

**Zener diodes can
give you fast
protection**

Zener diodes, the widely used protection devices, are **just no good for applications involving fast pulses because of their high junction capacitances**, which can easily get into the thousands of picofarads. But you can reduce a zener's capacitance, improve its response, and retain its limiting function, if you **put an ordinary signal diode in series with it**. The signal diode should have its junction oriented in the opposite direction to that of the zener, as if you were using it to thermally compensate the zener. **The very small capacitance of the signal diode in series with the zener will reduce the total capacitance by about two orders of magnitude**, down to around 10 pF.