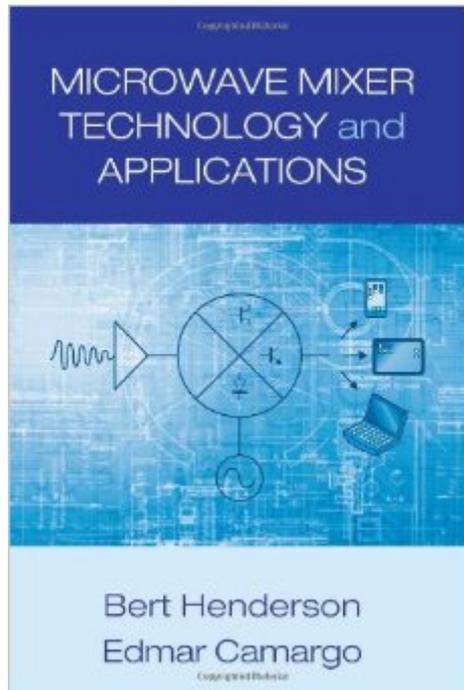


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# Microwave Mixer Technology And Applications (Artech House Microwave Library (Hardcover))



## Synopsis

Although microwave mixers play a critical role in wireless communication and other microwave applications employing frequency conversion circuits, engineers find that most books on this subject emphasize theoretical aspects, rather than practical applications. That's about to change with the forthcoming release of *Microwave Mixer Technology and Applications*. Based on a review of over one thousand patents on mixers and frequency conversion, authors Bert Henderson and Edmar Camargo have written a comprehensive book for mixer designers who want solid ideas for solving their own design challenges. Many of the important and most interesting patents and related circuits are discussed in the several application oriented chapters. In addition, important contributions from the technical literature are included to provide a solid theoretical foundation. This book contains both introductory and advanced material about active and passive mixers that use bipolar transistor, FET, or diode switching devices. Theory and design details are presented for dozens of important mixer designs, with practical application information derived from the authors' decades of experience.

## Book Information

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## Customer Reviews

Are you a design- and professional engineer? If you are, then this book is for you. Authors Bert Henderson and Edmar Camargo, have done an outstanding job of writing a book that provides the

new generation of design engineers with basic theory; a glimpse into the history of mixer technology development; and, to professional engineers, it offers a wealth of material on important publications and patents. Authors Henderson and Camargo, begin with an introduction to the origins of mixer technology, starting with the prevacuum tube era, up to its golden age in the late 1940s and early 1950s. Next, the authors discuss the application of mixers in systems, along with the parameters associated with mixers. Then, they discuss the modeling of diode, bipolar, and FET devices that apply particularly to use in frequency conversion circuits. In addition, the authors describe the basic building blocks in mixers, with emphasis on balun theory, one of the most important components in a mixer. They also introduce the basic theory of diode mixers, including the conventional theory by Torrey and Whitmer in the 1940s, the work of Saleh in the 1970s, and the work of Maas in recent years. The authors continue with a summary of patents and major publications on the application of diodes to various topologies and classes of mixers. Next, they deal with the theory of bipolar transistor mixers; as well as, applications. Then, the authors detail the theory of FET mixers and the principles of operation of the FET family for active and passive approaches. In addition, they discuss the applications of passive FET mixers. Finally, the authors present the applications of active FET mixers.

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