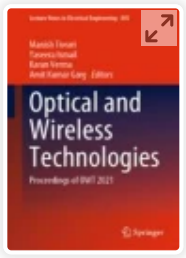

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Design and Analysis of Microstrip Circular Patch Antenna with a Rectangular Slot for Bluetooth Application

Suman Sharma, Richa Sharma, Dinesh Yadav & Mukesh Arorai

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Abstract

The proposed antenna is having a circular patch with ground plane and is designed on FR4 (frame sensitive) substrate having dielectric permittivity 4.4 and along with it the thickness ‘1.76 mm’, the designed antenna resonates at a frequency of around 2.4 GHz that can be used for Bluetooth applications. It provides a directional pattern with minimum return loss of around −30 dB. Gain has been improved by inserting a rectangular slot, with an improved gain of

7. Sontakke M, Savairam V, Masram S, Gundewar PP (2017) Microstrip patch antenna with DGS for bluetooth application. Int J Eng Res 6(3):524–527

8. Lee SW, Sung Y (2015) Compact frequency reconfigurable antenna for LTE/WWAN mobile handset applications. IEEE Trans Ant Propag 63(10):4572–4577

9. Ilvonen J, Valkonen R, Holopainen J, Viikari V (2014) Multiband frequency reconfigurable 4G handset antenna with MIMO capability. Progr Electromagn Res 148:233–243

10. Deepak A (2017) Design of miniaturized microstrip patch antenna for low frequency mobile communication. In: 4th IEEE conference on signal processing, computing and control, Solan, India, 21–23 September 2017

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