

# Effect of Indentation on $I$ - $V$ Characteristics of Au/n-GaAs Schottky Barrier Diodes

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Au/n-GaAs Schottky barrier diodes (SBDs) have been fabricated. The effect of indentation on Schottky diode parameters such as Schottky barrier height ( $\phi_b$ ) and ideality factor ( $n$ ) was studied by current-voltage ( $I$ - $V$ ) measurements. The method used for indentation was the Vickers microhardness test at room temperature. The experimental results showed that the  $I$ - $V$  characteristics move to lower currents due to an increase of  $\phi_b$  with increasing indentation weight, while contacts showed a nonideal diode behaviour.

*Key words:* Schottky Barrier Diode; Barrier Height; Ideality Factor; Indentation; Fermi Level Pinning.