Abstracts

A New Power Amplifier Topology with Series Biasing and Power Combining of Transistors

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A new power amplifier topology is described and demonstrated in a microwave monolithic integrated circuit (MMIC) implementation with GaAs MESFETs. This topology overcomes several limitations of the traditional approach of paralleling of power transistor unit cells. In the new topology, unit cells are both parallel and series combined. The benefits include higher input and output impedances, broadband power matched interstage networks, and high voltage biasing at reduced DC current.

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