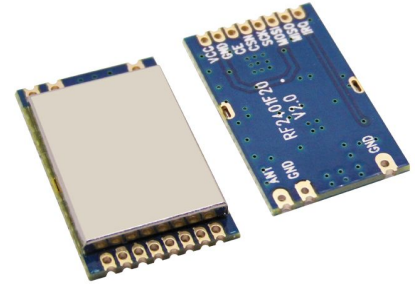

RF2401F20 2.4G Wireless Transceiver Module

—— Can pass CE、FCC、ETSI

1. Description

RF2401F20 Module is a high integrated wireless module, which worked in 2.4GHz of ISM band. RF2401F20 adopts Nordic's RF chip nRF24L01+ and high efficiency RF amplifier. The feature of high data rate (maximum 2Mbps), good sensitivity (-102 dBm) and high output power (+20dBm) but low harmonic and low unexpected radiation extend the range and improve the link performance.



★This module supports to pass CE, FCC, ETSI

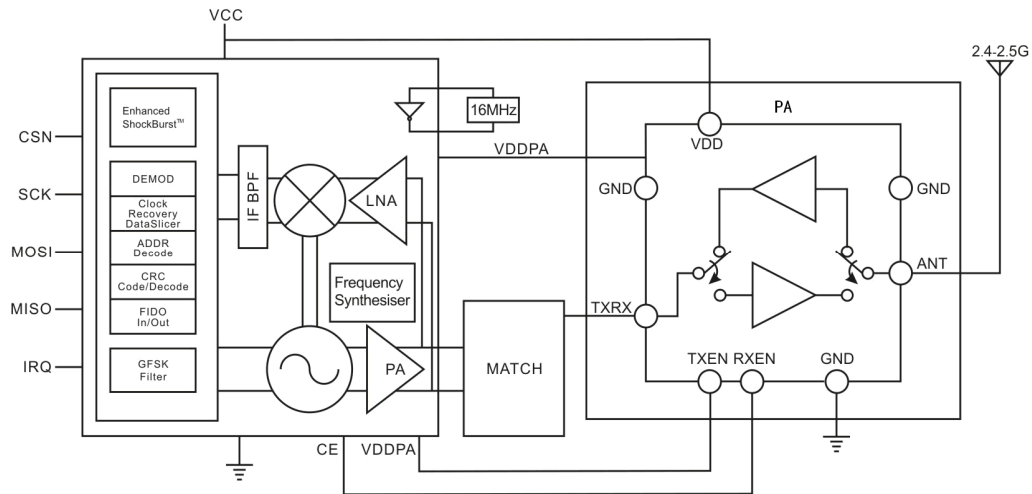
2. Features

- Frequency Range: 2400-2525MHZ
- Maximum power output: 20dBm
- Sensitivity up to:-102dBm@250Kpbs
- Data rate: 250K,1Mpbs,2Mpbs
- GFSK Modulation, 126 Channel
- FIFO: 32bytes
- Ultra low power off mode
- Support functions of frequency hopping
- Internal integrated voltage regulator
- operating voltage range: 1.9-3.6 V
- operating temperature range: -40~+85°C

3. Application

- Wireless remote control
- Remote meter reading
- Smart Home
- Personal data records
- Toy control
- Tire Pressure Monitoring
- health monitoring
- Tag reader

4.Schematic

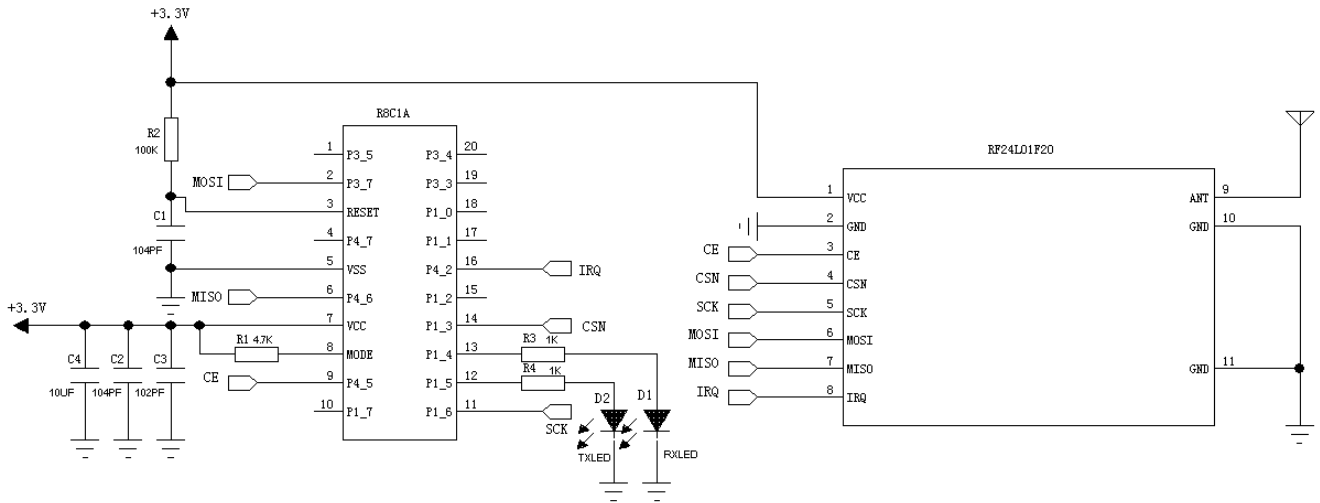


5. Electrical Characteristics

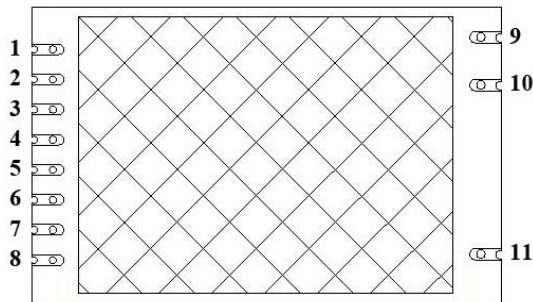
★ Below parameters is measured at 3V.

Parameter	Min.	Type.	Max.	Unit	Conditions
Operation conditions					
Operating voltage range	1.9	3.3	3.6	V	
Operating temperature range	-40		85	°C	
Current consumption					
RX Current		23.5	24	mA	
TX Current		135	150	mA	@20dBm
Sleep Current		<1		uA	
RF parameters					
Frequency range	2400		2525	MHZ	
Modulation rate	250		2000	Kbps	GFSK
Output power range	4		20	dBm	Power 0=5dBm,3=20dBm
Maximum output power	18.5	20		dBm	
RX sensitivity	-100	-102		dBm	@data=250kbps

6. Typical application circuit

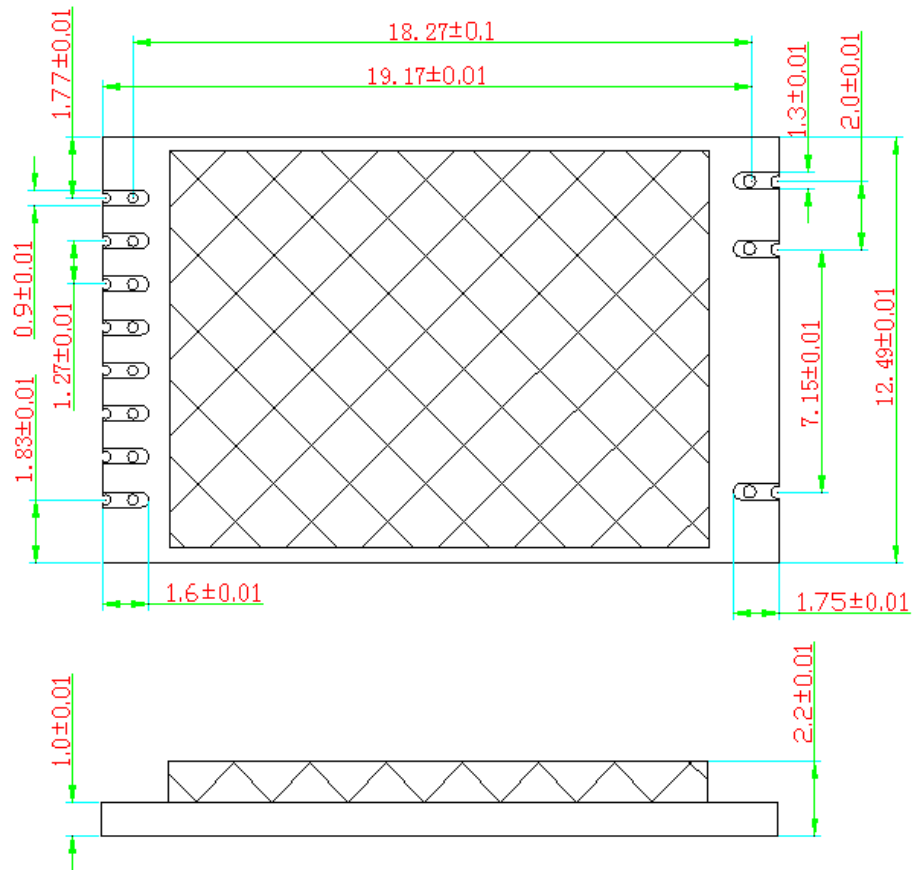


7. Pins Configuration



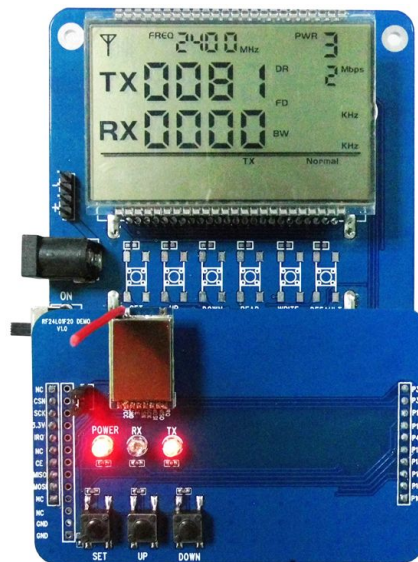
Pin No.	Pin Definitions	Description
1	VCC	Connect to VCC (1.9-3.6V)
2	GND	Connect to ground
3	CE	Chip enable
4	CSN	CSN of SPI interface
5	SCK	SCK or SPI interface
6	MOSI	MOSI of SPI interface
7	MISO	MISO of SPI interface
8	IRQ	Interrupt output, active low
9	ANT	Connect 50ohm coaxial antenna
10	GND	Connect to ground
11	GND	Connect to ground

8.Mechanical Dimension:

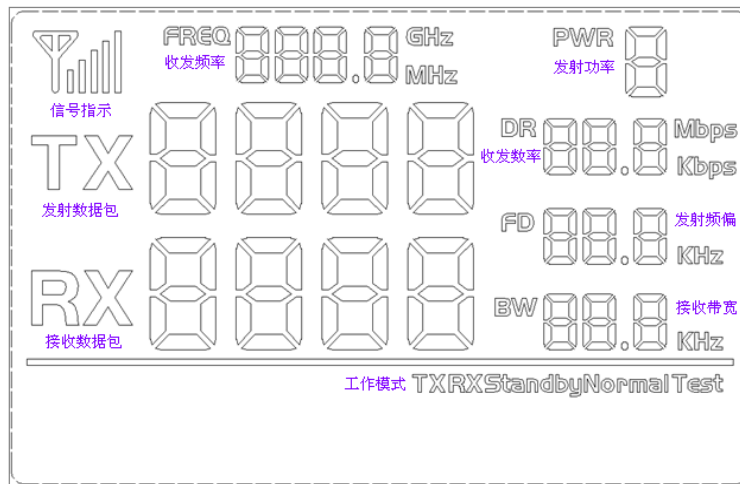


Appendix:

The module is equipped with a standard DEMO board for customer to debug the program and test distance. It shows as below:



The LCD Full Segment is as below:



Users can set the parameters of the RF module such as working mode /frequency / transmitter power / transmission data rate through the buttons, and measure the wireless communication distance.

➤ Working Mode

- 1) Master Mode: Send 1 packet per second, and waiting for the acknowledge;
- 2) Slave Mode: Stay in Rx mode to wait for the data from the master, it will send back the acknowledged signal after received the data from the master.
- 3) Tx Test Mode: RF module continuously transmit signal;
- 4) Rx Test Mode: RF module is always in Rx mode;
- 5) Standby Mode: RF module is always in standby state.

➤ Button Operation

- 1) [SET] Button
Press the [SET] button to enter into setting mode; Or press the [SET] button to be out of the setting mode upon the last parameter is done.
- 2) [UP/Down] Button
In setting mode, press the [UP/Down] button to increase/decrease the value of flash icon.

Note: The DEMO board has FLASH memory inside, all the setting parameters will be saved automatically and keep unchanged even power-off.