

Abstracts

A Grid Amplifier

M. Kim, J.J. Rosenberg, R.P. Smith, R.M. Weikle, II, J.B. Hacker, M.P. De Lisio and D.B. Rutledge. "A Grid Amplifier." 1991 Microwave and Guided Wave Letters 1.11 (Nov. 1991 [MGWL]): 322-322.

The first demonstration of a grid amplifier is reported. A 50-MESFET grid has shown a gain of 11 dB at 3.3 GHz. The grid isolates the input from the output by using vertical polarization for the input beam and horizontal polarization for the transmitted output beam. The grid unit cell is a two-MESFET differential amplifier. A simple calibration procedure allows the gain to be calculated from a relative power measurement. This grid is a hybrid circuit, but the structure is suitable for fabrication as a monolithic wafer-scale integrated circuit, particularly at millimeter wavelengths.

[Return to main document.](#)