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Abstract
The wireless communication products, for example: PDA, cell phone, and notebook are necessary for human life. The application communications require multi-band and wideband operation for transmitting and receiving data. We proposed multi-band and wideband antennas to economize resource and reduce cost. The multi-band antenna is base on F antenna and we add microstrip lines to reform the F antenna. Therefore, the frequencies of the proposed multi-band antenna are 0.824~1.04GHz, 1.81~1.9GHz, 2.39~2.484GHz, and 5.15~5.94GHz. These frequencies can apply for ISM bands and DECT system. The wideband antennas are widely used in communication systems. But the wireless communication products require mobile and small. Therefore, we proposed wideband antenna in small size. The proposed wideband antenna etched a λ0/4 open slot on ground plane to generate wideband bandwidth and the antenna size is very small. The bandwidth is 2.34~5.93GHz and can apply for Blue tooth and UWB. The X-Pole of the proposed wideband antenna will degenerate because the polarization of the proposed wideband antenna will exchange. Therefore, we correct the right angle edge of the open slot to change the current way and make the Co-Pol and X-Pol less interfere each other.
According these characters, we propose the antenna to apply for wireless communication products and we reach low cost and miniaturization of the objective.
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