

Abstracts

A Parameter Extraction Technique for Heterojunction Bipolar Transistors

R.J. Trew, U.K. Mishra, W.L. Pribble and J.F. Jensen. "A Parameter Extraction Technique for Heterojunction Bipolar Transistors." 1989 MTT-S International Microwave Symposium Digest 89.3 (1989 Vol. III [MWSYM]): 897-900.

A technique useful for parameter extraction of heterojunction bipolar transistors is presented. The technique makes use of a 'tee' equivalent circuit based upon the physical operation of the device. The technique uses the device $f_{\text{sub T}}$, determined by extrapolation of the device h parameters, to establish the total emitter-to-collector delay time from the experimental data. This information is used to establish an equation that is used to constrain the circuit elements, thereby facilitating the parameter extraction procedure. The technique is easily implemented using commercially available computer software.

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