Abstracts

Broadband physics-based modeling of microwave passive devices through frequency mapping

J.W. Bandler, M.A. Ismail and J.E. Rayas-Sanchez. "Broadband physics-based modeling of microwave passive devices through frequency mapping." 2000 MTT-S International Microwave Symposium Digest 00.2 (2000 Vol. II [MWSYM]): 969-972.

We present a new methodology to develop physics-based models for passive components. We coherently integrate full-wave EM simulations, artificial neural networks, multivariable rational functions, dimensional analysis and frequency mapping. We consider frequency-independent and frequency-dependent models. Various examples include a microstrip right angle bend and a CPW short-circuit stub.

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