

A systematic design procedure for micro-strip-based unidirectional UWB antennas

Abstract

A design procedure for microstrip antenna topologies operating within the full UWB band is described. The presence of the full ground plane successfully results in a unidirectional antenna, which is important in applications related to Wireless Body Area Networks (WBAN). The existing broadbanding concepts have been creatively combined throughout the design to enable the UWB behavior, while simultaneously keeping the full ground plane intact. The procedure is validated with a concrete design of a microstrip type UWB antenna operating from 3.6 GHz to 10.3 GHz.

Keywords

Wireless body area network; Broadbanding; Concrete design; Design procedure