Abstracts

HBT small signal T and /spl pi/ model extraction using a simple, robust and fully analytical procedure

A simple and fully analytical procedure is proposed in this paper for the direct extraction of the HBT small signal equivalent circuit model, whether it be the T- or hybrid /spl pi/-topology, from DC and single-frequency s-parameter measurements. DC data is required since it is possible to show that direct extraction from single frequency s-parameters is not possible, without prior knowledge of one parameter. The extraction procedure developed is based on the prior knowledge of dc current gain, /spl beta//sub 0/. Excellent results have been obtained when applied to InGaP/GaAs and InP based HBTs.

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