The Development of High-Directivity Microstrip Array Antenna for WLAN

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ABSTRACT

In this thesis, microstrip array antennas applicable in IEEE802.11a wireless local area network are designed. These antennas must meet the specifications of input return loss greater than 10 dB and gain greater than 10 dBi. Both parallel-fed and series-fed array antennas are implemented. In each of these two types of array antennas, all radiating elements should be excited by signals with identical magnitude and phase so that the main lobe points toward the broadside direction. The series-fed network is much more difficult to design than the parallel-fed network. Measured results indicate that the series-fed array antenna has a larger impedance bandwidth, but a lower directivity.

Keywords : Microstrip Array Antenna、IEEE 802.11a、wireless local area network.

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