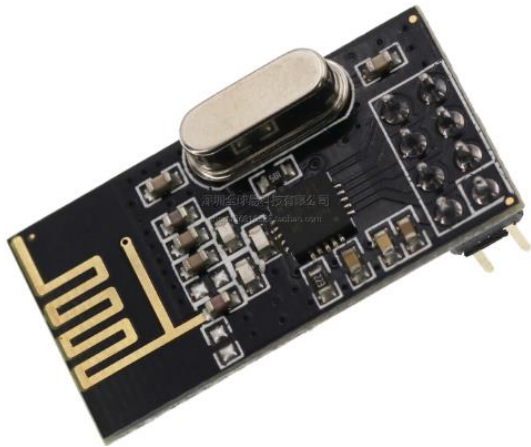# NRF2401L WIRELESS TRANSCEIVER MODULE 2.54GHZ 1.9V

Kindly reminder: Generally 2 pairs are used, both are transceiver integration, but one can only transmit or receive, and can not be used at the same time!

NRF24L01 is a single chip transceiver chip working in the universal ISM band of 2.4-2.5GHz. The wireless transceiver includes: Frequency generator enhanced SchockBurstTM mode controller power amplifier crystal amplifier modulator demodulator output power channel selection and protocol setting can be set through SPI interface low current consumption, the current consumption is 9.0mA when the transmission power is 6dBm in transmit mode and 12.3mA in receive mode. The current consumption mode is lower when the power is off mode and standby mode.

Ball open ISM band, 0dBm transmission power, license free use.

Support six channels of data reception

1. Low working voltage: 1.9 ~ 3.6V

2. High speed: 2Mbps. Due to short air transmission time, collision phenomenon in wireless transmission is greatly reduced (software sets 1Mbps or 2Mbps air transmission rate).

3. Multi-frequency points: 125 frequency points, to meet the needs of multi-point communication and frequency hopping communication

4. Ultra-small: built-in 2.4GHz antenna, compact size, 15x29mm (including antenna)

5. Low power consumption: When working in response mode communication, fast air transmission and startup time, greatly reducing current consumption.

6. Low application cost: NRF24L01 integrates all high-speed signal processing parts related to RF protocol, such as: The SPI interface of NRF24L01 can be connected by the hardware SPI port of the single chip microcomputer or simulated by the I/O port of the single chip microcomputer. The internal FIFO can be connected with a variety of high and low speed microprocessors, so as to facilitate the use of low-cost single chip microcomputer.

7. Easy to develop: because the link layer is fully integrated on the module, it is very easy to develop. Automatic retransmission function, automatic detection and retransmission of lost data packets, retransmission time and retransmission times can be controlled by the software to automatically store the data packets that have not received the response signal automatic response function, after receiving valid data, the module automatically sends the response signal. There is no need to program carrier detection - fixed frequency detection built-in hardware CRC error detection and point-to-multipoint communication address control packet transmission error counter and carrier detection functions can be used for frequency hop setting. Six receiving channel addresses can be set at the same time, and the receiving channel standard pin Dip2.54MM spacing interface can be opened selectively, which is convenient for embedded applications.
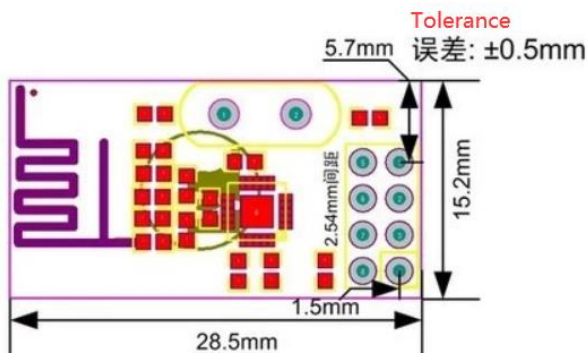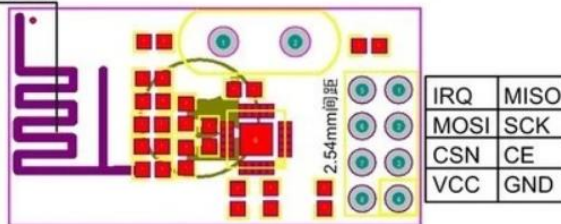
参数	数值	单位
最低供电压 Minimum supply voltage	1.9	V
最大发射功率 Maximum transmitting power	0	dBm
最大数据传输率 Maximum data transfer rate	2000	kbps
发射模式下电流消耗0dBm Current dissipation in emission mode	11.3	mA
接受模式下电流消耗2000kps Current consumption in receiving mode	12.3	mA
温度范围 Temperature range	$-40^{\circ} \sim 85$	$^{\circ}C$
数据传输为1000kbps下的灵敏度 Data transmission is sensitive at 1000kbps	-85	dBm
Current consumption in power off mode 掉电模式下电流消耗	900	nA