**RF module-2.4G transceiver**
Model: JM7130S20PL

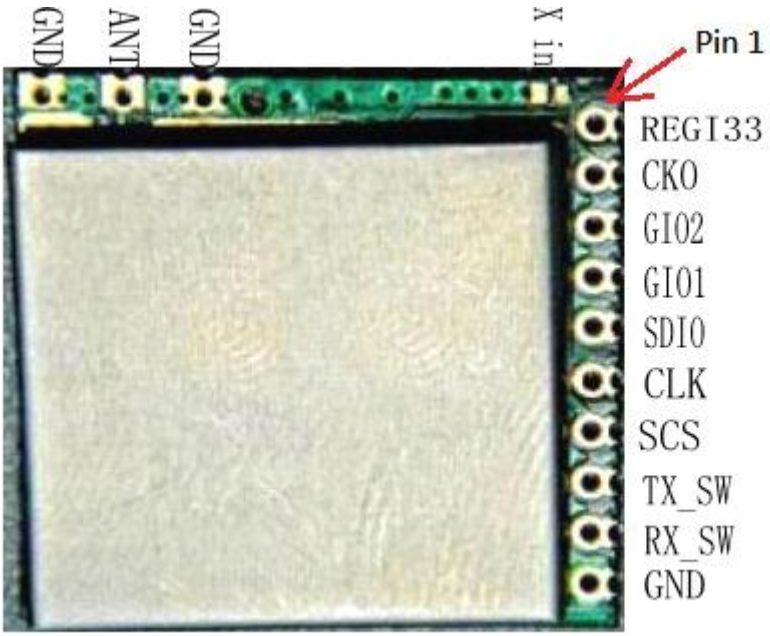
## 1.0 General Description

The JM7130S20PL module is designed for 2.4GHz ISM band wireless applications using GFSK transceiver. This module features a fully programmable frequency synthesizer by SPI. The data rate is 4Mbps.

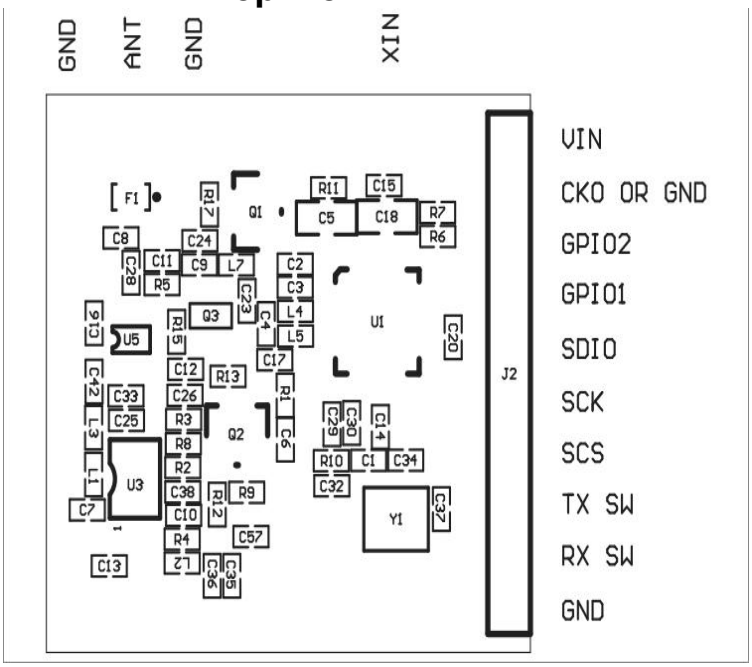
## 2.0 Electrical specification

| Item | Specification | Remark |
|---|---|---|
| Supply Voltage | 3.3V | +/-0.1V |
| Current Consumption | <10uA (typical) @Sleep mode<br>2.5mA (typical) @Standby mode<br>200mA (typical) @Tx mode<br>26mA (typical) @Rx mode | |
| Frequency | 2400 – 2483.5MHz | ISM band |
| Rx Sensitivity | -90dBm (typical) @ 4M mode, Dev = 1MHz | Typical,<br>BER≦1E-3,<br>With Gaussian filter. |
| Modulation | GFSK | |
| Dimension | 23 (L) x 21.5(W) x 4.2(H) mm (+/-0.5mm) | - With External Crystal<br>- Without connector |
| Crystal Frequency | 16MHz +/-20ppm | |
| **Operating Temperature** | **-20 ~ +70°C** | |

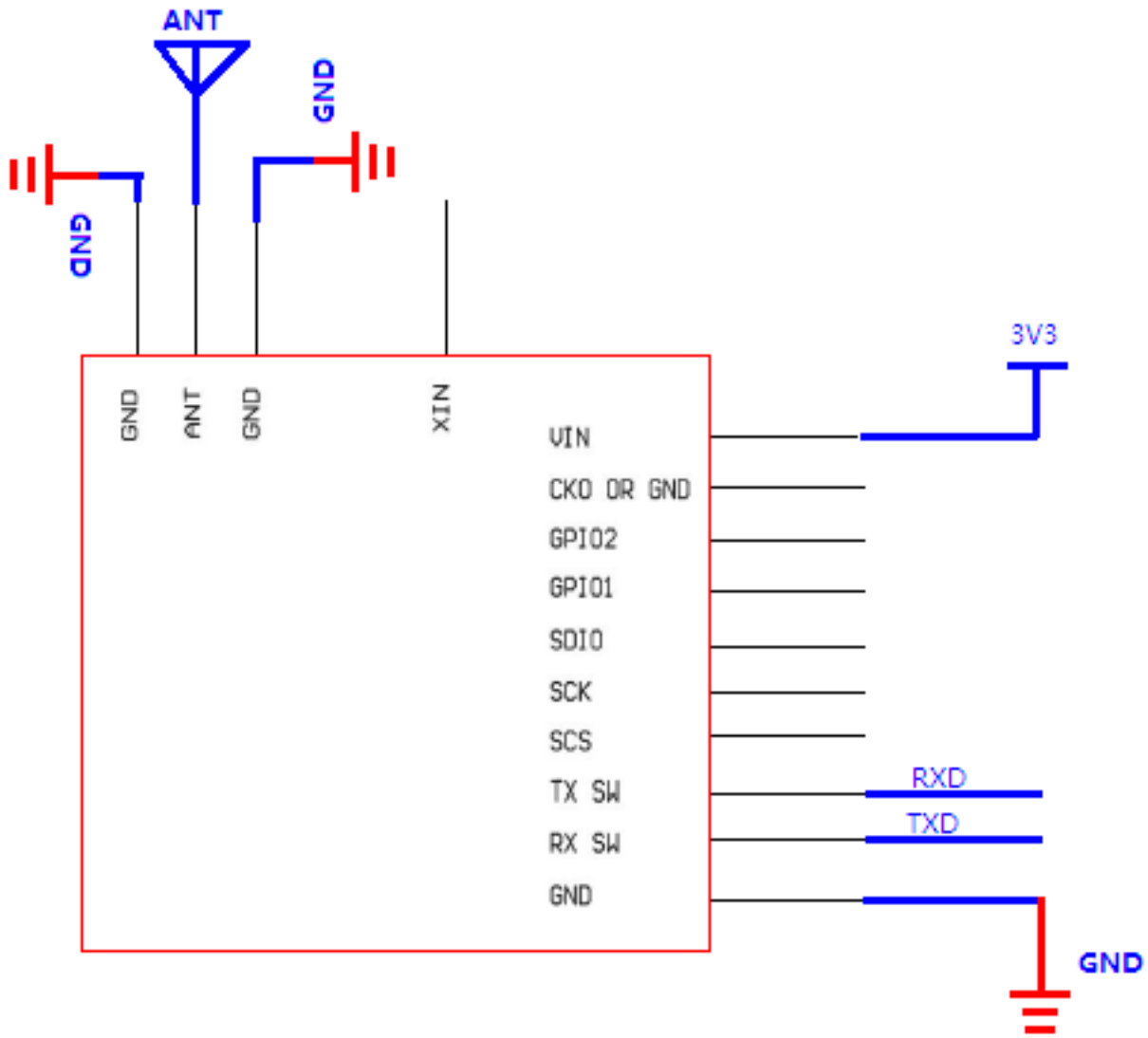
## 3.0 Module Picture




**Top view**

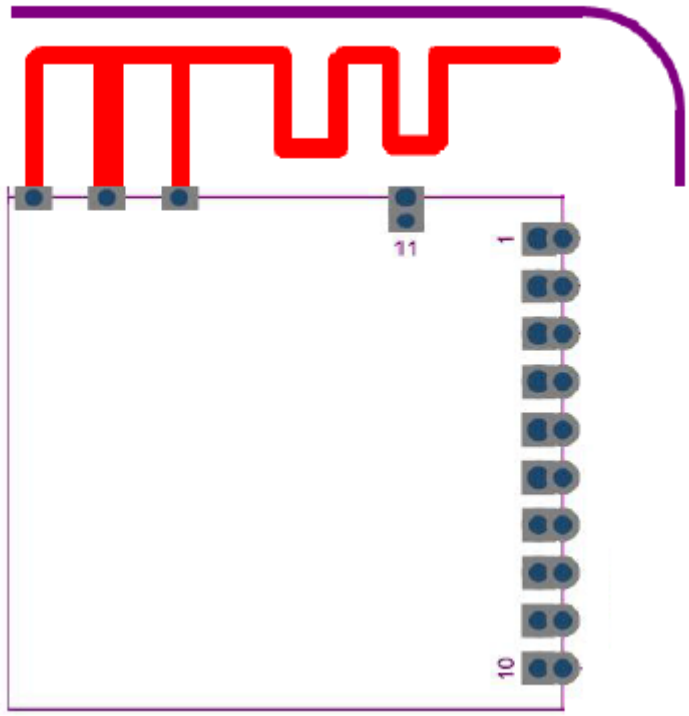


## 4. Typical application



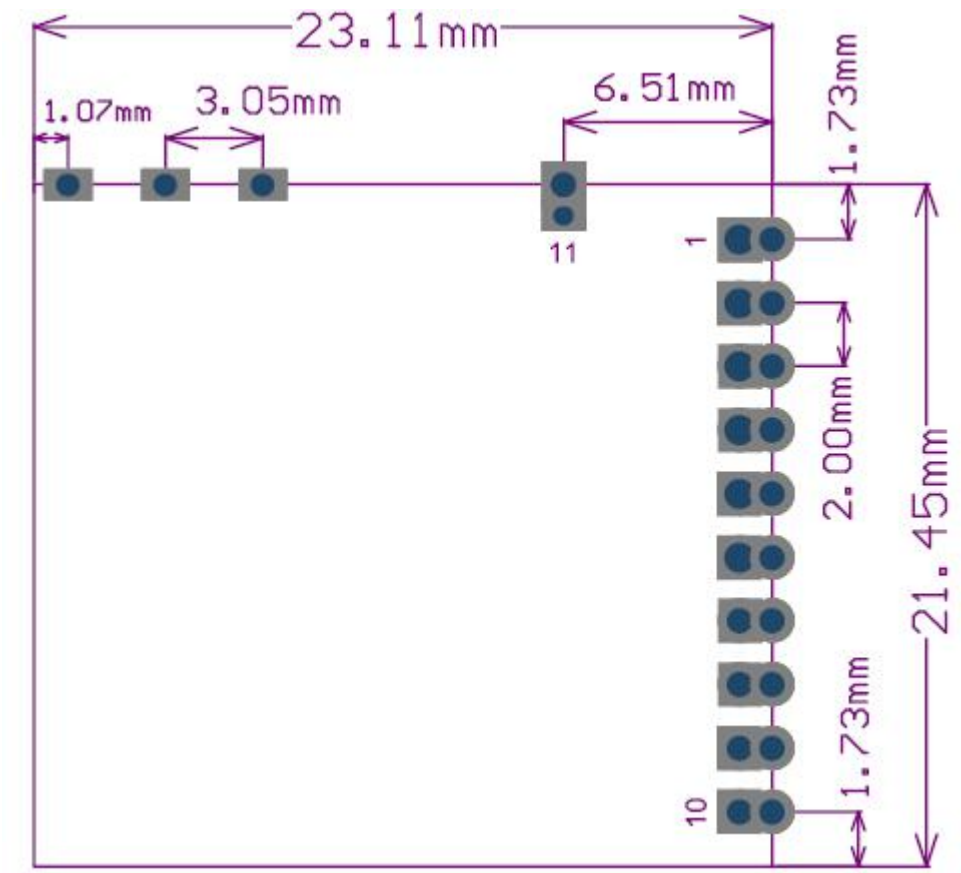
## 5. Installation instructions

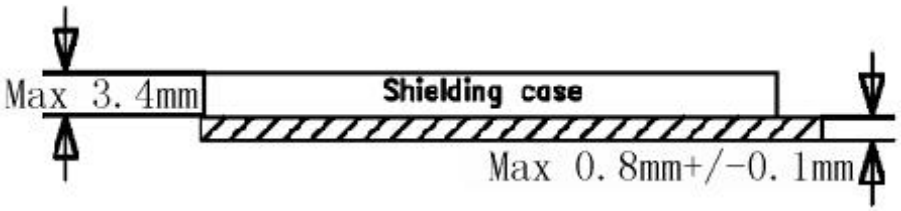
We recommend placing the module on the edge or corner of the PCB board. It is best to reserve a space of 6×18mm on the board for  antenna. As shown below:



**Top view**

## 4. Mechanical Dimension




**Side View**

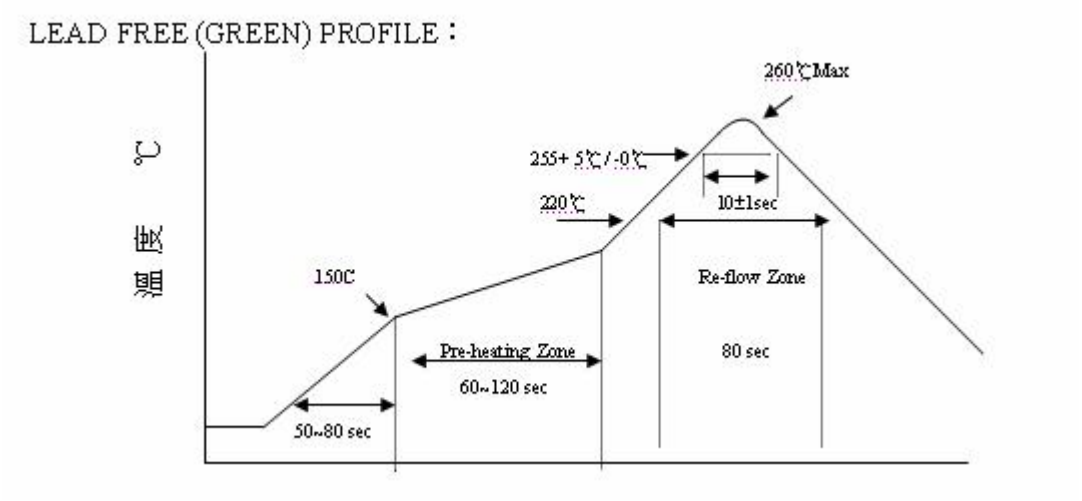
## 5. Interface

| Pin No. | Pin name | Comment | Note | |
|---|---|---|---|---|
| **1** | REGI33 | RF module supply voltage input | 3.3V | |
| **2** | CKO | Clock output of A7130 | | |
| **3** | GIO2 | General Purpose I/O 2 | | |
| **4** | GIO1 | General Purpose I/O 1 | Active low | |
| **5** | SDIO | SPI Data I/O | | |
| **6** | SCK | SPI Clock | | |
| **7** | SCS | SPI Chip Selection | | |
| **8** | TX SW | RF front end PA/LNA select | Active low | |
| **9** | RX SW | RF front end PA/LNA select | | |
| **10** | GND | GND | | |
| **11** | X’tal in | Clock in for A7130 | | |
| | | | | |

## 6. PA & LNA control state

| Control function | RX ON | TX ON | TR/X OFF | Inhibition |
|---|---|---|---|---|
| TX SW | 1 | 0 | 1 | 0 |
| RX SW | 0 | 1 | 1 | 0 |

### 7. Reflow Profile




## 8.0 Ordering Information

| Part number | Size (mm) | Remark |
|---|---|---|
| **JM7130S22PL** | 23 (L) x 21.5(W) x 4.2(H) mm (+/-0.5mm) | With 4Mbps data rate |

Note:The module is limited to OEM installation ONLY;The OEM integrator is responsible for ensuring that the end-user has no manual instructions to remove or install module.

If the FCC identification number is not visible when the module is installed inside another device, then the outside of the device into which the module is installed must also display a label referring to the enclosed module. This exterior label can use wording such as the following:
"Contains Transmitter Module FCC ID: XXXXXXXX"
when the module is installed inside another device, the user manual of this device must contain below warning statements;
1、This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference.
(2) This device must accept any interference received, including interference that may cause undesired operation.

That separate approval is required for all other operating configurations, including portable configurations with respect to Part 2.1093 and different antenna configurations.

This product is mounted inside of the end product only by professional installers OEM. They use this module with changing the power and control signal setting by software of end product within the scope of this application. End user can not change this setting.
The equipment complies with RF exposure limits. This module is limited to installation in mobile or fixed applications. The antenna used for this transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.