

Technical Description of the Circuit:

The circuit is a RF thermometer transmitter part, the MCU TM8712 will measure the temperature and code the data. Afterward, the data is transferred to the RF circuit, it is a fully integrated IC based OOK transmitter, the IC U2745B include a VCO, PLL and a power amplifier circuit. The IC U2745B will generate the frequency by the VCO and the PLL, the frequency is controlled by the reference crystal frequency, the reference frequency is 13.56MHz, then the PLL will multiple the frequency by 32 and it will generate the 433.92MHz. When the data from the MCU TM8712 transferred to the RF IC is high, it will turn on the power amplifier inside the IC U2745B and the IC U2745B will output the 433.92MHz. If the data transferred is low, it will turn off the power amplifier and the IC U2745B will not output the RF signal. Also there is a low pass filter at the output stage of the RF IC U2745B transmitter, it will suppress the harmonic and spurious emission.