

IV-1. High-Power Limitations of Microwave Control Circuits*

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Present and future high-power microwave systems impose stringent performance requirements on circuits for switching, duplexing, attenuating, and phase shifting of transmitted power. These control functions are achieved either with purely mechanical microwave circuits, or by utilizing the interaction between microwave circuits and nonlinear materials such as plasmas, ferrites and semiconductors. The high-power limitations of such control circuits will be reviewed with particular emphasis on their relative performance characteristics and on anticipated improvements in performance in the near future.

*Invited paper.