



High-Speed Bi-Directional Dual Supply Autosensing Level Shifter IC from Diodes Incorporated Aimed at Automotive Applications

Plano, Texas – April 13, 2021 – Diodes Incorporated (Nasdaq: DIOD) has expanded its family of voltage-level shifters, with the release of the [PI4ULS3V304AQ](#). This advanced level shifting technology, featuring high degrees of flexibility, is proving vital to modern automobile design. It addresses the challenge of lower voltage microprocessors and microcontrollers incorporated into automotive systems, which are required to drive external devices operating at different voltage levels to their own (such as sensors and EMI filters).

Enabling high-speed operation, this configurable 4-bit IC supports a guaranteed data rate of 140Mbps. It offers bi-directional voltage-level translation, allowing increasingly common push-pull type applications to be addressed.

Through the PI4ULS3V304AQ's A and B ports, two different power supply rails can be tracked. The IC can offer 0.9V to 2.0V translation on the A port and translation from 1.65V to 3.6V on the B port. Propagation delay is kept to just 13ns while running at full 100pF capacitive drive. Being AEC-Q100 Grade 1 qualified, this device is highly suited to automotive implementation. Among the key applications in which it will be employed are those relating to infotainment, driver assistance and telematics.

An operational temperature range of -40°C to 125°C is covered and 2kV electrostatic discharge (ESD) protection has been incorporated. The innovative output enable (EN) function means that either of the PI4ULS3V304AQ's respective I/O ports (A or B) can be shut down when not needed, in order to lower the power draw. Automated bi-directional operation eliminates the need for inclusion of a direction control pin.

Diodes Incorporated's [PI4ULS3V304AQ](#) is supplied in a 12-pin UQFN package. This automotive-compliant level translator has a unit price of \$0.55 in 5000 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 31 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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