



High-Performance Automotive Hall Effect Latch from Diodes Incorporated Features Wide Range of Sensitivity Options

Plano, Texas – July 14, 2015 – Diodes Incorporated (Nasdaq: DIOD), a leading global manufacturer and supplier of high-quality application specific standard products within the broad discrete, logic and analog semiconductor markets, today introduced the AH376xQ family of AECQ100-qualified Hall effect latches. These devices offer eight magnetic sensitivity options to cover the requirements of numerous automotive applications. Such automotive applications include commutation, encoding and position control of the various motors, pumps, fans and valves found in vehicle cabins, and operating windows, sun roofs, seats, tailgates and air-conditioning. These Hall effect latches can also be used in the engine bay for steering and sensing the speed and position of the crankshaft, camshafts, cooling fans, and water, oil and fuel pumps.

With an extended -40°C to $+150^{\circ}\text{C}$ temperature range and a 3V to 28V supply voltage range, the AH376xQ devices provide robust and reliable operation by tolerating the harsh automotive environment with its extremes of low crank voltage as well as over-voltage excursions. Comprehensive protection features enhance this robustness: a low leakage-blocking diode guards against reverse-supply connection; input and output clamps help withstand transient voltages; and an output current limit avoids overload. Plus, the devices have an ESD capability of 8kV and can withstand a transient load dump up to 32V.

The AH376xQ family provides eight different magnetic operation and release thresholds (B_{OP} and B_{RP}) to address the wide variety of applications with regard to magnet strength or sensor to magnet distance. These range from the highest B_{OP}/B_{RP} sensitivity of $+25\text{G}/-25\text{G}$ to the lowest sensitivity of $+210\text{G}/-210\text{G}$. Pin-

compatibility is maintained across the range and all devices are offered in industry-standard SOT23 and SIP3 packages. The AH3762Q/3Q/4Q/5Q are also offered in an SC59 package and provide the opposite polarity for magnetic detection compared to the SOT23 package.

The AH376xQ Hall effect latch ICs offer superior performance with a fast 10 μ s power-on time and a quick 3.75 μ s response time to reduce delays and commutation errors. A chopper-stabilized design with a low temperature coefficient minimizes switch point drift and provides enhanced immunity to stress. Flexibility is further enhanced by the open-drain output configuration, allowing the external pull-up resistor value to be adjusted to suit the application.

The AH376xQ Hall effect latch family is fully qualified to the automotive AECQ100 standard and meets the AIAG production part approval process (PPAP). Further information is available at www.diodes.com.

About Diodes Incorporated

Diodes Incorporated (Nasdaq: DIOD), a Standard and Poor's SmallCap 600 and Russell 3000 Index company, is a leading global manufacturer and supplier of high-quality application specific standard products within the broad discrete, logic and analog semiconductor markets. Diodes serves the consumer electronics, computing, communications, industrial, and automotive markets. Diodes' products include diodes, rectifiers, transistors, MOSFETs, protection devices, functional specific arrays, single gate logic, amplifiers and comparators, Hall-effect and temperature sensors; power management devices, including LED drivers, AC-DC converters and controllers, DC-DC switching and linear voltage regulators, and voltage references along with special function devices, such as USB power switches, load switches, voltage supervisors, and motor controllers. Diodes' corporate headquarters and Americas' sales office are located in Plano, Texas. Design, marketing, and engineering centers are located in Plano; San Jose, California; Taipei, Taiwan; Manchester, England; and Neuhaus, Germany. Diodes' wafer fabrication facilities are located in Kansas City, Missouri and Manchester, with two additional facilities located in Shanghai, China. Diodes has assembly and test facilities located in Shanghai and in Chengdu, China, as well as in Neuhaus and in Taipei. Additional engineering, sales, warehouse, and logistics offices are located in Taipei; Hong Kong; Manchester; Shanghai; Shenzhen, China; Seongnam-si, South Korea; and Munich, Germany, with support offices throughout the world. For further information, including SEC filings, visit Diodes' website at www.diodes.com.

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Company Contact:

Investor Relations Contact:

Diodes Incorporated
Julie Holland
VP, Worldwide Analog Products
P: 972-987-3900
E: pressinquiries@diodes.com

Shelton Group
Leanne K. Sievers
EVP, Investor Relations
P: 949-224-3874
E: lsievers@sheltongroup.com