1. Record Nr. UNINA9910814255503321 Autore Karmakar Nemai Chandra Titolo Chipless RFID Reader Architecture Pubbl/distr/stampa Norwood:,: Artech House,, 2013 [Piscatagay, New Jersey]:,: IEEE Xplore,, [2013] **ISBN** 1-60807-562-1 Descrizione fisica 1 online resource (325 p.) Collana Artech House microwave library Altri autori (Persone) KoswattaRandika KalansuriyaPrasanna Disciplina 621.384192 Soggetti Radio frequency identification systems 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 ""Contents""; ""Preface""; ""Introduction to Radio Frequency Identification (RFID)""; ""Recent Development of Chipless RFID Tags""; ""Backscatter-Based Chipless Tag""; ""Monash University Chipless RFID Systems""; ""References ""; ""Acknowledgments""; ""Foreword""; ""1 Introduction""; ""1.1 Chipless RFID ""; ""1.2 Chipless RFID Tag Reader""; ""1.3 Executive Summaries""; ""1.3.1 Operating Principle of Chipless RFID Systems ""; ""1.3.2 Reader Architecture for Chipless Reader ""; ""1.3.3 Physical Layer Development of Chipless RFID Tag Readers ""; ""1.4 Conclusion""; ""Questions"" ""Numerical Questions"""References""; ""2 Chipless RFID System Operating Principles ""; ""2.1 Chipless RFID Tags""; ""2.1.1 Time Domain (TD) Based Chipless RFID Tags ""; ""2.1.2 Frequency Domain Based Tags""; ""2.1.3 Image Based Tags""; ""2.1.4 Hybrid Domain Chipless RFID Tags""; ""2.1.5 Summary of the Review of Chipless RFID Tags ""; ""2.2 Multiresonator Based Chipless RFID Tag ""; ""2.2.1 Operating Principle for Reading of Multiresonator Based Chipless RFID Tags "": ""2.3 Methods for Reading RFID Tags""; ""2.3.1 Reading Time Domain Based Chipless RFID Tags"" ""2.3.2 Reading Frequency Domain Based Chipless RFID Tags"""2.3.3 Reading Hybrid Domain Based Chipless RFID Tags "": ""2.3.4 SAR Based Reading Process""; ""2.4 Conclusion""; ""Questions""; ""References""; ""3 Chipless RFID Readers"; ""3.1 Introduction to Chipless RFID Reader"";

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## Sommario/riassunto

In the era of information communication technology (ICT), radio frequency identification (RFID) has been going through tremendous development. RFID technology has the potential of replacing barcodes due to its large information carrying capacity, flexibility in operations, and applications. The deployment of RFID has been hindered by its cost. However, with the advent of low powered ICs, energy scavenging techniques, and low-cost chipless tags, RFID technology has achieved significant development. This book addresses the new reader architecture, presents fundamentals of chipless RFID systems,