Abstracts

Theoretical Efficiency for Triplers Using Real Varister Diodes at Submillimeter Wavelengths

K. Benson and M.A. Frerking. "Theoretical Efficiency for Triplers Using Real Varister Diodes at Submillimeter Wavelengths." 1985 MTT-S International Microwave Symposium Digest 85.1 (1985 [MWSYM]): 315-318.

The theoretical efficiency for frequency triplers from 300 to 900 GHz has been calculated for real GaAs Schottky diodes operating in the varister mode. The maximum efficiency is determined to be about 7%, only slightly smaller than that for ideal varisters. Guidelines for optimum bias conditions and embedding network impedances have been determined using the large signal analysis computer program of Siegel and Kerr.

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