
Description: Electrical Engineering Printed Circuit Board Design Techniques for EMC Compliance A Handbook for Designers Second Edition A Volume in the IEEE Press Series on Electronics Technology Robert J. Herrick, Series Editor Electromagnetic compatibility (EMC) is an engineering discipline often identified as "black magic." This belief exists because the fundamental mechanisms on how radio frequency (RF) energy is developed within a printed circuit board (PCB) is not well understood by practicing engineers. Rigorous mathematical analysis is not required to design a PCB. Using basic EMC theory and converting complex concepts into simple analogies helps engineers understand the mitigation process that deters EMC events from occurring. This user–friendly reference covers a broad spectrum of information never before published, and is as fluid and comprehensive as the first edition. The simplified approach to PCB design and layout is based on real–life experience, training, and knowledge. Printed Circuit Board Techniques for EMC Compliance, Second Edition will help prevent the emission or reception of unwanted RF energy generated by components and interconnects, thus achieving acceptable levels of EMC for electrical equipment. It prepares one for complying with stringent domestic and international regulatory requirements. Also, it teaches how to solve complex problems with a minimal amount of theory and math. Essential topics discussed include:

* Introduction to EMC
* PCB basics
* Bypassing and decoupling
* Clock Circuits–Trace Routing–Terminations
* Interconnects and I/O
* Electrostatic discharge protection
* Backplanes–Ribbon Cables–Daughter Cards
* Miscellaneous design techniques

This rules–driven book–formatted for quick access and cross–reference–is ideal for electrical and EMC engineers, consultants, technicians, and PCB designers regardless of experience or educational background.

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