

# Abstracts

## A 30 GHz Bandwidth AlGaAs-GaAs HBT Direct-Coupled Feedback Amplifier

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*N.H. Sheng, W.J. Ho, N.L. Wang, R.L. Pierson, P.M. Asbeck and W.L. Edwards. "A 30 GHz Bandwidth AlGaAs-GaAs HBT Direct-Coupled Feedback Amplifier." 1991 Microwave and Guided Wave Letters 1.8 (Aug. 1991 [MGWL]): 208-210.*

A dc to 30 GHz broadband amplifier based on the Darlington connected transistors with series and shunt resistive feedback was implemented with self-aligned AlGaAs-GaAs heterojunction bipolar transistor (HBT) technology. The measured performance shows 7.8 dB of gain with -3-dB roll-off band-width of 30 GHz. Measured at 1 GHz, the noise figure was 5.7 dB, 1-dB compression power was 11 dBm and the third-order intermodulation product intercept point (IP3) was 23.9 dBm.

 [Return to main document.](#)