1. Record Nr. UNINA9910456484903321

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Titolo	EMI protection for communication systems / / Kreesimir Malaric
Pubbl/distr/stampa	Boston : , : Artech House, , ©2010 [Piscataqay, New Jersey] : , : IEEE Xplore, , [2009]
ISBN	1-59693-314-3
Descrizione fisica	1 online resource (290 p.)
Disciplina	621.382 621.382/24
Soggetti	Electromagnetic interference Wireless communication systems Electronic books.
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	EMI Protection forCommunication Systems; Contents; Preface; Chapter 1 Communications Systems; 1.1 Components of Communications Systems; 1.2 Transmitter Systems; 1.2.1 Transmitter; 1.2.2 Randomization; 1.2.3 Encryption; 1.2.4 Encoder; 1.2.5 Interleaving; 1.2.6 Modulation; 1.2.7 Mixer (Upconverter); 1.2.8 Filter; 1.3 Receiver Systems; 1.3.1 Filter; 1.3.2 Mixer (Downconverter); 1.3.3 Demodulator; 1.3.4 Deinterleaver; 1.3.5 Decoder; 1.3.6 Decryptor; 1.3.7 Derandomizer; 1.3.8 Demultiplexer; 1.3.9 Received Power; 1.4 User Interface; 1.4.1 Graphical User Interface (GUI) 1.4.2 Voice User Interface (VOI)1.5 Antenna Systems; 1.5.1 Duplexer; 1.5.2 Antenna; 1.6 Power Supplies; 1.6.1 Power Supply Types; 1.6.2 Power Amplifier; 1.7 Considerations for Voice Versus Data; 1.7.1 Text; 1.7.2 Images; 1.7.3 Voice; 1.7.4 Video; Selected Bibliography; Chapter 2Electromagnetic Spectrum Used forCommunications; 2.1 Electromagnetic Spectrum; 2.1.1 Extra Low Frequency (ELF); 2.1.2 Super Low Frequency (SLF); 2.1.3 Ultra Low Frequencies (ULF); 2.1.4 Very Low Frequency (VLF); 2.1.5 Low Frequency (LF); 2.1.6 Medium Frequency (MF); 2.1.7 High Frequency (HF) 2.1.8 Very High Frequency (VHF)2.1.9 Ultra High Frequency (UHF); 2.1.10 Super High Frequency (SHF); 2.1.11 Extra High Frequency (EHF);

2.1.12 Infrared (IR); 2.1.13 Visible; 2.2 Spectrum Division; Selected Bibliography; Chapter 3 Electromagnetic Properties ofCommunications Systems; 3.1 Fundamental Communications System Electromagnetics; 3.1.1 Smith Chart; 3.1.2 Snell's Law of Reflection and Refraction; 3.2 Wave Generation and Propagation in Free Space; 3.2.1 Maxwell's Equations; 3.2.2 Wave Propagation; 3.2.3 Wave Polarization; 3.2.4 Fresnel Knife-Edge Diffraction; 3.2.5 Path Loss Prediction
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Sommario/riassunto

In recent years the protection of communication services operating in the same of adjacent channels has become more and more challenging. Communication systems need to be protected from natural and man-made interference. This practical reference provides a thorough understanding of how to protect communication systems from intentional and unintentional electromagnetic interference. Engineers learn how to overcome critical problems in both digital and analog communications. This unique resource shows how to shield equipment from electrical and magnetic fields, design TEM and GTEM-Cell, build capacitive coupling clamps for susceptibility tests, protect electronic equipment with filters, and calculate the measurement uncertainty. Professionals find numerous, well-illustrated examples that make challenging electromagnetics issues far easier to comprehend. CD-ROM Included! Contains time-saving software that helps engineers perform important calculations, including characteristic impedance of TEM-Cell, cut-off frequencies for higher order modes, and cut-off and resonant frequencies for GTEM-cell.