



## TECHNICAL DESCRIPTION

### MODEL 45132 MOTION SENSOR

#### DESCRIPTION

The transmitter is a low-power communication device operating at frequency 318MHz. The signal is a digital coding modulated transmission, which transmitted data to a receiver. This digital coding provides different patterns by proprietary micro-controller (U1).

#### FUNCTION

The passive infrared detector (FR1) produces a fluctuating voltage of about 1 mV as it detects the heat from a person moving in its fields of view. R32 and C20 and C25 offer some quieting of the power supply noise into the PIR detector as well as some RF filtering.

The PIR IC around (U3) forms the amplifier and band pass filter. The output (pin 2) of this IC provides the sufficient swing to latch the proprietary micro-controller (U6).

The digital modulator is employed in the proprietary micro-controller (U6), which sends encoded digital data. The capacitor (C10 and C14) and ceramic resonator (X1) established the clock rate of 4MHz.

The output data from the proprietary micro-controller (U6) drives an oscillator that the transistor (Q1) and associated components (C6, C8) controls the frequency of oscillation. Frequency of oscillation is controlled by a high-Q SAW resonator (Y1) of frequency 318MHz.

The inductive load is configured on the PCB as the principle radiating element which similar to an elementary dipole. Resistor (R2) in conjunction with the base bias circuit (R1) regulates the power output of the transmitter.

The unit operates from a Lithium battery of 3V.

Warning: Changes or modifications to this unit not expressly approved by the party responsible of compliance could void the user's authority to operate the equipment.