

## Optimal Estimation of Schottky Diode Parameters Using Advanced Swarm Intelligence Algorithms

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This work deals with estimation of the Schottky diode (Au|GaN|GaAs) optimal parameters. For this purpose, advanced swarm intelligence (SI) algorithms have been applied, i. e., Harris hawks optimization, ant lion optimizer (ALO), grey wolf optimizer, and whale optimization algorithm. The performance of the SI algorithms has been investigated by a comparative study following the analytical methods developed by Kaminski I, Cheung and Cheung, Norde, and Mikhelashvili. The comparative results show that the ALO algorithm gives minimum RMSE criteria, with best parameters estimation against all the SI optimizers and the analytical techniques.

**Keywords:** Schottky diodes, Au|GaN|GaAs, swarm intelligence algorithms, parameters estimation, barrier height.

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