

Abstracts

A High Power Protector Using PIN Diodes

M.R. Barber. "A High Power Protector Using PIN Diodes." 1963 PTGMMT National Symposium Program and Digest 63.1 (1963 [MWSYM]): 99-104.

PIN diodes are useful in high power switching applications because their microwave impedance is essentially a controllable conductance in shunt with a nearly constant capacitance. The diodes are made by diffusing heavily doped N+ and P+ layers into a pi-type body. When reverse biased the R. F. impedance is determined by the pi-region capacitance in series with a small resistance. If a forward bias current is applied, the pi-region is progressively filled with carriers and the device becomes a conductance increasing to a maximum value of about 10 mhos. It is this high conductance which accounts for the high power rating of PIN diodes.

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