Application of antenna design for wireless local area network

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ABSTRACT

An open slot antenna is proposed for WLAN applications in 2.4 – 2.484 / 5.15 – 5.825 GHz bands and WIMAX applications in 2.5 – 2.69 GHz band to gain more than 4GHz bandwidth [1]. It occupies an area of 30 × 35 mm when printed on a FR4 substrate with a thickness of 0.8 mm. The proposed structure applies the open slot antenna to fit the bands for WLAN applications in 2.4 – 2.484 / 5.15 – 5.825 GHz bands and WIMAX applications in 2.5 - 2.69 / 3.3 – 3.8 GHz [2-6]. The volume of propose antenna is smaller than the original one about 30%.The band of this antenna can be adjusted by changing the geometry parameters and matching. But we can not get the necessary bandwidth preciously by this method. So we will add a bandnotch design besidechanging the geometry parameters and obtain the band more preciously by this design. The EMC problems are also reduced. We perform an experiment to verify the result of the simulation. This antenna design achieves the desired requirement by the simulated and measured result.

Keywords : Open slot、Miniaturized、EMC

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