

# Abstracts

## Couplings of Microstrip Square Open-Loop Resonators for Cross-Coupled Planar Microwave Filters

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*J.-S. Hong and M.J. Lancaster. "Couplings of Microstrip Square Open-Loop Resonators for Cross-Coupled Planar Microwave Filters." 1996 Transactions on Microwave Theory and Techniques 44.11 (Nov. 1996 [T-MTT]): 2099-2109.*

A new type of cross-coupled planar microwave filter using coupled microstrip square open-loop resonators is proposed. A method for the rigorous calculation of the coupling coefficients of three basic coupling structures encountered in this type of filters is developed. Simple empirical models are derived for estimation of the coupling coefficients. Experiments are performed to verify the theory. A four-pole elliptic function filter of this type is designed and fabricated. Both the theoretical and experimental performance is presented.

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