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IDT Technology Limited

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Technical descriptions of THC138

THC138 is a remote thermo-sensor. It converts analogue temperature signal into digital signal and transmits via RF channel. It composes a controller part and a transmitter part. The transmitter is basically a Colpitts oscillator, where C1, C2 and X1 are used to determinate the resonant frequency that is 433.92MHz. Transistor Q1 whose f_T is greater than 6GHz, provides a good frequency response to the circuit. There is a LC filtering circuitry, L1 and C3, that is used to suppress harmonics of the oscillator. An inductor, L3, is employed to match the impedance of the antenna, L4.