

Ti/Pt SCHOTTKY CONTACT MEASUREMENTS FOR HEMT GATE METALLIZATION USING CURRENT-VOLTAGE METHOD

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ABSTRACT

A study of Schottky contact from Ti/Pt metal stack on Si-doped AlGaAs HEMT supply layer using current-voltage method is presented here. The Schottky barrier heights at metal-semiconductor junction were determined on two samples prepared by MBE. From plots of natural logarithm of current density versus voltage sweep, the values of current density at zero voltage were extrapolated, hence enabling the calculation of schottky barrier values. The effect of thermal annealing on Schottky barrier height for each samples were also discussed here. From this experiment, Schottky barrier heights with values for 0.65 eV has been successfully obtained from the metal-semiconductor interface.

<http://journal.masshp.net/wp-content/uploads/Journal/2007/Jilid%202/Ashaari%20Yusof%2044-49.pdf>

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