Abstracts

Input harmonics control using non-linear capacitor in GaAs FET power amplifier

Kye-ik Jeon, Young-se Kwon and Song-cheol Hong. "Input harmonics control using non-linear capacitor in GaAs FET power amplifier." 1997 MTT-S International Microwave Symposium Digest 2. (1997 Vol. II [MWSYM]): 817-820.

We address the effect of gate signal distortion arising from capacitance non-linearity on the power added efficiencies of power amplifiers based on FETs. A novel method which can compensate the non-linearity of gate capacitance is proposed. The key idea is that a reversed diode is connected to the gate, where the gate and source part of a FET is simply modeled as a diode. We demonstrated this scheme with the load-pull and source-pull measurement of the circuit. A 7% increase in power added efficiency is achieved.

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