

TriQuint Designs Power Amplifier 2X Faster and More Accurately Using Visual System Simulator

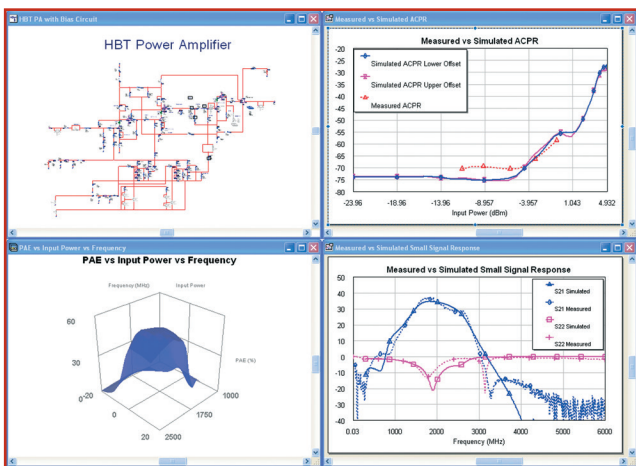
COMPANY PROFILE

TriQuint's Wireless Communications Operation provides products and technology to drive the growth of the cellular handset, portable WLAN device, and wireless basestation markets.

The Wireless Communication Operation designs and manufactures products focused on major wireless communications applications. The focus of the company's standard products is on cellular, PCS, KPCS, PHS, GSM, GPS, WLAN, ISM-Band (900 and 2400 MHz) wireless data links, and general RF applications.

THE DESIGN CHALLENGE

The challenge was to design an EDGE/GSM power amplifier for a cellular handset. It was essential to accurately characterize the power amplifier's circuit performance at the system level and to accurately predict adjacent channel power ratio (ACPR) measurements using modulated signals as opposed to traditional two-tone analysis. AWR's Microwave Office and Visual System Simulator (VSS) software were used for the design.



TriQuint designed EDGE/GSM power amplifier using AWR software.

THE SOLUTION

With AWR software, I was able to accurately characterize power amplifier circuit performance at the system level and accurately predict ACPR measurements using modulated signals as opposed to traditional two-tone analysis. I chose AWR software for my design needs for the following reasons:

- Confidence in EDGE/GSM source
- The AWR unified design environment
- Straightforward ability to simulate ACPR as a function of an input power sweep
- Superior technical support

Furthermore, the ACPR measurements simulated with VSS agreed with laboratory measurements, and the VSS simulation ran approximately two times faster than the alternative solution. Also, the user environment, interactivity of the VSS system tool with the Microwave Office circuit tool, and the superior technical support are key benefits I found with using AWR's VSS software.

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TriQuint SEMICONDUCTOR

Application:

EDGE/GSM power amplifier for a cellular handset

AWR Software:

Visual System Simulator™ & Microwave Office™

“The seamless integration of the Microwave Office and VSS software gave me more meaningful results because I was able to simulate my power amplifier circuit design's response to the EDGE/GSM modulated input signal with one design platform.”

Design Engineer

TriQuint Semiconductor

www.triquint.com