

Session L:

Microwave Integrated Circuits

Chairman: M. A. Ciminera

AIL Systems
Westlake Village, CA

New microwave circuit techniques have provided advancement in several areas of MIC technology. Advances in baluns and mixers, tunable filters, amplifiers, and vector modulators are shown. A novel planar balun concept is described and applied to a 2–20 GHz double-balanced mixer design. Two new frequency-agile varactor-tuned filter concepts provide tunable high-Q band pass and band stop filter responses at S- and X-band. Two new push-pull amplifier designs approaches using hybrid couplers achieve 1.85 watts in the 5–18 GHz band and, 10 dB improvement in IP2 performance through 2nd harmonic cancellation at 2.5–6.5 GHz. An additive gain inductorless amplifier approach provides wide band or narrow band cascadable gain blocks operating from 0.1 to 4.5 GHz. And, finally, a MMIC vector modulator for the 9–10 GHz band is presented capable of several GHz modulation rates.

1:30 p.m.–3:00 p.m., Tuesday, May 8, 1990
West Ballroom D