

CIRCUIT DESCRIPTION

Device: Low Cost Narrow Band Smoke Detector

Model: WLS906LC (UA207)

ESI Identifier:

Description:

The low cost narrowband Smoke Detector (LCNB SMK) sends the sensor status appropriately to the control unit of the wireless security system. A Smoke chamber is incorporated to sense any obscurity above its set threshold sensitivity level, If found to be higher, the sensor will immediately trigger the Transmitter to send status to the controlling unit.

This unit consists of Three main circuit sections. A control section with a microprocessor, a digital controls sensor section and the RF transmitter.

The control section receives status information from the sensor inputs triggered by detecting obscurity in the smoke chamber apart from its normal operating function. It is then coded to produce ASK modulation signal. This section also controls transmitter activity.

The transmitter consist of an integrated chip fully implemented with a phase locked loop (PLL), divide-by-64 prescaler, a phase detector, a voltage controlled oscillator, and an automatic lock detect that disables the transmitter output when the PLL is out of lock. The external reference crystal frequency provide a complete phase-locked detector which when divide-by-64 produce the output signal frequency of 433.92MHz compensated with a matching network to antenna.