Product news

High-Voltage Analog Multiplexers from Diodes Incorporated Provide Signal Distribution in Industrial IoT Applications

Plano, Texas – September 30, 2020 – Diodes Incorporated (Nasdaq: DIOD) today announced the introduction of the PS508 and PS509 analog multiplexers that are capable of switching signal voltages of up to 36V in an industrial environment. The high voltage capability of the devices will support industrial IoT (IIoT) applications using multiple sensors, including factory automation and process control, battery monitoring systems, and test and measurement equipment.

The PS508 and PS509 provide single-ended or differential configurations. A single PS509 offers differential 4:1 or dual 4:1 signal-end channels. The PS508 offers an 8:1 ratio for single-ended switching. Address lines are used to select the input/output combination, while an Enable pin disables all switches when low.

A low charge injection of 0.9pC, coupled with low input and output capacitances (30pF or lower), ensure there is low distortion on the signals being switched. This is important for industrial applications where a small change in the sensor signal can impact overall system functionality.

The multiplexers operate over the industrial temperature range of -40°C to +125°C from a dual supply voltage between ±5V and ±18V or a single supply voltage between 10V and 36V. The supply current for both devices is only 135µA, making them suitable for portable applications.

A key parameter of the analog multiplexers is their low on-resistance of 125Ω, when the supply voltage is ±15V. Besides the low on-resistance, the low leakage current and low charge injection will help to prevent signal loss and degradation, reduce the error on output signals, and improve the signal quality for backend ADC analysis. The devices also feature fast break-before-make switching times of 75ns (30ns minimum), with a transition time of 171ns (310ns maximum). This reduces the propagation time from input to output, supporting real-time applications. The switches also offer low leakage current, allowing them to be used in applications where they are interfacing to high impedance sources.

The PS509 and PS508 analog multiplexers are available in 16-pin TSSOP(L), QSOP(Q) and SOIC(W) packages. They are priced at $1.20 in 2500 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.

Company Contact:
Diodes Incorporated
Emily Yang
VP, Worldwide Sales and Marketing
P: 972-987-3900
Contact Us

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