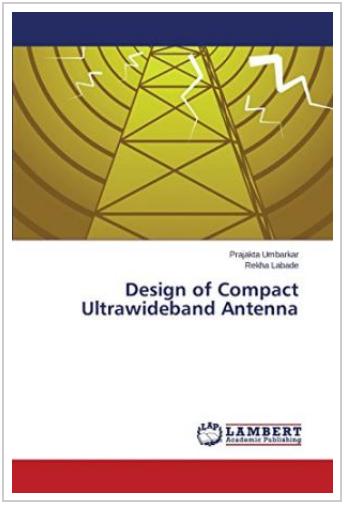

Design of Compact Ultrawideband Antenna

By Prajakta Umbarkar

LAP Lambert Academic Publishing Mrz 2015, 2015. Taschenbuch. Book Condition: Neu. 220x150x6 mm. Neuware - The Ultra-Wideband (UWB) technology is based on the new concepts of a very short pulse signals. This technology is a good candidate for the next generation (4G) networks, but it requires a new approach to antenna design in order to achieve UWB characteristics. This work analyzes the design of Microstrip line feed rectangular-cut ultrawideband (UWB) antenna and presents UWB antenna simulations in transient mode used to verify antenna parameters improvements. The antenna has been designed on a FR4 substrate with dielectric constant r = 4.4, loss tangent (tan)=0.02 The antenna has been optimized to exhibit UWB characteristics from frequency range 3.1GHz-12GHz. The radiation pattern of this antenna is nearly omni-directional in H-plane and bidirectional in E-plane. The effect of various design parameters on design have also been analyzed using CAD Feko 6.1 simulator using MoM. The simulated results are in good agreement with FCC standards showing VSWR 2 throughout the band 3.1GHz to 12GHz. This antenna can be easily integrated with microwave circuitry and useful for UWB applications. 92 pp. Englisch.

Reviews

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