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**Chen et al.**(10) **Pub. No.: US 2023/0231398 A1**(43) **Pub. Date: Jul. 20, 2023**(54) **CHARGER CIRCUIT**(71) Applicant: **Richtek Technology Corporation,**  
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**ABSTRACT**

A charger circuit includes a power stage circuit operating at least one power switch according to an operating signal to convert an input power into an output power to charge a battery and/or to provide the output power to a load, wherein the output power includes a charging power and/or a load power; a control generating the operating signal according to a voltage amplifying signal; and a voltage error amplifier circuit comparing a voltage sensing signal relevant to a charging voltage of the charging power or a load voltage of the load power with a voltage reference level in a voltage hysteresis mode of a discontinuous conduction mode, so as to generate the voltage amplifying signal; wherein the control circuit adjusts the charging voltage or the load voltage according to the voltage amplifying signal, so as to maintain the charging voltage or the load voltage within a predetermined range.

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