Coplanar Waveguide Design In Hfss

Second International Conference on Computer Networks and Communication Technologies
Applications to Electrical, Electronics and Computer Science and Engineering
Wearable Antennas and Body Centric Communication
Computational Methodologies for Electrical and Electronics Engineers
Electro-optical System Design, Simulation, Testing, and Training
Low Temperature Electronics and Low Temperature Cofired Ceramic Based Electronic Dvices
Proceedings of OWT 2020
ICoEVCI 2018, India
60GHz and Beyond
Advanced Millimeter-wave Technologies
9-10 July, 2002, Seattle, Washington, USA
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Antenna-on-Chip: Design, Challenges, and Opportunities
Physics of Semiconductor Devices
Microwave Applications of the Ferromagnetic Nanowires
Proceedings of the 1st International Congress on Engineering Technologies
Design of CMOS Millimeter-Wave and Terahertz Integrated Circuits with Metamaterials
Microelectronics, Electromagnetics and Telecommunications
Proceedings of the Fifth ICMEET 2019
EngiTek 2020, 16-18 June 2020, Irbid, Jordan
Optical and Wireless Technologies
Proceedings of SAI Intelligent Systems Conference (IntelliSys) 2016
Advances in Communication, Devices and Networking
Proceedings of the International Conference on Recent Cognizance in Wireless Communication & Image Processing
Proceedings of ICMEET 2017
Advances in Decision Sciences, Image Processing, Security and Computer Vision
Low-Power Wireless Communication Circuits and Systems
Microelectronics, Electromagnetics and Telecommunications
Advanced Energy and Control Systems
ICICCT 2019 – System Reliability, Quality Control, Safety, Maintenance and Management
New Developments and Applications in Sensing Technology
Antenna Fundamentals for Legacy Mobile Applications and Beyond
Magnetoelectric Composites
Advances in VLSI, Communication, and Signal Processing
Volume 1

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Second International Conference on Computer Networks and Communication Technologies Springer
This book has focussed on different aspects of smart sensors and sensing technology, i.e. intelligent measurement, information processing, adaptability, recalibration, data fusion, validation, high reliability and integration of novel and high performance sensors in the areas of magnetic, ultrasonic, vision and image sensing, wireless sensors and network, microfluidic, tactile, gyro, flow, surface acoustic wave, humidity and ultra-wide band. While future interest in this field is ensured by the constant supply of emerging modalities, techniques and engineering solutions, as well as an increasing need from aging structures, many of the basic concepts and strategies have already matured and now offer opportunities to build upon. The book has primarily been focussed for postgraduate and research students working on different aspects of design and developments of smart sensors and sensing technology.
Applications to Electrical, Electronics and Computer Science and Engineering Springer
This book presents a step-by-step discussion of the design and development of radio frequency identification (RFID) and RFID-enabled sensors on flexible low cost substrates for UHF frequency bands. Various examples of fully function building blocks (design and fabrication of antennas, integration with ICs and microcontrollers, power sources, as well as inkjet-printing techniques) demonstrate the revolutionary effect of this approach in low cost RFID and RFID-enabled sensors fields. This approach could be easily extended to other microwave and wireless applications as well. The first chapter describes the basic functionality and the physical and IT-related principles underlying RFID and sensors technology. Chapter two explains in detail inkjet-printing technology providing the characterization of the conductive ink, which consists of nano-silver-particles, while highlighting the importance of this technology as a fast and simple fabrication technique especially on flexible organic substrates such as Liquid Crystal Polymer (LCP) or paper-based substrates. Chapter three demonstrates several compact inkjet-printed UHF RFID antennas using antenna matching techniques to match IC's complex impedance as prototypes to provide the proof of concept of this technology. Chapter four discusses the benefits of using conformal magnetic material as a substrate for miniaturized high-frequency circuit applications. In addition, in Chapter five, the authors also touch up the state-of-the-art area of fully-integrated wireless sensor modules on organic substrates and show the first ever 2D sensor integration with an RFID tag module on paper, as well as the possibility of 3D multilayer paper-based RF/microwave structures. Table of Contents: Radio Frequency Identification Introduction / Flexible Organic Low Cost Substrates / Benchmarking RFID Prototypes on Organic Substrates / Conformal Magnetic Composite RFID Tags / Inkjet-Printed RFID-Enabled Sensors
Wearable Antennas and Body Centric Communication Springer
The purpose of this workshop is to spread the vast amount of information available on semiconductor physics to every possible field throughout the scientific community. As a result, the latest findings, research and discoveries can be quickly disseminated. This workshop provides all participating research groups with an excellent platform for interaction and collaboration with other members of their respective scientific community. This workshop's technical sessions include various current and significant topics for applications and scientific developments, including • Optoelectronics • VLSI & ULSI Technology • Photovoltaics • MEMS & Sensors • Device Modeling and Simulation • High Frequency/ Power Devices • Nanotechnology and Emerging Areas • Organic Electronics • Displays and Lighting Many eminent scientists from various national and international organizations are actively participating with their latest research works and also equally supporting this mega event by joining the various organizing committees.
Computational Methodologies for Electrical and Electronics Engineers Springer Nature
These proceedings of the SAI Intelligent Systems Conference 2016 (IntelliSys 2016) offer a remarkable collection of chapters on a wide range of topics in intelligent systems, artificial intelligence and their applications to the real world. Authors hailing from 56 countries on 5 continents submitted 404 papers to the conference, attesting to the global importance of the conference's themes. After being reviewed, 222 papers were accepted for presentation, and 168 were ultimately selected for these proceedings. Each has been reviewed on the basis of its originality, novelty and rigorousness. The papers not only present state-of-the-art methods and valuable experience from researchers in the related research areas; they also outline the field's future development.
Electro-optical System Design, Simulation, Testing, and Training Springer
This book discusses reliability applications for power systems, renewable energy and smart grids and highlights trends in reliable communication, fault-tolerant systems, VLSI system design and embedded systems. Further, it includes chapters on software reliability and other computer engineering and software management-related disciplines, and also examines areas such as big data analytics and ubiquitous computing. Outlining novel, innovative concepts in applied areas of reliability in electrical, electronics and computer engineering disciplines, it is a valuable resource for researchers and practitioners of reliability theory in circuit-based engineering domains.
Low Temperature Electronics and Low Temperature Cofired Ceramic Based Electronic Dvices Elsevier
The main objective of this thesis is to design a coplanar waveguide circulator (CPW circulator) and propose a method that replaces the ferrite in a CPW circulator with ferromagnetic nanowire (FMNW) material. A circulator with a coplanar waveguide structure, whose shape is in the form of hexagon, was designed and simulated in ANSYS HFSS software. The simulated CPW circulator operates at 1.6 GHz with an insertion loss of 1.27 dB, isolation of 38 dB, and bandwidth of 200 MHz. A ferromagnetic nanowire (FMNW) material was fabricated using electrode position of nickel into 20 nm diameter pores of a commercially available nanoporous alumina membrane to replace the ferrite on the device. In order to engineer the response of FMNW metamaterials for microwave applications the permittivity is to be known. To determine the permittivity of the FMNW material a microstrip ring resonator was designed in ANSYS HFSS software and fabricated on a Rogers 4350B substrate.
Proceedings of OWT 2020 CRC Press
This book presents the design requirements of antenna integration for modern commercial devices such as smartphones, dongles, and access points. Practical use-case scenarios of smartphone and the design process of the antenna system for the same are highlighted. The feasibility of scaling up sub-6GHz to mmWave antennas is also discussed in detail followed by a plethora of design examples which could be panel mounted to modern-day commercial smartphones. The unique requirement of gain switchability is introduced with feasible practical antenna designs. High efficiency antennas for 5G base stations is introduced along with a design example on planar all-metallic antenna. Beam switchability requirement for base station is illustrated with a couple of compact antenna system examples. Variety of feeding techniques for mmWave antennas is elaborated in this book. Finally, low-cost antenna designs for future wireless devices are illustrated.
ICoEVCI 2018, India CRC Press
This book is dedicated to modeling and application of magnetoelectric (ME) effects in layered and bulk composites based on magnetostrictive and piezoelectric materials. Currently, numerous theoretical and experimental studies on ME composites are available but few on the development and research of instruments based on them. So far, only investigation of ME magnetic field sensors has been cited in the existing literature. However, these studies have finally resulted in the creation of low-frequency ME magnetic field sensors with parameters substantially exceeding the characteristics of Hall sensors. The book presents the authors' many years of experience gained in ME composites and through creation of device models based on their studies. It describes low-

frequency ME devices, such as current and position sensors and energy harvesters, and microwave ME devices, such as antennas, attenuators, filters, gyrators, and phase shifters.

60GHz and Beyond Antenna Fundamentals for Legacy Mobile Applications and Beyond

The past few years have seen an upsurge in the numbers of known Neolithic settlements in Ireland. Many of these sites have been excavated by archaeologists based in field units, but few are well-known to the wider archaeological community. The papers in this volume were presented at a conference held at Queen's University, Belfast in 2001, which provided a forum for a discussion of the new Neolithic material from Ireland in its wider geographical context. Although the bulk of the emerging Irish settlement evidence relates to substantial houses, many of these papers consider wider themes, including issues of contact and communication along the sea routes and coastal margins of north-west Europe, questions of diversity and regional patterns of sedentism and mobility, and variations in regional food production strategies.

Advanced Millimeter-wave Technologies Springer Science & Business Media

Low-temperature co-fired ceramic (LTCC) was used for a novel band-pass filter design. The filter is based on metallic strips parallel to the E-plane and mounted in a substrate-integrated waveguide (SIW). A new iterative technique based on the Variation principle was used to obtain an inductive reactance of an equivalent T-network of the metallic strip. The design method of the filter was derived by applying the equivalent network of the metallic strip to the usual method of the filter design. This filter was designed such that it is electromagnetically isolated inside the SIW and excited using grounded coplanar waveguide (GCPW) to SIW transitions. The design steps are explained and verified by examples and results. Three-dimensional electromagnetic field modeling and simulation was carried out using High Frequency Structure Simulator (HFSS). A comparison between different types of SIW is presented showing the resulting S-parameters curves for each case. Measurement of the filter response was done to validate the simulation results. By following the design steps, similar filters for various frequency bands can be easily designed. Three examples of filters were concluded to demonstrate the idea and validate the new methodology of the design. A new idea of air-filled technology inside LTCC substrate was presented. This new technology makes the use of conventional high loss tangent LTCC material in high frequency application possible.

9-10 July, 2002, Seattle, Washington, USA Springer Nature

Antenna Fundamentals for Legacy Mobile Applications and BeyondSpringer

Joint Proceedings of the Seventh International Symposium on Low Temperature Electronics and the International Symposium on Cofired Ceramic Based Electronic Devices MDPI

The microwave and millimeter wave frequency range is nowadays widely exploited in a large variety of fields including (wireless) communications, security, radar, spectroscopy, but also astronomy and biomedical, to name a few. This Special Issue focuses on the interaction between the nanoscale dimensions and centimeter to millimeter wavelengths. This interaction has been proven to be efficient for the design and fabrication of devices showing enhanced performance. Novel contributions are welcome in the field of devices based on nanoscaled geometries and materials. Applications cover, but not are limited to, electronics, sensors, signal processing, imaging and metrology, all exploiting nanoscale/nanotechnology at microwave and millimeter waves. Contributions can take the form of short communications, regular or review papers.

Commercial Wireless Circuits and Components Handbook Springer

This book discusses the latest developments and outlines future trends in the fields of microelectronics, electromagnetics and telecommunication. It includes original research presented at the International Conference on Microelectronics, Electromagnetics and Telecommunication (ICMEET 2019), organized by the Department of ECE, Raghu Institute of Technology, Andhra Pradesh, India. Written by scientists, research scholars and practitioners from leading universities, engineering colleges and R&D institutes around the globe, the papers share the latest breakthroughs in and promising solutions to the most important issues facing today’s society.

Passive RF Component Technology CRC Press

This book comprises select peer-reviewed papers from the International Conference on VLSI, Communication and Signal processing (VCAS) 2019, held at Motilal Nehru National Institute of Technology (MNNIT) Allahabad, Prayagraj, India. The contents focus on latest research in different domains of electronics and communication engineering, in particular microelectronics and VLSI design, communication systems and networks, and signal and image processing. The book also discusses the emerging applications of novel tools and techniques in image, video and multimedia signal processing. This book will be useful to students, researchers and professionals working in the electronics and communication domain.

Design and Fabrication of Substrate-integrated Waveguide Filters Using Low Temperature Co-fired Ceramic Society of Photo Optical

This book presents new communication and networking technologies, an area that has gained significant research attention from both academia and industry in recent years. It also discusses the development of more intelligent and efficient communication technologies, which are an essential part of current day-to-day life, and reports on recent innovations in technologies, architectures, and standards relating to these technologies. The book includes research that spans a wide range of communication and networking technologies, including wireless sensor networks, big data, Internet of Things, optical and telecommunication networks, artificial intelligence, cryptography, next-generation networks, cloud computing, and natural language processing. Moreover, it focuses on novel solutions in the context of communication and networking challenges, such as optimization algorithms, network interoperability, scalable network clustering, multicasting and fault-tolerant techniques, network authentication mechanisms, and predictive analytics.

22nd International Symposium, VDAT 2018, Madurai, India, June 28-30, 2018, Revised Selected Papers IGI Global

RF and Microwave Microelectronics Packaging presents the latest developments in packaging for high-frequency electronics. It will appeal to practicing engineers in the electronic packaging and high-frequency electronics fields and to academic researchers interested in understanding leading issues in the commercial sector. It covers the latest developments in thermal management, electrical/RF/thermal-mechanical designs and simulations, packaging and processing methods as well as other RF/MW packaging-related fields.

Antenna-on-Chip: Design, Challenges, and Opportunities CRC Press

Focusing on novel materials and techniques, this pioneering volume provides engineers with a solid understanding of the design and fabrication of smart RF passive components. Professionals find comprehensive details on LCP, metal materials, ferrite materials, nanomaterials, high aspect ratio enabled materials, green materials for RFID, and on-chip silicon techniques. Moreover, this practical book offers expert guidance on how to apply these materials and techniques to design a wide range of cutting-edge RF passive components, from MEMS switch-based tunable passives and 3D passives, to metamaterial-based passives and on-chip passives. Supported with over 145 illustrations, this forward-looking resource summarizes the growing trend of smart RF passive component design and serves as a guide to the performance-improving and cost-down solutions this technology offers the next generation of wireless communications.

Physics of Semiconductor Devices Artech House

This book constitutes the proceedings of the First International Conference on Emerging Trends in Engineering (ICETE), held at University College of Engineering and organised by the Alumni Association, University College of Engineering, Osmania University, in Hyderabad, India on 22–23 March 2019. The proceedings of the ICETE are published in three volumes, covering seven areas: Biomedical, Civil, Computer Science, Electrical & Electronics, Electronics & Communication, Mechanical, and Mining Engineering. The 215 peer-reviewed papers from around the globe present the latest state-of-the-art research, and are useful to postgraduate students, researchers, academics and industry engineers working in the respective fields. Volume 2 presents papers on the theme “Advances in Decision Sciences, Image Processing, Security and Computer Vision – International Conference on Emerging Trends in Engineering (ICETE)”. It includes state-of-the-art technical contributions in the areas of electronics and communication engineering and electrical and electronics engineering, discussing the latest sustainable developments in fields such as signal processing and communications; GNSS and VLSI; microwaves and antennas; signal, speech and image processing; power systems; and power electronics.

Microwave Applications of the Ferromagnetic Nanowires Springer

This book explains one of the hottest topics in wireless and electronic devices community, namely the wireless communication at mmWave frequencies, especially at the 60 GHz ISM band. It provides the reader with knowledge and techniques for mmWave antenna design, evaluation, antenna and chip packaging. Addresses practical engineering issues such as RF material evaluation and selection, antenna and packaging requirements, manufacturing tolerances, antenna and system interconnections, and antenna One of the first books to discuss the emerging research and application areas, particularly chip packages with integrated antennas, wafer scale mmWave phased arrays and imaging Contains a good number of case studies to aid understanding Provides the antenna and packaging technologies for the latest and emerging applications with the emphases on antenna integrations for practical applications such as wireless USB, wireless video, phase array, automobile collision avoidance radar, and imaging

Springer Science & Business Media

The volume contains 94 best selected research papers presented at the Third International Conference on Micro Electronics, Electromagnetics and Telecommunications (ICMEET 2017) The conference was held during 09-10, September, 2017 at Department of Electronics and Communication Engineering, BVRIT Hyderabad College of Engineering for Women, Hyderabad, Telangana, India. The volume includes original and application based research papers on microelectronics, electromagnetics, telecommunications, wireless communications, signal/speech/video processing and embedded systems.