Abstracts

Scalable large-signal device model for high power-density AlGaN/GaN HEMTs on SiC

Jong-Wook Lee, Sungjae Lee and K.J. Webb. "Scalable large-signal device model for high power-density AlGaN/GaN HEMTs on SiC." 2001 MTT-S International Microwave Symposium Digest 01.2 (2001 Vol. II [MWSYM]): 679-682 vol.2.

A scalable device model for high-power, large periphery AlGaN-GaN HEMTs on SiC has been developed which includes device self-heating. The parameterized model coefficients were evaluated using S-parameters obtained from isothermal bias contours and pulsed I-V measurements. Model scaling with device size was examined by comparing with measurements for peripheries from 0.25 mm to 1.5 mm. The scaled model showed good agreement with measured S-parameters and power sweep data.

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