Abstract

The effect of slotted spiral technique on an antenna that covers octal bands of WWAN/LTE has been studied and discussed in this paper. The Slotted Spiral consists of strips arranged together forming a spiral of different vertical and horizontal width. The antenna has been initially designed without employing the slotted structure to cover the frequency bands GPS L2 band-1227.60/L3 band 1381.05, DCS1800/PCS1900/UMTS2100 LTE2300/2500/2600 (1710–2690 MHz). The size of the antenna was initially 15 x 40 mm². Then the structure has been designed employing the slotted spiral technique which provides a size reduction from 15 x 40 mm² to 15 x 38 mm² which is small enough to be incorporated in a tablet computer. Furthermore the use of embedded parallel resonant structure aids in implementing slotted spiral technique. The antenna after employing size reduction provided a low return loss and good radiation efficiency and high gain than the antenna without slotted spiral.
- Low-Profile Printed Octa-Band LTE/WWAN Mobile Phone Antenna Using Embedded Parallel Resonant Structure Yong-Ling Ban, Jin-Hua Chen, Shun Yang, Joshua Le-Wei Li, and Yu-Jiang Wu IEEE transactions on antenna and propagation, VOL. 61, NO. 7, JULY 2013
Index Terms

Computer Science  Communications

Keywords

Resonance  tablet computers  embedded parallel resonant structure  Slotted Spiral Technique.