1. Record Nr. UNINA9910808290003321 Autore Rhea Randall W. Titolo Filter Synthesis Using Genesys S / / Filter Pubbl/distr/stampa Norwood:,: Artech House,, 2014 [Piscatagay, New Jersey]:,: IEEE Xplore,, [2014] **ISBN** 1-60807-803-5 Descrizione fisica 1 online resource (342 p.) Collana Artech House microwave library Disciplina 621.3815324 Soggetti Electric filters Electric filters - Design and construction Electric filters - Mathematical models Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Includes index. Note generali Nota di bibliografia Includes bibliographical references and index. Title; Contents; Preface; 1 Transmission Zeros; 1.1 Determining TZ by Nota di contenuto Inspection; 1.2 Filter Degree; 1.3 Canonical Realization; 1.4 Influence of TZs on the Response; 2 All-Pole Lowpass and Highpass; 2.1 Initial All-Pole Lowpass Parameters; 2.2 Dual Topologies; 2.3 Chebyshev Approximation with Even Order; 2.4 All-Pole Highpass Example; 3 Lowpass with Finite Zeros; 3.1 Introduction; 3.2 Alternative Topologies; 4 Conventional Bandpass; 4.1 Bandpass Transform; 4.2 Classification Symmetry or Antimetry: 4.3 A 75- to 125-MHz Bandpass: 4.4 A 96- to 104-MHz Bandpass Filter. 4.5 Comparative Analysis of the Wide and Narrow Filters5 Extraction Sequences: 5.1 The Extraction Tab: 6 Customized Bandpass Filters: 6.1 Custom Filter Specification; 6.2 Partial Extractions of FTZs; 6.3 Inexact Extractions; 6.4 Inexact Example; 7 Norton Transforms; 7.1 Norton Series Transform; 7.2 Removing a Transformer with the Series Norton; 7.3 Norton S. Sommario/riassunto S/Filter includes tools beyond direct synthesis, including a wide variety of both exact and approximate equivalent network transforms, methods for selecting the most desirable out of potentially thousands of synthesized alternatives, and a transform history record that simplifies design attempts requiring iteration. Very few software

programs are based on direct synthesis, and the additional features of

S/Filter make it a uniquely effective tool for filter design. This resource presents a practical guide to using Genesys software for microwave and RF filter design and synthesis. The focus of the book is common filter design problems and how to use direct synthesis to solve those problems. This book covers the application of S/Filter features to solving important and common filter problems. Both lumped element and distributed filters are discussed, with extensions to dielectric and quartz crystal resonators.