Circle Embedded Rectangular Microstrip Patch Antenna for High Gain application

Abstract

In this paper a rectangular microstrip patch antenna with a rectangular slot at the left side and a circle embedding in a square slot is proposed. The antenna is resonant at 9 GHz frequency. The antenna is good for directional applications. The antenna can be used for GPS application and for microwave virus sanitizer. The gain of the antenna is 9.059 dBi. The directivity of the antenna is 10.56 dBi. The return loss of the antenna is -16.6 dB. The antenna is designed for X band application. The dielectric substrate used is RT Duroid with dielectric constant 2.2 and loss tangent 0.0004.

References

- Yogesh Bhomia, Ashok Kajla and Dinesh Yadav, V-Slotted Triangular...
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- Jawad Y. Siddique and Debatosh Guha, Applications of Triangular Microstrip Patch Antenna: Circuit Elements to modern wireless antennas.
- M. Biswas and D. Guha. "Input impedance and resonance characteristics of superstrate-loaded triangular microstrip patch."
- Ashvini Chaturvedi, Yogesh Bhomia and Dinesh Yadav, Truncated tip triangular microstrip patch antenna; IEEE 2010.
- Dinesh Yadav, L-Slotted rectangular microstrip patch antenna; 2011 International conference on communication systems and network technologies.
- Dr. Anubhuti Khare, Rajesh Nema and Puran Gour, New Multiband E-Shape Microstrip Patch Antenna On RT DUROID 5880 Substrate and RO4003 Substrate for Pervasive Wireless Communication.
- K. Naga Mallik, Ch. Radhika, D Ujwala, H. M. Ramesh, A. Gowtham Kumar, P. Karthik; A compact microstrip patch antenna with triangular snipped slot for wireless applications.

Index Terms

Keywords

Microstrip patch antenna square slot gain directivity return loss X band