

TVS Diode Modules for Auto, Wireless, Ethernet and Industrial Systems

ProTek Devices announced the general availability of two new surface mount transient voltage suppressor (TVS) diode modules ideal for automotive, wireless base stations, Ethernet, industrial and other applications. The SM3KWxxA™ and the SM5KWxxA™ series of modules are surface mount technology (SMT) TVS diodes in a low profile two lead DFN package. The modules are high-powered components designed to protect equipment and systems from the damaging effects of high voltage spikes.

The SM3KWxxA features a DFN package size of 6.5x5.5x1.2mm and the SM5KWxxA series of modules feature a DFN package size of 7.7x6.6x1.2mm. These packages make ProTek Devices' latest TVS modules also ideal for densely populated PC boards where smaller modules are required offering the same protection as through-hole components.

Technical Details for the SM3KWxxA

The 24 Volt SM3KWxxA's DFN-2-3KW, in a plastic case package configuration, provides a lower profile at a reduced cost. It provides 3,000 Watts of peak pulse power dissipation for a 10/1000µs waveform. This is sufficient protection for tertiary type lightning threats at key interface locations. The device meets the requirements of IEC 61000-4-5 (Surge), 48A Level 3(Line-Ground), Level 4(Line-Line) and Level 1(Power). Other features include unidirectional configuration and easy mounting to printed circuit boards (PCB). The SM3KWxxA is fully RoHS and REACH compliant. Ideal applications include: relay drives; motor (start/stop) back EMF protection; module lightning protection and secondary lightning protection.

Other key mechanical characteristics include an approximate weight of 2.5 grams and lead-free silver plating. It has a solder reflow temperature of 260-270°C; 12mm tape and reel per EIA Standard 481; and a flammability rating of UL 94V-0. The SM3KWxxA should be placed near a connector to provide the best protection against transients.

Technical Details for the SM5KWxxA Series

The SM5KWxxA series features three modules with varying voltage. The SM5KW10A is 10 Volts; the SM5KW33A is 33 Volts; and the SM5KW36A is 36 Volts. The devices are rated at 5,000 Watts peak pulse power using the 10/1000µs surge waveform and 28,000 Watts for the 8/20µs surge. This is sufficient protection for tertiary type lightning threats at key interface locations. These devices meet the requirements of IEC 61000-4-5 (Surge), 48A Level 3(Line-Ground), Level 4(Line-Line) and Level 1(Power). Other features include unidirectional configuration and easy mounting to PCBs. The SM5KWxxA series is fully RoHS and REACH compliant. Ideal applications for the SM5KWxxA series include: relay drives; motor (start/stop) back

EMF protection; module lightning protection; and secondary lightning protection.

Other key mechanical characteristics of the SM5KWxxA series include an approximate weight of 2.5 grams and lead-free silver plating. It features a solder reflow temperature of 260-270°C and flammability rating of UL 94V-0. The SM5KWxxA should be placed near a connector to provide the best protection against transients.

"Electronic systems across all applications have several circuits and interfaces that are vulnerable to the effects of ESD, EFT and other induced surges," said VP Pai, Group Vice President of ProTek Devices. "Automotive systems, wireless base stations and countless industrial applications, to name just a few, are highly susceptible to surges. They must be protected against damaging effects of high voltage spikes. ProTek Devices' new SM3KWxxA and the SM5KWxxA series of TVS modules provide a low footprint and low cost ideal for such applications to protect against voltage surges."

More information is available at <http://www.protekdevices.com> [1].

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