1. Record Nr. UNINA9910819785203321 Autore Gudnason Gunnar Titolo CMOS circuit design for RF sensors / / by Gunnar Gudnason and Erik Bruun Pubbl/distr/stampa Boston, : Kluwer Academic, c2002 **ISBN** 1-280-20015-4 9786610200153 0-306-47528-6 Edizione [1st ed.] Descrizione fisica 1 online resource (VII, 176 p.) Collana The Kluwer international series in engineering and computer science;; SECS 695. Analog circuits and signal processing BruunErik <1949-> Altri autori (Persone) Disciplina 621.39/732 Soggetti Detectors - Design and construction Electronic circuit design Metal oxide semiconductors, Complementary - Power supply Very high speed integrated circuits - Design and construction Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Bibliographic Level Mode of Issuance: Monograph Nota di bibliografia Includes bibliographical references (p. 169-176). Nota di contenuto Link Design -- Receivers -- Power Supply Management -- Reference Circuits -- Case Studies. CMOS Circuit Design for RF Sensors is about CMOS circuit design for Sommario/riassunto sensor and actuators to be used in wireless RF systems. The main application is implantable transducers for biomedical purposes such as sensing of nerve signals and electrical stimulation of nerves. Special focus is put on the power and data link in a wireless system with transducers which are powered via the RF link. Novel principles and methods are presented for the regulation of power to the sensors and for the distribution of data and power in an implanted transducer system. One of the main problems in such systems is the transmission of power via an RF link. This problem is analyzed in detail and solutions incorporating an RF magnetic link to the transducers are identified. The theoretical results are supported by experiments from CMOS chips

including a system chip for functional electrical stimulation (FES).