Abstract

A design of wide band low noise amplifier for a typical antenna system is investigated here. This utilizes a wide frequency band from 1-6 GHz. The design objective is to achieve minimum Noise Figure at reasonable gain throughout the entire band. The transistor model used is ATF58143, an e pHEMT family member offering the best noise performance. After simulations a NF below 1dB is achieved from 1-3.6 GHz band along with a gain above 10 dB. While below 2 dB noise figure is achieved between 3.6-5.6 GHz but at this the gain achieved is above 7dB. The input and output matching networks for the circuit are designed using micro wave transmission lines and PCB used is PTFE board.

References

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Index Terms

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Keywords