Thesis Title   Analysis of Resonant Frequency and Input Impedance for Rectangular Microstrip Antenna with Conducting Short Post

Thesis Credits   12

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Abstract

In this thesis, an easy practical technique of tuning the resonant frequencies and the input impedances of rectangular microstrip antenna using different short points of a conducting short post is present. Also, the theoretical technique utilizes reported cavity model and the concept of total dynamic capacitance to determine the effective parameter of rectangular microstrip antennas with a conducting short post. The new closed – form formulas of resonant frequency and input impedance are suitable for computer aided – design (CAD) and is directly applicable for the rectangular microstrip antenna with a conducting short post beneath coax–fed rectangular microstrip antenna. The thesis predicts both characteristics as accurately as possible within the tolerance range of the resonant frequency and input impedance.

Keywords   :   Shorting Post / Tuning Frequency / Compact Antenna /Shorting Pin