# Abstracts

## Waveguide branch couplers for tight couplings (Dec. 2000 [T-MTT])

*Tao Shen and K.A. Zaki. "Waveguide branch couplers for tight couplings (Dec. 2000 [T-MTT])." 2000 Transactions on Microwave Theory and Techniques 48.12 (Dec. 2000 [T-MTT] (Special Issue on 2000 International Microwave Symposium)): 2432-2438.*

Full-wave optimization design of waveguide branch couplers is presented. Waveguide T-junction equivalent circuit parameters are extracted from full-wave modeling results. They are used to explain why tight couplings are difficult to realize using waveguide branch couplers. Approaches used to obtain tight couplings are discussed and illustrated by two design examples of 3-dB couplers. Through random tolerance analysis, it is found that reasonable manufacturing tolerances have no significant effect on coupler performance.

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