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Titolo	RF Tunable Devices and Subsystems: Methods of Modeling, Analysis, and Applications [[electronic resource] /] / by Qizheng Gu
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ISBN	3-319-09924-8
Edizione	[1st ed. 2015.]
Descrizione fisica	1 online resource (368 p.)
Disciplina	620 621.3815 621.382
Soggetti	Electronic circuits Signal processing Image processing Speech processing systems Electrical engineering Circuits and Systems Electronic Circuits and Devices Signal, Image and Speech Processing Communications Engineering, Networks
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	Introduction -- Characterizations of RF Tunable Devices -- Circuit Modeling of RF Tunable Devices and Their Networks -- Nonlinearity Analysis -- Tunable Matching Networks -- Matching Network Tuning and Control Methods -- Tunable Filters and Filter Frequency Automatic Control Loop -- Tunable Antennas -- Miscellaneous.
Sommario/riassunto	This book serves as a hands-on guide to RF tunable devices, circuits and subsystems. An innovative method of modeling for tunable devices and networks is described, along with a new tuning algorithm, adaptive matching network control approach, and novel filter frequency automatic control loop. The author provides readers with the necessary background and methods for designing and developing

tunable RF networks/circuits and tunable RF font-ends, with an emphasis on applications to cellular communications. · Discusses the methods of characterizing, modeling, analyzing, and applying RF tunable devices and subsystems; · Explains the necessary methods of utilizing RF tunable devices and subsystems, rather than discussing the RF tunable devices themselves; · Presents and applies methods for MEMS tunable capacitors, which can be used for any RF tunable device; · Uses analytic methods wherever possible and provides numerous, closed-form solutions; · Includes innovative modeling techniques for tunable devices and networks, new tuning algorithm and adaptive matching network control approach, and novel filter frequency automatic control loop.