



IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES

A PUBLICATION OF THE IEEE MICROWAVE THEORY AND TECHNIQUES SOCIETY



NOVEMBER 1998

VOLUME 46

NUMBER 11

IETMAB

(ISSN 0018-9480)

PART II OF TWO PARTS

SPECIAL ISSUE ON INNOVATIVE INTEGRATION TECHNIQUES FOR MICROWAVE AND MILLIMETER-WAVE CIRCUITS

Foreword J. F. Harvey and E. R. Brown 1817

PAPERS

Micromachining for Terahertz Applications (<i>Invited Paper</i>)	V. M. Lubecke, K. Mizuno, and G. M. Rebeiz	1821
Microtechnology in the Development of Three-Dimensional Circuits (<i>Invited Paper</i>)	K. J. Herrick, J.-G. Yook, and L. P. B. Katehi	1832
A 10–60-GHz Micromachined Directional Coupler	S. V. Robertson, A. R. Brown, L. P. B. Katehi, and G. M. Rebeiz	1845
Integration of Air-Gap Transmission Lines on Doped Silicon Substrates Using Glass Microbump Bonding Techniques	J. C. P. Chuang and S. M. El-Ghazaly	1850
Optimized Irregular Structures for Spatial- and Temporal-Field Transformation (<i>Invited Paper</i>)	T. ul Haq, K. J. Webb, and N. C. Gallagher	1856
RF-MEMS Switches for Reconfigurable Integrated Circuits (<i>Invited Paper</i>)	E. R. Brown	1868
Distributed MEMS True-Time Delay Phase Shifters and Wide-Band Switches	N. S. Barker and G. M. Rebeiz	1881
Progress in Active Integrated Antennas and Their Applications (<i>Invited Paper</i>)	Y. Qian and T. Itoh	1891
Novel Architectures for High-Efficiency Amplifiers for Wireless Applications	V. Radisic, Y. Qian, and T. Itoh	1901
Microwave Phase Conjugation Using Antenna Arrays..	Y. Chang, H. R. Fetterman, I. L. Newberg, and S. K. Panaretos	1910
Injection- and Phase-Locking Techniques for Beam Control (<i>Invited Paper</i>)	R. A. York and T. Itoh	1920
Novel Beam-Control Techniques Using Dielectric-Image-Line-Fed Microstrip Patch-Antenna Arrays for Millimeter-Wave Applications	M. Li and K. Chang	1930
Thin Frequency-Selective Lattices Integrated in Novel Compact MIC, MMIC, and PCA Architectures	H. Contopanagos, L. Zhang, and N. G. Alexopoulos	1936
Element Efficiency and Noise in Grid Arrays (<i>Invited Paper</i>)	M. P. De Lisio, R. M. Weikle II, and D. B. Rutledge	1949
Properties of Periodic Arrays of Symmetric Complementary Structures and Their Application to Grid Amplifiers	A. Moussessian, J. J. Rosenberg, and D. B. Rutledge	1956
Quasi-Optical Transmit/Receive Front Ends (<i>Invited Paper</i>)	Z. Popović and A. Mortazawi	1964
A Terahertz Grid Frequency Doubler	A. Moussessian, M. C. Wanke, Y. Li, J.-C. Chiao, S. J. Allen, T. W. Crowe, and D. B. Rutledge	1976

SHORT PAPERS

Voltage-Controlled Biphase Attenuator and Vector Synthesizer for Monolithic Microwave Signal Processors	Y. Suzuki, T. Ohira, and H. Ogawa	1982
---	-----------------------------------	------
