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450W TVS Diode Arrays from Littelfuse Protect Sensitive Electronics from ESD and Surge Currents

Designed to protect buttons/keypads, switches, DC power ports, other low-speed I/Os

CHICAGO, February 12, 2013 - Littelfuse, Inc., the global leader in circuit protection, has introduced the 450W SD05 (unidirectional) and SD05C (bidirectional) Series General-purpose TVS Diode Arrays (SPA® Devices), which are designed to replace multilayer varistors (MLVs) for protecting electronic equipment from damage due to electrostatic discharge (ESD) and other transient events. Unlike ceramic devices, which have an inherent wear-out factor, SD05 and SD05C Series devices are made of silicon diodes, which allows them to absorb repetitive ESD strikes or surge transients safely without performance degradation. Their low dynamic resistance (0.5Ω for SD05, 0.6Ω for SD05C) provides up to a 50% reduction in clamping voltage when compared with competing technologies, and can safely dissipate induced surge currents up to 30A. Typical applications of these devices include buttons/keypads, switches, DC power ports, and various other low-speed I/Os in point-of-sale terminals, test equipment or instrumentation, medical equipment, desktop/notebook computers, servers, computer peripherals, etc.
"The SD05 and SD05C Series are perfect solutions for medical, industrial, consumer and computing applications. They allow designers to add ESD and/or surge protection around the printed circuit board (PCB) as needed," said Chad Marak, Director of the Littelfuse TVS Diode Arrays product line. "Their compact SOD-323 package fits right into the footprint of an 0805 MLV, allowing manufacturers to replace them in their designs with a SD05 or SD05C device without requiring a PCB or solder pad change."

The SD05 and SD05C Series TVS Diode Arrays offer these key features and benefits:

Features

- Lightning: IEC61000-4-5, 30A (tp=8/20?s); ESD: IEC61000-4-2, ±30kV contact discharge
- Low dynamic resistance of only 0.5Ω (SD05) and 0.6Ω (SD05C)
- Low leakage of 1µA max.
- No inherent wear-out factor
- SOD-323 package fits existing 0805 PCB footprints

Benefits

- Robust surge and enhanced ESD protection helps equipment manufacturers comply with and exceed regulatory standards, extending equipment life and system up-time
- Provides up to a 50% reduction in clamping voltage compared to competing technologies, making them ideal for protecting modern electronics
- Up to a 97% decrease in leakage current compared to previous technologies, greatly increasing battery life
- Capable of handling multiple ESD strikes or surge transients without performance degradation compared to ceramic devices, making for a more robust design
- Offers flexibility to the manufacturer to replace existing 0805 MLVs without requiring a PCB or solder pad change

For More Information

If you have questions or require technical support, please contact the Littelfuse technical support hotline at 1-800-999-9445. For circuit protection application design ideas, please visit the Application Design Center section of the Littelfuse website.

Availability

The SD05 and SD05C Series TVS Diode Arrays are available in quantities of 3,000 in tape and reel packaging. Samples are available now for bulk orders; sample requests can be placed through authorized Littelfuse distributors worldwide. For a listing of Littelfuse distributors, please visit Littelfuse.com.

Technical Contact

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About Littelfuse
Founded in 1927, Littelfuse, Inc., the worldwide leader in circuit protection, offers the industry's broadest and deepest portfolio of circuit protection products and solutions. Littelfuse devices protect products in virtually every market that uses electrical energy, from consumer electronics to automobiles to industrial equipment. In addition to its Chicago, Illinois, world headquarters, Littelfuse has more than 30 sales, distribution, manufacturing and engineering facilities in the Americas, Europe and Asia. Technologies offered by Littelfuse include Fuses; Gas Discharge Tubes (GDTs); Positive Temperature Coefficient Devices (PTCs); PulseGuard® ESD Suppressors; SIDACtor® Devices; Silicon Protection Arrays (SPA®); Switching Thyristors; TVS Diodes and Varistors. The company also offers a comprehensive line of highly reliable Electromechanical and Electronic Switch and Control Devices for commercial and specialty vehicles and Sensors for automobile safety systems, as well as Protection Relays and underground Power Distribution Centers for the safe control and distribution of electricity.

For more information, please visit the Littelfuse website: littelfuse.com.

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