Abstracts

Design Concepts for High-Power PIN Diode Limiting

N.J. Brown. "Design Concepts for High-Power PIN Diode Limiting." 1967 Transactions on Microwave Theory and Techniques 15.12 (Dec. 1967 [T-MTT]): 732-742.

Experimental data and discussion are presented which show the desirability of using thick punch-through PIN diode for high-power limiting. The slower speed of response sets an upper limit on thickness. Data are presented on the maximum thickness allowable as a function of frequency. Results are given for a high-peak-power narrow-pulsewidth receiver protector, and for a high-average-power wide-pulsewidth balanced duplexer. These devices are compared to conventional gas T-R tubes and results suggest that the use of multiple PIN diodes in limiters and duplexers can offer significant improvements in some radar applications.

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