Geaneral Description:

The RXB9 is a miniature receiver module that receives On-off keyed (OOK) modulation signal and demodulated to digital signal for the next decoder stage. The Receiver offers a high level of integration and needs only a few external components. The device containsa low noise amplifier (LNA), a double balanced mixer, a fully integrated VCO, a PLL synthesiser, a crystal oscillator, a limiter with RSSI generator, a data filter, a data comparator (slicer) and a peak detector. Additionally there is a power down feature to save battery life.The result is excellent performance in a simple-to-use ,with a low external component count. The RXB9 is designed specifically for remote-control and wireless security receiver operating at 315Mhz in the USA under FCC Part 15 regulation.

PHOTO 1

Features：

- Low supply current (I s = 4.6mA typ.)
- Supply voltage range2.5~ 5.5V
- Power down mode with very low supply current (50nA typ)
- Fully integrated VCO and PLL Synthesiser
- RF input sensitivity < -114dBm
- Frequency ranges 315/433 MHz
- Selectable reference frequency
- Limiter with RSSI generation, operating at 10.7MHz
- 2nd order low pass data filter with external capacitors
- Data Slicer with self-adjusting threshold
- Data Rates to 4kbps(swp),10kbps(fixed)
- Over specified temperature range (- 20 to +80°C)

APPLICATION：

- Car Alarm System
- Tyre Pressure Monitoring System
- Low Bit Rate Communication System
- Remote Control System
- Home Automotive System

Absolute Maximum Ratings

Rating	Value	Units
Power Supply and/or Modulation Input Voltage	2.4 to 5.5	V
Operating temperature	-20 to +70	℃

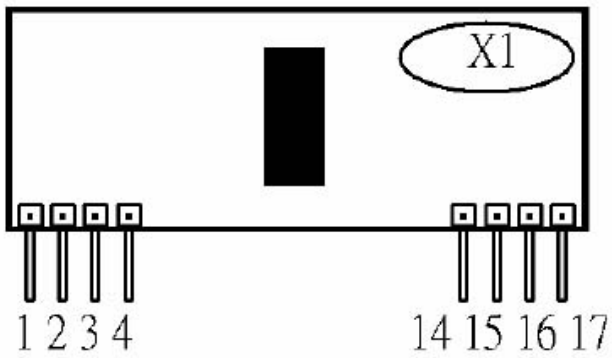
Electronical characteristics:

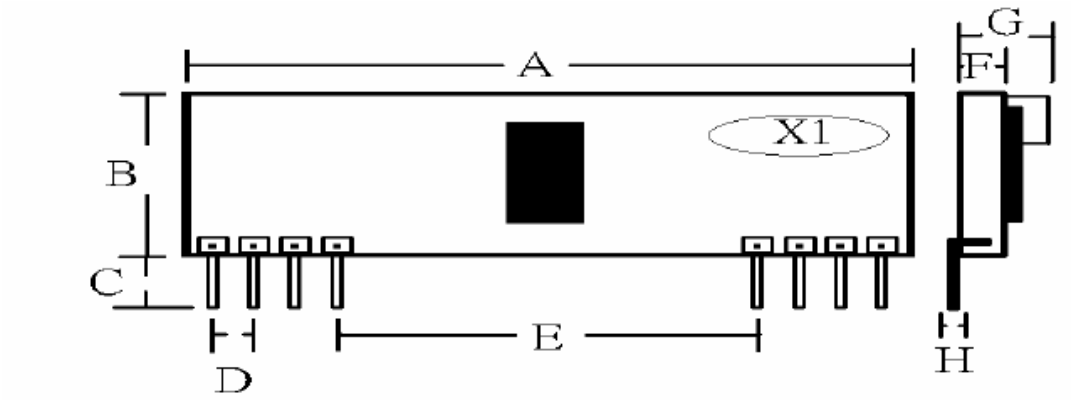
Table 5-2 Operating Range, Ambient temperature T_{AMB}= -40°C ... + 85°C

#	Parameter	Symbol	Limit Values		Unit	Test Conditions/Notes	L	Item
			min	max				
1	Supply Current	I_S		5.2	mA	f_{RF} = 315MHz		
2	Receiver Input Level	RF_{in}	-110	-13	dBm	@ source impedance 50Ω, BER 2E-3, average power level, Manchester encoded datarate 4kBit, 280kHz IF Bandwidth	■	
3	LNI Input Frequency	f_{RF}	310	350	MHz			
4	MI/X Input Frequency	f_{MI}	310	350	MHz			
5	3dB IF Frequency Range	$f_{IF\ -3dB}$	5	23	MHz			
6	Powerdown Mode On	$PWDN_{ON}$	0	0.8	V			
7	Powerdown Mode Off	$PWDN_{OFF}$	2	V_S	V			
8	Gain Control Voltage, LNA high gain state	V_{THRES}	2.8	V_S	V			
9	Gain Control Voltage, LNA low gain state	V_{THRES}	0	0.7V	V			

Pin assignment

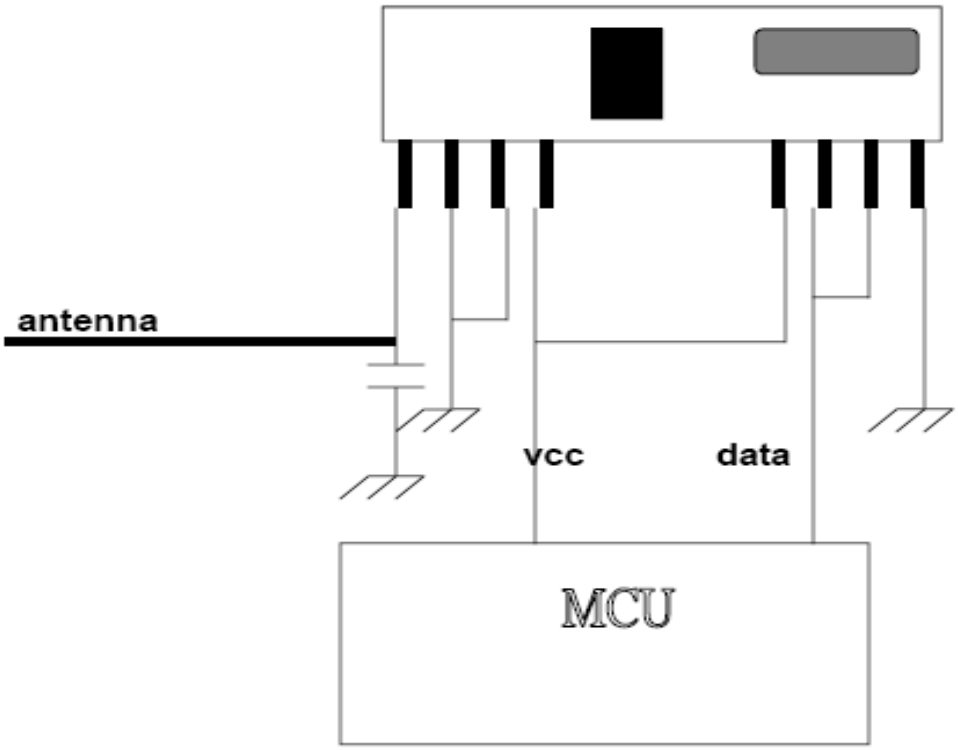
Pin	Connections
1	ANT
2	GND
3	GND
4	VCC
14	VCC
15	DATA
16	DATA SHUT
17	GND





Dimensions	Millimeters	Dimensions	Millimeters
A	43.0 +/- 0.25mm	F	1.2 (MAX)
B	11.5 +/- 0.25mm	G	5.2 +/- 0.15mm
C	5.9 +/- 0.1mm	H	0.095 (MAX)
D	2.54 (MAX)		
E	25.5 +/- 0.05mm		

Appication



Notes:

Antenna : Length = 22.6cm for 315MHz ; Length = 17 cm for 433.92MHz.