

Envelope Tracking Technology vs. Pulse RF Measurement for Power Amplifier

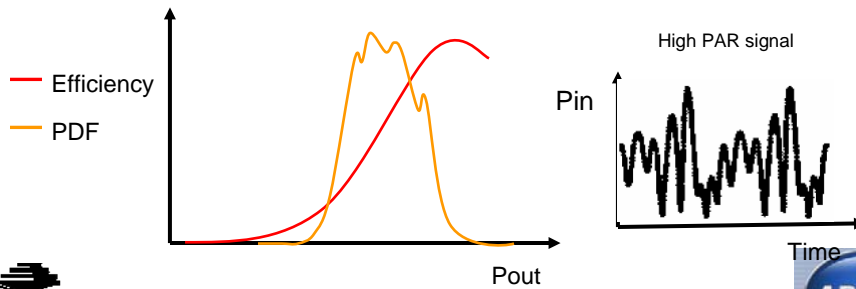
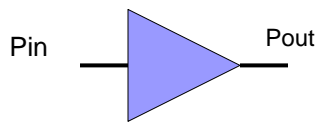
Chin Hsia, Pavel Kolinko, Peter Asbeck and Don Kimball

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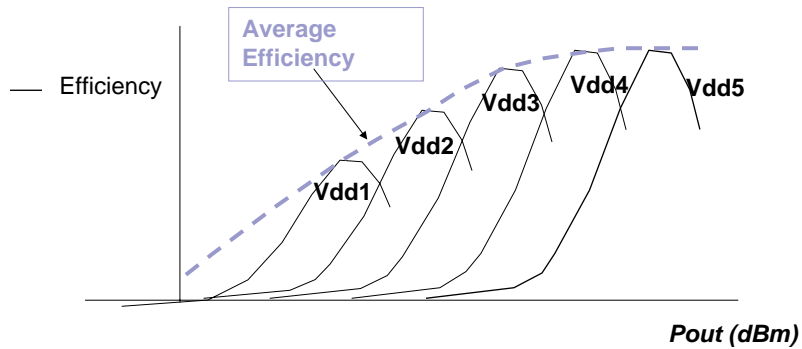


Performance of Conventional Linear Power Amplifier

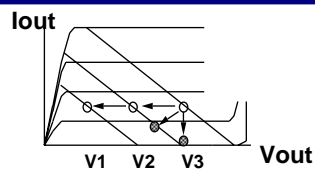
Power Amplifier



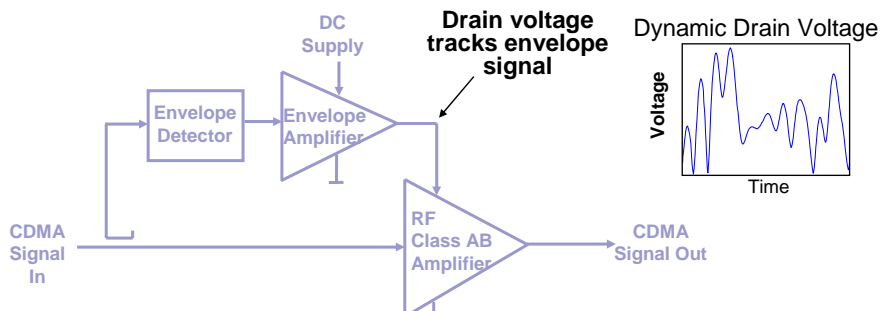
Schematic Dependence of Efficiency on Output Power



Envelope Tracking Techniques



- Maximizes PA efficiency by keeping RF transistor closer to saturation for all envelope amplitudes
- Envelope Amplifier provides dynamic drain voltage



In Envelope Tracking, PA is Class AB.
Input signal contains envelope and phase information.



Summary and Future work

- High efficiency envelope tracking power amplifier has been demonstrated
- Pulse RF measurement could help understand the behaviors of envelope tracking power amplifier
- Optimization of envelope tracking technology based on pulse RF measurement are to be continued!

