

Scheduled Maintenance: On Saturday, 16 March 2024, IEEE *Xplore* will undergo necessary technical work from 9:00 AM EDT (1300 UTC) to 2:00 PM EDT (1800 UTC) to improve system reliability and stability. During this time, the site will be unavailable. We apologize for any inconvenience.

IEEE.orgIEEE XploreIEEE SAIEEE SpectrumMore Sites

DonateCartCreate AccountPersonal Sign In

Access provided by:
HIRASUGAR INSTITUTE
OF TECHNOLOGY

Sign Out

Browse▼My Settings▼Help▼

Access provided by:
HIRASUGAR INSTITUTE
OF TECHNOLOGY

Sign Out

All

ADVANCED SEARCH

Conferences > 2020 4th International Confer... ?

Compact Multiband Microstrip Fractal Antenna Design for Wireless Applications – An Overview

Publisher: IEEE

Cite This

PDF

Suresh Akkole ; N. Vasudevan All Authors ...

173

Full

Text Views

Alerts

Manage Content Alerts

Add to Citation Alerts

Abstract

Document Sections

I. Introduction

II. Review

III. Advantages
Disadvantages and
Applications of Fractal
Antenna

IV. Conclusion

Authors

Figures

References

Keywords

Metrics

More Like This

Download PDF

Abstract:Rapid development in telecommunication technology innovation over the ongoing recent past years, there is an expanding interest for the smaller dimension, multiband frequ... **View more**

► Metadata

Abstract:
Rapid development in telecommunication technology innovation over the ongoing recent past years, there is an expanding interest for the smaller dimension, multiband frequency of operation and low priced microstrip antennas. The fractal patch can be utilized in meeting the necessities of the Multi-band, low profile, and compact antenna structures. Different procedures and calculations have been presented for size decrease and multi-band activity of microstrip fractal antennas. The purpose behind the popularity of fractal antenna use is their electrically weighty structure which alters proficiently into the reduced size and operates at many resonant frequencies. The latest advancements in the design and notion of fractal antenna elements, in addition to fractal antenna geometries used to design a microstrip antenna for size reduction. The multi-band operation are utilized in wireless communication such as medical imaging, Radar communication, and military communication.

Published in: 2020 4th International Conference on Electronics, Communication and Aerospace Technology (ICECA)

Date of Conference: 05-07 November 2020

DOI: 10.1109/ICECA49313.2020.9297629

Date Added to IEEE Xplore: 28 December 2020

Publisher: IEEE

► ISBN Information:

Conference Location: Coimbatore, India

☰ Contents

I. Introduction

There has been a gigantic ever-developing demand, in both military and buyer worldwide markets, for microstrip antenna structures and fabrications that have been accompanying exceptionally attractive characteristics viz. compact size, thin and conformal and working with multiband [1]. Various methodologies developed in the recent past years, which can be utilized to accomplish one or more of these design goals. Recently, the possible way to build models of microstrip patch antennas that use some of the fractal geometry attributes to attain the above features. Since ordinary microstrip antenna comprises a conducting patch radiator mounted on a grounded dielectric and function at resonant cavity elements, therefore its operation leads intrinsically to narrow impedance bandwidth which is a hindrance for microstrip antennas uses in wireless communications further customarily each patch antenna functions at a single frequency band, where a separate antenna is needed for diverse application. This leads to the requirement of a large space for antennas for different communications. In order to mitigate this difficulty, multi-band antennas can be designed and only one antenna can be made to work at several frequency bands as indicated in figure 1 [2]. The multi-band behavior design of the antenna can be achieved by incorporating fractal structures in microstrip antennas. Fractal notions have been progressively more applied for the design and fabrication of a variety of patch antennas in recent years because of their recursive, self-comparable trait and space-filling ability. Figure 1.

(a) 4 antennas with four different frequency bands (b) Single antenna planned be used as a 4 band fractal antenna.

Authors	▼
Figures	▼
References	▼
Keywords	▼
Metrics	▼

More Like This

Design of modified geometry Sierpinski carpet fractal antenna array for wireless communication
2013 3rd IEEE International Advance Computing Conference (IACC)
Published: 2013

Designing and performance metrics analysis of microstrip antenna and microstrip patch fractal antenna

Show More

IEEE Personal Account

CHANGE
USERNAME/PASSWORD

Purchase Details

PAYMENT OPTIONS
VIEW PURCHASED
DOCUMENTS

Profile Information

COMMUNICATIONS
PREFERENCES
PROFESSION AND
EDUCATION
TECHNICAL INTERESTS

Need Help?

US & CANADA: +1 800
678 4333
WORLDWIDE: +1 732
981 0060
CONTACT & SUPPORT

Follow



About IEEE Xplore | Contact Us | Help | Accessibility | Terms of Use | Nondiscrimination Policy | IEEE Ethics Reporting | Sitemap | IEEE Privacy Policy

A not-for-profit organization, IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity.

© Copyright 2024 IEEE - All rights reserved.

IEEE Account

- » Change Username/Password
- » Update Address

Purchase Details

- » Payment Options
- » Order History
- » View Purchased Documents

Profile Information

- » Communications Preferences
- » Profession and Education

» Technical Interests

Need Help?

» **US & Canada:** +1 800 678 4333

» **Worldwide:** +1 732 981 0060

» Contact & Support

[About IEEE Xplore](#) | [Contact Us](#) | [Help](#) | [Accessibility](#) | [Terms of Use](#) | [Nondiscrimination Policy](#) | [Sitemap](#) | [Privacy & Opting Out of Cookies](#)

A not-for-profit organization, IEEE is the world's largest technical professional organization dedicated to advancing technology for the benefit of humanity.

© Copyright 2024 IEEE - All rights reserved. Use of this web site signifies your agreement to the terms and conditions.