1. Record Nr. UNINA9910829927003321

Titolo	High power microwave sources and technologies using metamaterials / / edited by John Luginsland [and three others]
Pubbl/distr/stampa	Piscataway, New Jersey ; ; Hoboken, New Jersey : , : IEEE Press : , : Wiley, , [2022] ©2022
ISBN	1-119-38447-8 1-119-38445-1 1-119-38446-X
Descrizione fisica	1 online resource (307 pages)
Collana	IEEE Press series on RF and microwave technology
Disciplina	621.3813
Soggetti	Power amplifiers Microwave devices Metamaterials
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Multi-transmission line model for slow-wave structures interacting with electron beams and multimode synchronization / Ahmed F. Abdelshafy, Mohamed A. K. Othman, Alexander Figotin, and Filippo Capolino -- Generalized Pierce model from the Lagrangian / Alex Figotin and Guillermo Reyes -- Dispersion engineering for slow wave structure design / Ushemadzoro Chipengo and Niru K. Nahar, John L. Volakis, Adrian W. Cross, and Alan D.R. Phelps.
Sommario/riassunto	"Metamaterials have been actively researched for well over a decade, primarily by the optics and then the low power microwave communities. The high power microwave community was late to adopt them, primarily because of concerns of metamaterial survivability since they are inherently highly resonant structures. In the context of this book, metamaterial structures are broadly defined as periodic structures that might have halfwavelength periodicity or have sub-wavelength periodicity; they may be double positive and they may be double negative. Furthermore, it is shown how traditional periodic structures (used since the 1940s and 1950s) can have properties that,

until recently, were attributed to double negative metamaterial structures"--