

Abstracts

A high-power W-band monolithic FGC doubler

J. Papapolymerou, J. East and L.P.B. Katehi. "A high-power W-band monolithic FGC doubler." 2000 Microwave and Guided Wave Letters 10.5 (May 2000 [MGWL]): 195-197.

This paper describes the realization of a high output power W-band planar monolithic doubler using finite ground coplanar lines. The design of this doubler is based on two parallel pairs of varactor Schottky diodes fabricated on GaAs substrate. Measured results indicate a 12.5% efficiency at 74 GHz, a minimum 3-dB bandwidth of 12.5%, a return loss of -15 dB and a maximum output power of 115 mW. To the authors' knowledge, this is the highest output power level reported for a planar/monolithic W-band doubler.

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