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(54) **MULTI-PORT USB FAST CHARGERS WITH FAST-CHARGING CONTROLLER CHIPS INCLUDING TRANSISTOR COMBINATIONS ON DIFFERENT CHIP BASES**

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(57) **ABSTRACT**

Chip package and method thereof. For example, a chip package of a charging controller chip for a USB charger includes: a high-side main transistor including a first drain, a first gate and a first source, the first drain being configured to receive an input voltage; a low-side main transistor including a second drain, a second gate and a second source, the second source being configured to receive a ground voltage, the second drain being connected to the first source and a first coil terminal of an inductive coil, the inductive coil further including a second coil terminal; one or more port main transistors, each port main transistor of the one or more port main transistors including a third drain, a third gate and a third source, the third drain being biased to a converter voltage and connected to the second coil terminal of the inductive coil.

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