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(54) **TRACKING POWER SUPPLIES AND
ASSOCIATED SYSTEMS AND METHODS**

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(71) Applicant: **Maxim Integrated Products, Inc.**, San Jose, CA (US)

(72) Inventors: **Gaoling Zou**, San Jose, CA (US);
Alberto Giovanni Viviani, Mountain View, CA (US); **Alexandr Ikriannikov**, San Jose, CA (US); **Laszlo Lipcsei**, Campbell, CA (US)

(57)

ABSTRACT

A tracking power supply includes a power conversion subsystem and one or more tracking subsystems. The power conversion subsystem is configured to generate N power rails, where N is an integer greater than one. Each tracking subsystem includes a switching network and a controller. The switching network is electrically coupled between each of the N power rails and a tracking power rail of the tracking power supply. The controller is configured to control operation of the switching network according to a tracking signal associated with a load powered by the tracking power supply, such that a voltage at the tracking power rail is one of two or more values, as determined at least partially based on the tracking signal. The controller is further configured to adjust voltage of at least one of the N power rails.

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