Abstract

The area of micro strip antennas has seen some inventive work in recent years and is currently one of the most dynamic fields of antenna theory. An overview of work done in the area of micro strip antennas is presented and several recent developments in the field are highlighted. In addition, new antenna configurations that improve electrical performance and manufacturability are described. This designing is very easy and chip in microstrip antenna designing. We analyzed micro strip antenna in IE3D by finite moment of method. The proposed antenna design on different substrate and analyzed result of both substrates between 1GHz to 20GHz. When the proposed antenna design on a 31 mil RT DUROID 5880 substrate from Rogers-Corp with dielectric constant of 2.2 and loss tangent of .004. At 14GHz the verify and tested result on IE3D SIMULATOR are Return loss = -10.35dB, VSWR=1.872, Directivity=6dbi, Z=32.94Ω Characteristic impedance, and when The proposed antenna design on a 60 mil
New Multiband E-Shape Microstrip Patch Antenna on RT DUROID 5880 Substrate and RO4003 Substrate for Pervasive Wireless Communication

RO4003 substrate from Rogers-Corp with dielectric constant of 3.4 and loss tangent of .002. At 10GHz the effective results of RO4003 substrate verify and tested on IE3D SIMULATOR are Return loss = -21.34dB, VSWR=1.192, Directivity=8dbi, Z=42.31Ω Characteristic impedance, Axial ratio (at theta=90deg) =96%. The optimum 60 mil RO4003 substrate E Shape microstrip patch antenna provides very good results between 10GHz to 20GHz, All results shown in Simulation results. The results shown in Table 1, Table2,

Reference

- Design considerations for rectangular microstrip patch antenna on electromagnetic crystal substrate at terahertz frequency Infrared Physics & Technology, Volume 53, Issue 1, January 2010, Pages 17-22 G. Singh
- 2009 WRI International Conference on Communications and Mobile Computing Improved Microstrip Fractal Patch Antenna Using Uni-planar Compact Photonic Bandgap Structure (UC-PBG) January 06-January 08 Gao Wei Deng Hui
- Progress in Electromagnetics Research Symposium Proceedings, Moscow, Russia, August 18-21, 2009 Annular Ring Micro strip Patch Antenna on a Double Dielectric Anisotropic Substrate C. F. L. Vasconcelos1, S. G. Silva1, M. R. M. L.Albuquerque1, J. R. S. Oliveira2, and A. G. d'Assunção,a1


**Index Terms**

- Computer Science
- Wireless Communications

**Key words**

- Micro strip antenna
- IE3D SIMULATOR
- Dielectric
- Patch width
- Patch Length
- Characteristic Impedance
- Losses
- strip width
- strip length