Abstracts

A Thorough Investigation of Dynamic Bias on Linear GaAs FET Power Amplifier Performance

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Methods which involve increasing the gate bias on GaAs power FETs at reduced input power levels are excellent techniques for increasing efficiency. This paper presents the results of a thorough study on the effects of dynamic gate bias on GaAs power FET performance. Detailed information concerning the effects of gate bias changes on gain, input return loss, and linearity are included. A two-stage linear power amplifier was built and tested that successfully demonstrated dynamic gate bias optimization. This amplifier produced over 5 Watts of output power at L-Band with high efficiency and excellent linearity.

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