



# IEEE TRANSACTIONS ON MICROWAVE THEORY AND TECHNIQUES

JUNE 1979

VOLUME MTT-27

NUMBER 6

(ISSN 0018-9480)

A PUBLICATION OF THE IEEE MICROWAVE THEORY AND TECHNIQUES SOCIETY



## ACCENT ON THEORY

---

### PAPERS

An Approximation for the Characteristic Impedance of Shielded-Slab Line .....	<i>H. J. Riblet</i>	557
The <i>E</i> -Plane Taper Junction in Rectangular Waveguide .....	<i>L. Lewin</i>	560
Capacitance of the Abrupt Transition from Coaxial-to-Circular Waveguide .....	<i>M. Razaz and J. B. Davies</i>	564
Cutoff Wavenumbers of Goubau Lines .....	<i>J. G. Fikioris and J. A. Roumeliotis</i>	570
A Study of Waveguides for Far Infrared Interferometers Measuring Electron Density of Tokamak Plasmas .....	<i>J. P. Crenn</i>	573
An Exact Three-Dimensional Field Theory for a Class of Cyclic <i>H</i> -Plane Waveguide Junction .....	<i>R. J. Copplestone</i>	577
On the Modeling of the Edge-Guided Mode Stripline Isolators .....	<i>S. H. Talisa and D. M. Bolle</i>	584
The Point-Matching Solution for Magnetically Tunable Cylindrical Cavities and Ferrite Planar Resonators .....	<i>A. M. Khilla and I. Wolff</i>	592
Theory of Infrared and Optical Frequency Amplification in Metal-Barrier-Metal Diodes .....	<i>D. M. Drury and T. K. Ishii</i>	598
Closed-Form Analysis of the Abrupt Junction Varactor Doubler .....	<i>E. W. Sard</i>	604
An Improved Computational Method for Noise Parameter Measurement .....	<i>M. Mitama and H. Katoh</i>	612
A Mechanism for High-Frequency Electromagnetic Field-Induced Biological Damage? .....	<i>O. B. Nilsson and L. E. Pettersson</i>	616
Microwave Apexcardiography .....	<i>J. C. Lin, J. Kiernicki, M. Kiernicki, and P. B. Wollschlaeger</i>	618

---

### LETTERS

Comments on "Analysis of an End Launcher for a Circular Cylindrical Waveguide" .....	<i>P. K. Bondyopadhyay, B. N. Das, and M. D. Deshpande</i>	621
Correction to "Comments on 'In Impedance of Coaxial Line to Circular Waveguide Feed'" .....	<i>P. K. Bondyopadhyay</i>	621

---

CONTRIBUTORS .....	622
--------------------	-----

