

Seminar on

A Compact Fully Differential Doherty Power Amplifier

by

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Abstract

In this paper, a compact triple-transistor fully differential Doherty power amplifier (DPA) is investigated. Three active devices are combined in a very judicious way to amplify the differential signal in a way like what a typical Doherty amplifier does. Particularly, two out-of-phase carrier PAs are applied to operate in the low-power region for high efficiency. On the other hand, only one peaking PA is used in the high-power region, which shares its output evenly with the two carriers. The reduction of transistor number from four for a classic differential DPA to three greatly cuts down the realization cost and compacts the overall circuit. Theoretical analysis and experimental result is given for deep understanding of the operation principle.

Biography

Shichang Chen received the B.S. degree in electronic engineering from Nanjing University of Science and Technology, Nanjing, China, in 2009. He is currently working toward the Ph.D. degree in City University of Hong Kong. His research interest focuses on high-efficiency amplifiers and integrated circuit (IC) design.

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City University of Hong Kong

***** ALL ARE WELCOME *****

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