Abstracts

A Physically Based with Self Heating Large Signal HBT Model and Transit Time Effects

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A physically based, time dependent, large signal HBT model is presented which accounts for the time dependence of base, collector, and emitter charging, and includes self heating effects. The model tracks device performance over eight decades of current. The model can be used as the basis of SPICE model approximations. A thesis for the divergence of high frequency large signal SPICE simulations from measured data is presented. A new empirical equation for base-collector capacitance is included.

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