



A Printed Monopole Antenna with Two Steps and a Circular Slot for UWB Applications

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Abstract:

This letter presents a printed monopole antenna with two steps and a circular slot for ultra-wide band (UWB) applications. The proposed antenna is fabricated and tested. The proposed antenna has a wide frequency bandwidth of 8.4 GHz starting from 3 GHz up to 11.4 GHz for a return loss (S_{11}) of less than -10 dB and gain flatness over the frequency range. Measured results show also that the proposed antenna features satisfactory radiation characteristics within the achieved impedance bandwidth. By introducing a simple and proper narrow slot in the radiating element, frequency-notched characteristics can be obtained and a good band-notched performance in the 5.6 GHz band can be achieved.

Keywords:

Planar monopole antenna, printed circuit board(PCB) antenna, radiation patterns, ultrawide band (UWB) antenna.

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