Abstracts

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

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An LDMOS based VHF 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 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.

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