Abstracts

Foreword (Nov. 1973 [T-MTT])

M.E. Hines. "Foreword (Nov. 1973 [T-MTT])." 1973 Transactions on Microwave Theory and Techniques 21.11 (Nov. 1973 [T-MTT] (Special Issue on Solid-State Microwave Power Amplifiers)): 657-659.

During the past 10-15 years, there has been a revolution in microwave techniques brought about by the invention, development, and application of various new microwave solid-state devices. This has paralleled, in time, other revolutions brought about by solid-state devices in other fields of electronics. During this period, the most significant of the new microwave semiconductor devices have been the varactor diode, the tunnel diode, the PIN diode, the Schottky-barrier diode, the Gunn-effect diode, and the IMPATT diode. Dramatic improvements in transistors have also occurred, pushing their useful frequency frontier above 10 GHz. Applications of these devices include several types of low-noise and power amplifiers, varactor harmonic generator power sources, variable attenuators, phase shifters, microwave switches, oscillators, tuning elements, detectors, frequency converters, and modulators. Some of these devices appear to be useful at frequencies as high as 100 GHz.

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