Abstracts

Linear Microwave Solid State Transferred Electron Power Amplifiers with a Large Gain-Bandwidth Product

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In this paper we shall describe recent results with reflection type wide band solid state power amplifiers which show promise of replacing tubes in many microwave systems. These amplifiers are fabricated from epitaxial GaAs transferred electron devices which are stabilized through the use of low impedance circuits to form stable wideband linear cw amplifiers. Output powers in C-band of more than 250 mW over a 1 dB bandwidth of 3 GHz with a gain of 7 dB have been achieved. Saturated power outputs of 1 watt with 3 dB gain have also been achieved. In X-band, power outputs of over 150 mW over a 2 GHz bandwidth with 4 dB has been achieved.

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