Dual Channel PIR Signal Processor

E931.62

Production Data - Dec 16, 2016

RoHS compliant

Features

- Direct connection to PIR sensor elements
- Temperature measurement
- Differential PIR inputs
- Digital Signal Processing (DSP)
- Single wire serial interface (DOCI™)
- Operating voltage down to 2.7V
- Low current consumption
- High dynamic range
- High supply rejection

Applications

- Integration with PIR sensor elements (hybrid modules)
- Gas sensors
- High end PIR systems

General Description

The E931.62 integrated circuit is designed for interfacing Passive Infra Red (PIR) sensors with micro-controllers or processors. A single wire **D**ata **O**ut, **C**lock **I**n (DOCI™) interface is provided for interfacing with a micro-controller. Multiple devices can easily be operated at the same time.

Up to two PIR sensors elements connect directly to the PIR inputs. The PIR signal is converted to a 14 bit digital value.

The E931.62 contains an on chip temperature measurement circuit with a resolution of better than 0.1K. The PIR sensor voltages and the temperature value are supplied to an external microcontroller through the DOCI™ interface.

Ordering Information

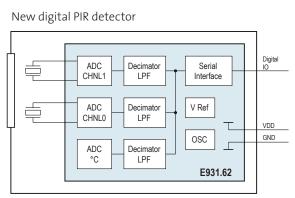| Ordering-No.:	Temp$_{ST}$ Range	Package
E93162A22W	-45°C to +125°C	Wafer B - Entegris Box

Digital Sensor Assembly with E931.62

The E931.62 PIR Signal processor replaces the JFETs and optional discrete components.
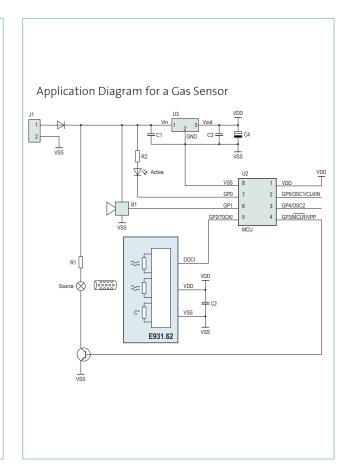The pin count of the detector is reduced to 3 pins.

Traditional analog PIR detector

New digital PIR detector

Application Diagram for a Gas Sensor

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