



Automotive-Compliant, Two-Wire Hall Effect Switches with Self-Diagnostics from Diodes Incorporated Deliver High Sensitivity and Stable Performance

Plano, Texas – December 17, 2020 – Diodes Incorporated (Nasdaq: DIOD) has announced a family of [automotive-compliant](#), two-wire unipolar ([AH323xQ/4xQ](#)) and latch ([AH327xQ/8xQ](#)) switch integrated circuits (ICs) that provide high sensitivity and high stability over wide operating voltage and temperature ranges. The ICs are for use in automotive proximity- and position-sensing applications, including seatbelt buckle, power window, gear selector and seat position. The adoption of two-wire hall switches reduces the number of wires required in the harness, saving on system complexity and cost while improving robustness to electrical noise.

The AH324xQ and AH328xQ have integrated self-diagnostics which continually monitor the main device blocks, supply voltage, and temperature. There is a third output state that warns of an abnormal condition. These devices are ISO 26262 ASIL-B ready, having been developed using rigorous design processes with safety analysis conducted in accordance with the ISO 26262 standard.

Diodes adopted an advanced chopper stabilized design, which provides superior stability of the magnetic operating and release points (B_{OP}/B_{RP}) over the 2.7V to 27V operating voltage and -40°C to $+150^{\circ}\text{C}$ temperature range. This stability, coupled with a high ESD rating of 8kV, built-in reverse blocking diode, and supply pin Zener clamp, enables the AH32xxQ series to meet the demanding requirements of automotive proximity/position-sensing applications.

All [AH32xxQ](#) devices are supplied in the SC59 package. They are qualified to AEC-Q100, manufactured in IATF 16949 certified facilities, and support PPAP documentation. The AH324xQ and AH328xQ have a unit price starting at \$0.40 in 3000 piece quantities, while the AH323xQ and AH327xQ start at \$0.36 in 3000 piece quantities.

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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 consumer electronics, computing, communications, industrial, and automotive markets. We leverage our expanded product portfolio of discrete, analog, and mixed-signal products and leading-edge packaging technology to meet customers' needs. Our broad range of application-specific solutions and solutions-focused sales, coupled with worldwide operations of 28 sites, including engineering, testing, manufacturing, and customer service, enables us to be a premier provider for high-volume, high-growth markets. For more information visit www.Diodes.com.

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