Abstracts

An E-Mode GaAs FET Operating as a Single Balanced Gate Mixer

E. Camargo and W. Kennan. "An E-Mode GaAs FET Operating as a Single Balanced Gate Mixer." 1996 MTT-S International Microwave Symposium Digest 96.2 (1996 Vol. II [MWSYM]): 951-954.

The objective of this paper is to describe the design details of a semi-monolithic single balanced gate mixer for DBS applications. In order to obtain a low noise figure and high conversion gain it was decided to employ enhancement mode MESFETs, thus avoiding the need for a negative supply. The non-linear modeling is briefly described and contributed to the success of the mixer performance. An SSB noise figure of 6.0 dB was measured from 10.7 to 11.8 GHz with a conversion gain of 7.0 dB +/- 1.0 dB, with only + 3.0 dBm of LO power. The third order intercept point is equal to + 13.0 dBm, adequate for LNB applications.

❑ Return to main document.