



IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES

DECEMBER 1976

VOLUME MTT-24

NUMBER 12

A PUBLICATION OF THE IEEE MICROWAVE THEORY AND TECHNIQUES SOCIETY

1976 Symposium Issue



The Bicentennial Symposium

Editor's Overview	J. B. Horton	901
President's Message—A Quarter Century of Progress	G. P. Rodrigue	902
The 1976 International Microwave Symposium	B. D. De Marinis and M. Caulton	904
MTT Awards for 1975	J. B. Horton	910
The 1976 S-MTT National Lectureship	F. Sterzer	913

PAPERS

Acoustic Surface Waveguides and Comparisons with Optical Waveguides (<i>Invited Paper</i>)	A. A. Oliner	914
Transferred Electron Logic Devices for Gigabit-Rate Signal Processing	C. L. Upadhyayula, R. E. Smith, J. F. Wilhelm, S. T. Jolly, and J. P. Paczkowski	920
Multiplexing and Demultiplexing Techniques with Gunn Devices in the Gigabit-per-Second Range	K. Mause	926
Diode Circuits for Pulse Regeneration and Multiplexing at Ultrahigh Bit Rates	U. Barabas, U. Wellens, U. K. Langmann, and B. G. Bosch	929
Microwave Power GaAsFET Amplifiers	H. Q. Tserng, V. Sokolov, H. M. Macksey, and W. R. Wisseman	936
Design, Fabrication, and Evaluation of BARITT Devices for Doppler System Applications	J. R. East, H. Nguyen-Ba, and G. I. Haddad	943
Millimeter-Wave Receivers with Subharmonic Pump	T. F. McMaster, M. V. Schneider, and W. W. Snell, Jr.	948
A 4-, 6-, 20-, and 30-GHz-Band Branching Network Using a Multilayer Dielectric Filter for a Satellite Communication Earth Station	S. Shindo, I. Ohtomo, and M. Koyama	953
The High-Power X-Band Planetary Radar at Goldstone: Design, Development, and Early Results	R. Hartop and D. A. Bathker	958
MLS—A Practical Application of Microwave Technology	R. M. Cox and J. R. Sebring	964

SHORT PAPERS

Cryogenically Cooled GaAs FET Amplifier with a Noise Temperature Under 70 K at 5.0 GHz	J. Pierro	972
A Quasi-Linear Approach to the Design of Microwave Transistor Power Amplifiers	K. L. Kotzebue	975
Passive Millimeter-Wave IC Components Made of Inverted Strip Dielectric Waveguides	R. Rudokas and T. Itoh	978
Design, Implementation, and Performance Analysis of a Broad-Band V-Band Network Analyzer	L. T. Yuan, G. M. Yamaguchi, and J. E. Raue	981
Discussion of a 2-Gap Waveguide Mount	R. L. Eisenhart	987
An Improved Solid-State Noise Source	M. Kanda	990
A New 34-GHz 3.5-mm Low-Cost Utility Coaxial Connector Featuring Low Leakage, Low Standing-Wave Ratio, and Long Life	S. F. Adam, G. R. Kirkpatrick, N. J. Sladek, and S. T. Bruno	995

CONTRIBUTORS	997
--------------------	-----

1976 INDEX	Follows page 1001
------------------	-------------------
