

# Abstracts

## A Novel Planar Double-Balanced 6-18 GHz MMIC Mixer (1994 Vol. I [MWSYM])

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*W.R. Brinlee, A.M. Pavio and K.R. Varian. "A Novel Planar Double-Balanced 6-18 GHz MMIC Mixer (1994 Vol. I [MWSYM])." 1994 MTT-S International Microwave Symposium Digest 94.1 (1994 Vol. I [MWSYM]): 9-12.*

A novel planar monolithic double-balanced mixer has been demonstrated which exhibits low conversion loss, good compression and isolation characteristics, and low spurious responses. This has been achieved for LO and RF signals in the 6 to 18 GHz frequency range with an IF bandwidth from DC to 2.5 GHz. It is fabricated using standard 0.5  $\mu\text{m}$  MESFET technology on ion-implanted low-noise, low-current GaAs material. Occupying a size of only 0.050 x 0.100 X 0.006 in. (1.27 x 2.54 X 0.15 mm), it is the smallest known planar double-balanced MMIC mixer to accomplish this level of performance.

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