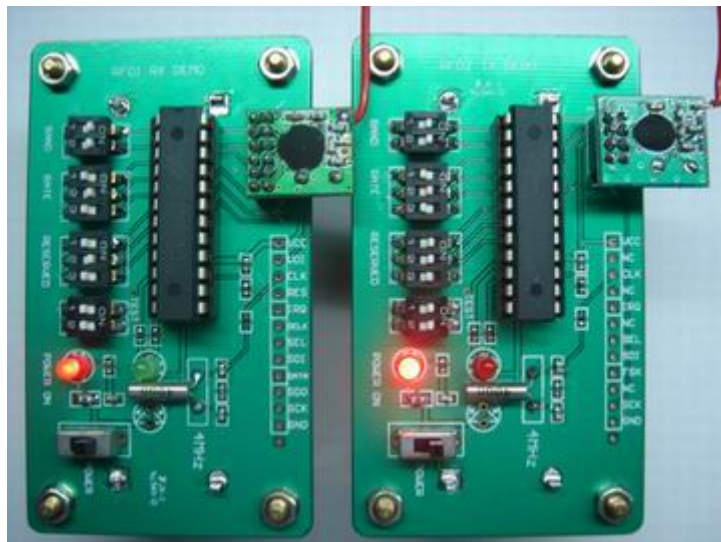


RF02, RF01 Demo Kit User Manual

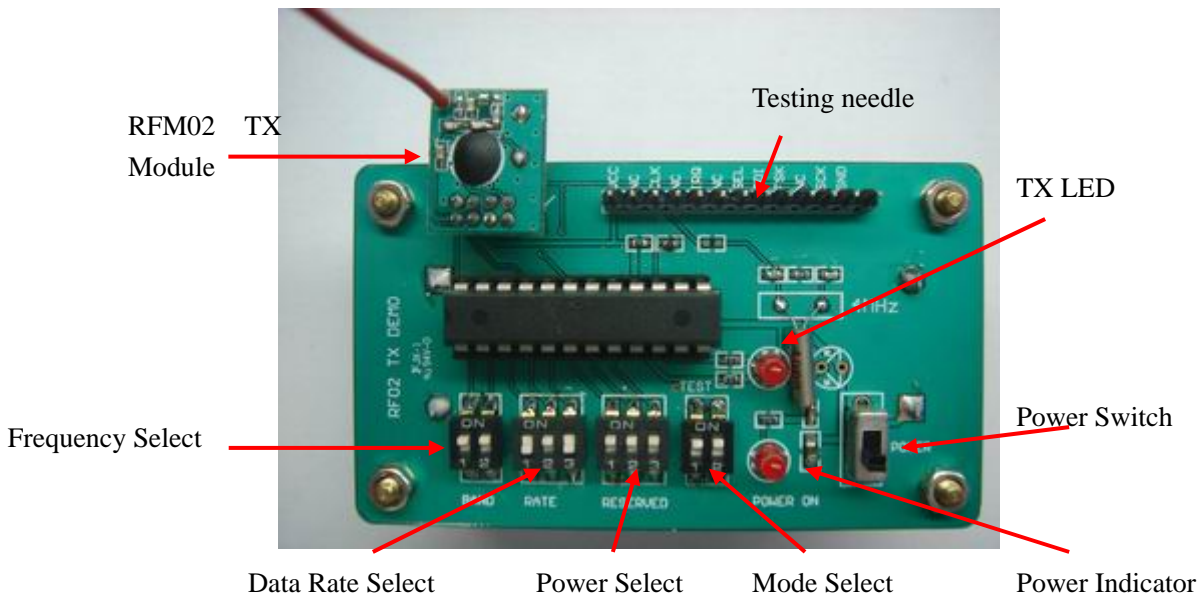


General

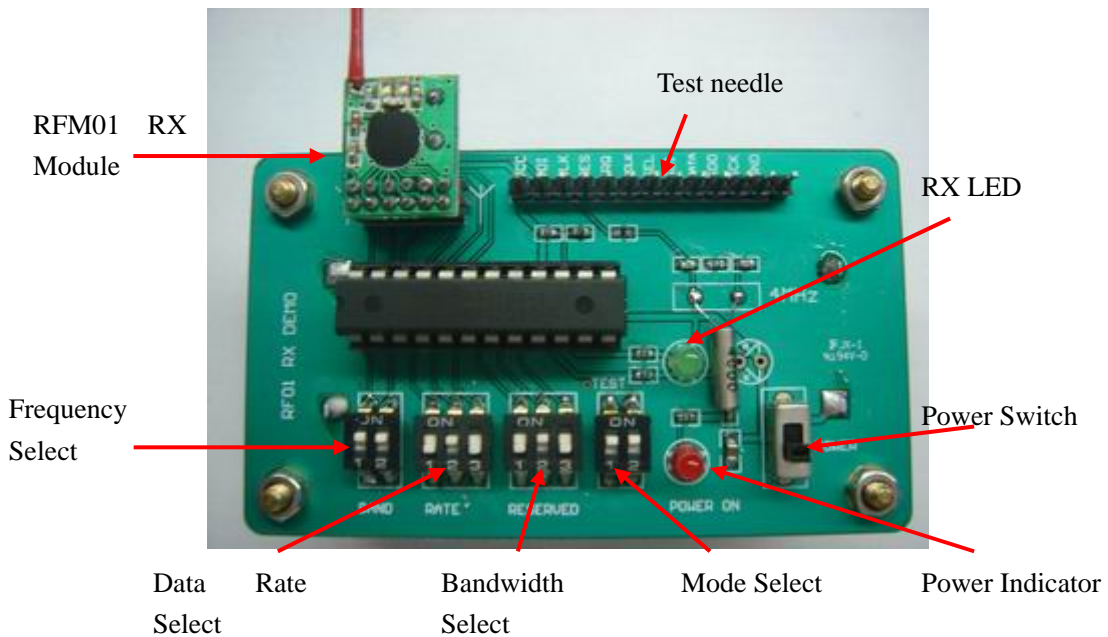
RF02, RF01 Demo Kit is used mainly to demonstrate the function of RFM02 and RFM01M FSK module, such as RF distance, and also useful for faster code development purpose. It consists of RF02 TX DEMO and RF01 RX DEMO.

Products Introduction:

1. RF02 TX DEMO



2. RF01 RX DEMO



Quick Start

Parameter Setting

Attention: RF02 TX DEMO and RF01 RX DEMO setting has to be matching with each other for frequency and data rate so that RF link can be established.

1、Band and frequency: with BAND select, ON=1, OFF=0

SW1	SW2	Frequency
1	1	915MHz
1	0	869MHz
0	1	434MHz
0	0	315MHz

Note: For RFM02B, the 315MHz band is not available

2、Data Rate: With Data RATE select, ON=1, OFF=0

SW1	SW2	SW3	Data Rate
1	1	1	Reserved
1	1	0	Reserved
1	0	1	Reserved
1	0	0	17.2kbps
0	1	1	9.6kbps
0	1	0	4.8kbps
0	0	1	2.4kbps
0	0	0	1.2kbps

3、Demo setting mode: ON=1, OFF=0

1. RF02 TX DEMO

SW1	SW2	Description
1	X	Testing mode(1010... data modulated)
0	1	RFM02A demo (data rate fixed)
0	0	RFM02B demo (RF02B bit synchronized)

2. RF01 RX DEMO

SW1	SW2	Description
1	X	Testing mode(receive 1010 data)
0	1	Bit synchronized mode with DATA and DCLK
0	0	FIFO mode

4、RESERVED select (ON=1, OFF=0)

1. RF02 TX DEMO, RESERVED switch is used to select TX power:

SW1	SW2	SW3	Power
1	1	1	0dB
1	1	0	-3dB
1	0	1	-6dB
1	0	0	-9dB
0	1	1	-12dB
0	1	0	-15dB
0	0	1	-18dB
0	0	0	-21dB

2. RF01 RX DEMO, RESERVED switch is used to select bandwidth:

SW1	SW2	SW3	Bandwidth
1	1	1	Reserved
1	1	0	400kHz
1	0	1	340kHz
1	0	0	270kHz
0	1	1	200kHz
0	1	0	134kHz
0	0	1	67kHz
0	0	0	Reserved

How to operate

1. RF02 TX DEMO

Step 1. Select frequency, data rate, RF TX power and working mode through dip switch.

Step 2. Switch on power, the microcontroller will configure the RF02A/B module according to selected parameter.

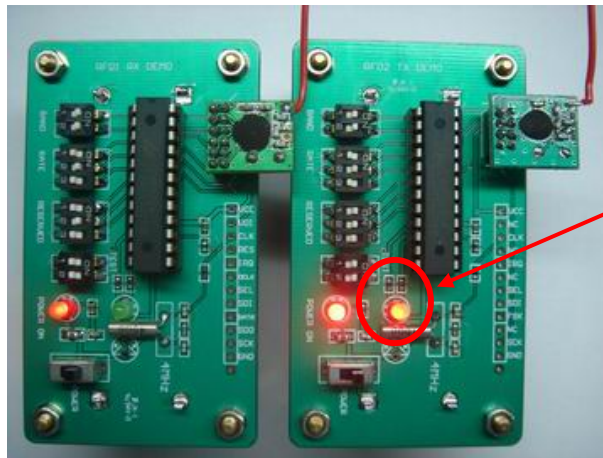
Step 3. RF02 TX DEMO starts to send out data packets with one second interval. When there is transmission, the LED will blink once to indicate the transmission.

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RF02、RF01 DEMO GUIDE

Data Protocol:

Preamble	Sync word	Data	Checksum	Dummy byte
0xAA, 0xAA, 0xAA	0x2D, 0xD4	0x31, 0x32,, 0x3F	0x78	0x55



After each transmission, the led will blink

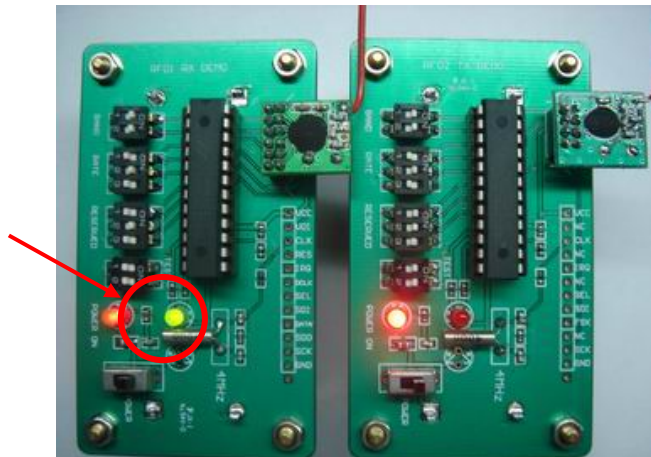
2. RF01 RX DEMO

Step 1. Select reception frequency, data rate, sensitivity and demo mode (synchronized or FIFO reception mode). Make sure reception frequency and data rate matches with the setting from RF02 TX DEMO.

Step 2. switch on power and then microcontroller will configure the RF01 according to selected parameter.

Step 3. If there is data packets received and verified to be correct, the led on receiver will blink once.

After each successful reception, the green led will blink once.



Testing needle

RF02 TX DEMO and RF01 RX DEMO has all the RF module (RFM02、RFM01) pin connected externally for easier timing observation during their firmware development. If the MCU is removed, the RF module can be hooked to the target board to evaluate the RF module on end user's system.

Precautions:

1. Power supply range from 2.2V—5.5V
2. Dip switch setting for TX and RX setting must be matching with each other.
3. Once a different setting is needed, make sure to re-power up the system again to make the setting valid.

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