Abstracts

Generation of Millimeter-Wave Radiation by Optical Mixing Printed in FET's Integrated with Circuit Antennas

D.V. Plant, D.C. Scott, D.C. Ni and H.R. Fetterman. "Generation of Millimeter-Wave Radiation by Optical Mixing Printed in FET's Integrated with Circuit Antennas." 1991 Microwave and Guided Wave Letters 1.6 (Jun. 1991 [MGWL]): 132-134.

Using optical mixing, we have demonstrated the generation of continuous wave 60-GHz millimeter wave radiation from FET's integrated with planar antennas. The radiation was propagated through narrow band quasi-optical Fabry-Perot filters and heterodyne detected in a second FET antenna structure. In addition to spectroscopic applications, this transmitter/ receiver system demonstrates the feasibility of having optically fed arrays of millimeter wave sources.

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