Abstracts

Microstrip Circuit Design Using Neural Networks

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A new technique using neural networks to efficiently design microstrip circuits is presented. In our proposed method, a full-wave analysis is employed to rigorously characterize a microstrip circuit, which results in a finite set of pairs of input and output parameter vectors. The neurons, arranged as a three-layer network, are used to learn the mappings from input to output and then give accurate approximations for the output vectors at any arbitrary input. It is emphasized that a three-layer neural network is capable of performing any mapping if the right connections among the neurons can be made. A real example on the microstrip corporate feed design is given to illustrate the potential power of this technique.

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