

Call for Papers

SPECIAL ISSUE ON SOLID-STATE MICROWAVE POWER AMPLIFIERS

Rapid progress is being made in the development of practical microwave power amplifiers using transistors, IMPATT diodes, and transferred-electron (Gunn) diodes. There appears to be a need for wider information exchange among microwave engineers in this important new field. Papers are being sought for a special issue of the G-MTT TRANSACTIONS, which will provide network theory and engineering design principles for these amplifiers.

Both theoretical and experimental papers are desired. It is expected that this special issue will cover a variety of the important topics and special problems in power amplifier design, and will provide an improved understanding of the relationships between performance and the characteristics of the networks and the devices used. Papers are desired which are concerned with the "locked-oscillator" mode of amplification as well as the stable "linear" mode. Nonlinear characteristics at high signal levels are considered to be especially important.

Specific topics are suggested below, but other topics are not excluded if related to this general subject matter:

- 1) network analysis and/or synthesis for active power devices;
- 2) nonlinear effects—frequency conversion, gain compression and expansion, amplitude-to-phase conversion, intermodulation, hysteresis, etc.;
- 3) stability and spurious responses;
- 4) characterization and modeling of semiconductor devices and complete networks;
- 5) noise, especially under large signal conditions;
- 6) limitations on efficiency, bandwidth, noise figure, etc.;
- 7) experimental data relating to the performance of described networks, particularly those relating to the topics above.

Papers should be submitted in triplicate to the Guest Editor before February 1, 1973:

M. E. Hines
Microwave Associates, Inc.
South Avenue
Burlington, Mass. 01803