

1. Record Nr.	UNINA9911019926103321
Autore	Chen Zhi Ning
Titolo	Broadband planar antennas : design and applications / / Zhi Ning Chen and Michael Y.W. Chia
Pubbl/distr/stampa	Chichester, England ; ; Hoboken, NJ, : John Wiley & Sons, c2006
ISBN	9786610449149 9781280449147 1280449144 9780470300671 0470300671 9780470871768 0470871768 9780470871751 047087175X
Edizione	[1st edition]
Descrizione fisica	1 online resource (259 p.)
Altri autori (Persone)	ChiaMichael Y. W
Disciplina	621.384/135
Soggetti	Antennas (Electronics) Microstrip antennas Broadband communication systems - Equipment and supplies
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Broadband Planar Antennas; Contents; Foreword; Preface; Acknowledgements; 1 Planar Radiators; 1.1 Introduction; 1.2 Bandwidth Definitions; 1.2.1 Impedance Bandwidth; 1.2.2 Pattern Bandwidth; 1.2.3 Polarization or Axial-ratio Bandwidth; 1.2.4 Summary; 1.3 Planar Antennas; 1.3.1 Suspended Plate Antennas; 1.3.2 Bent Plate Antennas; 1.4 Overview of this Book; References; 2 Broadband Microstrip Patch Antennas; 2.1 Introduction; 2.2 Important Features of Microstrip Patch Antennas; 2.2.1 Patch Shapes; 2.2.2 Substrates; 2.2.3 Feeding Structures; 2.2.4 Example: Rectangular Microstrip Patch Antennas 2.3 Broadband Techniques2.3.1 Lowering the Q; 2.3.2 Using an Impedance Matching Network; 2.3.3 Case Study: Microstrip Patch Antenna with Impedance Matching Stub; 2.3.4 Introducing Multiple

Resonances; 2.3.5 Case Study: Microstrip Patch Antenna with Stacked Elements; References; 3 Broadband Suspended Plate Antennas; 3.1 Introduction; 3.2 Techniques to Broaden Impedance Bandwidth; 3.2.1 Capacitive Load; 3.2.2 Slotted Plates; 3.2.3 Case Study: SPA with an W-shaped Slot; 3.2.4 Electromagnetic Coupling; 3.2.5 Nonplanar Plates; 3.2.6 Vertical Feed Sheet

3.3 Techniques to Enhance Radiation Performance3.3.1 Radiation Characteristics of SPAs; 3.3.2 SPA with Dual Feed Probes; 3.3.3 Case Study: Center-concaved SPA with Dual Feed Probes; 3.3.4 SPA with Half-wavelength Probe-fed Strip; 3.3.5 SPA with Probe-fed Center Slot; 3.3.6 Case Study: Center-fed SPA with Double L-shaped Probes; 3.3.7 SPA with Slots and Shorting Strips; 3.4 Arrays with Suspended Plate Elements; 3.4.1 Mutual Coupling between Two Suspended Plate Elements; 3.4.2 Reduced-size Array above Double-tiered Ground Plane; References; 4 Planar Inverted-L/F Antennas; 4.1 Introduction

4.2 The Inverted-L/F Antenna4.3 Broadband Planar Inverted-F/L Antenna; 4.3.1 Planar Inverted-F Antenna; 4.3.2 Planar Inverted-L Antenna; 4.4 Case Studies; 4.4.1 Handset Antennas; 4.4.2 Laptop Computer Antennas; References; 5 Planar Monopole Antennas and Ultra-wideband Applications; 5.1 Introduction; 5.2 Planar Monopole Antenna; 5.2.1 Planar Bi-conical Structure; 5.2.2 Planar Monopoles; 5.2.3 Roll Monopoles; 5.2.4 EMC Feeding Methods; 5.3 Planar Antennas for UWB Applications; 5.3.1 Ultra-wideband Technology; 5.3.2 Considerations for UWB Antennas and Source Pulses

5.3.3 Planar UWB Antenna and Assessment5.4 Case Studies; 5.4.1 Planar UWB Antenna Printed on a PCB; 5.4.2 Planar UWB Antenna Embedded into a Laptop Computer; 5.4.3 Planar Directional UWB Antenna; References; Index

Sommario/riassunto

The increasing demand for wireless communications has revolutionised the lifestyle of today's society and one of the key components of wireless technology is antenna design. Broadband planar antennas are the newest generation of antennas boasting the attractive features required, such as broad operating bandwidth, low profile, light weight, low cost and ease of integration into arrays or Radio Frequency (RF) circuits, to make them ideal components of modern communications systems. Research into small and broadband antennas has been spurred by the rapid development of portable wireless communi
