Abstracts

Transient analysis of collector current collapse in multifinger HBT's

F. Dhondt, J. Barrette and P.A. Rolland. "Transient analysis of collector current collapse in multifinger HBT's." 1998 Microwave and Guided Wave Letters 8.8 (Aug. 1998 [MGWL]): 272-274.

The authors report for the first time a time-domain analysis of thermal instability in multifinger heterojunction bipolar transistors (HBT's). This is based on a transient quasi-three-dimensional (3-D) electrothermal model that selfconsistently solves the thermal and electrical equations. This model is designed to evaluate the thermal time constant of GaAs-based power HBT's employing emitter thermal shunt and emitter ballast resistance.

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