Abstracts

Temperature-dependent modeling of high power MESFET using thermal FDTD method

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A temperature-dependent model of high power MESFET based on the small signal extraction methodology is presented. The temperature dependencies of the MESFET equivalent circuit elements derived from experimental results describing long-term thermal effects and short-term thermal effects have been modeled by means of FDTD method using chip dimensions. The verification of the proposed model shows an excellent agreement of the experimental results with the theoretical analysis.

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