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(54) **NON-ISOLATED POWER MODULE WITH USER ADJUSTABLE PASS-THROUGH MODE**

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(57) **ABSTRACT**

A power converter with a voltage-modulating circuit, a controller, and a sensing circuit. The controller controls switches of a voltage-modulating circuit to provide a level of an output voltage (VOUT) based on an operational mode of the voltage-modulating circuit and a voltage measurement provided by the sensing circuit. The operational mode of the voltage-modulating circuit can be pass-through mode or voltage-modulating. The sensing circuit includes one or more externally programmable connectors configured to determine one or more boundaries of an output voltage window. In the pass-through mode, a level of VOUT will be provided without switching any of the switches when a level of an input voltage (VIN) falls within the output voltage window. In the voltage-modulating mode, a level of VOUT will be provided by switching one or more of the switches when the level of VIN falls outside of the output voltage window having only one boundary.