Abstracts

Nonlinear Biasing Resistors for Microwave Tunnel-Diode Oscillators (Correspondence)

J.T. Wallmark and A.H. Dansky. "Nonlinear Biasing Resistors for Microwave Tunnel-Diode Oscillators (Correspondence)." 1963 Transactions on Microwave Theory and Techniques 11.4 (Jul. 1963 [T-MTT]): 260-262.

By using a nonlinear rather than a linear stabilizing resistor in tunnel-diode oscillator and amplifier circuits, the dc power dissipation in the resistor may be reduced by a factor of 3 for typical germanium tunnel diodes, and by a factor of 6 for typical gallium arsenide tunnel diodes. At the same time ac loading by the resistor is reduced. Such nonlinear stabilizing resistors may consist of reverse- or forward-biased heavily doped pn junctions.

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