

IEEE Transactions ON MICROWAVE THEORY AND TECHNIQUES



Volume MTT-12

SEPTEMBER, 1964

Number 5

Published Bimonthly

Impedance of Rectangular Coaxial Line

Propagation in Ferrite-Filled Line

Optimum Broadband Reflection Amplifiers

Multiharmonic Rejection Filter

Propagation in Lossy Ferrites

Surface Waves on Plasma Sheath

Back-Scattering Measurements

MICROWAVE THEORY AND TECHNIQUES GROUP

IEEE MICROWAVE THEORY AND TECHNIQUES GROUP

The Microwave Theory and Techniques Group is an association of IEEE members with professional interest in the field of Microwave Theory and Techniques. All IEEE members are eligible for membership and will receive all Group publications upon payment of the prescribed annual fee of \$4.00. Members of the American Physical Society and the Institution of Electrical Engineers of Great Britain may become affiliated and receive all Group publications upon payment of the Affiliate fee of \$7.50 per year.

Administrative Committee

Chairman

H. M. ALTSCHULER

Vice Chairman

E. N. TORGOW

Secretary-Treasurer

MARVIN COHN

T. N. ANDERSON

R. C. HANSEN

A. A. OLINER

T. S. SAAD

H. E. M. BARLOW

I. KAUFMAN

J. PIPPIN

G. E. SCHAFER

A. C. BECK

D. D. KING

R. A. RIVERS

G. SHAPIRO

S. B. COHN

G. L. MATTHAEI

S. W. ROSENTHAL

K. TOMIYASU

T. MORENO

F. G. R. WARREN

Honorary Life Members

A. G. CLAVIER

W. W. MUMFORD

G. C. SOUTHWORTH

Editor

ROBERT W. BEATTY

Associate Editor

WALTER K. KAHN

Quantum Phenomena and Optical Techniques

G-MTT Chapters

Albuquerque-Los Alamos	S. R. Booker	Nebraska	R. B. Olson
Baltimore	T. L. Aphrys	New York	L. Kaplan
Boston	M. Michelson	North Jersey	B. M. Mindes
Buffalo	R. Johnson	Orange Co.	R. F. Hyneman
Chicago	C. M. Knop	Orlando	J. W. Dees
Columbus	W. H. Peake	Philadelphia	J. L. King
Denver-Boulder	R. E. Larson	San Diego	M. M. Chazotte
Florida-W. Coast	J. G. Oliver	San Francisco	R. J. Prickett
Foothill	A. DeFrenza	Schenectady	A. E. Blume
Huntsville	L. W. Root, Jr.	Seattle	G. Hasserjian
Kansas City	H. S. Hayre	S.E. Michigan	J. E. Rowe
Long Island	A. Arfin	Syracuse	T. M. Maher
Los Angeles	J. C. Aukland	Tokyo, Japan	Hideo Iwakata
Milwaukee	T. K. Ishii	Toronto	A. H. Secord
Montreal	F. G. R. Warren	Washington, D. C.	H. W. Cooper

IEEE TRANSACTIONS on Microwave Theory and Techniques

Published by the Institute of Electrical and Electronics Engineers for the Microwave Theory and Techniques Group, 345 E. 47 Street, New York, N.Y. 10017. Responsibility for the contents rests upon the authors, and not upon the IEEE, the Group, or its members. Individual copies, except special issues, may be purchased at the following prices: IEEE members (one copy) \$2.25, libraries and colleges \$3.25, all others \$4.50. Annual subscription price: libraries and colleges, \$12.75; nonmembers, \$17.00.

Address all manuscripts to Robert W. Beatty, Editor, National Bureau of Standards, Boulder, Colo. Submission of three copies of manuscripts, including figures, will expedite the review.

COPYRIGHT © 1964—THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, INC.

Printed in U.S.A.

All rights, including translations, are reserved by The Institute of Electrical and Electronics Engineers, Inc. Requests should be addressed to the Institute of Electrical and Electronics Engineers, 354 E. 47 Street, New York, N.Y. 10017