Abstracts

High Efficiency Amplifier Using Rectangular Waveform

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This paper describes a new high efficiency amplifier. It consists of two circuits: the first one produces the rectangular waveform, and the second one makes its operating angle (current flowing angle) small. Using this waveform with small operating angle, we can obtain an amplifier having large power added efficiency. A single power amplifier using the rectangular waveform was constructed and tested. In the experiment, the operating frequency was in the 0.9 GHz band. The maximum power was 5.1 W, and the power added efficiency was 65% and 76% when the operating angle was 70° and 30° respectively.

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