

IEEE TRANSACTIONS ON ELECTROMAGNETIC COMPATIBILITY

A PUBLICATION OF THE IEEE ELECTROMAGNETIC COMPATIBILITY SOCIETY



MAY 2011

VOLUME 53

NUMBER 2

IEMCAE

(ISSN 0018-9375)

EMC MANAGEMENT

- Improved IC Production Yield by Taking Into Account the Electromagnetic Interference Level During Testing C.-N. Hu and H.-C. Ko 266

EMC MEASUREMENTS

Field Probes

- An Improved Method for Free-Space Antenna-Factor Measurement by Using the MUSIC Algorithm H.-F. Chen and K.-H. Lin 274

Reverberation Chambers

- Including Directivity in Reverberation Chamber Radiated Susceptibility Testing M. Höijer 283

- Analysis of the Independent Positions of Reverberation Chamber Stirrers as a Function of Their Operating Conditions F. Moglie and V. M. Primiani 288

- The Role of Losses in the Definition of the Overmoded Condition for Reverberation Chambers and Their Statistics A. Cozza 296

- Coupling of Stochastic Electromagnetic Fields to a Transmission Line in a Reverberation Chamber M. Magdowski, S. V. Tkachenko, and R. Vick 308

ELECTROMAGNETIC ENVIRONMENT

Emissions

- Method for Determining Whether or Not Information is Contained in Electromagnetic Disturbance Radiated From a PC Display T. Tosaka, Y. Yamamoto, and K. Fukuiaga 318

Human Exposure and SAR

- Design of Optimized Multilayer PIFA With the EBG Structure for SAR Reduction in Mobile Applications S. il Kwak, D.-U. Sim, and J. H. Kwon 325

ELECTROMAGNETIC INTERFERENCE CONTROL

Cable Shielding

- Cable Tray Connections for Electromagnetic Interference (EMI) Mitigation P. S. van der Merwe, H. C. Reader, and D. J. Rossouw 332

Immunity

- An Equation-Based Hybrid Method for Predicting Radiated Susceptibility Responses of RF/Microwave Circuits H.-C. Hsieh, C.-N. Chiu, M.-S. Lin, C.-H. Wang, and C. H. Chen 339

- Complete Time-Domain Diode Modeling: Application to Off-Chip and On-Chip Protection Devices B. B. M'Hamed, F. Torrès, A. Reineix, and P. Hoffmann 349

(Contents Continued on Page 265)

请阅后放回:

排架号 E192 处



(Contents Continued from Front Cover)

Interference Reduction

- A Crosstalk Reduction Technique for Microstrip MTL Using Mode Velocity Equalization..... J. Lee, S. Lee, and S. Nam 366

Material Characterization

- A New Directional Coupler to Measure the Performances of Noncontact Devices Used for the Reduction of the Shielding Current on Cables..... M. Zeino and G. Mönich 372

HIGH POWER ELECTROMAGNETICS

HPEM

- A Fan-Beam Radiator Using Waveguide's Narrow Wall for Horizontal Polarization and High Power..... N. R. Devarapalli, C. E. Baum, C. G. Christodoulou, and E. Schamiloglu 380

Lightning

- Some Inferences From Radial Electric Fields Measured Inside the Lightning-Channel Corona Sheath..... G. Maslowski, V. A. Rakov, and M. Miki 390

- General Time-Domain Formula for Horizontal Electric Field Excited by Lightning..... D. Li, C. Wang, and X. Liu 395

- The Response of Grounding Electrodes to Lightning Currents: The Effect of Frequency-Dependent Soil Resistivity and Permittivity..... S. Visacro, R. Alipio, M. H. M. Vale, and C. Pereira 401

- Remote Measurements of Currents in Cloud Lightning Discharges..... A. Nag, V. A. Rakov, and J. A. Cramer 407

- Voltages Induced in Single-Phase Overhead Lines by First and Subsequent Negative Lightning Strokes: Influence of the Periodically Grounded Neutral Conductor and the Ground Resistivity..... F. H. Silveira, A. De Conti, and S. Visacro 414

- Electromagnetic Coupling of Lightning to Power Lines: Transmission-Line Approximation versus Full-Wave Solution..... A. Andreotti, D. Assante, and V. A. Rakov L. Verolino 421

- Suppression of Common-Mode Radiation and Mode Conversion for Slot-Crossing GHz Differential Signals Using Novel Grounded Resonators..... H.-H. Chuang and T.-L. Wu 429

- Radiated Fields From Lightning Strikes to Tall Structures: Effect of Upward-Connecting Leader and Reflections at the Return Stroke Wavefront..... A. Mosaddeghi, F. Rachidi, M. Rubinstein, F. Napolitano, D. Pavanello, V. O. Shostak, W. Janischewskyj, and M. Nyffeler 437

- Comparison of Lightning-Induced Current Simulations in the Time and Frequency Domains Using Different Computer Codes..... K. Aniserowicz and T. Maksimowicz 446

NUMERICAL TECHNIQUES

- Time-Domain Finite-Element Method for the Transient Response of Multiconductor Transmission Lines Excited by an Electromagnetic Field..... X. Liu, X. Cui, and L. Qi 462

PRINTED CIRCUIT BOARDS, INTERCONNECTS, AND SIGNAL INTEGRITY

- Calculation of Optimal Ground Post Resistance for Reducing Emissions from Chassis-Mounted Printed Circuit Boards..... X. He, T. Hubing, H. Ke, N. Kobayashi, K. Morishita, and T. Harada 475

- A Simple and Efficient Design Procedure for Planar Electromagnetic Bandgap Structures on Printed Circuit Boards..... L. Raimondo, F. De Paulis, and A. Orlandi 482

- Worst Case-Induced Disturbances in Microstrip Interchip Interconnects by an External Electromagnetic Plane Wave—Part II: Analysis and Validation..... J. L. Lagos and F. Fiori 491

TRANSMISSION LINES

- Stochastic Analysis of Multiconductor Cables and Interconnects..... I. S. Stievano, P. Manfredi, and F. G. Canavero 501

- Plane-Wave Coupling to a Twisted-Wire Pair Above Ground..... S. A. Pignari and G. Spadacini 508

WIRELESS TECHNOLOGY

- Analysis of Modulated Monofractal Noise for Noise Modeling in Wireless Networks..... L. Woo, K. Ferens, W. Kinsner, and M. Potter 524

SHORT PAPERS

- Closed-Form Expression for the Net Ground Plane Inductance of Coplanar Stripline PCBs..... H. Li and G. Subramanyam 531

- Mismatch Correction by Measurements of Conducted Radio Disturbances With AMN..... J. Sroka 534

- Indirect Lightning-Induced Voltages Along a Railway Catenary-Track Multiconductor Transmission-Line System With Lumped Components..... Z. Mazloom, N. Theethayi, and R. Thottappillil 537

- Maximum Power Radiated From an Aperture Antenna Before Air Breakdown in the Near-Field Region..... J.-H. Zhang and J.-L. Wang 540

- Radio Frequency Interference and Lightning Studies of a Square Kilometre Array Demonstrator Structure..... P. G. Wiid, H. C. Reader, and R. H. Geschke 543

- A Mathematical Formalism for Surge Generator Correlation..... T.-C. Toh 547