

1. Record Nr.	UNINA9910784148303321
Autore	Komarov Igor V.
Titolo	Fundamentals of short-range FM radar // Igor V. Komarov, Sergey M. Smolskiy ; English translation edited by David K. Barton
Pubbl/distr/stampa	Boston : , : Artech House, , ©2003 [Piscataway, New Jersey] : , : IEEE Xplore, , [2003]
ISBN	1-58053-733-2
Descrizione fisica	1 online resource (303 p.)
Collana	Artech House radar library
Altri autori (Persone)	SmolskiySergey M
Disciplina	621.3848
Soggetti	Radar Remote sensing
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 and index.
Nota di contenuto	Fundamentals of Short Range FM Radar; Contents vii; Preface xiii; Chapter 1 Introduction to Frequency-Modulated Continuous-Wave Radar 3; Chapter 2 Basic Theory of Short-Range FM Radar 11; Chapter 3 Characteristics of the Converted Signal with Different Transmitter Modulations 27; Chapter 4 Integrated Methods of Converted Signal Processing 49; Chapter 5 Spectral Methods of Processing the Converted Signal 89; Chapter 6 Analysis of Constant Frequency Oscillators 125; Chapter 7 Analysis of FM Systems Using Symbolical Abbreviated Equations 151 Chapter 8 Output Voltage of a Frequency-Controlled Oscillator 173Chapter 9 Nonlinearity and Linearization in Varactor Control of FM Oscillators 201; Chapter 10 Theory of the Single-Tuned Transistor Autodyne and Optimization of Its Modes 227; Chapter 11 Autodyne Modes of Transistor Oscillators with Strong Interference 249; List of Symbols 275; About the Authors 281; Index 285
Sommario/riassunto	Here's a unique new resource that offers you a solid understanding of the fundamental theory, operation principles and applications of short-range frequency modulated continuous wave (FM CW) radar. You learn how to choose the structural scheme of short-range FM radar, and determine the optimal algorithm of useful signal processing necessary for ensuring the technical characteristic of radar. Moreover, this practical reference shows you how to ensure the minimum level of

radar signal parasitic amplitude, calculate modulation signal distortion,
and compensate for nonlinear distortion.
