

## Miniaturization of I-Slot Antenna with Improved Efficiency and Gain

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**Abstract :** In this paper, novel miniaturization technique of antenna is proposed using I-slot. Using this technique, gain of antenna can increased for 4dB (antenna only) to 6.6dB for the proposed I-slot antenna and a frequency shift of about 0.45 GHz to 1 GHz is obtained. Also a reduction of the shape size of the antenna is achieved (about 38 %) to operate in the Wi-Fi (2.45 GHz) band. RF Moreover the frequency shift can be controlled by changing the place or the length of the I-slot. Finally the proposed miniature antenna with an improved radiation efficiency and gain was built and tested.

**Keywords :** slot antenna, miniaturization, RF, electrical equivalent circuit (EEC)

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