

## **Properties of Al and Pd contacts on n-type SiC membranes**

### **Abstract**

Membranes with dimensions up to 10 mm x 15 mm have been fabricated in epitaxial 3C-SiC/Si wafers. An array of CTLM metal contacts was deposited onto the upper surface of the n-SiC membrane. Both Al/n-SiC and Pd/n-SiC contacts which were formed on the membrane and on the adjacent substrate have shown an ohmic current/ voltage response. Values of specific contact resistance,  $\rho_c$ , were measured directly on the membranes. These results have shown no consistent difference in  $\rho_c$  of the contacts located either on the membrane or off the membrane. The exposure of SiC surfaces to reactive ion etching in CF<sub>4</sub> plasma during the fabrication of a membrane has resulted in  $\rho_c$  which was higher by a factor of 10<sup>3</sup> than with as-grown and KOH etched silicon surfaces.

**Keywords** — Metal contacts, ohmic currents, properties of Al, SiC membranes