

## Features

- ▶ Increases proximity detection range of E909.05/E909.06 by a factor of 5 (\*)
- ▶ Improves signal to noise ratio by a factor of 3
- ▶ Optical receiver with high sensitivity (limiting output): total transimpedance typ. 422M $\Omega$
- ▶ Integrated op-amp for buffering, gain or additional active filtering
- ▶ Very low phase shift in input overdrive
- ▶ High ambient light suppression up to photo currents of 10mA
- ▶ Signal bandwidth up to 500kHz
- ▶ No current consumption in standby mode
- ▶ Automotive qualified according to AEC-Q100

(\*) in systems with highly focused IR beams and optimized optical sensor surfaces

## Applications

- ▶ Optical receivers
- ▶ Transimpedance amplifiers
- ▶ Multiplex function for channel expander of the chip set E909.05/E909.06

## General Description

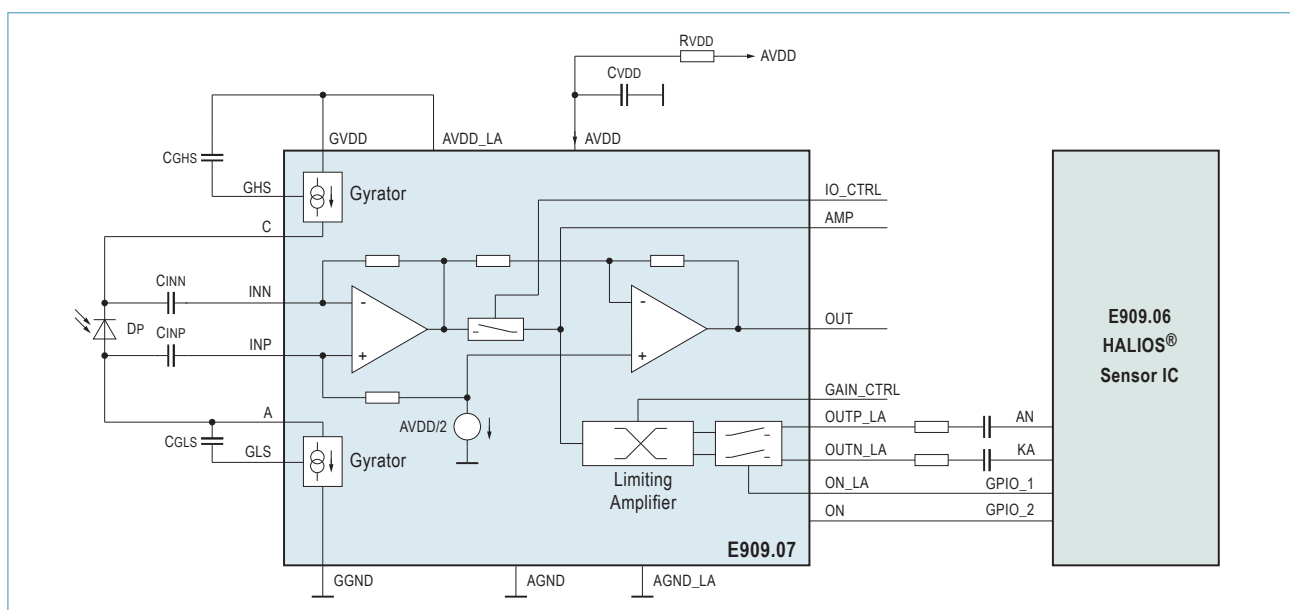
The optical receiver device consists of a first stage transimpedance amplifier (TIA) with differential input, limiting amplifiers with integrated high pass filter characteristics and differential outputs OUTP\_LA / OUTN\_LA and a secondary linear output OUT.

A very high sensitivity equivalent to a transimpedance resistance of typ. 422M $\Omega$  is achieved at the limiting outputs. By using a limiting amplifier no phase shift occurs if the input is overdriven. Ambient light equivalent to a constant photo current up to 10mA is suppressed with an integrated gyrator.

Together with the HALIOS® chip set E909.05/E909.06 motion detectors a detection range of several meters can be realized. By switching the output to high impedance state several optical receivers can be multiplexed to the input of a HALIOS® multi-purpose sensor IC E909.05/E909.06.

## Ordering Information

Product ID	Temp. Range	Package
E909.07	-40°C to +105°C	QFN20L4



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