Abstracts

An extrinsic-inductance independent approach for direct extraction of HBT intrinsic circuit parameters (2001 Vol. III [MWSYM])

T.S. Horng, J.M. Wu and H.H. Huang. "An extrinsic-inductance independent approach for direct extraction of HBT intrinsic circuit parameters (2001 Vol. III [MWSYM])." 2001 MTT-S International Microwave Symposium Digest 01.3 (2001 Vol. III [MWSYM]): 1761-1764 vol.3.

A new analytical procedure has been developed for direct extraction of the intrinsic elements in a hybrid-/spl pi/ equivalent circuit of heterojunction bipolar transistors (HBTs). The method differs from previous ones by formulating impedance-parameter based expressions that are exclusive of the extrinsic parasitic inductances associated with the base, emitter and collector. It is therefore not susceptible to variation of the extrinsic reactances from DC to high frequencies and can lead to very accurate extraction of the intrinsic elements under different bias conditions.

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