Abstracts

Current-mode class-D power amplifiers for high-efficiency RF applications (Dec. 2001 [T-MTT])

H. Kobayashi, J.M. Hinrichs and P.M. Asbeck. "Current-mode class-D power amplifiers for high-efficiency RF applications (Dec. 2001 [T-MTT])." 2001 Transactions on Microwave Theory and Techniques 49.12 (Dec. 2001 [T-MTT] (Special Issue on 2001 International Microwave Symposium)): 2480-2485.

We show that current-mode class-D (CMCD) power amplifiers can achieve high efficiency at RF frequencies. In contrast with conventional voltage-mode class-D amplifiers, the CMCD features "zero voltage switching," which eliminates the output capacitance discharge loss. Experimental CMCD amplifiers with 76.3% power-added efficiency (PAE) at 290-mW output and 71.3% PAE at 870-mW output are demonstrated using GaAs FETs at 900 MHz.

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