



US 20220352811A1

(19) **United States**(12) **Patent Application Publication**
SHIH(10) **Pub. No.: US 2022/0352811 A1**(43) **Pub. Date: Nov. 3, 2022**(54) **METHOD FOR PROTECTING CIRCUIT AND ELECTRONIC DEVICE**(52) **U.S. Cl.**CPC *H02M 1/32* (2013.01); *H02M 3/155* (2013.01); *H02H 3/207* (2013.01)(71) Applicant: **InnoLux Corporation**, Miao-Li County (TW)(72) Inventor: **Ching-Wen SHIH**, Miao-Li County (TW)

(57)

ABSTRACT(21) Appl. No.: **17/705,787**(22) Filed: **Mar. 28, 2022**(30) **Foreign Application Priority Data**

Apr. 28, 2021 (CN) 202110465787.9

Publication Classification(51) **Int. Cl.***H02M 1/32* (2006.01)*H02M 3/155* (2006.01)*H02H 3/20* (2006.01)

A method for protecting a circuit includes steps of: providing a first current source connected to a capacitor of the circuit through a second switch; providing a detection and control unit for turning on the second switch at a first time, and let the first current source to charge the capacitor; detecting a voltage value of the capacitor by the detection and control unit; wherein when the voltage value is greater than or equal to a reference voltage value, the detection and control unit turns off the second switch and turns on a first switch of the circuit, and when the voltage value is lower than the reference voltage value, the detection and control unit turns off the second switch and continue turns off the first switch.

