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**SIMPSON et al.**(10) **Pub. No.: US 2024/0213106 A1**(43) **Pub. Date: Jun. 27, 2024**(54) **SEMICONDUCTOR DEVICE**(71) Applicants: **DYNEX SEMICONDUCTOR LIMITED**, Lincoln (GB); **ZHUZHOU CRRG TIMES SEMICONDUCTOR CO. LTD.**, Zhuzhou (CN)(72) Inventors: **Robin Adam SIMPSON**, Lincoln (GB); **Michael David NICHOLSON**, Lincoln (GB); **Yangang WANG**, Lincoln (GB)(21) Appl. No.: **17/928,809**(22) PCT Filed: **Jul. 19, 2021**(86) PCT No.: **PCT/EP2021/070115**

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(57)

**ABSTRACT**

There is provided a semiconductor device **1** which comprises: a housing comprising a first housing electrode **5** and a second housing electrode **4** which are arranged at opposite sides of the housing; a plurality of semiconductor units **30** arranged within the housing between the first and second housing electrodes **4**, **5**; a plurality of pressure means **40** for applying pressure to the plurality of semiconductor units **30**, respectively, wherein the plurality of pressure means **40** are arranged between the plurality of semiconductor units **30** and the first housing electrode **5**; a first conductive structure **14** arranged between the plurality of pressure means **40** and the plurality of semiconductor units **30**, wherein the plurality of semiconductor units **30** are electrically connected in parallel between the second housing electrode **4** and the first conductive structure **14**; and a second conductive structure **18** configured to provide a current flow path from the first conductive structure **14** to the first housing electrode **5**, the second conductive structure comprising a first part **16** that is fixedly connected to the first conductive structure **14** and a second part **9** that is fixedly connected to the first housing electrode **5**.

