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- [54] **METHOD OF FORMING PLATINUM OHMIC CONTACT TO P-TYPE SILICON CARBIDE**
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- [52] U.S. Cl. **437/187; 148/DIG. 148**
- [58] Field of Search **148/DIG. 148; 437/100, 437/184, 187, 188**

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[57] ABSTRACT

A method and resulting ohmic contact structure between a high work function metal and a wide bandgap semiconductor for which the work function of the metal would ordinarily be insufficient to form an ohmic contact between the metal and the semiconductor. The structure can withstand annealing while retaining ohmic characteristics. The ohmic contact structure comprises a portion of single crystal wide bandgap semiconductor material; a contact formed of a high work function metal on the semiconductor portion; and a layer of doped p-type semiconductor material between the single crystal portion and the metal contact. The doped layer has a sufficient concentration of p-type dopant to provide ohmic behavior between the metal and the semiconductor material.

24 Claims, 4 Drawing Sheets

