

**Printed UWB monopole antenna embedded with L-shaped slots in the ground plane for 5-GHz band-notch function**

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Abstract

An octagonal shaped microstrip-fed monopole antenna designed for UWB applications that operate within the 3.1 ~ 10.6 GHz band is proposed. By applying a novel technique of embedding a pair of thin L-shaped slots in the ground plane, a band-notch function in the frequency band of around 4.95 to 5.98 GHz can be achieved for this antenna, so as to avoid interferences to the 5 GHz WLAN band. The time-domain characteristics of this antenna have further validates that it is suitable for any short-range mobile communication systems application.