

Abstracts

Quasi-Optical Watt-Level Millimeter-Wave Monolithic Solid-State Diode-Grid Frequency Multipliers

R.J. Hwu, L.P. Sadwick, N.C. Luhmann, Jr., D.B. Rutledge, M. Sokolich and B. Hancock. "Quasi-Optical Watt-Level Millimeter-Wave Monolithic Solid-State Diode-Grid Frequency Multipliers." 1989 MTT-S International Microwave Symposium Digest 89.3 (1989 Vol. III [MWSYM]): 1069-1072.

A monolithic planar array containing thousands of GaAs Barrier-Intrinsic-N/sup +/- (BIN) diodes have produced one watt output power at 100 GHz in a tripler configuration in excellent agreement with the predictions from large-signal nonlinear circuit analysis of frequency multiplication. Significant improvement is expected with realizable diode parameters and optimized pumping condition.

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