Abstracts

A new empirical I-V model for HEMT devices

Y.C. Chen, D.L. Ingram, H.C. Yen, R. Lai and D.C. Streit. "A new empirical I-V model for HEMT devices." 1998 Microwave and Guided Wave Letters 8.10 (Oct. 1998 [MGWL]): 342-344.

We have developed a new empirical model to represent the current-voltage (I-V) characteristics of HEMT devices. This model is simple and yet capable of representing the HEMT I-V characteristics with high accuracy. Excellent modeling of the measured drain current, its first (transconductance), second, and third derivatives with respect to gate voltage for multiple drain biases is demonstrated. A simple model extraction procedure has been developed and is described in the letter.

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