

Abstracts

A Design Technique for MESFET Mixers Based on Spice Program

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A design technique for MESFET mixers is described. This technique is based on a mixer analysis program (MIXAN) developed to obtain the value of conversion gain and optimum source and load impedances for any local oscillator power and DC bias. (MIXAN) program uses SPICE as a "subroutine" to determine large-signal current and voltage waveforms. In accordance, with MIXAN program is possible to obtain the operating conditions for maximum conversion gain. The good agreement between experimental and theoretical values for X band drain and gate mixers prove the validity of the design technique.

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