.	Not connected.
Pin 2-7	Ground	GND
Pin 3	Antenna	Antenna input, impedance 50 ohm.
Pin 11	N.C.	Not connected.
Pin 13	RSSI Out – Test point	RSSI output proportional to the amplitude of the input signal.
Pin 14	Data output	Data output from the receiver.
Pin 15	+Vs	Positive Voltage supply.

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 _c	Carrier Frequency	310	314.98	316	MHz	IF = 220kHz
V _{cc}	Supply Voltage	3.6	5.0	5.5	V	5.0v at default
I _s	Supply current	4.3	5.9	6.2	mA	FSK
		4.5	5.9	6.2		ASK
Modulation Mode		ASK/FSK				



CY78

	RF sensitivtity		-115		dBm	600bps(Manchester), dev= \pm 40kHz
F _{dev}	Frequency Deviation		\pm 80kHz			
B _w	-3dB Bandwith		250		KHz	
	Datarate		2.4	9.6	kbps	
T _{on}	Turn on time from sleep			5	ms	
V _{IL}	“L”level input/output level	0		0.2	mA	
V _{IH}	“H”level input/output level	2.0		5.5	V	
	Output leak current (H level)		0	2	μ A	
V _{DATAL}	Output voltage (L level)			0.4	V	I _{DATAL} = 200 μ A
DR	Wave shaping output duty ratio	45	50	55	%	V _{IN} (MIX) = 60dBmVEMFF or single tone
I _{RR}	Image Suppression Ratio		35		dB	
T _{op}	Opertaing Temperature Range	-40		+85	$^{\circ}$ C	

Condition: Ta=25 $^{\circ}$ C Vcc=5.0V Frequency=433.92MHz

Characteristics		Min	Typ	Max	Unit	Note
F _c	Carrier Frequency	430	433.92	435	MHz	IF = 220kHz
V _{cc}	Supply Voltage	3.6	5.0	5.5	V	5.0v at default
I _s	Supply current	4.6	6.0	6.2	mA	ASK
		4.7	6.0	6.2		FSK
Modulation Mode		ASK/FSK				
	RF sensitivtity		-116		dBm	600bps(Manchester), dev= \pm 40kHz
F _{dev}	Frequency Deviation		\pm 80kHz			
B _w	-3dB Bandwith		250		KHz	
	Datarate		2.4	9.6	kbps	At default
T _{on}	Turn on time from sleep			3	ms	
V _{IL}	“L”level input/output level	0		0.2	mA	
V _{IH}	“H”level input/output level	2.0		5.5	V	
	Output leak current (H level)		0	2	μ A	
V _{DATAL}	Output voltage (L level)			0.4	V	I _{DATAL} = 200 μ A
DR	Wave shaping output duty ratio	45	50	55	%	V _{IN} (MIX) = 60dBmVEMFF or single tone
I _{RR}	Image Suppression Ratio		35		dB	
T _{op}	Opertaing Temperature Range	-40		+85	$^{\circ}$ C	

6. MECHANICAL SIZE: (UNIT: mm)

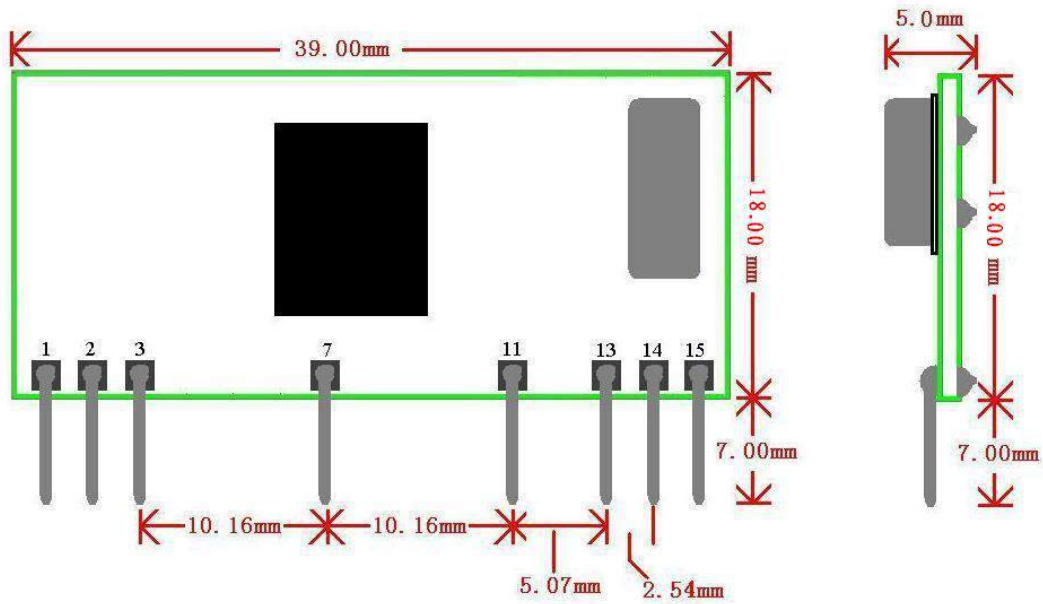
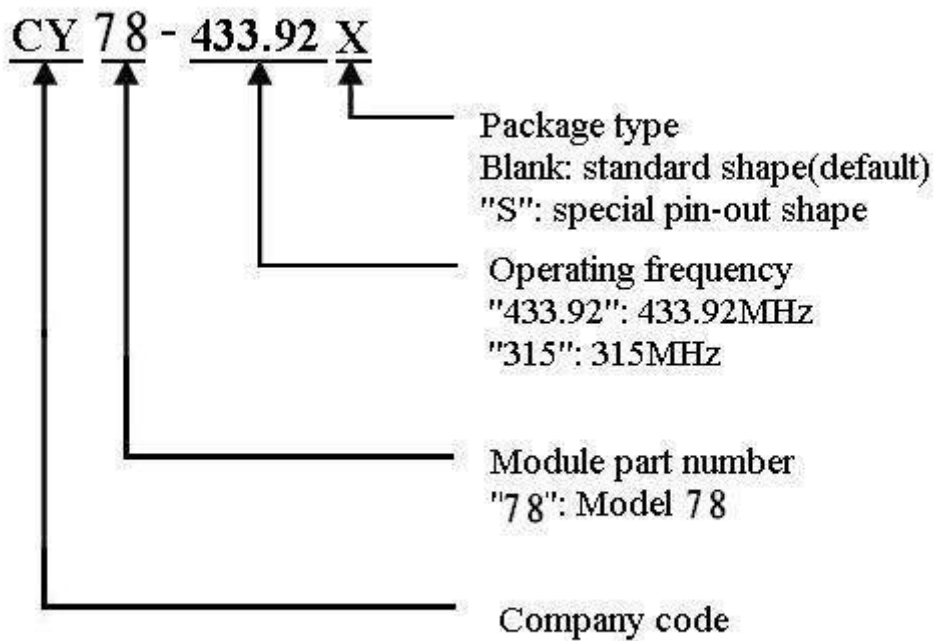


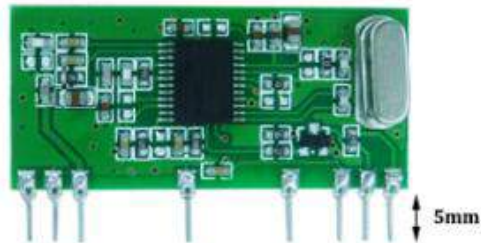
Figure2 CY78 Dimension

7. ORDER INFORMATION:

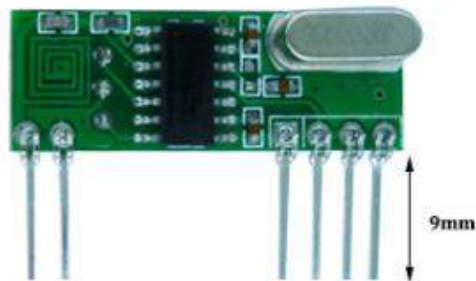


8. PIN TYPE SELECTION:

Short soft pin



Long soft pin



Standard hard pin



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

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