Abstracts

A millimeter-wave quasi-optical amplifier array using inclined-plane horn antennas

C.E. Saavedra, W. Wright, K.Y. Hur and R.C. Compton. "A millimeter-wave quasi-optical amplifier array using inclined-plane horn antennas." 1998 Microwave and Guided Wave Letters 8.2 (Feb. 1998 [MGWL]): 81-83.

A novel millimeter-wave quasi-optical amplifier array architecture is presented. The amplifier array consists of a horn antenna that tapers down to a parallel-plate waveguide. Stacked between the parallel-plates is a microstrip power divider circuit which feeds the active elements. At the output there is a similar power-combining circuit and transition to free space. Measurements on the active array show a maximum gain of 7.25 dB at 43.25 GHz and a bandwidth of 5.75 GHz.

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