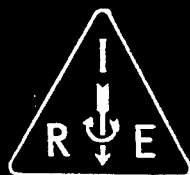


Transactions



of the I·R·E

Professional Group on

Microwave Theory and Techniques

July, 1954

Volume MTT-2

Number 2

TABLE OF CONTENTS

Symposium on Modern Advances in Microwave Techniques.....	1
Frequency Curves	1
A Traveling-Wave Electron Deflection System.....R. C. Honey	2
Crystal Checker for Balanced Mixers.....P. D. Strum	10
A Technique for Stabilizing Microwave Oscillators.....Jerome L. Altman	16
Use of Crystals in Balanced Mixers.....Jesse Taub and Paul J. Giordano	26
A Coaxial Line Filled with Two Non-concentric Dielectrics.....D. J. Angelakos	39
H ₀₁ Mode Circular Waveguide Components.....D. A. Lanciani	45
Characteristic Impedance of the Shielded-Strip Transmission Line Seymour B. Cohn	52
Bibliography on Directional Couplers.....Richard F. Schwartz	58
Addenda	64

The Institute of Radio Engineers

IRE PROFESSIONAL GROUP ON MICROWAVE THEORY AND TECHNIQUES

The Professional Group on Microwave Theory and Techniques is an association of IRE members with professional interest in the field of Microwave Theory and Techniques. All IRE members are eligible for membership and will receive all Group publications upon payment of the prescribed assessment.

Annual Assessment: \$2.00.

Administrative Committee

W. W. MUMFORD, *Chairman*

A. C. BECK, *Vice-Chairman*

H. F. ENGELMAN, *Secretary-Treasurer*

R. E. BEAM

T. S. SAAD

C. W. CHANDLER

HAROLD SCHUTZ

A. G. CLAVIER

L. D. SMULLIN

HENRY JASIK

G. C. SOUTHWORTH

D. D. KING

BEN WARRINER

G. A. ROSSELOT

J. R. WHINNERY

TRANSACTIONS of the IRE®

Professional Group on Microwave Theory and Techniques

Published by the Institute of Radio Engineers, Inc., for the Professional Group on Microwave Theory and Techniques at 1 East 79th Street, New York 21, New York. Responsibility for the contents rests upon the authors, and not upon the Institute, the Group, or its members. Individual copies available for sale to IRE PGMTT members at \$1.25; to IRE members at \$1.85; and to nonmembers at \$3.75.

Copyright, 1954 — THE INSTITUTE OF RADIO ENGINEERS, INC.

All rights, including translations, are reserved by the Institute. Requests for republication privileges should be addressed to the Institute of Radio Engineers, 1 E. 79th St., New York 21, N. Y.