

## CAD Models of Lumped Elements on GaAs up to 18 GHz

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*E. Pettenpaul, H. Kapusta, A. Weisgerber, H. Mampe, J. Luginsland and I. Wolff. "CAD Models of Lumped Elements on GaAs up to 18 GHz." 1988 Transactions on Microwave Theory and Techniques 36.2 (Feb. 1988 [T-MTT] (Special Issue on Computer-Aided Design)): 294-304.*

Improved models for integrable lumped-element straight-line single-loop, and spiral inductors, as well as for interdigitated and MIM capacitors, have been derived using numerical solutions of the inductance integral, basic microstrip theory, and network analysis. The broad experimental verification shows good agreement between models and experiments, with deviations of 5 to 10 percent up to 18 GHz. Besides the useful value and frequency range, losses of the lumped elements are presented.

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