# Abstracts

## Broadband, planar, doubly balanced star mixers

*Chi-Yang Chang, Ching-Wen Tang and Dow-Chih Niu. "Broadband, planar, doubly balanced star mixers." 2000 MTT-S International Microwave Symposium Digest 00.1 (2000 Vol. I [MWSYM]): 513-516.*

Planar broadband star mixers comprising two CPW-CPS T-junction dual baluns are developed. The bandwidth is about 6:1 without treatment of even mode resonance. After improving the even-mode resonance, the measured relative bandwidths of the star mixers can be larger than 15:1. The planar structure of the circuit is suitable for both MIC and MMIC fabrication. Some MIC prototype circuits are fabricated with an Al/sub 2/O/sub 3/ substrate. The measured conversion losses of the star mixers are about 6 to 10 dB typically within the bandwidth.

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