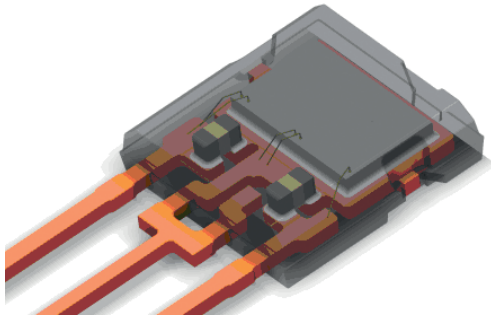


INNOVATIVE HALLSENSOR SOLUTION WITH INTEGRATED CAPACITORS



The direct-angle Hall-effect sensors HAC37xy from Micronas are suitable for multi-dimensional magnetic field measurements in automotive and industrial applications. The TO92UF package was especially designed for this new sensor and integrates both a chip from the HAL37xy sensor family based on Micronas' 3D technology as well as two capacitors up to 100 nF.

All members of the HAC37xy use a so-called pixel cell, which consists of one horizontal (B_z) and two vertical (B_x , B_y) Hall elements. The pixel cell measures three magnetic field vector components at one point. Magnetic field lines in parallel to the sensor surface are detected by the vertical Hall elements, whereas the component perpendicular to the chip surface is captured by the horizontal Hall element. The ability to evaluate the relative strength out of the horizontal and vertical magnetic field components is the key for excellent angular performance.

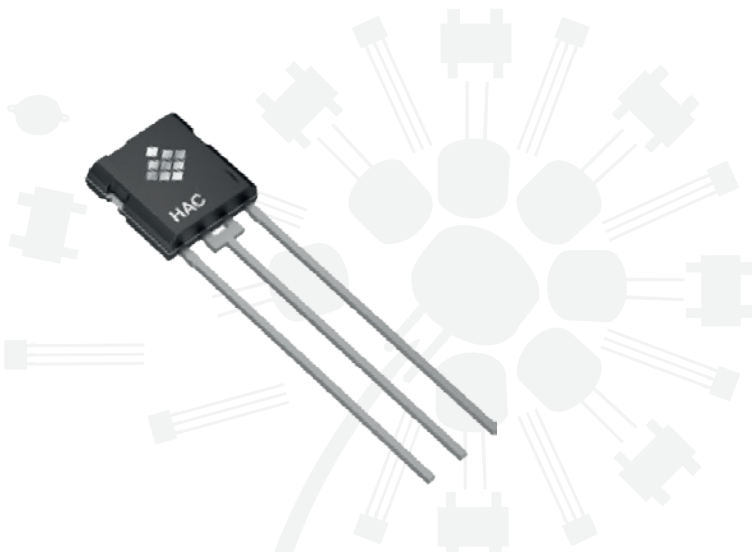
The HAC37xy sensors enable angle measurements of up to 360° or linear measurements of up to 40mm. At the same time, the sensors achieve an ESD immunity of up to 8kV. Further

more, the sensors meet all of the stringent EMC requirements, such as the current Bulk Current Injection (BCI), for example.

The leaded TO92UF package provides the option to weld or sold the sensor directly to a lead frame. This eliminates the need for a printed circuit board (PCB), thus reducing the total system size and cost. Examples for PCB-free module solutions in automotive applications are turbo chargers, EGR and throttle valves.

FURTHER PRODUCT FEATURES/ INFORMATION

- » Functional safety: ASIL-B ready
- » Analog or digital output (PWM / SENT / Triggered SENT)
- » Samples available
- » SOP is planned for early 2017



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