

EM2213

## Products Description

This wireless cooking thermometer is one device which operation base on the heat resistance's temperature linearity and its radio transmitting base on amplitude modulation & demodulation elements.

The brief introduction of the circuit

### 1 Transmitter:

The temperature will be converted into signal through temperature sensor(PT3-312-3) and transmit to IO account of MCU1. this signal will be converted into data through MCU1 and export out from DATA feet, mixing modulated at Q2 through R11&X3(basic frequency of 433.92MHz) and frequency magnified at Q3, then the electronic wave will be sent out through ANT.

At the same time, one ephemeral high electrical frequency will be exported out from the LED feet of MCU1 for controlling the LED light irradiance through R4, Q1. the MCU will proceed data sending when the temperature's change is above 1 C or the temperature keep no change in per 30 seconds.

### 2 Receiver

Transmitter's signal will be input through ANT, the L2, C9, C10 will sieve the wave and Q1 will modulate the signal, then the U3-A(integrator) will choose the frequency and U3-B will blow up the signal to transmit it to MCU2. finally the temperature will display on the LCD through MCU2 after software running.

The appointed electrical frequency will be sent to MCU2 through 8 buttons. the MCU2 will perform the referred function through software running. (pls study the manual for more function details)

1, Modulation mode: amplitude modulation

2, Central frequency: 433.92MHz

3, Antenna: 50 OHM resistance