

Technical Description of the Circuit:

The circuit above is a RF thermometer receiver part, the RF circuit is a single conversion, super-heterodyne architecture and incorporate an entire phase locked loop receiver IC. The incoming RF signal received by the antenna is fed to the RF input terminal of the IC RX3400, then the RF signal is then amplified by the LNA in the IC RX3400. The amplified signal will be fed to the mixer input, the LO for the mixer is generated by the VCO and PLL circuit, in the above circuit, the reference frequency is 6.775MHz, the LO is 64 times the reference frequency, so the LO is 433.63MHz, the IF ($F_{RF}-F_{LO}$) is then demodulated by the demodulator in the IC RX3400 and the IC RX 3400 provides the raw data. The data is then fed to the MCU MSM64164 for decoding and the MCU MSM64164 will display the decoded temperature at the LCD.