



P-N Diodes And P-N-P Heterojunction Bipolar Transistors With Diamond Collectors And Current Tunneling Layers

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The Invention

P-N diodes that include p-type doped diamond and devices, such as p-n-p heterojunction bipolar transistors, that incorporate the p-n diodes are provided. In the p-n diodes, the diamond at the p-n junction has a positive electron affinity and is passivated by a thin layer of inorganic material that provides a tunneling layer that passivates the bonding interface states, without hindering carrier transport across the interface.

Additional Information

For More Information About the Inventors

- [Zhenqiang Ma](#)

Tech Fields

- [Semiconductors & Integrated Circuits : Design & fabrication](#)

For current licensing status, please contact Jeanine Burmania at jeanine@warf.org or 608-960-9846