Record Nr. Autore	UNINA9910135031203321 Sabban Albert
Titolo	Wideband RF technologies and antennas in microwave frequencies / / Dr. Albert Sabban
Pubbl/distr/stampa	Hoboken, New Jersey : , : Wiley, , 2016 ©2016
ISBN	1-119-04865-6 1-119-04866-4 1-119-04864-8
Descrizione fisica	1 online resource (464 p.)
Classificazione	TEC024000
Disciplina	621.381/3
Soggetti	Microwave communication systems Microwave receivers Microwave antennas Millimeter wave communication systems Broadband communication systems
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 at the end of each chapters and index.
Nota di contenuto	 Intro; Title Page ; Copyright; Contents; Acknowledgments; Author Biography ; Preface; 1 Electromagnetic Wave Propagation and Applications; 2 ELECTROMAGNETIC THEORY AND TRANSMISSION LINES FOR RF DESIGNERS; 3 BASIC ANTENNAS FOR COMMUNICATION SYSTEMS; 4 MIC AND MMIC MICROWAVE AND MILLIMETER WAVE TECHNOLOGIES; 5 PRINTED ANTENNAS FOR WIRELESS COMMUNICATION SYSTEMS; 6 MIC AND MMIC MILLIMETER-WAVE RECEIVING CHANNEL MODULES; 7 INTEGRATED OUTDOOR UNIT FOR MILLIMETER-WAVE SATELLITE COMMUNICATION APPLICATIONS; 8 MIC AND MMIC INTEGRATED RF HEADS; 9 MIC AND MMIC COMPONENTS AND MODULES DESIGN 10 MICROELECTROMECHANICAL SYSTEMS (MEMS) TECHNOLOGY11 LOW-TEMPERATURE COFIRED CERAMIC (LTCC) TECHNOLOGY; 12 ADVANCED ANTENNA TECHNOLOGIES FOR COMMUNICATION SYSTEM; 13 Wearable Communication and Medical Systems; 14 RF

1.

	Measurements; Index; EULA ; 1.1 Electromagnetic Spectrum; 1.2 Free- Space Propagation; 1.3 Friis Transmission Formula; 1.4 Link Budget Examples; 1.5 Noise; 1.6 Communication System Link Budget; 1.7 Path Loss; 1.9 Receivers: Definitions and Features; 1.10 Types of Radars; REFERENCES; 2.1 definitions; 2.2 electromagnetic waves; 2.3 TRANSMISSION LINES; 2.4 MATCHING TECHNIQUES 2.5 COAXIAL TRANSMISSION LINE2.6 MICROSTRIP LINE; 2.7 MATERIALS; 2.8 WAVEGUIDES; 2.9 CIRCULAR WAVEGUIDE; references; 3.1 INTRODUCTION TO ANTENNAS; 3.2 ANTENNA PARAMETERS; 3.3 DIPOLE ANTENNA; 3.4 BASIC APERTURE ANTENNAS; 3.5 HORN ANTENNAS; 3.6 ANTENNA ARRAYS FOR COMMUNICATION SYSTEMS; REFERENCES; 4.1 INTRODUCTION; 4.2 MICROWAVE INTEGRATED CIRCUITS MODULES; 4.4 MONOLITHIC MICROWAVE INTEGRATED CIRCUITS MODULES; 4.4 MONOLITHIC MICROWAVE INTEGRATED CIRCUITS MODULES; 4.4 MONOLITHIC MICROWAVE INTEGRATED CIRCUITS & DONLES; 4.4 MONOLITHIC MICROWAVE INTEGRATED CIRCUITS & DATCH ANTENNA; 5.4 LOOP ANTENNAS; 5.2 TWO LAYERS STACKED MICROSTRIP ANTENNAS; 5.3 STACKED MONOPULSE K uB AND PATCH ANTENNA; 5.4 LOOP ANTENNAS; 5.5 WIRED LOOP ANTENNA 5.6 RADIATION PATTERN OF A LOOP ANTENNA NEAR A METAL SHEETS. 7 PLANAR INVERTED-F ANTENNA; REFERENCES; 6.1 18-40 GHz COMPACT RF MODULES; 6.3 18-40 GHz Integrated Compact Switched Filter Bank Module; 6.4 FSU PERFORMANCE; 6.5 FSU DESIGN AND ANALYSIS; 6.6 FSU FABRICATION; 6.7 CONCLUSIONS; REFERENCES; 7.1 THE ODU DESCRIPTION; 7.2 THE LOW NOISE UNIT: LNB; 7.4 ISOLATION BETWEEN RECEIVING AND TRANSMITTING CHANNELS; 7.6 THE ODU MECHANICAL PACKAGE; 7.7 LOW NOISE AND LOW-COST K-BAND COMPACT RECEIVING CHANNEL FOR VSAT SATELLITE COMMUNICATION GROUND TERMINAL 7.8 KA-BAND INTEGRATED HIGH POWER AMPLIFIERS, SSPA, FOR VSAT SATELLITE COMMUNICATION GROUND TERMINAL7.9 CONCLUSIONS; REFERENCES; 8.1 INTEGRATED Ku-BAND AUTOMATIC TRACKING SYSTEM; 8.2 SUPER COMPACT X-BAND MONOPULSE TRANSCEIVER; REFERENCES; 9.6 WIDEBAND PHASED ARRAY DIRECTION FINDING SYSTEM; 9.7 CONCLUSIONS; REFERENCES; 0.1.1 INTRODUCTION; 10.3 W-BAND MEMS DETECTION ARRAY; 10.4 ARRAY
Sommario/riassunto	"This book presents applications of Wide Band RF Technologies and Antennas. The author begins by discussing electromagnetic theory for RF designers. The book covers electromagnetic theory and microwave and mm wave RF technologies. The author examines MIC, MMIC, MEMS, and LTCC technologies. The text will also present information on meta- materials, design of microwave and mm wave systems, along with a look at microwave and mm wave receivers, transmitters and antennas"