Abstract

This paper presents a new concept of a wide band RF amplifier using scattering parameters that is often used in the radio frequency communication system. This amplifier operates from 80MHz to 1.1GHz frequency and it is based on BFG65 NPN transistor that has a high transition frequency of 7.5GHz [1]. The simulation results show good performances. The power gain S21 is varied between 10 and 14.34 dB. For the input reflection coefficient S11 is changed between -29.3 and -17.61 dB. Regarding the output reflection coefficient S22 is varied between -19.78 and -10.36 dB. For the reverse transmission S12 is changed between -23.23 and -24.65 dB. Regarding the noise figure NF is varied between 3.6 and 3.9 dB. For the 1 dB compression point is changed between -13.94 and -8.24 dBm.
References

- Gonzalez Guillermo, Microwave Transistor Amplifier, 1996.

Index Terms

Computer Science    Wireless Communications

Keywords

Wide band RF amplifier    Input matching    Output matching    RF communication system