# Abstracts

## Monolithic GaAs Interdigitated 90° Hybrids with 50- and 25-Ohm Impedances

*M. Kumar, S.N. Subbarao, R.J. Menna and H.-C. Huang. "Monolithic GaAs Interdigitated 90° Hybrids with 50- and 25-Ohm Impedances." 1982 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 82.1 (1982 [MCS]): 50-53.*

This paper describes the design, fabrication and performance of two monolithic GaAs C-band 900 interdigitated couplers with 50-ohm and 25-ohm impedances, respectively. A comparison of the performance of these two couplers shows thar the 25-ohm coupler has the advantages of lower loss, higher fabrication yield and needs fewer numbers of matching elements when it is used in the balanced amplifier configuration. The fewer number of matching elements results in great savings in the GaAs real estate for MMICS. Both the couplers have been fabricated on a 0.1 mm thick GaAs SI substrate. The measured results agree quite well with calculated results. The losses of the 50-ohm and 25-ohm couplers are 0.5 and 0.3 dB, respectively, over the 4-8 GHz frequency band.

❑ Return to main document.