Abstracts

A Physics-Based Temperature-Dependent SPICE Model for the Simulation of High Temperature Microwave Performance of HBT's and Experimental Results

V. Krozer, M. Ruppert, W.Y. Lee, J. Grajal, A. Goldhorn, M. Schussler, K. Fricke and H.L. Hartnagel. "A Physics-Based Temperature-Dependent SPICE Model for the Simulation of High Temperature Microwave Performance of HBT's and Experimental Results." 1994 MTT-S International Microwave Symposium Digest 94.2 (1994 Vol. II [MWSYM]): 1261-1264.

A new temperature-dependent physical-based SPICE model has been developed. The simulated and experimental results for the microwave performance of HBT's up to 240° C ambient temperature are given. Fabrication of high temperature stable HBT's is demonstrated. The origin of the deterioration of RF performance at increased ambient temperatures is investigated.

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