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# Minimally Coupled E-Shaped Dual-band Antenna for Wireless Applications

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### Abstract



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- IV. Conclusion

**Abstract:**A miniaturized 'E'-Shaped Multi-Input-MultiOutput (MIMO) patch antenna operating at sub-6 GHz for dual-band application is presented in this paper. The antenna covers the... **View more**

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##### Abstract:

A miniaturized 'E'-Shaped Multi-Input-MultiOutput (MIMO) patch antenna operating at sub-6 GHz for dual-band application is presented in this paper. The antenna covers the two resonating bands at 3.7 GHz (3.5 GHz-3.8 GHz) and 5.7 GHz (5.6 GHz-5.9 GHz) for WLAN applications. Both the resonating bands have more than -20dB return loss. The isolation between the antenna elements is improved by adding 'C'-Shaped parasitic elements in between the arms of the Eshaped antenna. Incorporating the parasitic patch improves the isolation by 30 dB and 15 dB at the first and second resonant frequencies. A peak gain of 4 dB at 3.7 GHz and 5.2 dB at 5.7 GHz is obtained. optimizing the distance between the MIMO antenna's radiating elements makes the overall dimension 30\times 29\times 1.6mm<sup>3</sup>. Antenna parameters such as Sparameters, gain, diversity gain (DG), and envelope correlation coefficient (ECC) are measured and found satisfactory for MIMO applications.

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