1. Record Nr. UNINA9910783251303321

Autore	Gudnason Gunnar
Titolo	CMOS circuit design for RF sensors
Pubbl/distr/stampa	Boston, MA : , : Springer US, , 2002
ISBN	1-280-20015-4 9786610200153 0-306-47528-6
Descrizione fisica	1 online resource (VII, 176 p.)
Collana	The Kluwer international series in engineering and computer science CMOS circuit design for RF sensors
Disciplina	621.39/732
Soggetti	Detectors - Design and construction Electronic circuit design - Power supply Metal oxide semiconductors, Complementary - Design and construction Very high speed integrated circuits Electrical & Computer Engineering Engineering & Applied Sciences Electrical Engineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Bibliographic Level Mode of Issuance: Monograph
Nota di contenuto	Link Design -- Receivers -- Power Supply Management -- Reference Circuits -- Case Studies.
Sommario/riassunto	CMOS Circuit Design for RF Sensors is about CMOS circuit design for 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).