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## TECHNICAL DESCRIPTION

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#### **Introduction**

The unit is a passive infrared motion detector ability and transmit through RF carrier in the frequency of 433.93MHz ; a signal shall be transmitted and alarm shall be generated when a infrared motion object be detected ; It is designed for hallway and it is powered by 3 xAAA battery cells.

#### **MCU**

IC U5, OKI brand MSM64160 is process the data to transmit RF signal and drive alarm , clock frequency is 32768Hz. It receive the data by PIR.IC U5 MSM64160 process the data to transmit data through 433.93MHz .

#### **PIR DETECT**

Pyroelectric passive infrared sensor generate a signal when detect a infrared motion object,the signal be U1(LP324) compared and amplified.and then ,the signal be transmitted after be processed by U5.

#### **Transmitter**

The transmitter is made of a Colpitts Oscillator, with a 433.92 MHz SAW resonator (X1) to guarantee the carrier center frequency. The transmitting power will be controlled by adjusting the value of a matching network (L2, C17, L5, C16, C14, C36, L7 and C18) and an attenuator (R17).

#### **Low Battery Detection**

The IC 2 detects low battery signal with the switching circuitry Q2, Q3 and Q4 .