Automotive-Compliant, Hall Effect ICs from Diodes Incorporated Offer Wide Choice of Switching Sensitivities for Optimal Proximity Detection

Plano, Texas – September 10, 2024 – Diodes Incorporated (Diodes) (Nasdaq: DIOD) announces the addition of two enhanced high-voltage, Hall effect switch IC families to its automotive-compliant* product portfolio. The AH332xQ (unipolar) and AH352xQ (omnipolar) offer a wide range of operating sensitivity options in SIP-3, SOT23 (Type S), and SC59 packages. The devices can be used in a broad range of contactless position and proximity detection applications, including seatbelt fastening, door and trunk latching, windshield wipers, and steering-wheel locks.

The unipolar AH332xQ is activated when the magnetic flux density of correct polarity exceeds the defined operating threshold (B_{OP}), and switches off when the flux density falls below the release threshold (B_{RP}). Ten sensitivity options are available, ranging from a highly sensitive 30G B_{OP} to a low-sensitivity 275G B_{OP} version, allowing for a wide range of magnet and distance choices for optimal sensing.

The omnipolar AH352xQ is activated when the magnetic flux density of either a magnetic south or north pole exceeds the B_{OP} and turns off when the magnetic flux density falls below the B_{RP}. Three high-sensitivity options are available, ranging from ±20G to ±40G B_{OP} devices.

The B_{OP} and B_{RP} thresholds for both the AH332xQ and AH352xQ provide a tight operating window with sufficient hysteresis for reliable operation, while a low-temperature coefficient ensures the stability of the switching points.

The AH332xQ and AH352xQ Hall effect devices have an open-drain output and operate over a wide 3.0V to 28V supply voltage range and -40°C to +150°C temperature range, providing product design flexibility to meet the requirements of the harsh automotive environment. Even when physical stress is applied to the package, the devices maintain very accurate sensitivity levels. For enhanced robustness and reliability, the devices have reverse blocking diodes with Zener clamps on their supply pins, as well as overcurrent limits and Zener clamps on their open-drain output. ESD protection exceeds 8kV HBM and 1kV CDM, and the devices have a 40V load-dump capability.

The AH332xQ and AH352xQ are available at $0.30 in 3,000-piece quantities.

About Diodes Incorporated
Diodes Incorporated (Nasdaq: DIOD), a Standard and Poor's SmallCap 600 and Russell 3000 Index company, delivers high-quality semiconductor products to the world's leading companies in the automotive, industrial, computing, consumer electronics, and communications markets. We leverage our expanded product portfolio of analog and discrete power solutions combined with leading-edge packaging technology to meet customers' needs. Our broad range of application-specific products and solutions-focused sales, coupled with global operations including engineering, testing, manufacturing, and customer service, enable us to be a premier provider for high-volume, high-growth markets. For more information, visit www.diodes.com.

**Automotive-compliant - AEC qualified, manufactured in facilities certified to IATF 16949, supporting PPAP documents.*

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