



CeraDiode

Description

Date: August 2008

Description

1 Description

Due to ongoing miniaturization, today's electronic devices are more and more sensitive to electrostatic discharge (ESD). That makes reliable protection components absolutely necessary to safeguard valuable electronics against the impact of ESD.

1. CeraDiodes are ceramic semiconductor components optimized for **ESD protection** of data, audio and video lines, ICs and I/O ports in electronic devices.
2. CeraDiodes are cost-effective alternatives to semiconductor protection devices such as Zener and TVS diodes. In many cases, the CeraDiode is a 1:1 replacement for these devices (fit, form, function) and offers additional packages for specific application requirements.
3. CeraDiodes have a nonlinear voltage/current characteristic for effectively suppressing extremely fast voltage transients and offer superior parametric stability over the complete operating range of $-40\text{ }^{\circ}\text{C}$ to $+85\text{ }^{\circ}\text{C}$.
4. CeraDiodes are bidirectional devices. A single CeraDiode connected from a signal/data line to ground routes both positive and negative ESD transitions safely to the ground plane. This technique eliminates the need to route ESD charge into the power plane, possibly damaging nearby integrated circuits. CeraDiodes for high-speed lines exhibit a very low capacitance designed for maximum ESD protection combined with minimal signal distortion.

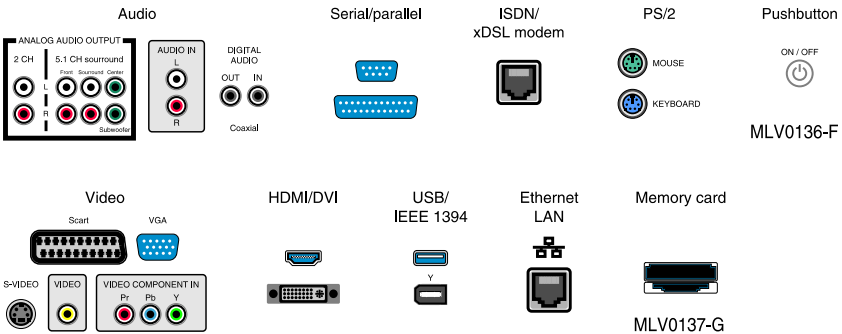
2 Applications

- Consumer products (TV, DVD player/recorder, set-top box, game consoles, MP3 player, digital still/video camera, etc.)
- EDP products (desktop and notebook computer, monitor, PDA, printer, memory card, etc.)
- Peripherals (control unit, headset, speaker, drive, etc.)
- Industrial
- Mobile communication (SIM card, etc.)
- etc.

Description

3 Interfaces

- Video
- Audio
- USB
- IEEE 1394 (Firewire, DV, etc.)
- Ethernet
- DVI
- HDMI
- DisplayPort
- Parallel/serial
- SATA
- Pushbuttons
- etc.



Interfaces protected against ESD by CeraDiode (examples)