Abstracts

A computational load-pull system for evaluating RF and microwave power amplifier technologies

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A computational load-pull system has been developed. This system uses technology CAD to predict the large-signal performance of semiconductor power amplifier technologies. The input to the system is a matrix of simulated time-domain current and voltage waveforms for different RF input and output voltages. These waveforms may also be supplied by circuit simulation, and could in principle be measured. The waveform data is processed, modeled and interpolated to obtain large-signal quantities such as input power, output power, gain, power-added efficiency and linearity. These quantities are displayed in load-pull and/or source-pull form. The system is used for technology assessment, for device optimization, and to assist circuit design.

❑ Return to main document.