Abstracts

Two Stage Double Layer Microstrip Spatial Amplifiers

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Several two stage spatial amplifiers are presented. The amplifiers were constructed on double layer back to back microstrip circuits with a shared ground plane. The ground plane provides an effective isolation between the receiving antenna array and the transmitting antenna array. Furthermore, it serves as a heat sink in high power amplifier design. The coupling between the two stages is accomplished through microstrip to slot transitions, therefore there is no electrical contact from one layer to another. This facilitates monolithic fabrication of such amplifiers. The measured gain of a 3x3 spatial amplifier at 9.95 GHz is 18.0 dB.

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