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Abstract
In this thesis, we proposed open slot antenna designs, including band-rejected and enhance bandwidth for WLAN, WiMAX and UWB applications. In practical applications, broadband antenna must use filter to suppress dispensable bands lead to increase cost. First, the broadband characteristic (2.3~6.1GHz) of open slot antenna design with small size is proposed. Then, by inserting strip on printed open slot of the broadband antenna to reject dispensable bands, a dual-broadband design of the open slot antenna with small size is obtained for WLAN applications in the 2.4/5GHz bands. Furthermore, inserting two strips of different length on open slot antenna to rejected dual-band, a three-band antenna is achieved. By adjusting the dimension of two strips on open slot antenna, a three operating modes frequencies at 2.5/3.5/5.5 GHz for WiMAX (Worldwide Interoperability for Microwave Access) application has been obtained. Finally, a novel open slot antenna for bandwidth enhancement is presented. The bandwidth enhancement of the proposed antenna is achieved by cutting two notches along the invert-L shape open slot in the ground plane. The frequency range of the proposed antenna is from 2.3 to 10.9 GHz, which can cover UWB frequency range (3.1~10.6 GHz).
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