

Abstracts

Statistical Computer-Aided Design for Microwave Circuits

J. Carroll and K. Chang. "Statistical Computer-Aided Design for Microwave Circuits." 1996 Transactions on Microwave Theory and Techniques 44.1 (Jan. 1996 [T-MTT]): 24-32.

A useful methodology for microwave circuit design is presented. A statistical technique known as Design of Experiments is used in conjunction with computer-aided design (CAD) tools to obtain simple mathematical expressions for circuit responses. The response models can then be used to quantify response trade-offs, optimize designs, and minimize circuit variations. The use of this methodology puts the designer's intelligence back into design optimization while making "designing for circuit manufacturability" a more systematic and straightforward process. The method improves the design process, circuit performance, and manufacturability. Two design examples are presented in context to the new design methodology.

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