Abstracts

Broad-Band Microwave Measurements on GaAs "Traveling-Wave" Transistors

R.H. Dean, A.B. Dreeben, J.J. Hughes, R.J. Matarese and L.S. Napoli. "Broad-Band Microwave Measurements on GaAs "Traveling-Wave" Transistors." 1973 Transactions on Microwave Theory and Techniques 21.12 (Dec. 1973 [T-MTT] (1973 Symposium Issue)): 805-809.

Instantaneous gain, noise figure, reverse attenuation, and gain and phase control measurements in the frequency range 8-18 GHz have been performed on GaAs traveling-wave transistors. The broad-band high-gain nature of the device together with the requirement for several bias connections precluded the use of standard test fixtures, and resulted in a package design exhibiting less than 1-dB insertion loss over the band together with 75- to 90-dB internal isolation. Untuned X-band gain, noise figure, and reverse attenuation were 12 dB, 18 dB, and 32 dB, respectively, and the gain and phase could be electronically varied over a 35-dB and 360° range. When RF tuning was employed, the gain, on the average, improved by 10 dB.

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