

EFFECT OF THERMAL TO OHMIC CONTACT Ge/Au/Ni TO AlGaAs

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ABSTRACT

Ohmic contact of Ge/ Au/ Ni to AlGaAs substrate was studied by varying treatment of the samples with hydrochloric acid and ammonium hydroxide. The samples were etched by wet chemical solutions to determine the most effective solution to remove native oxide that degrades the performance of the devices. The annealing temperature and the length of time were varied to determine the lowest contact resistance. Transmission Line Measurement was used to measure the contact resistance. Result shows that the anneal time at temperature 400 °C for 60 seconds yields the best ohmic contact. The most effective wet solution that can remove native oxide is hydrochloric acids.

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