Abstracts

Design of GaAs MESFET Oscillator Using Large Signal S-Parameters (1977 [MWSYM])

Y. Mitsui, M. Nakatani and S. Mitsui. "Design of GaAs MESFET Oscillator Using Large Signal S-Parameters (1977 [MWSYM])." 1977 MTT-S International Microwave Symposium Digest 77.1 (1977 [MWSYM]): 270-272.

A design method of GaAs MESFET oscillator using large signal S-parameters has been discussed. Together with the measurement results of the dependence of large signal S-parameters on power level and bias condition, computer analysis of the equivalent circuit for MESFET's has qualitatively clarified the large signal properties of MESFET'S. On the basis of these S-parameters has been designed the MESFET oscillator over the frequency range of 6-10 GHz, which has resulted in power output of 45 mW at 10 GHz with 19% efficiency and 350 mW at 6.5 GHz with 26% efficiency respectively. Good agreements between predicted and obtained performance of MIC positive feedback oscillator have been ascertained, verifying the validity of the design method using large signal S-parameters.

❑ Return to main document.