

عنوان مقاله:

Dimension-reducing of UWB Notch-band Microstrip Antenna by Exponential Curvatures

محل انتشار:

دومین کنفرانس بین المللی فناوری های نوین در علوم (سال: 1397)

تعداد صفحات اصل مقاله: 8

نویسندگان:

.Seyed Hossein Haghirosadat - *Electrical and Computer Department, University of Birjand, Birjand, Iran*

.Mohammadreza Khorshidi - *Electrical and Computer Department, University of Birjand, Birjand, Iran*

خلاصه مقاله:

In this work, a new compact ultra wide-band (UWB) patch antenna, capable of rejecting frequency range from 4.8 to 5.9 GHz, is designed. The designed antenna has a simple configuration with a rectangular radiating patch. In order to increase the antenna's frequency bandwidth without any dimensions increase, bottom edges of the rectangular patch connected to microstrip feedline, accompanied by upper edges of the antenna partial ground plane are curved exponentially. Moreover, to reduce potential interference between wireless local area network (WLAN) and UWB systems, frequency band from 4.8 to 5.9 GHz should be rejected. Therefore, a parasitic T-shaped metallic structure is embedded in the ground plane of the antenna. Simulation results of the designed antenna obtained by HFSS and CST packages confirm that frequency bandwidth of the antenna is from 2.9 to 12.98 GHz for a reflection coefficient below -10 dB. The embedded T-shaped metallic structure rejects frequency range 4.8 to 5.9 GHz with -3 dB reflection coefficient at the center frequency of the notch band. The proposed antenna with 16mm*24 mm dimensions is considered as one of the smallest UWB antennas.

کلمات کلیدی:

.compact UWB antenna, exponential taper, band rejection, microstrip antenna

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/899548>

