

Evaluation of GaN Substrate for Vertical GaN Power Device Applications

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Pn diodes were fabricated on a GaN substrate prepared by the Na flux method. Edge and mix dislocations that developed from the GaN substrate were observed in the diodes. These threading dislocations did not induce leakage current even when the dislocation density was in the range of 10^5 – 10^6 cm⁻². These results indicate that a GaN substrate that does not include pure screw dislocations will be applicable to vertical power devices.

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