Abstracts

An LDMOS VHF class-E power amplifier using a high-Q novel variable inductor

H. Zirath and D.B. Rutledge. "An LDMOS VHF class-E power amplifier using a high-Q novel variable inductor." 1999 Transactions on Microwave Theory and Techniques 47.12 (Dec. 1999 [T-MTT] (Special Issue on 1999 International Microwave Symposium)): 2534-2538.

In this paper, an lateral diffused metal-oxide-semiconductor-based very high-frequency class-E power amplifier has been investigated theoretically and experimentally. Simulations were verified by amplifier measurements and a record-high class-E output power was obtained at 144 MHz, which is in excellent agreement with simulations. The key of the results is the use of efficient device models, simulation tools, and the invention of a novel high-Q inductor for the output series resonance network. The latter allows for low losses in the output network and, simultaneously, a wide tuning range for maximum output power or maximum efficiency optimization.

❑ Return to main document.