Abstracts

An indium phosphide MMIC amplifier for 180-205 GHz

J.W. Archer, R. Lai, R. Grundbacher, M. Barsky, R. Tsai and P. Reid. "An indium phosphide MMIC amplifier for 180-205 GHz." 2001 Microwave and Wireless Components Letters 11.1 (Jan. 2001 [MWCL]): 4-6.

This paper describes a high-performance indium phosphide (InP) monolithic microwave integrated circuit (MMIC) amplifier, which has been developed for application in radioastronomy and imaging-array receivers. Implemented using coplanar waveguide, the six-stage amplifier exhibits 15 db gain, 10 dB input and output return loss, and low noise figure over the 180-205 GHz frequency range. Only one design pass was needed to obtain excellent agreement between the predicted and measured characteristics of the circuit, a unique achievement in this frequency band. The circuit is also the first 180-205 GHz amplifier designed for and successfully fabricated using TRW's standard 0.1-/spl mu/m InP HEMT process.

❑ Return to main document.