

High-efficiency low-IM microwave PA design

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Harmonic terminations effects in microwave power amplifiers on its power and linearity performances are discussed. By a simplified theoretical approach, useful guidelines are inferred to obtain both high efficiency and low intermodulation. The concepts discussed are experimentally validated showing the performances of four hybrid amplifiers, designed using different harmonic manipulation strategies. In particular, using a proper input second harmonic output termination, an improvement both in power added efficiency and intermodulation can be obtained.

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