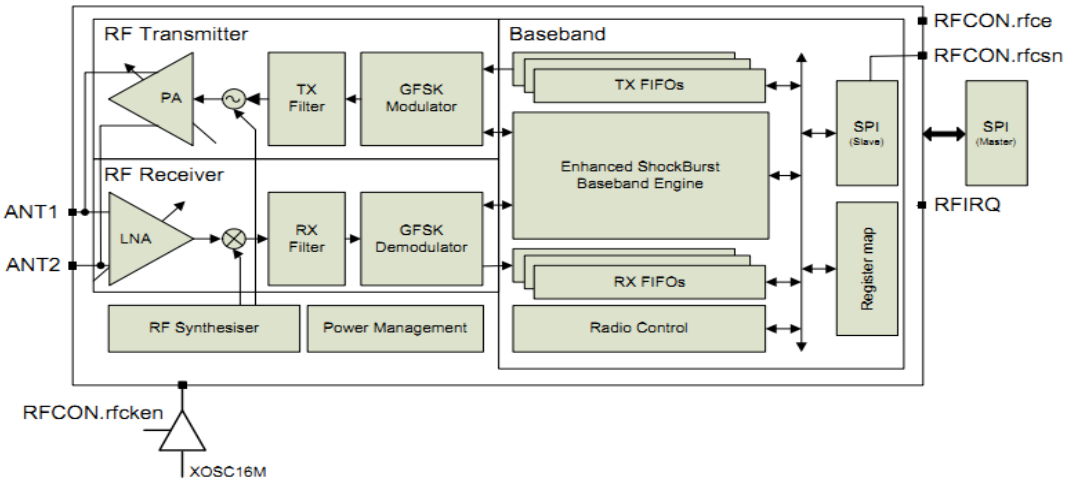
Circuit Description

It's a receiver device with a RF function for a Medical treatment device. The receiver device's working voltage is 30V, its working current is less than 60mA when in operation. Frequency Range is 2.404~2.477GHz. and a clock frequency of 16MHz as base clock signal.

This receiver device has 2 keys, one key was used to pair with the remote control , the other key was used to make the hospital bed down.It has a LED which shows the receiver device's state. Press the pairing button of the receiver and the LED is on, then you have 10s to make the remote to pair with the receiver. The distance between the transmitter and the receiver should be less than 2 meters when we do the pairing action . Press the K_1 and K_2 of the transmitter simultaneously till the LED blinks , then the pairing operation is successful . If we can't see the LED blinking till it is off ,the pairing is fail.And the recriver's LED is on whenever it is receiving a signal.

And the receiver device's electronic parameters are as follows:

1. Modulation: GFSK
2. Frequency Range: 2.404~2.477GHz
3. Transmitted Power: 0 dBm
4. Working Current: <6A
5. Ambient Temperature: -40—85℃
6. Power supply: DC 24 Voltage.(30 Voltage Max-Allowable)
7. PCB Material & Size: FR4 1.6mm 47.9*85mm
8. RF transceiver block diagram



Antenna Specification:

Type of Antenna: PCB Antenna

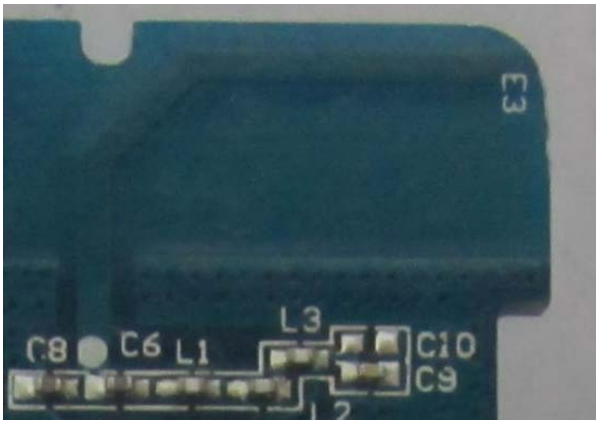
Frequency Range: 2400-2483.5MHz

Maximum Gain: -0.20 dBi

Impedance: 50 ohm

Size: 17mm x 11mm

Antenna View



Antenna Location