Google Drive



Frequency Selective Surfaces: Theory and Design

Ben A. Munk

Download now

Click here if your download doesn"t start automatically

Frequency Selective Surfaces: Theory and Design

Ben A. Munk

Frequency Selective Surfaces: Theory and Design Ben A. Munk
"...Ben has been the world-wide guru of this technology, providing support to applications of all types. His genius lies in handling the extremely complex mathematics, while at the same time seeing the practical matters involved in applying the results. As this book clearly shows, Ben is able to relate to novices interested in using frequency selective surfaces and to explain technical details in an understandable way, liberally spiced with his special brand of humor... Ben Munk has written a book that represents the epitome of practical understanding of Frequency Selective Surfaces. He deserves all honors that might befall him for this achievement." -William F. Bahret.

Mr. W. Bahret was with the United States Air Force but is now retired. From the early 50s he sponsored numerous projects concerning Radar Cross Section of airborne platforms in particular antennas and absorbers. Under his leadership grew many of the concepts used extensively today, as for example the metallic radome. In fact, he is by many considered to be the father of stealth technology.

"This book compiles under one cover most of Munk's research over the past three decades. It is woven with the physical insight that he has gained and further developed as his career has grown. Ben uses mathematics to whatever extent is needed, and only as needed. This material is written so that it should be useful to engineers with a background in electromagnetics. I strongly recommend this book to any engineer with any interest in phased arrays and/or frequency selective surfaces. The physical insight that may be gained from this book will enhance their ability to treat additional array problems of their own." -Leon Peters, Jr.

Professor Leon Peters, Jr., was a professor at the Ohio State University but is now retired. From the early sixties he worked on, among many other things, RCS problems involving antennas and absorbers.

This book presents the complete derivation of the Periodic Method of Moments, which enables the reader to calculate quickly and efficiently the transmission and reflection properties of multi-layered Frequency Selective Surfaces comprised of either wire and/or slot elements of arbitrary shape and located in a stratified medium. However, it also gives the reader the tools to analyze multi-layered FSS's leading to specific designs of the very important Hybrid Radome, which is characterized by constant band width with angle of incidence and polarization. Further, it investigates in great detail bandstop filters with large as well as narrow bandwidth (dichroic surfaces). It also discusses for the first time, lossy elements used in producing Circuit Analog absorbers. Finally, the last chapter deals with power breakdown of FSS's when exposed to pulsed signals with high peak power.

The approach followed by most other presentations simply consists of expanding the fields around the FSS, matching the boundary conditions and writing a computer program. While this enables the user to obtain calculated results, it gives very little physical insight and no help in how to design actual multi-layered FSS's. In contrast, the approach used in this title analyzes all curves of desired shapes. In particular, it discusses in great detail how to produce radomes made of FSS's located in a stratified medium (Hybrid Radomes), with constant band width for all angles of incidence and polarizations. Numerous examples are given of great practical interest. More specifically, Chapter 7 deals with the theory and design of bandpass radomes with constant bandwidth and flat tops. Examples are given for mono-, bi- and tri-planar designs. Chapter 8 deals with bandstop filters with broad as well as narrow bandwidth. Chapter 9 deals with multi-layered FSS of lossy elements, namely the so-called Circuit Analog Absorbers, designed to yield outstanding

absorption with more than a decade of bandwidth.

Features material previously labeled as classified by the United States Air Force.

Download Frequency Selective Surfaces: Theory and Design ...pdf

Read Online Frequency Selective Surfaces: Theory and Design ...pdf

Download and Read Free Online Frequency Selective Surfaces: Theory and Design Ben A. Munk

---

From reader reviews:

Willie Clark:

Spent a free a chance to be fun activity to try and do! A lot of people spent their down time with their family, or their friends. Usually they undertaking activity like watching television, going to beach, or picnic from the park. They actually doing same thing every week. Do you feel it? Will you something different to fill your own personal free time/ holiday? May be reading a book is usually option to fill your totally free time/ holiday. The first thing that you ask may be what kinds of e-book that you should read. If you want to try out look for book, may be the reserve untitled Frequency Selective Surfaces: Theory and Design can be great book to read. May be it might be best activity to you.

Thomas Llanos:

Do you have something that you want such as book? The reserve lovers usually prefer to opt for book like comic, limited story and the biggest one is novel. Now, why not hoping Frequency Selective Surfaces: Theory and Design that give your satisfaction preference will be satisfied by simply reading this book. Reading behavior all over the world can be said as the method for people to know world a great deal better then how they react to the world. It can't be said constantly that reading habit only for the geeky particular person but for all of you who wants to possibly be success person. So , for all you who want to start reading through as your good habit, you can pick Frequency Selective Surfaces: Theory and Design become your personal starter.

Amber Tyson:

Is it you who having spare time subsequently spend it whole day simply by watching television programs or just lying on the bed? Do you need something totally new? This Frequency Selective Surfaces: Theory and Design can be the respond to, oh how comes? A book you know. You are so out of date, spending your extra time by reading in this brand-new era is common not a geek activity. So what these ebooks have than the others?

Maria Hughes:

What is your hobby? Have you heard that will question when you got college students? We believe that that query was given by teacher for their students. Many kinds of hobby, All people has different hobby. Therefore you know that little person like reading or as examining become their hobby. You need to know that reading is very important and book as to be the matter. Book is important thing to add you knowledge, except your teacher or lecturer. You discover good news or update with regards to something by book. Many kinds of books that can you choose to adopt be your object. One of them are these claims Frequency Selective Surfaces: Theory and Design.

Download and Read Online Frequency Selective Surfaces: Theory and Design Ben A. Munk #DX61KYC0GMZ

Read Frequency Selective Surfaces: Theory and Design by Ben A. Munk for online ebook

Frequency Selective Surfaces: Theory and Design by Ben A. Munk Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Frequency Selective Surfaces: Theory and Design by Ben A. Munk books to read online.

Online Frequency Selective Surfaces: Theory and Design by Ben A. Munk ebook PDF download

Frequency Selective Surfaces: Theory and Design by Ben A. Munk Doc

Frequency Selective Surfaces: Theory and Design by Ben A. Munk Mobipocket

Frequency Selective Surfaces: Theory and Design by Ben A. Munk EPub