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of the dipole antenna
2.1.2. Fat antennas and tip loading2.1.3. Meandered dipoles; 2.1.4. Influence of dielectric and metallic materials - losses and detuning; 2.1.5. Near-field/far-field behavior of UHF RFID tags; 2.2. Matching between the antenna impedance and the microchip impedance; 2.2.1. Matching conditions; 2.2.2. L-matching basics; 2.2.3. Equivalent electrical circuits; 2.2.4. Double-tuned matching; 2.2.5. Synthesis of a double-tuned tag and a naive tag; 2.2.6. Alternative implementation of the optimum double-tuned match; 2.2.7. Example of a double-tuned match tag and use in variable environments
2.3. RFID tag antennas using an inductively coupled feed2.3.1. Analytical model; 2.3.2. Antenna design and results; 2.4. Combined RFID tag antenna for recipients containing liquids; 2.4.1. Module description; 2.4.2. Inductive coupling and antenna matching; 2.4.3. Antenna design; 2.4.4. Measurements of the initial tag; 2.4.5. Measurements with an empty and filled plastic recipient; 2.4.6. Combined antenna; 2.4.7. Discussion relative to the respect of the matching conditions; 2.5. Tag on metal; 2.5.1. Radiation efficiency of low-profile patch antennas; 2.5.2. Ultra-thin metal tags
2.5.3. Thick metal tags2.5.4. Improved dipole designs on metallic surfaces; 2.6. Bibliography; CHAPTER 3. THE BACKSCATTERING TECHNIQUEAND ITS APPLICATION; 3.1. Backscattering principle of communication by between-base station and tag; 3.1.1. The forward link: communication from the base station to the tag; 3.1.2. The return link: communication from the tag to the base station; 3.2. The merit factor of a tag, e s or RCS; 3.2.1. Definition of the variation of the radar cross section, e s or RCS; 3.2.2. Estimation of e s as a function of ; 3.2.3. The variation e s = f(,1)
3.3. Variations of e s =f(a)

Sommario/riassunto

UHF Radio Frequency Identification (RFID) is an electronic tagging technology that allows an object, place or person to be automatically identified at a distance without a direct line-of-sight using a radio wave exchange. Applications include inventory tracking, prescription medication tracking and authentication, secure automobile keys, and access control for secure facilities.This book begins with an overview of UHF RFID challenges describing the applications, markets, trades and basic technologies. It follows this by highlighting the main features distinguishing UHF (860MHz-960MHz) an

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Descrizione fisica	1 online resource (276 p.)
Soggetti	Technology: general issues
Lingua di pubblicazione	Inglese
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Sommario/riassunto	This book is devoted to the teaching and learning of fluid mechanics. Fluid mechanics occupies a privileged position in the sciences; it is taught in various science departments including physics, mathematics, mechanical, chemical and civil engineering and environmental sciences, each highlighting a different aspect or interpretation of the foundation and applications of fluids. While scholarship in fluid mechanics is vast, expanding into the areas of experimental, theoretical and computational fluid mechanics, there is little discussion among scientists about the different possible ways of teaching this subject. We think there is much to be learned, for teachers and students alike, from an interdisciplinary dialogue about fluids. This volume therefore highlights articles which have bearing on the pedagogical aspects of fluid mechanics at the undergraduate and graduate level.