

IEEE

MICROWAVE AND WIRELESS COMPONENTS LETTERS®

A PUBLICATION OF THE IEEE MICROWAVE THEORY AND TECHNIQUES SOCIETY



SEPTEMBER 2016

VOLUME 26

NUMBER 9

IMWCBJ

(ISSN 1531-1309)

LETTERS

Theory and Numerical Methods

- An Instrumental-Variable QR Decomposition Vector-Fitting Method for Modeling Multiport Networks Characterized by Noisy Frequency Data *M. Sahouli and A. Dounavis* 645
- A Theorem for Multi-Frequency DC-Feed Network Design *M. A. Maktoomi, M. Akbarpour, M. S. Hashmi, and F. M. Ghannouchi* 648
- Complex-Frequency Shifted PML Formulation for the 3-D MNL-FDTD Method *K. Fujita* 651
- Conduction Mode Analysis and Impedance Extraction of Shielded Pair Transmission Lines *A. Chen, F. Liang, B.-Z. Wang, W.-S. Zhao, and G. Wang* 654

Passive Components and Circuits

- Fully Printed Gap Waveguide With Facilitated Design Properties *M. S. Sorkherizi and A. A. Kishk* 657
- Broadband Microstrip-to-Microstrip Vertical Transition Design *Z. Tao, J. Zhu, T. Zuo, L. Pan, and Y. Yu* 660
- Enhanced Bandwidth and Diversity in Real-Time Analog Signal Processing (R-ASP) Using Nonuniform C-Section Phasers *S. Taravati, S. Gupta, Q. Zhang, and C. Caloz* 663
- Mono-Pulse Comparator in Rectangular Co-Axial Guide for Satellite Ground Station *G. B., S. Reddy D., A. V. G. Subramanyam, V. S. Kumar, and V. V. Srinivasan* 666
- Bandwidth of Complementary Split Ring Resonator for Rectangular Waveguide BPFs *W. A. Arriola, Y.-S. Kim, J.-W. Lee, and I. S. Kim* 669
- Compact Dual-Band Filter Using Open/Short Stub Loaded Stepped Impedance Resonators (OSLSIRs/SSLSIRs) *W. Jiang, W. Shen, T. Wang, Y. M. Huang, Y. Peng, and G. Wang* 672
- Single- and Dual-Band Bandpass Filters Using Coupled Stepped-Impedance Resonators With Embedded Coupled-Lines *H. Zhu and A. M. Abbosh* 675
- Multilayer Substrate Integrated Waveguide (SIW) Filters With Higher-Order Mode Suppression *D. Jia, Q. Feng, Q. Xiang, and K. Wu* 678
- Compact Size On-Chip 60 GHz H-Shaped Resonator BPF *N. Mahmoud, A. Barakat, A. B. Abdel-Rahman, A. Allam, and R. K. Pokharel* 681
- Reconfigurable Single/Multi-Band Filtering Power Divider Based on Quasi-Bandpass Sections *D. Psychogiou, R. Gómez-García, A. C. Guyette, and D. Peroulis* 684

Electron Devices and Device Modeling

- Effectiveness of $p+$ Layer in Mitigating Substrate Noise Induced by Through-Silicon Via for Microwave Applications *X. Yin, Z. Zhu, Y. Yang, and R. Ding* 687

(Contents Continued on Back Cover)



A Large-Signal Statistical Model and Yield Estimation of GaN HEMTs Based on Response Surface Methodology	690
Alternative Determination of the Intrinsic Cut-Off Frequency Applied to a Degraded MOSFET	693
<i>Hybrid and Monolithic RF Integrated Circuits</i>	
A K-Band High Power and High Isolation Stacked-FET Single Pole Double Throw MMIC Switch Using Resonating Capacitor	696
Simple Design of a Class-J Amplifier With Predetermined Efficiency	699
A Triple-Power-Mode Digital Polar CMOS RF Power Amplifier With LO Duty Cycle Control	702
Electronically Reconfigurable Reflective Phase Shifter for Circularly Polarized Reflectarray Systems	705
A High Dynamic Range Power Detector at X-Band	708
Compact Tuning Circuit for Enhanced Linearity in a Ku-Band MMIC VCO	711
High-Performance Low-Cost Dual 15 GHz/30 GHz CMOS LC Voltage-Controlled Oscillator	714
5 GHz CMOS Quadrature VCO Using Trifilar-Transformer-Coupling Technology	717
Ultra-Wideband Active Balun Topology and Its Implementation on SiGe BiCMOS Across DC-50 GHz	720
A 57–78 GHz Frequency Tripler MMIC in 65-nm CMOS	723
A D-Band Frequency Sextupler MMIC With Very Low DC Power Consumption	726
A 5.8 GHz 54 Mb/s Backscatter Modulator for WLAN With Symbol Pre-Distortion and Transmit Pulse Shaping	729
High-Sensitivity CMOS RF-DC Converter in HF RFID Band.	732
An Interference Tolerant RF Frontend With Capacitive Feedback for Channel Filtering	735
<i>Measurement Techniques, System Modeling Techniques and Applications</i>	
Free-Space Radio Communication Employing OAM Multiplexing Based on Rotman Lens	738
Magnetic Resonant Three-Coil WPT System Between Off/In-Body for Remote Energy Harvest.	741
Substrate Integrated Waveguide Phase Shifter for Hydrogen Sensing.	744
A Novel TM_{0n} Mode Content and Relative Phase Analysis Technique	747
