

## DESIGN AND FABRICATION OF LOW COST MICROWAVE AMPLIFIER

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### **Abstract**

Microwave amplifiers having different characteristics find numerous applications in the system development of various kinds. Low cost of fabrication and modular configuration are the desirable features to be incorporated in such amplifiers for their better usage. Keeping these considerations in view, a number of microwave amplifier modules have been designed using the S-parameters of the transistor chip and then fabrications were carried out in double copper clad epoxy for lower range of microwave frequencies. Aluminum housing was designed so that the amplifier circuit on epoxy substrate could be fitted inside with fixed input, output and bias connections. A software was developed to determine circuit components and dimension of microstrip line, taking transistor scattering parameter, substrate parameter and operating point as input data. The mask required for the circuit was prepared by photoplotter. The gain of the amplifier was 8dB at center frequency 1.4GHz of bandwidth 260MHz.