



IDT Technology Limited

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NR868A Technical Description

Introduction

The unit NR868A is a passive infrared motion detector. It can detect a infrared radiation by person moving at night, then generate an nightlight signal and transmit a alarm signal to the main unit JMR868A through RF carrier in the frequency 433.94 MHz. The main unit receive the signal, then display the sign at LCD and drive backlight.

MCU

IC U4, OKI brand MSM64160 can process the CDS data and the PIR data , and transmit RF signal and drive nightlight. It can process the battery level signal and drive the corresponding LED indicating. When it transmit RF sign, it drive orange LED indicating. It's clock frequency is 32768Hz.

PIR DETECT

Pyroelectric passive infrared sensor generate a signal when detect a infrared motion object, the signal be U201(LPV324MT) amplified and compared. and then the signal be processed by U4.

Low Battery Detection

The IC U4 detects low battery signal with the switching circuitry Q5, Q6 and Q7.

Transmitter

The transmitter is made of a Colpitts Oscillator, with a 433.92 MHz SAW resonator □ (X101) to guarantee the carrier center frequency. The transmitting power will be □ controlled by adjusting the value of a matching network (L102, C117, L105, C116 and □ C114) and attenuator (C136, C118 and L107).