

1. Record Nr.	UNINA9910702536803321
Autore	Taff Laurence G. <1947->
Titolo	A search for Earth-crossing asteroids // L.G. Taff and D.F. Kostishack
Pubbl/distr/stampa	Lexington, MA : , : Lincoln Laboratory, M.I.T. [Washington, D.C.] : , : National Aeronautics and Space Administration, , [1983]
Descrizione fisica	1 online resource (7 pages, 5 unnumbered pages) : illustrations
Collana	NASA CR ; ; 175374
Soggetti	Asteroids Spectral resolution Charge coupled devices Image processing
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Title from title screen (viewed on Aug. 25, 2014).
Nota di bibliografia	Includes bibliographical references (page 7).

2. Record Nr.	UNINA9910820644803321
Autore	Bahl Inder J.
Titolo	Lumped Elements for RF and Microwave Circuits // Inder J. Bahl
Pubbl/distr/stampa	Norwood, MA : , : Artech House, , [2023] ©2023
ISBN	9781630819330 9781630819323
Edizione	[Second edition.]
Descrizione fisica	1 online resource (593 pages)
Disciplina	780
Soggetti	Lumped elements (Electronics)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Lumped Elements for RF and Microwave Circuits Second Edition -- Contents -- Preface -- Chapter 1 Introduction -- 1.1 History of Lumped Elements -- 1.2 Why Use Lumped Elements for RF and Microwave Circuits? -- 1.3 L, C, R Circuit Elements -- 1.4 Basic Design of Lumped Elements -- 1.4.1 Capacitor -- 1.4.2 Inductor -- 1.4.3 Resistor -- 1.5 Lumped-Element Modeling -- 1.6 Fabrication -- 1.7 Applications -- References -- Chapter 2 Inductors -- 2.1 Introduction -- 2.2 Basic Definitions -- 2.2.1 Inductance -- 2.2.2 Magnetic Energy -- 2.2.3 Mutual Inductance -- 2.2.4 Effective Inductance -- 2.2.5 Impedance -- 2.2.6 Time Constant -- 2.2.7 Quality Factor -- 2.2.8 Self-Resonant Frequency -- 2.2.9 Maximum Current Rating -- 2.2.10 Maximum Power Rating -- 2.2.11 Other Parameters -- 2.3 Inductor Configurations -- 2.4 Inductor Models -- 2.4.1 Analytical Models -- 2.4.2 Coupled-Line Approach -- 2.4.3 Mutual Inductance Approach -- 2.4.4 Numerical Approach -- 2.4.5 Measurement-Based Model -- 2.5 Coupling Between Inductors -- 2.5.1 Low-Resistivity Substrates -- 2.5.2 High-Resistivity Substrates -- 2.6 Electrical Representations -- 2.6.1 Series and Parallel Representations -- 2.6.2 Network Representations -- References -- Chapter 3 Printed Inductors -- 3.1 Inductors on Si Substrate -- 3.1.1 Conductor Loss -- 3.1.2 Substrate Loss -- 3.1.3 Layout Considerations -- 3.1.4 Inductor Model -- 3.1.5 Q-Enhancement Techniques -- 3.1.6 Stacked-Coil Inductor -- 3.1.7

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13.3.8 CMOS Attenuator with Integrated Switch.

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## Sommario/riassunto

Fully updated and including entirely new chapters, this Second Edition provides in-depth coverage of the different types of RF and microwave circuit elements, including inductors, capacitors, resistors, transformers, via holes, airbridges, and crossovers. Featuring extensive formulas for lumped elements, design trade-offs, and an updated and current list of references, the book helps you understand the value and usefulness of lumped elements in the design of RF, microwave and millimeter wave components and circuits. You'll find a balanced treatment between standalone lumped elements and their circuits using MICs, MMICs and RFICs technologies. You'll also find detailed information on a broader range RFICs that was not available when the popular first edition was published. The book captures - in one consolidated volume -- the fundamentals, equations, modeling, examples, references and overall procedures to design, test and produce microwave components that are indispensable in industry and academia today. With its superb organization and expanded coverage of the subject, this is a must-have, go-to resource for practicing engineers and researchers in industry, government and university and microwave engineers working in the antenna area. Students will also find it a useful reference with its clear explanations, many examples and practical modeling guidelines.

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3. Record Nr.	UNISANNIOMIL0574823		
Autore	Guzzetti, Enrico		
Titolo	A monte del business plan : cosa occorre sapere prima di preparare un effettivo business plan / Enrico Guzzetti		
Pubbl/distr/stampa	Milano, : F. Angeli, 2002		
ISBN	8846436350		
Descrizione fisica	199 p. ; 23 cm + 1 floppy disk.		
Collana	Formazione permanente , . Sezione 1, Problemi d'oggi ; 247		
Disciplina	658 658.4012		
Soggetti	Aziende - Programmazione		
Collocazione	POZZO LIB.F. CORTI	22501POZZO LIB.F. CORTI	225
Lingua di pubblicazione	Italiano		
Formato	Materiale a stampa		
Livello bibliografico	Monografia		