Abstracts

RF Amplifier Design with Large-Signal S-Parameters

W.H. Leighton, R.J. Chaffin and J.G. Webb. "RF Amplifier Design with Large-Signal S-Parameters." 1973 Transactions on Microwave Theory and Techniques 21.12 (Dec. 1973 [T-MTT] (1973 Symposium Issue)): 809-814.

High-power UHF transistors have been characterized through the use of large-signal S-parameters. These S-parameters have been used successfully to design UHF power amplifiers. Waveform measurements show that due to the Q of the package parasitic, most class C operated UHF power transistors have nearly sinusoidal waveforms at their package terminals. Experimental evidence presented shows that the large-signal S-parameters are relatively independent of power once the device is turned on. These two observations make it possible to extend modified small-signal S-parameter design techniques to large-signal power amplifiers.

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