



Space-Saving TVS from Diodes Incorporated Provides Superior ESD and Surge Protection for High-Speed I/Os

Plano, Texas – March 28, 2023 – Diodes Incorporated (Diodes) (Nasdaq: DIOD) has announced its new bi-directional transient voltage suppressor (TVS) diode, addressing market demands for robust protection for high-speed data ports. The [D3V3Z1BD2CSP](#) is designed to offer protection from both electrostatic discharge (ESD) strikes and surge events. The main applications for this device are the I/O ports in high-performance computing hardware, smartphone handsets, laptop and tablet computers, displays, and gaming consoles.

While many competing products must make design trade-offs, either having strong surge protection properties or low input capacitance, the D3V3Z1BD2CSP can deliver both benefits simultaneously. Its ultra-low capacitance of 0.3pF (typical) ensures that signal integrity is maintained by not interfering with or impeding high-speed data communication. Its high peak pulse current (10.5A typical) and low clamping voltage (5.3V) safeguards I/O ports and their sensitive electronics from transient voltages. The risk of electrical overstress damage from activities such as frequent hot swapping is therefore avoided. Complying with the IEC61000-4-2 immunity standard, the D3V3Z1BD2CSP provides robust ESD protection against $\pm 20\text{kV}$ air and contact discharges, thereby improving system reliability.

The D3V3Z1BD2CSP can be used to protect I/O interfaces, such as USB Type-C®, DisplayPort™, HDMI™, and SD-Card, carrying high-speed data rates up to 20Gbps. Its broad operating temperature range, from -55°C to $+150^{\circ}\text{C}$, ensures continued protection even in challenging application environments.

The [D3V3Z1BD2CSP](#) TVS from Diodes is supplied in an extremely compact DSN0603 wafer-level chip-scale package, that measures just 0.6mm x 0.3mm x 0.3mm. It is available at \$0.049 each in 10,000 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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