

# Abstracts

## Planar-Circuit-Type 3-dB Quadrature Hybrids (1994 Vol. I [MWSYM])

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*T. Kawai and I. Ohta. "Planar-Circuit-Type 3-dB Quadrature Hybrids (1994 Vol. I [MWSYM])."* 1994 MTT-S International Microwave Symposium Digest 94.1 (1994 Vol. I [MWSYM]): 205-208.

The performance of a conventional branch-line 3-dB hybrid tends to deteriorate with increasing of an operation frequency because of a pair of low impedance series line sections. This paper treats planar-circuit-type 3-dB quadrature hybrids using a rectangular disk, and realizes good characteristics comparable to those of an ideal branch-line hybrid over a wide operation frequency range by efficacious devices without destroying the simple-shaped configuration. In addition, the way of broadening the hybrid property are examined and hybrids with flat coupling, e.g., a relative bandwidth of 27 percent, are obtained at various operation frequencies. These theoretical results are verified experimentally.

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