

Direct extraction of HBT equivalent-circuit elements

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We present an analytical method for determining the heterojunction bipolar transistors (HBT's) equivalent-circuit elements. Its special feature is that it does not need measurements of test structures nor optimizations. The new algorithm for extracting the intrinsic elements exploits the information contained in the frequency dependence of the network parameters. This leads to a fast algorithm with a unique solution. The method is validated treating GaInP-GaAs HBT's.

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