Abstracts

A 94 GHz monolithic high output power amplifier

P. Huang, E. Lin, R. Lai, M. Biedenbender, T.W. Huang, H. Wang, C. Geiger, T. Block and P.H. Liu. "A 94 GHz monolithic high output power amplifier." 1997 MTT-S International Microwave Symposium Digest 3. (1997 Vol. III [MWSYM]): 1175-1178.

A two-stage monolithic W-band power amplifier using 0.1-/spl mu/m pseudomorphic AlGaAs/InGaAs/GaAs T-gate power HEMT process has been designed, fabricated, and tested. This MMIC PA exhibits 8 dB linear gain and a maximum output power of 300 mW with 10.5% peak power-added efficiency at 94 GHz. The substrate thickness is 2 mil to take advantage of lower thermal resistance as well as smaller via holes and a more compact chip layout. To our knowledge, the 300-mW output power represents the highest output power for a single W-band power amplifier chip at this frequency.

❑ Return to main document.