Abstracts

A Novel MMIC Biphase Modulator with Variable Gain Using Enhancement-Mode FETs Suitable for 3 V Wireless Applications

M.E. Goldfarb, J.B. Cole and A. Platzker. "A Novel MMIC Biphase Modulator with Variable Gain Using Enhancement-Mode FETs Suitable for 3 V Wireless Applications." 1994 Microwave and Millimeter-Wave Monolithic Circuits Symposium Digest 94.1 (1994 [MCS]): 99-102.

A circuit topology for realizing a BPSK (180 degree) modulator without the use of reactive phase determining networks is presented for the first time. This physically small circuit employs a trio of enhancement mode MESFETs which are uniquely configured to extend the upper frequency response of the design to in excess of 1.7 GHz. This approach is particularly noteworthy as it is implemented using less than 3 V dc and precludes the need for negative gate voltages making it attractive for use in wireless applications.

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