

# Resonant Frequency of Tunable Microstrip Ring Antenna Printed on Isotropic or Uniaxially Anisotropic Substrate

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**Abstract:** In this study, the resonant frequency of annular ring microstrip resonator with uniaxial anisotropic substrate and air gap layer is analyzed. The cavity model for simple ring microstrip antenna is extended with some modifications for the tunable geometry taking into account the anisotropy in the layer. The theoretical resonant frequency results are in very good agreement with the experimental results reported elsewhere. The air gap tuning effect on the resonant characteristics is also investigated for fundamental and higher order modes.

**Keywords :** Microstrip, Ring Antenna