

## Millimeter-wave monolithic balanced BPSK modulator using a miniaturised backward-wave coupler

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*T. Gokdemir, S. Nam, A.E. Ashtiani, I.D. Robertson and U. Karacaoglu. "Millimeter-wave monolithic balanced BPSK modulator using a miniaturised backward-wave coupler." 1998 MTT-S International Microwave Symposium Digest 98.2 (1998 Vol. II [MWSYM]): 877-880.*

A miniature parallel-coupled microstrip coupler has been realised at millimeter-wave frequency using capacitor compensation at the ends. The coupler has been used in a very compact BPSK modulator as an example of application. The balanced modulator employs reflection-type topology and measures 0.7/spl times/0.9 mm excluding RF-on-wafer probe pads.

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