Analytical Model with Empirical Verification for Heterojunction Bipolar Transistors Under Illumination

L.E.M. de Barros, Jr., A. Paolella, P.R. Herczfeld and P. Enquist. "Analytical Model with Empirical Verification for Heterojunction Bipolar Transistors Under Illumination." 1995 MTT-S International Microwave Symposium Digest 95.1 (1995 Vol. I [MWSYM]): 49-52.

A new model for the HBT has been developed which solves for the electrical and photogenerated currents in base, emitter and collector. The model accounts for the discontinuity in quasi-fermi level by defining an effective carrier interface velocity. Experimental and theoretical curves relating to the device behavior are presented and compared.

❑ Return to main document.