

SINGLE-SUPPLY MULTI-LEVEL ENVELOPE TRACKER

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In the context of radio frequency (RF) and microwave electronic circuits, the present invention relates to the power supply of modulated RF amplifiers, for telecommunications and radar applications. It aims at increasing the energy efficiency of radio frequency and microwave amplifiers.

Protection: International

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INVENTION

The patented Multilevel Envelope Tracker operates through a single source of supply voltage exploiting use of capacitors that implement different voltage levels. These capacitors are kept charged at the desired levels through a feedback network and a suitable control strategy that recharges the capacitors through the switches of the multilevel converter.

The innovation lies in the use of a multi-level converter with a single supply voltage source for this type of application and in the capacitor's charging control algorithm. The supply circuit allows to increase the energy efficiency of RF and microwave amplifiers, while reducing the transmitters' complexity and costs.

ADVANTAGES

- Reduced complexity and lower costs of energy-efficient RF and microwave transmitters;
- Improved energy efficiency of the system.

APPLICATIONS

High energy efficiency radio frequency and microwave transmitters to be deployed in:

- telecommunications;
- radar.

CONTACTS

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