Abstracts

Waveguide branch couplers for tight couplings (2000 Vol. III [MWSYM])

T. Shen, K.A. Zaki and T. Dolan. "Waveguide branch couplers for tight couplings (2000 Vol. III [MWSYM])." 2000 MTT-S International Microwave Symposium Digest 00.3 (2000 Vol. III [MWSYM]): 1319-1322.

Waveguide T-junction equivalent circuits are extracted from full-wave modeling results. They are used to explain why tight couplings are difficult to realise using waveguide branch couplers, from the viewpoint of coupler synthesis. Full-wave optimization design is used to obtain tight couplings. A 3-dB waveguide branch coupler is designed. Its coupling variation is within /spl plusmn/0.1 dB, and its return loss and isolation are greater than 40 dB, over the 23% guide-wavelength bandwidth. Measured results are in good agreement with computed results.

❑ Return to main document.