

# Abstracts

## A 2-32 GHz Coplanar Waveguide InAlAs/InGaAs-InP HBT Cascode Distributed Amplifier

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*K.W. Kobayashi, J. Cowles, L. Tran, T. Block, A.K. Oki and D.C. Streit. "A 2-32 GHz Coplanar Waveguide InAlAs/InGaAs-InP HBT Cascode Distributed Amplifier." 1995 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 95.1 (1995 [MCS]): 195-198.*

A 2-32 GHz InAlAs/InGaAs-InP HBT CPW distributed amplifier (DA) has been demonstrated which benchmarks the highest bandwidth reported for an HBT DA. The DA combines a 100 GHz  $f_{\text{sub max}}$  and 60 GHz  $f_{\text{sub max}}$  HBT technology with a cascode coplanar waveguide DA topology to achieve this record bandwidth. The cascode CPW DA demonstrates both design techniques and technology capability which can be applied to more complex circuit functions such as active baluns for mixers, active combiners/dividers, and low dc power-broadband amplification at millimeter-wave frequencies.

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