



High-Precision Automotive-Compliant Op Amp from Diodes Incorporated Features Input Offset Stabilization

Plano, Texas – June 29, 2023 – Diodes Incorporated (Diodes) (Nasdaq: DIOD) releases a high-precision operational amplifier (op amp) featuring input offset (V_{OS}) stabilization for automotive signal conditioning applications. The micropower [AS333Q](#), a single-channel version of the dual-channel [AS2333Q](#) op amp, is designed for current sensing and signal detection in a broad range of in-vehicle functions, including airbags, position sensors, vehicle occupant detection sensors, on-board chargers (OBC) and wireless chargers, and battery management systems (BMS).

Automotive designs are increasingly employing brushless DC (BLDC) motors and electronic control units (ECU) for advanced driver assistance systems (ADAS). These require precision op amps for accurate analog signal conditioning. The chopper-stabilized low input offset voltage ($V_{OS} = 8\mu V$) and almost-zero temperature drift ($0.02\mu V/^\circ C$) of the AS333Q enable it to maintain high accuracy across the full common-mode input voltage range.

In addition, the device's ability to handle beyond-the-rail-to-rail common-mode inputs allows the AS333Q to support both supply and ground-referenced inputs. The extremely low $1.1\mu V/\sqrt{Hz}$ low-frequency noise helps to improve signal-to-noise ratios (SNR), while a low quiescent current of $17\mu A$ (typical) means it can be used in equipment that must continue operating while a vehicle's engine is off.

The [AS333Q](#) is qualified to AEC-Q100 Grade 1, manufactured in IATF 16949 certified facilities, and is PPAP capable. It is available in the SOT25 package at \$0.82 in 1,000 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 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 32 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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