Abstracts

Low-Cost Modular 100-Watt Peak 10% Bandwidth Microstrip IMPATT Amplifier

J.F. Cushman and M.E. Hines. "Low-Cost Modular 100-Watt Peak 10% Bandwidth Microstrip IMPATT Amplifier." 1986 MTT-S International Microwave Symposium Digest 86.1 (1986 [MWSYM]): 101-103.

A New IMPATT diode amplifier circuit is described which uses planar microstrip circuitry. A single-diode stage serves as a driver for a four-diode combiner stage. The combiner uses a tree of three hybrids of the Wilkinson-Gysel type. GaAs double-drift IMPATT diodes are used. The device provides a minimum of 12 dB gain over a band from 9.4 to 10.6 GHz with a peak pulsed output between 105 and 120 watts over the band.

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