1. Record Nr. UNINA9910830357703321 Verma Anand K. <1948-> Autore Titolo Introduction to modern planar transmission lines: physical, analytical, and circuit models approach / / Anand K. Verma Pubbl/distr/stampa Hoboken, New Jersey:,: Wiley:,: IEEE Press,, [2021] ©2021 **ISBN** 1-119-63247-1 1-119-63244-7 1-119-63245-5 Descrizione fisica 1 online resource (941 pages) Collana Wiley - IEEE 621.319 Disciplina Soggetti Electric lines Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia

Sommario/riassunto

"The planar transmission lines form the core of modern high-frequency communication, computer, and other related technology. The subject has come up to the present level of maturity over the past 3 to 4 decades. The planar transmission lines are used not only as interconnects on the PCB board and IC chips; these are directly needed for the development of microwave and mm-wave components in form of the microwave integrated circuits (MIC). The type of planar transmission lines i.e. their physical structures and material medium have been changing with the growth of technology in many other disciplines. Such efforts during recent years propelled the MIC to move in many exotic directions- MMIC, MEMS, LTCC, use of ferroelectrics, and high-temperature superconductors, optically controlled microwave devices, non-linear planar transmission lines, DGS, EBG, and metamaterials, etc.. The researchers with varying backgrounds have contributed much to research activities. Already the divergent planar technology has contributed significantly to the advancement of highfrequency electronics and in the near future, more contribution will be made by it. The exotic planar transmission lines are not covered comprehensively in a single book. The present book is an attempt in

this direction. The proposed book aims to provide a comprehensive discussion of planar transmission lines and their applications. It focuses on physical understanding, analytical approach, and circuit models for planar transmission lines and resonators in the complex environment. The present book has evolved from the lecture notes, workshop, seminar presentation, and invited lectures delivered by the author at many universities and R&D centers. Some chapters were also initially written for my Ph.D. students to help them to understand the topics. Finally, it has evolved from notes prepared by the authors as a scheme for the self-study. The author started his academic career after 17 years of professional experience in the field of electrical engineering, broadcast transmitters, and satellite communication."--