

Cambridge University Press

978-0-521-19323-8 - X-Parameters: Characterization, Modeling, and Design of Nonlinear RF
and Microwave Components

David E. Root, Jan Verspecht, Jason Horn and Mihai Marcu

Copyright Information

[More information](#)

X-Parameters

Characterization, Modeling, and Design of
Nonlinear RF and Microwave Components

DAVID E. ROOT

Agilent Technologies, Inc.

JAN VERSPECHT

Agilent Technologies, Inc.

JASON HORN

Agilent Technologies, Inc.

MIHAI MARCU

Agilent Technologies, Inc.



CAMBRIDGE
UNIVERSITY PRESS

Cambridge University Press
978-0-521-19323-8 - X-Parameters: Characterization, Modeling, and Design of Nonlinear RF
and Microwave Components
David E. Root, Jan Verspecht, Jason Horn and Mihai Marcu
Copyright Information
[More information](#)

CAMBRIDGE UNIVERSITY PRESS

University Printing House, Cambridge CB2 8BS, United Kingdom

Published in the United States of America by Cambridge University Press, New York

Cambridge University Press is part of the University of Cambridge.

It furthers the University's mission by disseminating knowledge in the pursuit of education, learning and research at the highest international levels of excellence.

www.cambridge.org

Information on this title: www.cambridge.org/9780521193238

© Cambridge University Press 2013

This publication is in copyright. Subject to statutory exception and to the provisions of relevant collective licensing agreements, no reproduction of any part may take place without the written permission of Cambridge University Press.

First published 2013

Printing in the United Kingdom by TJ International Ltd. Padstow Cornwall

A catalog record for this publication is available from the British Library

Library of Congress Cataloging in Publication data

Root, David E.

X-parameters : characterization, modeling, and design of nonlinear RF and microwave components / David E. Root, Agilent Technologies Inc., Jan Verspecht, Agilent Technologies Inc., Jason Horn, Agilent Technologies Inc., Mihai Marcu, Agilent Technologies Inc.

pages cm – (The Cambridge RF and microwave engineering series)

Includes bibliographical references.

ISBN 978-0-521-19323-8 (Hardback)

1. Microwave circuits—Design and construction—Mathematics. 2. Electric circuits, Nonlinear—Design and construction—Mathematics. 3. Parametric devices—Design and construction—Mathematics.

4. Differential equations. I. Verspecht, Jan. II. Horn, Jason. III. Marcu, Mihai. IV. Title.

TK7876.R66 2013

621.3841'2—dc23 2013013915

“X-parameters” is a trademark of Agilent Technologies, Inc.

ISBN 978-0-521-19323-8 Hardback

Cambridge University Press has no responsibility for the persistence or accuracy of URLs for external or third-party internet websites referred to in this publication, and does not guarantee that any content on such websites is, or will remain, accurate or appropriate.